



**CLIMATE
OF
ANDHRA PRADESH**

GOVERNMENT OF INDIA

INDIA METEOROLOGICAL DEPARTMENT



FOREWORD

The importance of meteorology for the economic and social benefits of man is being increasingly realised all over the world. In recent years the various multi-purpose projects undertaken by the Central and State Governments as well as agriculture, aviation, shipping, industrial and other interests have been making heavy demands on this department for climatological information pertaining to different parts of the country for planning and executing various projects with a view to take the maximum advantage of favourable meteorological conditions. Keeping these demands in view, it has been decided to publish Climatological Summaries for each State in the country incorporating the district climatological summaries. The second in the series 'State Climatological Summaries' is the 'Climate of Andhra Pradesh'. It is hoped that these climatological summaries will also serve as educational material in the schools and colleges in the State.

The Climatological Summaries in the publication have been prepared by the Office of the Deputy Director General of Observatories (Climatology and Geophysics), Poona, under the direction of Shri M. Gangopadhyaya, Deputy Director General.

P. KOTESWARAM,

Director General of Observatories

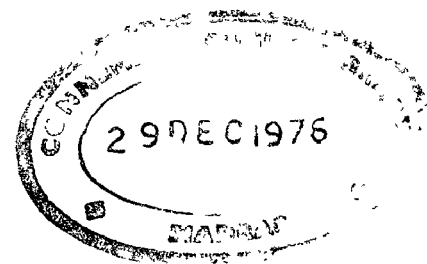
NEW DELHI

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CLIMATE OF ANDHRA PRADESH

INTRODUCTION



The meteorological conditions of Andhra Pradesh as a whole are described in the first Chapter followed by detailed description of the climate of each district in the succeeding chapter. The district summaries are grouped under the respective meteorological subdivisions and arranged alphabetically.

The normals of meteorological elements used for describing the climate are generally based on data for the period 1931 to 1960 except in the case of rainfall. For rainfall, normals using all available data for 1901 to 1950 have been used. In preparing charts showing the extremes of temperature data up to 1965 have been utilized.

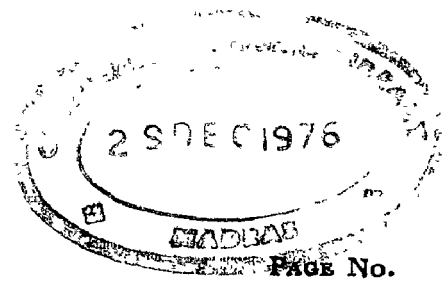


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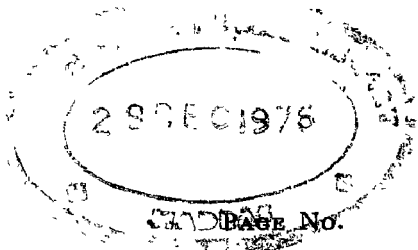
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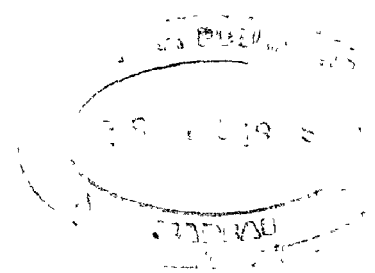
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CHAPTER I
CLIMATE OF ANDHRA PRADESH

WEATHER HAZARDS

Storms and Depressions

In late October and November, depressions and storms from the Bay of Bengal cross the Andhra Coast or recurve towards north or northeast and travel parallel to the coast close to it. Heavy rains in the coastal belt and the interior occur in association with these disturbances.

The following table gives the total number of depressions/storms which affected each of the three sub-divisions during the 80 year period ending 1970. For this purpose, depressions affecting more than one sub-division have been counted separately for each sub-division. The coastal belt is further sub-divided into (1) south coast upto Ongole, (2) central coast from Ongole to Kakinada and (3) north coast from Kakinada northwards, so as to give an idea of the incidence of the disturbances over different parts of the coast. The last column gives the total number of depressions/storms which affected the State as a whole during this period. For this purpose, each depression is counted as one, even though it may have affected more than one sub-division.

TABLE
Depressions/Storms affecting Andhra Pradesh during 1891 to 1970.

Month	Coastal Andhra Pradesh			Rayalaseema	Telangana	State as a whole
	South	Central	North			
January	2	..	..	..	..	2
February . . . . .	..	..	..	..	..	..
March . . . . .	..	..	..	..	..	..
April	2	..	..	3	..	5
May	2	7	2	3	1	11
June . . . . .	..	2	9	..	1	10
July . . . . .	..	..	5	..	..	5
August . . . . .	..	1	9	..	..	10
September	1	18	25	1	19	42
October	13	28	16	11	14	54
November	12	12	4	5	1	24
December	2	4	1	..	..	5
TOTAL	34	72	71	23	36	168

The Bay disturbances affecting Andhra Pradesh are generally rare during December to April and July. September to November are the principal months when the coastal belt is much affected. On an average at least one disturbance affects the coastal belt in a year.

Other Weather Phenomena

Thunderstorm activity is pronounced over the State in May and June before the onset of the southwest monsoon and again in September and October, in association with the onset of the northeast monsoon. The average is 4-6 days in each of these months. Duststorms are rare. A maximum frequency of 1-2 days over Telangana in May has been observed. Fog is of rare occurrence.

TABLE I

Mean Wind Speed (Km p.h.) and Predominant Wind Direction

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
COASTAL ANDHRA PRADESH													
Kakinada	a 10.3 M NE E SE	8.8 NNE SE	8.3 SW SE	9.1 SW SSE	11.1 SW SSE	12.1 SW SW	12.3 SW SW	11.0 SW SW	8.6 SW SW	9.5 NE SE/NE	12.0 NE ENE	11.3 NE ESE	10.4
Rentachintala	a 5.0 M C/ESE E ESE	6.5 C/SSE ESE	8.1 C/SSE ESE	8.8 SSE ESE	10.4 WSW W/ESE	14.5 W W	13.3 W W	11.8 W W	7.9 WSW WNW	4.8 C/WNW NNE	4.0 C/ENE NE	3.8 C/Var ENE	8.2
Gannavaram	a 9.8 M ENE E ESE	9.3 ENE SSE	10.7 ESE SSE	12.5 SSE SSE	15.5 S SSE	17.6 W W	16.2 WSW W	15.3 WSW WNW	11.1 W WNW	9.0 NE ESE	10.2 NE E	9.4 NE ESE	12.2
Masulipatam	a 8.7 M NNE E ESE	8.2 NNE SSE	9.1 SSE SSE	11.4 S SSE	13.8 SSW SSE	14.5 W SW	12.8 W WNW	11.0 WSW WNW	8.8 W WNW	7.7 NNE SE	8.8 NNE ESE	9.1 NNE SSE	10.3
Nellore	a 5.4 M C/NW E ENE	6.4 C/SSE ESE	8.6 SSE ESE	10.0 SSE ESE	10.3 SW ESE	9.8 W W	9.6 WSW WSW	9.2 WSW WSW	7.7 WNW WNW	5.6 C/WNW ENE	6.0 NNW ENE	6.1 NNW ENE	7.9
Ongole	a 5.0 M C/NNE E ESE	6.5 C/SSE ESE	8.4 C/SSE ESE	9.8 SSE SE	10.3 SSE SE	11.6 W WSW	10.7 WSW WSW	10.3 WSW WSW	6.8 WSW WSW	4.4 C/NNW ESE	4.9 NNE ENE	4.7 NNE E	7.8
Kalingapatam	a 9.6 M NNW E ESE	9.5 NNW SSE	11.6 WNW SSW	15.1 WSW SSW	17.0 SW SSW	15.0 WSW SSW	14.0 WSW SSW	11.8 WSW SW	9.1 WNW SSW	10.0 NW ESE	11.2 NNW ENE	11.3 NNW E	12.1
Vishakhapatnam	a 6.3 M C/NW E ESE	6.4 C/W SSE	9.6 C/WSW SSW	14.7 WSW SSW	15.9 WSW SSW	13.7 WSW SSW	16.5 WSW WSW	13.5 WSW WSW	9.5 C/WSW SSW	8.1 C/WNW ENE	8.1 C/ENE ENE	7.5 C/NNW ENE	10.8
Nidadavole	a 6.5 M NNE E ESE	5.7 NNE SSE	5.4 ENE SSW	5.9 Var/SW SSW	7.8 SW S	12.2 WSW WSW	12.7 WSW WSW	11.0 WSW WSW	8.0 WSW WSW	5.9 NNE ESE	7.1 NNE E	7.0 NNE E	7.9
Sub. Div. Mean	a 7.4	7.5	8.9	10.8	12.5	13.4	13.1	11.7	8.6	7.2	8.0	7.8	9.7

RAYALASEEMA

Anantapur	a	10.0	9.2	9.9	10.2	12.2	18.4	18.9	18.0	13.1	7.9	8.5	8.9	12.1
		M C/ESE	C/SE	C/SSW	WSW	WSW	W	W	W	W	C/WNW	C/ESE	C/E	
		E ENE	ENE	ENE	ENE	WNW	W	W	W	WNW	ENE	ENE	ENE	
Arogyavaram	a	5.9	7.1	8.6	8.1	9.9	13.8	13.8	13.4	9.9	5.8	5.1	5.0	8.9
		M C/SSE	C/SSE	SSE	SSE	WNW	WNW	WNW	WNW	WNW	C/NNW	C/NE	C/NE	
		E ENE	ENE	ENE	E	NNW	WNW	WNW	WNW	WNW	NNW	NE	ENE	
Cuddapah	a	10.0	11.2	11.2	10.0	8.7	9.9	10.4	8.7	6.8	5.0	5.4	4.3	8.5
		M C/ESE	C/ESE	C/ESE	C/ESE	WNW	WNW	WNW	WNW	C/WNW	C/WNW	C/E	C/E	
		E ESE	ESE	ESE	ESE	C/WNW	WNW	WNW	WNW	C/WNW	C/ESE	C/E	ENE	
Kurnool	a	6.1	6.9	7.7	8.7	13.4	21.1	21.3	18.4	12.6	6.0	5.1	4.9	11.0
		M C/ESE	C/ESE	C/ESE	SW	W	W	WSW	WSW	WSW	C/W	C/ESE	C/ESE	
		E ESE	ESE	C/ESE	ESE	WNW	W	WNW	WNW	WNW	C/ESE	ENE	ESE	

Sub. Div. Mean a 8.0 8.6 9.3 9.3 11.1 15.8 16.1 14.6 10.6 6.2 6.0 5.8 10.1

TELANGANA

Begampet	a	8.1	8.9	9.6	10.9	12.4	23.8	22.1	18.3	12.6	8.9	8.0	7.4	12.6
		M C/ESE	C/ESE	C/ESE	C/SSE	WNW	W	W	WNW	WNW	C/NE	C/E	C/E	
		E ESE	ESE	ESE	ESE	NW	W	W	WNW	WNW	NE	ENE	ENE	
Ramagundam	a	5.0	5.7	6.9	7.9	8.4	9.0	7.2	6.3	5.0	4.4	4.3	3.4	6.1
		M C/Var	C/SSE	SSE	SSE	SSE	WNW	W	WNW	WNW	NNW	N	C/NE	
		E NE	NNE	SSE	SSE	SSE	W	W	W	C/NW	NNE	NNE	NNE	
Bhadrachalam	a	4.6	5.7	7.6	9.1	9.0	9.0	8.0	6.4	4.8	4.0	4.0	3.7	6.3
		M C/NE	C/ENE	SSE	SSE	SSE	W	WSW	WSW	Var/WSW	NE	NE	C/NE	
		E ENE	ENE	SSE	SSE	SE	W	W	WNW	N	NE	NE	NE	
Khammam	a	5.6	7.2	8.8	8.7	9.7	10.9	9.7	8.1	5.7	4.4	4.0	4.0	7.2
		M C/ESE	ESE	ESE	SSE	SSE	W	W	W	W	C/N	N	C/N	
		E ESE	ESE	SE	SE	SE	W	W	WNW	NW	NE	ENE	ENE	

TABLE I—Contd.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Mahbubnagar	a 8.8	8.0	7.8	8.1	11.0	14.4	13.5	12.5	9.8	8.0	9.8	9.3	12.1
	M ENE	E NE	ESE	SW	WNW	W	WSW	W	WNW	ENE	ENE	ENE	E
Nizamabad	a 4.1	4.7	5.1	5.4	6.7	8.9	8.6	7.1	5.4	4.2	3.9	3.5	5.6
	M C/Var	C/Var	C/SE	C/SW	WSW	WSW	WSW	WSW	C/WSW	C/NE	C	C	C
Hanamkonda	a 7.2	9.1	9.7	10.9	12.1	13.1	12.4	10.7	8.5	6.1	5.3	5.1	9.2
	M SSE	SSE	SSE	SSE	SSE	WNW	WNW	WNW	WNW	NNW	NNE	SSE	SSE
Sub. Div. Mean	(a) 6.2	7.0	7.9	8.7	9.9	12.7	11.6	9.9	7.4	5.7	5.6	5.2	8.1

(a) Mean wind speed in Kms. per hour.

(M) Predominant direction in the morning.

(E) Predominant direction in the evening.

(Var) Variable.

(C) Calm. The next predominant direction is also indicated when calm is mentioned.

TABLE-2

Mean Maximum and Minimum Temperature (°C)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
COASTAL ANDHRA PRADESH													
Kakinada	Max.	27.3	29.6	33.0	35.3	36.9	35.9	31.8	31.8	30.8	28.7	27.1	31.7
	Min.	19.1	20.7	23.1	25.8	27.7	27.1	25.4	25.6	24.5	21.6	19.2	23.8
Rentalchintala	Max.	31.2	34.1	37.5	39.6	41.5	37.8	34.1	33.9	32.9	30.8	29.9	34.7
	Min.	17.3	19.9	23.0	26.1	28.6	27.8	25.3	25.6	23.2	19.6	16.8	23.2
Gannavavam	Max.	30.1	32.9	35.6	37.8	39.7	37.5	32.6	32.1	31.5	30.7	29.7	33.5
	Min.	19.1	20.0	22.3	25.6	27.7	27.3	25.3	25.1	24.2	21.1	19.1	23.5
Masulipatam	Max.	27.8	29.6	31.9	34.0	36.5	36.4	32.6	32.2	30.8	29.0	27.8	31.7
	Min.	19.4	20.8	22.9	25.9	28.0	27.4	25.7	25.8	24.9	22.1	19.8	24.0
Nellore	Max.	29.8	32.0	34.5	37.1	39.6	38.2	35.6	35.2	32.5	29.6	28.7	34.0
	Min.	20.0	21.1	23.1	25.7	27.8	28.2	26.7	26.5	24.7	22.3	20.4	24.4
Ongole	Max.	28.7	30.6	32.3	34.4	38.2	37.4	34.1	34.1	31.7	29.8	28.6	32.8
	Min.	19.7	20.9	23.3	26.0	28.0	28.4	26.5	26.3	24.7	21.8	19.9	24.3
Kalingapatam	Max.	27.4	29.6	31.9	33.1	33.9	33.6	31.6	31.9	30.7	28.5	26.8	30.9
	Min.	17.7	19.8	22.8	25.7	27.4	27.1	25.9	26.0	24.5	20.4	17.6	23.4
Vishakhapatnam	Max.	27.7	29.2	31.2	32.8	34.0	33.7	31.7	32.0	30.9	29.3	27.7	31.0
	Min.	17.5	19.3	22.6	25.9	27.8	27.4	26.0	26.0	24.5	21.2	18.3	23.5
Nidadavole	Max.	30.1	32.2	34.1	35.8	38.2	36.7	31.5	31.1	31.3	30.4	29.5	32.0
	Min.	18.0	19.4	22.2	25.0	26.9	26.7	25.1	25.0	23.6	20.7	18.3	23.07
Sub. Div. Mean	Max.	28.9	31.1	33.6	35.5	37.6	36.4	32.8	32.7	31.5	29.6	28.4	32.6
	Min.	18.6	20.2	22.8	25.7	27.8	27.5	25.8	25.8	24.3	21.2	18.8	23.7

TABLE 2—Concl'd.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
RAYALASEEMA													
Anantapur	30.4	33.4	36.8	38.4	38.1	34.7	32.4	32.4	32.5	31.4	30.0	29.1	33.3
Max.	17.3	18.6	21.6	25.7	25.8	24.7	23.7	23.5	23.1	22.5	19.4	17.2	21.9
Arogyavaram	27.1	30.1	33.2	34.7	34.7	32.0	30.0	30.0	29.8	28.3	26.5	25.5	30.2
Max.	15.3	16.7	19.1	22.0	23.5	22.7	21.7	21.7	21.2	20.1	17.6	15.5	19.8
Cuddapah	30.9	34.3	37.7	39.8	40.3	37.0	34.5	34.0	33.3	32.5	30.4	29.5	34.5
Max.	19.2	21.0	24.0	27.4	28.7	26.9	25.6	25.4	25.0	23.9	21.3	19.1	24.0
urnool	31.3	34.3	37.5	39.3	40.0	35.6	32.5	32.1	31.9	32.4	31.0	30.3	34.0
Max.	17.0	19.3	22.5	26.0	27.2	25.0	23.8	23.5	23.3	22.4	19.2	16.6	22.1
Sub. Div. Mean	29.9	33.0	36.3	38.1	38.3	34.8	32.3	32.1	31.9	31.1	29.5	28.6	33.0
Min.	17.2	18.9	21.8	25.3	26.3	24.8	23.7	23.5	23.1	22.2	19.4	17.1	21.9
TELANGANA													
Begampet	28.6	31.2	34.8	36.9	38.7	34.1	29.8	29.5	29.7	30.3	28.7	27.8	31.7
Max.	14.6	16.7	20.0	23.7	26.2	24.1	22.3	22.1	21.6	19.8	16.0	13.4	20.0
Ramagundam	31.1	34.1	37.7	40.3	42.8	38.6	32.1	31.3	32.0	32.5	30.7	30.2	34.5
Max.	16.1	18.8	22.7	26.9	29.7	28.2	24.7	24.4	24.4	22.8	17.5	15.0	22.6
Bhadrachalam	30.8	34.0	37.1	39.0	41.0	37.4	32.1	31.6	32.3	32.3	30.9	30.0	34.0
Max.	16.9	19.1	22.8	25.6	28.0	27.4	25.0	24.7	24.4	23.0	18.7	16.1	22.6
Khammam	31.0	33.6	36.8	39.0	41.3	37.6	32.6	32.2	32.6	32.5	30.6	30.1	34.2
Max.	17.6	20.0	23.1	25.9	28.1	27.2	24.9	24.7	24.4	22.9	19.1	16.7	22.9
Mahbubnagar	29.3	32.4	35.5	37.5	38.7	34.2	30.1	29.9	30.4	30.7	29.4	28.6	32.2
Max.	16.5	18.0	21.2	24.5	26.3	24.1	22.5	22.3	22.1	21.1	18.2	16.7	21.1
Nizamabad	30.0	32.6	36.4	39.2	41.5	36.2	30.5	30.1	30.6	31.5	29.7	28.9	33.1
Max.	15.3	17.5	21.0	24.8	27.7	25.4	23.2	23.0	22.7	20.6	16.2	13.8	20.9
Hanamkonda	29.9	32.4	35.9	38.3	40.8	36.5	31.2	30.9	31.2	31.7	29.9	29.0	33.1
Max.	17.2	19.2	22.2	25.3	28.1	26.7	24.4	24.2	23.9	22.2	18.4	16.1	22.3
Sub. Div. Mean	30.1	32.9	36.3	38.6	40.7	36.4	31.2	30.8	31.3	31.6	30.0	29.2	33.3
Min.	16.3	18.5	21.9	25.2	27.7	26.2	23.9	23.6	23.4	21.8	17.7	15.4	21.8

TABLE 3

Mean Relative Humidity (%)

Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
COASTAL ANDHRA PRADESH													
Kakinada	M	72	73	73	71	72	81	81	80	78	71	71	75
	E	70	67	62	65	64	73	74	76	74	69	69	69
Rentachintala	M	71	67	63	61	61	70	70	74	76	74	73	68
	E	33	31	28	28	31	54	55	61	57	50	41	43
Gannavaram	M	74	77	76	72	65	79	79	81	81	70	71	74
	E	54	44	44	45	43	65	69	71	76	62	56	56
Masulipatam	M	81	81	78	75	71	80	80	82	83	79	78	78
	E	69	67	67	71	65	70	69	73	76	72	69	69
Nellore	M	84	79	74	69	60	65	66	69	79	84	84	73
	E	64	59	59	62	54	51	54	60	72	75	70	61
Ongole	M	81	78	79	78	74	78	73	75	74	75	78	76
	E	70	67	72	77	74	70	65	68	69	67	66	69
Kalingapatam	M	82	81	79	77	76	83	83	84	83	81	80	81
	E	69	69	72	76	77	82	81	80	75	68	66	74
Vishakhapatnam	M	77	77	74	73	75	84	82	81	78	68	70	77
	E	78	73	71	80	83	82	83	84	79	73	74	79
Nidadavole	M	79	76	77	77	73	85	86	86	85	79	77	80
	E	55	49	52	56	50	74	77	78	76	67	58	62
Sub. Div. Mean.	M	78	77	75	73	69	78	78	79	80	76	76	76
	E	62	58	59	62	60	69	70	72	73	67	63	65

	2	3	4	5	6	7	8	9	10	11	12	13	14
RAYALASEEMA													
Anantapur	M 69	54	47	52	62	69	73	74	74	76	70	72	66
	E 36	26	19	23	32	47	53	53	52	56	47	44	41
Arogyavaram	M 79	62	59	66	60	67	72	71	72	79	79	81	71
	E 47	31	26	34	38	48	57	55	54	66	64	58	48
Cuddapah	M 68	60	53	56	57	63	67	68	71	72	74	72	65
	E 54	46	36	40	41	49	58	57	61	65	71	61	53
Kurnool	M 70	57	48	49	54	69	75	75	76	74	72	72	66
	E 32	24	21	24	27	46	57	56	57	53	44	37	40
Sub. Div. Mean.	M 71	58	52	56	58	67	72	72	73	75	74	74	67
	E 42	32	25	30	35	47	56	55	56	60	57	50	45
TELANGANA													
Begampet	M 79	64	54	51	50	71	83	82	82	73	68	71	69
	E 36	35	30	31	33	54	69	70	71	58	48	42	48
Ramagundam	M 64	54	52	50	44	59	79	81	80	76	66	68	64
	E 35	26	23	23	23	42	67	69	67	58	44	41	43
Bhadrachalam	M 78	73	73	70	60	65	82	84	85	83	79	79	76
	E 41	30	29	32	30	48	69	73	74	68	56	49	50
Khammam	M 80	73	75	73	67	69	81	80	81	81	77	78	76
	E 40	33	32	31	33	49	67	70	69	66	50	44	49
Mahbubnagar	M 67	52	47	51	53	73	83	82	81	72	64	66	66
	E 37	27	24	28	31	51	68	66	66	59	46	42	45
Nizamabad	M 64	53	42	41	37	65	79	80	81	72	66	67	62
	E 32	28	21	21	22	47	68	70	68	53	41	33	42
Hanamkonda	M 75	71	66	62	51	62	77	78	79	75	69	71	70
	E 36	29	25	26	24	46	65	67	68	56	48	41	44
Sub. Div. Mean.	M 72	63	58	57	52	66	81	81	81	76	70	71	69
	E 37	30	26	27	28	48	68	69	69	60	48	42	46

M—Morning.

E—Evening.

TABLE 4

Mean Cloud amount (okta) and Mean Number of days of Clear and Overcast skies at 0830 hrs. IST.

Station		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
COASTAL ANDHRA PRADESH														
Kakinada	a	9	9	9	3	2	1	0	1	1	2	5	9	4.3
	b	0	0	0	0	1	5	10	6	4	4	2	1	2.7
	c	2.0	2.2	2.3	3.7	4.3	5.1	6.1	5.6	5.4	4.5	3.4	2.2	3.9
Rentachintala	a	7	7	9	4	3	0	0	0	0	2	3	6	3.4
	b	2	2	2	2	6	13	18	16	11	7	5	3	7.3
	c	2.5	2.5	2.2	3.2	4.2	6.5	7.0	6.6	5.9	4.8	4.0	2.9	4.4
Gannavaram	a	10	7	5	1	1	0	0	0	0	2	4	10	3.3
	b	0	1	1	1	4	11	16	13	9	5	3	2	5.5
	c	1.7	2.4	2.8	4.1	4.1	5.8	6.7	6.5	5.7	4.7	3.3	2.2	4.2
Masulipatam	a	9	7	7	3	4	2	1	1	1	3	5	10	4.4
	b	0	1	0	1	2	6	11	9	7	6	3	1	3.9
	c	2.1	2.5	2.7	3.8	3.8	5.0	5.9	5.6	5.5	4.5	3.5	2.5	3.9
Nellore	a	0	1	3	1	1	0	0	0	0	0	0	0	0.5
	b	1	1	1	1	3	8	14	10	7	5	6	3	5.0
	c	3.1	2.7	2.3	3.2	4.3	5.8	6.7	6.0	5.4	5.0	4.8	4.0	4.4
Ongole	a	11	10	12	5	7	2	1	0	1	2	5	9	5.4
	b	1	1	1	1	3	9	15	11	9	6	4	4	5.4
	c	2.1	2.1	2.3	3.2	3.4	5.0	6.2	5.8	5.4	5.0	3.8	2.9	3.9
Kalingapatam	a	10	8	9	4	2	0	0	0	1	3	7	10	4.5
	b	1	1	1	1	3	10	14	12	9	8	3	2	5.4
	c	2.6	2.8	2.7	3.6	4.4	5.9	6.4	6.2	5.8	4.9	3.6	2.7	4.3
Vishakhapatnam	a	9	9	10	4	2	0	0	0	0	2	6	9	4.3
	b	1	1	1	1	5	12	16	13	10	6	3	2	5.9
	c	2.0	2.1	2.1	3.1	4.4	6.1	6.9	6.4	5.8	4.5	3.5	2.5	4.1
Nidadavole	a	8	8	4	1	1	0	0	0	0	3	3	5	2.7
	b	2	2	2	3	5	13	18	16	12	8	5	3	7.4
	c	2.8	2.8	3.7	5.5	5.6	6.3	6.9	6.8	6.3	4.9	3.9	3.4	4.9
Sub. Div. Mean.	a	8.1	7.3	7.6	2.9	2.6	0.6	0.2	0.2	0.4	2.1	4.2	7.6	3.7
	b	0.9	1.1	1.0	1.2	3.6	9.7	14.7	11.8	8.7	6.1	3.8	2.3	5.4
	c	2.3	2.5	2.6	3.7	4.3	5.7	6.5	6.2	5.7	4.8	3.8	2.8	4.2
RAYALASEEMA														
Anantapur	a	15	14	19	10	6	3	1	1	1	3	6	10	7.4
	b	1	1	0	1	3	8	13	11	8	5	3	2	4.7
	c	1.6	1.7	1.2	2.9	4.3	5.9	6.9	6.6	5.7	5.1	3.5	2.5	4.0
Arogyavaram	a	6	8	14	4	2	1	0	0	0	1	2	5	3.6
	b	2	1	1	1	5	10	16	13	10	8	7	5	6.6
	c	3.2	3.0	1.9	3.5	5.1	6.0	6.9	6.7	5.9	6.0	4.8	4.0	4.7
Cuddapah	a	12	15	20	13	8	1	0	0	1	3	4	7	7.0
	b	1	0	0	1	2	7	14	12	9	6	6	3	5.1
	c	2.2	1.6	1.3	2.3	3.4	5.4	6.7	6.2	5.6	4.6	4.2	3.1	3.9
Kurnool	a	15	14	17	9	4	1	0	1	1	3	5	11	6.7
	b	2	1	1	2	6	13	20	18	13	8	5	3	7.7
	c	1.7	1.6	1.4	2.4	4.0	6.1	6.9	6.6	6.0	4.4	3.6	2.3	3.9
Sub. Div. Mean.	a	12.0	12.7	17.5	9.0	5.0	1.5	0.3	0.5	0.7	2.5	4.3	8.3	6.2
	b	1.5	0.7	0.5	1.3	4.0	9.5	15.7	13.5	10.0	6.7	5.3	3.3	6.0
	c	2.2	2.0	1.5	2.8	4.2	5.9	6.9	6.5	5.8	5.0	4.0	3.0	4.1

TABLE 4—Contd.

Station		Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
TELANGANA														
Begampet	a	11	12	16	7	4	0	0	0	1	4	6	10	5.9
	b	2	1	1	1	3	9	17	13	9	5	3	2	5.5
	c	2.4	2.2	1.6	2.5	3.5	5.8	7.0	6.6	5.7	4.1	3.5	2.5	3.9
Ramagundam	a	15	15	15	11	9	3	0	0	1	6	10	17	8.5
	b	2	2	2	2	3	9	16	16	12	5	3	1	6.1
	c	2.1	1.7	2.1	3.0	3.2	5.5	6.9	6.9	5.8	4.0	2.5	1.8	3.8
Bhadrachalam	a	12	10	8	4	6	1	0	0	1	5	9	10	5.5
	b	3	3	5	5	4	14	19	16	15	8	5	5	8.5
	c	2.5	2.7	3.2	4.0	3.6	5.8	6.8	6.5	6.2	4.7	3.4	3.0	4.4
Khammam	a	11	8	8	4	3	1	0	0	0	3	5	10	4.4
	b	1	1	1	1	2	7	13	10	7	4	2	2	4.3
	c	2.0	2.5	3.1	3.5	3.5	5.5	6.5	6.2	5.6	4.2	3.3	2.1	4.0
Mahbubnagar	a	16	15	18	11	6	1	0	0	1	5	8	11	7.7
	b	2	1	1	3	6	13	20	16	14	7	5	4	7.7
	c	2.1	1.9	1.6	2.8	4.1	6.4	7.1	6.8	6.2	4.4	3.6	3.1	4.2
Nizamabad	a	13	14	16	11	7	1	1	0	1	6	8	12	7.5
	b	0	0	0	0	0	4	10	8	5	2	1	0	2.5
	c	1.6	1.4	1.4	2.0	2.5	4.6	5.9	5.5	5.1	3.0	2.4	1.7	3.1
Hanamkonda	a	10	10	13	6	4	1	0	0	1	5	7	11	5.7
	b	1	1	1	1	1	5	12	9	5	2	1	1	3.3
	c	2.1	2.3	2.0	2.5	2.7	4.9	6.4	5.8	5.1	3.3	2.6	1.9	3.5
Sub.Div. Mean	a	12.6	12.0	13.4	7.7	5.6	1.1	0.1	0.0	0.9	4.9	7.6	11.6	6.5
	b	1.6	1.3	1.6	1.9	2.7	8.7	15.3	12.6	9.6	4.7	2.9	2.1	5.4
	c	2.1	2.1	2.1	2.9	3.3	5.5	6.7	6.3	5.7	4.0	3.0	2.3	3.8

(a) Days with clear sky.

(b) Days with sky overcast.

(c) Mean cloud amount.

TABLE—4 (a)

Mean Cloud Amount (okta) and Mean Number of days of Clear and Overcast Skies at 1730 hrs. IST.

Station		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
COASTAL ANDHRA PRADESH														
Kakinada	a	13	13	17	9	7	1	0	0	0	1	4	9	4.3
	b	0	0	0	0	1	4	9	5	3	4	2	1	2.4
	c	1.5	1.5	1.3	2.3	3.0	5.1	6.0	5.7	5.5	4.8	3.6	2.2	3.5
Rentachintala	a	6	6	8	4	1	0	0	0	0	1	3	5	2.8
	b	2	1	1	3	5	12	19	17	16	9	5	3	7.7
	c	2.8	2.7	2.3	3.6	4.8	6.3	7.1	6.9	6.8	5.8	4.4	3.0	4.7
Gannavaram	a	4	8	12	6	1	0	0	0	0	0	1	4	3.0
	b	1	0	0	0	4	10	15	13	10	8	4	3	5.7
	c	1.9	1.8	1.6	2.6	4.0	6.1	6.7	6.9	6.4	5.7	4.0	2.7	4.2
Masulipatam	a	9	10	16	9	6	1	0	0	0	1	3	6	5.1
	b	0	0	1	0	3	7	11	11	9	7	5	2	4.7
	c	1.5	1.5	1.2	1.9	2.8	5.1	5.9	5.8	5.6	4.9	3.9	2.6	3.5
Nellore	a	1	3	7	3	1	0	0	0	0	0	0	0	1.3
	b	1	0	0	1	3	8	14	10	7	6	5	3	4.8
	c	2.9	2.2	2.0	3.0	4.1	6.1	6.7	6.3	5.5	5.3	5.0	4.0	4.4
Ongole	a	14	15	18	11	5	1	0	0	0	1	6	10	6.7
	b	1	0	1	1	3	9	14	12	11	8	5	3	5.7
	c	1.5	1.5	1.5	2.4	3.5	5.4	6.2	6.2	5.8	5.2	3.6	2.7	3.8
Kalingapatam	a	9	8	8	3	1	0	0	0	0	1	6	10	3.8
	b	1	0	1	2	4	10	13	13	11	9	4	2	5.8
	c	2.7	2.9	2.9	4.2	4.8	6.2	6.8	6.8	6.5	5.7	3.8	2.7	4.7
Vishakhapatnam.	a	9	10	11	3	1	0	0	0	0	1	5	8	4.0
	b	1	1	2	2	5	14	17	15	13	9	5	3	7.3
	c	2.0	1.7	2.2	3.9	4.7	6.5	7.0	6.5	6.4	5.2	3.7	2.7	4.1
Nidadavole	a	5	7	6	3	3	0	0	0	0	2	3	3	2.7
	b	2	1	1	2	5	13	18	17	14	11	6	4	7.8
	c	3.3	2.7	2.6	3.5	4.4	6.5	7.1	6.9	6.8	6.0	4.6	4.0	4.9
Sub. Div. Mean.	a	7.8	8.9	11.4	5.7	2.9	0.3	0.0	0.0	0.0	0.9	3.4	6.1	3.9
	b	1.0	0.3	0.8	1.2	3.7	9.7	14.4	12.5	10.4	7.9	4.6	2.7	5.8
	c	2.2	2.1	2.0	3.0	4.0	5.9	6.6	6.4	6.1	5.4	4.1	3.0	4.2
RAYALASEEMA														
Anantapur	a	7	9	12	2	1	0	0	0	0	1	3	6	3.4
	b	0	0	0	2	5	8	14	11	8	6	3	2	4.9
	c	2.1	2.0	1.9	3.7	4.8	6.2	6.9	6.9	6.4	5.8	4.0	2.9	4.5
Arogyavaram	a	5	6	10	2	0	0	0	0	0	0	1	3	2.3
	b	1	1	0	3	7	12	16	14	11	12	6	4	7.3
	c	3.6	3.1	2.4	4.7	5.8	6.9	7.2	7.1	6.7	6.6	5.2	4.3	5.3
Cuddapah	a	9	12	16	7	4	1	0	0	0	1	3	6	4.9
	b	0	0	0	2	3	8	12	10	7	7	5	3	4.7
	c	2.6	1.9	1.9	3.2	4.1	5.7	6.6	6.3	5.8	5.4	4.6	3.5	4.3
Kurnool	a	9	10	11	3	2	1	0	0	0	1	4	9	4.2
	b	2	1	1	3	5	14	20	18	15	10	6	3	8.2
	c	2.3	2.1	2.1	3.5	4.2	6.3	7.1	6.8	6.4	5.4	4.1	2.8	4.4
Sub. Div. Mean.	a	7.5	9.3	12.3	3.5	1.7	0.5	0.0	0.0	0.0	0.7	2.7	6.0	3.7
	b	0.7	0.5	0.3	2.5	5.0	10.5	15.5	13.3	10.3	8.7	5.0	3.0	6.3
	c	2.7	2.3	2.1	3.8	4.7	6.3	6.9	6.8	6.3	5.8	4.5	3.4	4.6

TABLE 4(a)—Contd.

Station		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual.	
TELANGANA															
Begampet	a	9	9	10	2	1	0	0	0	0	1	5	9	3.8	
	b	0	0	0	1	2	8	15	13	10	4	2	1	4.7	
	c	2.1	2.1	2.1	3.7	4.4	6.2	7.0	6.7	6.4	4.8	3.7	2.5	4.3	
Ramagundam	a	11	12	12	5	3	0	0	0	0	2	9	12	5.5	
	b	1	0	1	2	2	7	13	14	9	4	2	1	4.7	
	c	2.0	1.9	2.5	3.8	4.1	5.5	6.6	6.5	6.0	4.6	2.8	2.0	4.0	
Bhadrachalam	a	12	12	13	6	4	1	0	0	0	3	9	11	5.9	
	b	1	1	2	2	5	15	21	21	16	10	4	2	8.3	
	c	2.3	2.2	2.3	3.5	4.5	6.6	7.2	7.2	6.7	5.2	3.3	2.7	4.5	
Khammam	a	7	7	10	4	1	0	0	0	0	1	3	7	3.3	
	b	0	0	1	1	3	8	15	13	9	6	3	1	5.0	
	c	2.2	2.2	2.0	3.1	4.3	6.2	7.0	6.9	6.5	5.7	3.7	2.7	4.4	
Mahbubnagar	a	12	13	14	4	2	0	0	0	0	2	6	9	5.2	
	b	2	1	1	4	7	16	21	20	17	11	7	5	9.3	
	c	2.3	1.9	1.9	3.9	5.1	6.7	7.4	7.3	6.8	5.3	3.9	3.2	4.6	
Nizamabad	a	9	10	10	4	2	1	0	0	1	2	6	10	4.6	
	b	0	0	0	1	1	4	10	7	4	1	0	0	2.3	
	c	2.0	1.7	2.2	2.9	3.3	5.1	6.3	5.7	5.5	4.3	2.6	2.0	3.6	
Hanamkonda	a	10	10	12	5	2	0	0	0	0	2	6	10	4.7	
	b	0	0	0	0	1	5	12	9	7	3	1	1	3.3	
	c	1.6	1.6	1.8	2.5	3.2	5.3	6.5	6.0	5.8	3.5	2.7	2.1	3.5	
Sub. Div. Mean.	a	10.0	10.4	11.6	4.3	2.1	0.3	0.0	0.0	0.1	1.9	6.3	9.7	4.7	
	b	0.6	0.3	0.7	1.6	3.0	9.0	15.3	13.9	10.3	5.6	2.7	1.6	5.4	
	c	2.1	1.9	2.1	3.3	4.1	5.9	6.9	6.6	6.2	4.8	3.2	2.5	4.1	
(a) Days with clear sky.		(b) Days with sky overcast.					(c) Mean cloud amount.								

TABLE—5

Mean Rainfall (mm) and Number of rainy days

District		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
COASTAL ANDHRA PRADESH														
East Godavari	a	5.8	13.0	12.8	25.3	52.1	133.6	203.0	174.8	186.5	214.0	108.1	8.6	1137.6
	b	0.4	0.8	0.7	1.6	3.0	6.9	12.0	10.0	9.4	8.0	3.8	0.5	57.1
Guntur	a	5.9	11.3	9.5	17.8	42.8	90.2	133.9	138.0	128.8	140.3	83.2	12.1	813.8
	b	0.4	0.7	0.5	1.2	2.5	5.7	9.4	8.3	8.4	6.7	4.0	0.7	48.5
Krishna	a	6.4	11.1	11.6	18.4	41.8	108.4	185.3	165.8	159.6	157.8	88.2	8.0	962.4
	b	0.4	0.6	0.6	1.1	2.4	6.5	11.5	9.9	8.9	6.6	3.6	0.5	52.6
Nellore	a	36.9	9.8	9.7	15.0	39.6	41.8	73.6	75.5	102.9	251.9	293.5	92.4	1042.6
	b	1.4	0.5	0.4	0.8	1.6	3.3	5.9	5.5	5.8	8.9	8.8	3.4	46.3
Prakasam	a	8.7	9.5	9.9	15.8	38.7	50.0	87.5	87.2	124.0	170.7	134.8	23.0	759.8
	b	0.6	0.6	0.5	1.0	2.3	3.9	7.2	6.1	7.0	7.2	5.3	1.2	42.9
Srikakulam	a	7.5	18.6	14.0	33.7	63.1	127.6	158.3	186.7	200.1	179.7	74.1	11.4	1074.8
	b	0.5	1.2	0.9	2.2	3.6	7.3	9.8	10.4	10.0	6.9	2.6	0.5	55.9
Vishakhapatnam	a	7.8	20.7	14.8	36.0	65.0	115.5	138.8	144.2	190.9	199.6	87.8	11.5	1032.0
	b	0.6	1.3	1.0	2.3	3.6	6.9	9.5	8.9	9.7	7.9	3.2	0.6	55.5
West Godavari	a	4.4	11.2	10.8	20.7	46.1	137.4	220.9	192.4	177.2	173.3	80.0	7.3	1081.7
	b	0.3	0.7	0.6	1.3	2.7	7.0	13.0	11.0	9.5	7.5	3.5	0.5	57.6
Sub. Div. Mean	a	10.4	13.1	11.6	22.8	48.7	100.6	150.2	145.6	158.7	185.9	118.7	21.8	988.1
	b	0.6	0.8	0.7	1.4	2.7	5.9	9.8	8.8	8.6	7.5	4.3	1.0	52.1
RAYALASEEMA														
Anantapur	a	3.5	5.0	4.3	19.2	54.3	47.0	53.2	78.8	131.8	92.8	46.3	7.9	544.1
	b	0.3	0.3	0.3	1.4	3.5	3.4	4.5	5.1	6.8	5.3	3.1	0.6	34.6
Chittoor	a	20.3	7.3	10.4	24.0	62.4	56.4	79.1	102.2	126.8	149.3	143.2	46.0	827.5
	b	1.2	0.4	0.6	1.5	3.3	3.9	5.5	6.2	6.5	7.4	6.6	2.5	45.6
Cuddapah	a	9.5	3.5	6.0	15.4	44.9	58.3	84.8	97.0	132.9	114.4	95.3	23.5	685.5
	b	0.6	0.2	0.3	1.2	2.7	4.2	6.3	6.5	7.3	6.6	5.0	1.7	42.6
Kurnool	a	3.3	5.8	5.5	17.7	36.9	70.9	101.7	103.1	149.6	84.7	33.7	4.4	617.3
	b	0.2	0.4	0.3	1.4	2.8	4.9	7.7	7.2	8.1	4.9	2.3	0.4	40.6
Sub. Div. Mean	a	9.2	5.4	6.6	19.1	49.6	58.2	79.7	95.3	135.3	110.3	79.6	20.5	668.8
	b	0.6	0.3	0.4	1.4	3.1	4.1	6.0	6.3	7.2	6.1	4.3	1.3	41.1

TABLE 5—Contd.

District		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
TELANGANA														
Adilabad	a	6.6	19.1	13.3	17.5	14.0	155.6	307.6	211.1	174.5	52.1	20.1	3.6	995.1
	b	0.5	1.4	1.1	1.4	1.3	8.6	15.7	11.7	9.8	3.0	1.3	0.4	56.2
Hyderabad	a	4.3	9.3	11.8	26.1	27.5	112.6	158.9	143.0	186.2	60.5	24.9	4.8	769.9
	b	0.3	0.8	0.8	1.9	2.0	6.8	11.0	9.3	9.7	3.7	1.5	0.4	48.2
Karimnagar	a	5.0	21.9	11.7	23.1	22.2	137.7	251.6	178.7	173.8	64.6	20.5	3.4	914.2
	b	0.4	1.4	0.8	1.3	1.5	7.5	14.1	10.5	8.9	2.9	1.3	0.2	50.8
Khammam	a	4.1	14.9	12.4	28.8	38.6	140.5	283.0	209.9	180.6	94.9	33.0	5.7	1046.4
	b	0.2	0.9	0.8	1.9	2.3	7.8	14.8	11.7	9.2	5.4	2.1	0.3	57.4
Mahbubnagar	a	3.8	7.4	6.1	16.3	26.2	93.0	138.3	126.5	160.3	67.7	25.3	2.4	673.3
	b	0.2	0.4	0.5	1.2	2.0	5.8	10.7	9.2	8.7	4.0	1.4	0.2	44.3
Medak	a	3.7	14.0	12.9	24.9	21.7	147.3	226.2	191.8	186.1	50.5	18.7	5.9	903.7
	b	0.3	1.1	0.9	1.8	1.7	8.5	13.5	11.6	10.2	3.3	1.4	0.2	54.5
Nalgonda	a	2.7	9.4	8.9	25.7	29.6	100.4	129.9	120.3	156.8	90.6	29.9	7.1	711.3
	b	0.3	0.7	0.7	1.8	1.8	6.3	10.3	8.1	8.7	4.9	2.3	0.4	46.3
Nizamabad	a	5.2	19.8	12.6	17.8	11.7	149.4	283.5	240.8	208.7	54.4	16.4	3.4	1023.8
	b	0.4	1.3	1.0	1.3	1.1	8.7	15.9	12.5	9.7	3.0	1.2	0.3	56.4
Warangal	a	6.0	17.5	11.4	25.5	34.9	157.2	277.2	202.3	188.6	67.7	23.4	4.1	1015.8
	b	0.4	1.0	0.7	1.8	1.9	8.3	15.7	11.9	9.7	3.9	1.8	0.3	57.4
Sub. Div. Mean	a	4.6	14.8	11.2	22.9	25.2	132.6	228.5	180.5	179.5	67.0	23.6	4.5	894.9
	b	0.3	1.0	0.8	1.6	1.7	7.6	13.5	10.7	9.4	3.8	1.6	0.3	52.3

(a) Mean rainfall.

(b) Mean number of rainy days (days with rain of 2.5 mm or more).

CHAPTER II
DISTRICT CLIMATOLOGICAL SUMMARIES

C O A S T A L A N D H R A P R A D E S H

EAST GODAVARI DISTRICT

The climate of this district is characterised by high humidities nearly all the year round, and oppressive summer season and good seasonal rainfall. The summer season is from March to May. This is followed by the southwest monsoon season lasting up to September. October and November constitute the post monsoon or retreating monsoon season. December to February is the season of generally fine weather.

Rainfall

Records of rainfall in the district are available for 16 raingauge stations for sufficiently long periods. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is 1137.6 mm. In the southern portion of the district south of the line joining Rajahmundry and Kakinada the rainfall gradually decreases from the southwestern coast towards the interior. But in the northern portion of the district the rainfall rapidly increases as one proceeds from the coast towards the interior. Both the southwest monsoon and the retreating monsoon bring rains to the district. The rainfall during the southwest monsoon months, June to September amounts to about 61 per cent of the annual rainfall and that during the retreating monsoon constitutes about 28 per cent of the annual rainfall. October is the rainiest month. In the fifty year period, 1901 to 1950, the highest annual rainfall amounting to 139 per cent of the normal occurred in 1916. The lowest annual rainfall which was 63 per cent of the normal occurred in 1905. During this 50 year period the annual rainfall in the district was less than 80 per cent of the normal in 9 years of which two were consecutive. But at some stations, two consecutive years of such low rainfall occurred more than once. Even 3 consecutive years of such low rainfall occurred once or twice at five stations in the district. At Mummdivaram the rainfall in four consecutive years 1911--1914 was less than 80 per cent of the normal. It will be seen from table 2 that the annual rainfall in the district was between 900 and 1400 mm *i.e.* roughly within 20 per cent of the normal in 35 years out of 50.

On an average there are 57 rainy days (*i.e.* days with rainfall of 2.5 mm or more) in a year in the district. This number varies from 53 at Tuni to 68 at Chodavaram.

The highest rainfall in 24 hours recorded at any station in the district was 508.0 mm at Amalapuram on 6th September 1895.

Temperature

The only meteorological observatory in the district is at Kakinada and the records of this observatory may be taken as fairly representative of the meteorological conditions prevailing over the coastal regions of the district. In the interior of the district the temperatures in summer are about 2 to 3°C higher than in the coastal region. From February temperatures rise rapidly till May which is the hottest month with the mean daily maximum temperature at about 37°C and the mean daily minimum at about 28°C. The heat is very trying particularly in the coastal region where humidities are generally higher. In May and the early part of June before the onset of the monsoon maximum temperatures may on some days go above 46°C. The sea breezes afford some relief during the afternoons in the coastal areas. The thunder showers which occur on some days during the afternoons bring welcome relief. With the onset of the monsoon temperatures decrease appreciably in June but remain steady thereafter till September; and the weather is comparatively milder. After the withdrawal of the southwest monsoon early in October temperatures begin to decrease progressively. December is the coolest part of the year with the mean daily maximum temperature at about 27°C and the mean daily minimum at 19°C.

The highest maximum temperature recorded at Kakinada was 47.2°C on 8th June, 1923 and the lowest minimum was 13.9°C on 29th December 1902.

Humidity

The air is generally humid throughout the year. But in the interior of the district the humidities are slightly less than in the coastal regions.

Cloudiness

Skies are generally heavily clouded to overcast during the southwest monsoon season. There is moderate cloudiness in the post monsoon season. In the rest of the year skies are mostly clear or lightly clouded.

Winds

Winds are light to moderate in speed with some strengthening during the early southwest monsoon and in November. In the period October to February winds are northerly or northeasterly in the mornings and are from directions between northeast and southeast in the afternoons. In the summer season winds from directions between southeast and southwest are most common. In the southwest monsoon season winds are from the southwest or west.

Special Weather Phenomena

Storms and depressions originating in the Bay of Bengal during the post monsoon season cross the east coast in the neighbourhood of the district causing widespread heavy rain and strong winds. Thunderstorms occur during the period March to November. The interior of the district experiences more thunderstorms than in the coastal region.

Tables 3, 4 and 5 give the temperature and humidity, mean wind speed and special weather phenomena for Kakinada.

GUNTUR DISTRICT

The district has a hot climate, the summer specially being very trying. The year may be conveniently divided into four seasons. The summer season starts by about March and continues till May. The southwest monsoon season follows thereafter and extends upto September. Northeast monsoon sets in by mid-October. During the period the coastal belt is particularly liable to damages due to cyclonic storms. The period from December to February is the cold weather season of generally fine weather.

Rainfall

Records of rainfall are available for 13 stations for fairly long periods for most of the stations. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is about 81 cms. The rainfall in general, decreases from the east to the west in the district. It varies from about 65 cms. in the west to about 100 cms in the east. Both the southwest monsoon and the north east monsoon bring rains to the district. While the rainfall in the monsoon season accounts for 60 per cent of the annual total, the rainfall in the north east monsoon season amounts to about 27 per cent. October is the rainiest month. In the rest of the months May gets the maximum rain. January is the least rainy month. The variation in the rainfall in the district from year to year is appreciable. In the fifty year period from 1901 to 1950 the highest annual rainfall amounting to 161 per cent of the normal was received in 1903. The lowest rainfall which was 64 per cent of the normal occurred in 1904. In 9 years out of fifty, the district received rainfall of less than 80 per cent of the normal, two of them being consecutive years. Two consecutive years of such low rainfall have occurred twice or thrice at most of the stations, and three consecutive years of such low rainfall have occurred at Bapatla. Even six consecutive years of rainfall less than 80 per cent of the normal (1904—09) have occurred once at Repalle. It will be seen from table 2 that in 34 years out of fifty the rainfall was between 600 and 1000 mm *i.e.* within 25 per cent of the annual normal.

On an average there are 49 rainy days (*i.e.* days with rainfall of 2.5 mm or more) in a year. 66 per cent of these occur during June-September and 22 per cent during October-November. This number varies from 41 (about 85 per cent of the average) at Macherla in the west to 54 (about 112 per cent of the average) at Tenali in the east.

The highest rainfall in 24 hours recorded in the district was 386.1 mm on 19th November 1879 at Sattenapalli.

Temperature

The district has one meteorological observatory at Rentachintala. The meteorological data for Rentachintala may be taken as representative of conditions in the interior of the district. In the interior, the day temperatures are higher by 3 to 5 degrees celsius in summer and the night temperatures lower by 2 or 3 degrees celsius in the winter, than in the coastal parts. From February temperatures rise till May which is the hottest month when the mean maximum temperature is about 42°C in the interior and about 38°C over the coastal region while the mean minimum temperature is about 29°C and 28°C over these parts respectively. The heat during the summer months is very trying; in the coastal regions, however, sea breeze in the late afternoons gives a little relief. Temperatures decrease with the onset of the southwest monsoon more rapidly over the interior than over the coast. They continue to decrease further till December or January which is the coolest part of the year, when the mean maximum temperature is about 30°C in the interior and about 29°C in the coastal parts, the mean minimum temperature being 17°C and 20°C respectively over these regions.

The highest maximum temperature recorded was 47.2°C at Rentachintala on 18th May 1948 and on 3rd June 1953. The lowest minimum temperature recorded was 10.0°C on 31st December 1936 at Rentachintala.

Humidity

The coastal region is humid throughout the year. In the interior humidities are much lower particularly in the afternoons in winter and the summer seasons when the range between 30 to 40 per cent.

Cloudiness

Skies are generally heavily clouded to overcast during the southwest monsoon season. There is moderate cloudiness in the northeast monsoon season. In the rest of the year, skies are mostly clear or lightly clouded.

Winds

Winds are light to moderate in speed except in late summer and early southwest monsoon season when they strengthen. In the period October to March, winds are variable in direction in the mornings and from directions between north and southeast in the afternoons, in the interior, while over the coastal belt winds in the morning are variable in October and February and north to north-easterly during November to January. They are mostly northeasterly to southeasterly in the afternoons during October to February. In March and April the directions are between east and south. Southwesterly to northwesterly winds appear over the interior in May and over the coastal parts in June and these continue in the southwest monsoon season.

Special Weather Phenomena

Storms and depressions originating in the Bay of Bengal during the post monsoon season cross the east coast in the neighbourhood of the district, causing widespread heavy rain and strong winds. Thunderstorms occur mostly during April to October and coast may be affected by associated tidal waves. The frequency of thunderstorms increase from coast to the interior.

Tables 3, 4 and 5 give the temperature and humidity, mean wind speed and frequency of special weather phenomena for Rentachintala.

KRISHNA DISTRICT

The climate of this district is characterised by an oppressive summer and good seasonal rainfall. The year may be divided into four seasons. The period from March to May is the summer season. This is followed by the southwest monsoon season which continues till September. October and November constitute the post monsoon or retreating monsoon season. December to February is the season of generally fine weather.

Rainfall

Records of rainfall in the district are available for 13 rain gauge stations for long periods. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is 962.4 mm. The rainfall generally increases from the west towards the east. The district receives rain both in the southwest and retreating monsoon seasons. The rainfall in the southwest monsoon season amounts to about 64 per cent of the annual rainfall and that during the retreating monsoon period about 26 per cent of the annual rainfall. Although considering the district as a whole July is the rainiest month in the coastal region October is the rainiest month. In the fifty year period from 1901 to 1950 the highest annual rainfall amounting to 154 per cent of the annual normal occurred in 1916, while the lowest annual rainfall which was 60 per cent of the normal occurred in 1905. In the same 50 year period the annual rainfall was less than 80 per cent of the normal in 10 years, two of them being consecutive. But at individual stations, two consecutive years of such low rainfall have occurred twice or thrice at most stations. Even 3 consecutive years of such low rainfall occurred during the period 1907-1909 at Vijayavada, Gudivada and Gannavaram. At Pandraka the four consecutive years 1905-1908 were years of rainfall less than 80 per cent of the normal. It will be seen from table 2 that the annual rainfall in the district was between 700 and 1200 mm *i.e.* within about 25 per cent of the normal in 40 years out of 50.

On an average there are 53 rainy days (*i.e.* days with rainfall of 2.5 mm or more) in a year in the district. Except in the western most corner of the district where the number of rainy days is about 48 it is more or less uniform in the rest of the district and is about 54 days.

The heaviest annual rainfall in 24 hours recorded at any station in the district was 502.4 mm at Bandar on 26th October 1949.

Temperature

There are two meteorological observatories one at Gannavaram and the other at Masulipatam in the district. The records of the observatory at Gannavaram may be taken as representative of the climatological conditions in the interior of the district and those of Masulipatam as representative of the conditions in the coastal region. From February temperatures begin to rise and by May, the hottest month, the mean daily maximum temperature is about 37°C at Masulipatam, and about 40°C at Gannavaram while the mean minimum temperature is about 28°C at both the places. The heat is very trying during this season. But in the coastal tracts the afternoon sea breezes bring a little relief. Thunderstorms which occur on a few days in the coastal region and more often in the interior also bring temporary relief from the heat. After the onset of the southwest monsoon in June the day temperatures decrease appreciably particularly over the interior and the weather is comparatively milder. After the withdrawal of the monsoon early in October, temperatures decrease gradually. December and January are usually the months with the lowest temperatures during the year. In the coastal region the mean daily maximum temperature in these two months is about 28°C while the mean daily minimum is about 19°C. But in the interior of the district the maximum temperature is on the average a couple of degrees higher than in the coastal tracts while the minimum temperature is about the same.

The highest maximum temperature recorded was 47.8°C on 25th May 1906 at Masulipatam and 46.7°C on 10th May 1956 and 11th June 1953 at Gannavaram. The lowest minimum was 13.9°C at Masulipatam on 10th November 1934 and 7th January 1945 while at Gannavaram it was 14.2°C on 20th December 1953.

Humidity

The relative humidities are generally high throughout the year particularly in the coastal region. But in the interior during the period February to June the relative humidities in the afternoons are between 40 and 50 per cent.

Cloudiness

Skies are generally heavily clouded to overcast during the southwest monsoon season. There is moderate cloudiness in the post monsoon season. In the rest of the year the skies are mostly clear or lightly clouded.

Winds

Winds are generally light with some strengthening in force during the summer and southwest monsoon seasons. In the period October to February winds blow mostly from the north or northeast in the mornings while the afternoon winds are southeasterly or easterly. In the summer season winds are mainly from directions between southeast and southwest. During the southwest monsoon season the winds blow mainly from directions between the southwest and northwest.

Special Weather Phenomena

Storms and depressions originating in the Bay of Bengal in the post monsoon season cross the east coast of the district or its neighbourhood causing widespread heavy rain and strong winds. Thunderstorms occur during the period March to November being more common in the interior of the district.

Tables 3, 4 and 5 give the temperature and humidity, mean wind speed and special weather phenomena for Masulipatam and Gannavaram.

TABLE 5

Special Weather phenomena

*Mean No. of days with	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
MASULIPATAM													
Thunder	0	0.1	0.4	1.3	2	4	3	4	5	7	1.4	0	28
Hail	0	0	0	0	0	0	0	0	0	0	0	0	0
Dust-Storm	0	0	0	0.1	0.1	0.1	0	0	0	0	0	0	0.3
Squall	0	0	0	0	0.2	0	0	0	0	0	0	0	0.2
Fog	0.3	0.2	0.5	0	0	0	0	0	0	0	0	0	1.0
GANNAYARAM													
Thunder	0	0.2	1.2	3	8	6	5	5	10	8	2	0.1	49
Hail	0	0	0.1	0	0	0	0	0	0	0	0	0	0.1
Dust-Storm	0	0	0	0.1	0.4	0	0	0	0	0	0	0	0.5
Squall	0	0	0.1	0.2	0.4	0.1	0.5	0.3	0.1	0.1	0	0	1.8
Fog	0.4	3	0.9	0.2	0	0	0	0.1	0.1	0.1	0.1	0.4	5.5

*No. of days 2 and above are given in whole numbers.

NELLORE DISTRICT

The district has a hot climate, the summer specially being very trying. The year may conveniently be divided into four seasons. The summer season from March to May is followed by the southwest monsoon season till September. October to December constitute the northeast monsoon season, which sets in by mid-October. During this period the coastal belt is particularly liable to damage due to cyclonic storms. January to February is the cold weather period of generally fine weather.

Rainfall

Records of rainfall in the district are available for 11 stations for long periods. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is about 104 cms. The rainfall in the district, in general decreases from the southeast towards the northwest and varies from 81 cms at Atmakur to 126 cms at Tada near the southeastern corner of the district. The rainfall is even less than 75 cms in the extreme west and northwest of the district. The district gets the benefit of rainfall both in the southwest and the northeast monsoon seasons. The rainfall during the southwest monsoon season amounts to about 30 per cent of the annual normal rainfall while about 60 per cent of the annual rainfall is received during the northeast monsoon season. The period January to April is dry. October and November are the rainiest months each month receiving more than 25 per cent of the annual total. The onset of the northeast monsoon in October is noticeable in this district when the rainfall increases from 10 cms in September to 25 cm in October. February and March are the driest months, while January and May each get small but significant amount of rainfall. The variation in the rainfall in the district from year to year is appreciable. In the fifty year period 1901 to 1950 the highest annual rainfall amounting to 156 per cent of the normal occurred in 1946. The lowest annual rainfall which was 51 per cent of the normal occurred in 1904. The annual rainfall in the district was less than 80 per cent of the normal in 12 years. Two consecutive years of low rainfall in the district as a whole occurred thrice in the district; considering the rainfall at the individual stations also, two consecutive years of such low rainfall occurred 2 to 5 times at 13 out of 16 stations and three consecutive years occurred once each at Sulturpet and Venkatagiri. It will be seen from table 2 that the annual rainfall in the district was between 800 and 1200 mm *i.e.* within about 20 per cent of the normal in only 28 years out of fifty.

On an average there are 46 rainy days (*i.e.* days with rainfall of 2.5 mm or more) in a year in the district, of these 45 per cent is accounted for by each of the seasons June to September and October to December. As in the case of rainfall, the number of rainy days decreases generally from the southeast towards the northwest in the district. It varies from about 41 to 81 per cent of the average for Atmakur to 54 (or 117 per cent of the average) for Tada.

The highest rainfall in 24 hours recorded at any station in the district was 419.9 mm at Tada on 8th October 1943.

Temperature

The only meteorological observatory in the district is at Nellore and the records of this observatory may be taken as fairly representative of the meteorological conditions prevailing in the district. In the interior parts of the district the day temperatures may be higher and the night temperatures lower by a degree or two, than in the coastal parts. From February the day temperatures progressively increase and by May which is the hottest month, the mean maximum temperature is about 40° C and the mean minimum 28° C. The heat during the summer months is trying. In the coastal region sea breeze in the afternoons bring some relief from the heat. After June there is some decrease in temperatures. After September temperatures decrease further and by December, which is the coolest month, the mean daily maximum temperature is of the order of 29° C and the mean daily minimum about 20° C.

The highest maximum temperature recorded at Nellore was 46.7° C on 15th May 1892 and 1st June 1894. The lowest minimum was 14.4° C on 10th December 1895.

TABLE 4
Mean Wind Speed in Km/hr
 (NELLORE)

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
5.4	6.4	8.6	10.0	10.3	9.8	9.6	9.2	7.7	5.6	6.0	6.1	7.9

TABLE 5
Special Weather phenomena
 (NELLORE)

*Mean No. of days with	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Thunder . . .	0	0.1	0.5	1.2	2	1.7	1.3	3	3	4	1.4	0.1	18
Hail . . .	0	0	0	0	0	0	0	0	0	0	0	0	0
Dust-Storm . . .	0	0	0	0	0.1	0	0	0	0	0	0	0	0.1
Squall . . .	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0.4
Fog . . .	0.1	0	0	0	0	0	0	0	0	0	0.2	0	0.3

*No. of days 2 and above are given in whole numbers.

CLIMATE OF PRAKASAM DISTRICT

The district has a hot climate, the summer specially being trying. The year may be divided into four seasons. The summer season starts by about March and continues till May. This is followed by the southwest monsoon season which extends upto September. October and November form the northeast monsoon season. Northeast monsoon rains set in by mid-October. During this season, coastal belt is liable to damages due to cyclonic storms. The cold weather period from December to February is a season of generally fine weather.

Rainfall

Records of rainfall for fairly long periods are available in respect of 14 stations. Details of rainfall at these stations are given in tables 1 and 2. The average annual rainfall in the district is about 76 cms. The rainfall in general increases from west to east varying from about 60 cm in the west to slightly over 90 cm in the east. Both the southwest and the northeast monsoons bring rains to this district. For the district as a whole, the rainfall during June to September is about 45 per cent of the annual and 40 per cent during October and November. October is generally the rainiest month and about 22 per cent of the average annual rainfall occurs during the month. Rainfall rapidly decreases in December. January is generally the driest month. In the rest of the months, May receives significant rainfall. During the 50 year period 1901—50 the highest annual rainfall amounting to 146 per cent of the annual total occurred in 1917 and the lowest one of 61 per cent occurred in 1925. In 12 years out of 50 the district received less than 80 per cent of the normal rainfall. Of these 12 years, there were 3 spells of 2 consecutive years. Two consecutive years of such low rainfall have occurred twice or thrice at most of the stations, the three consecutive years of less than 80 per cent of normal occurred once each at Chinaganjam and Kanuparthi. Such low rainfall for four consecutive years occurred at Kumbum. It would be seen from table 2 that the rainfall was within 25 per cent of the normal (i.e. between 600 and 900mm) during 23 years out of 50.

Heaviest rainfall in 24 hours recorded at any station in the district was 304.8-mm at Pakala on 29th October, 1939.

On an average there are 43 rainy days (i.e. days with rainfall of 2.5 mm or more); of these 56 per cent occurs during the period June to September and 29 per cent during October-November. The number varies from 37 at Podilli and Darsi to 47 at Santaravur i.e. from 86 per cent to 109 per cent of the average.

Temperature

The district has one meteorological observatory at Ongole. This may be taken as representative of the conditions in coastal regions of the district. The temperatures begin to rise from February to May. May is the hottest month, when the mean maximum temperature is about 38° C over the coastal region and 42° C in the interior, the mean minimum being at 28° C or 29° C everywhere. The heat during the summer is very trying particularly in the interior of the district. The coastal regions get some relief due to the effect of the sea breeze in the late afternoons. Temperatures decrease with the onset of the southwest monsoon more rapidly over the interior than over the coast. They continue to decrease till December or January which are the coolest months of the year with the mean maximum temperature at about 29-30° C over the district and the mean minimum at about 20° C over the coastal belt and 17° C in the interior. Generally speaking, in the interior day temperatures are higher by 3-5° C in summer and night temperatures lower by 2 or 3° C in winter than in the coastal parts.

The highest maximum temperature recorded at Ongole was 46.6° C on 30 May 1964 and the lowest minimum temperature recorded was 14.0° C on 6th January 1962. In the interior, maximum temperature may occasionally reach 48° C in summer, while the minimum may touch 10° C in winter.

TABLE 4
Mean Wind Speed in Km/hr.
 (ONGOLE)

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
5.0	6.5	8.4	9.8	10.3	11.6	10.7	10.3	6.8	4.4	4.9	4.7	7.8

TABLE 5
Special Weather phenomena
 (ONGOLE)

*Mean No. of days with	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Thunder . . .	0	0.1	0.3	1.3	4	3	1.7	1.9	3	4	1.1	0.1	21
Hail . . .	0	0	0	0	0	0	0	0	0	0	0	0	0
Dust-Storm . . .	0	0	0	0	0.1	0.3	0	0	0.1	0	0	0	0.5
Squall . . .	0	0	0	0	0.1	0.1	0.3	0	0.1	0.1	0	0.1	0.8
Fog . . .	0	0.1	0.4	0	0	0	0	0	0	0.1	0.3	0.2	1.1

*No. of days 2 and above are given in whole numbers.

SRIKAKULAM DISTRICT

The climate of this district is characterised by high humidities nearly all the year rounds oppressive summer and good seasonal rainfall. The summer season is from March to May. This is followed by the southwest monsoon season which lasts till September. The period from October to November constitutes the post-monsoon or retreating monsoon season. December to mid February is the season of generally fine weather.

Rainfall

Records of rainfall in the district are available for 13 rain gauge stations for long periods. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is 1074.8 mm. The rainfall in the district increases in general from the southeast towards the northwest and varies from 854.4 mm at Kuppili near the coast in the southeastern corner of the district to 1286.2 mm at Parvatipur near the north-western border of the district. The rainfall during the period June to October, amounts to about 79 per cent of the annual normal rainfall. September is the rainiest month. The variation in the annual rainfall from year to year is not large. In the fifty year period, 1901-1950, the highest annual rainfall amounting to 136 per cent of the normal occurred in 1914, while the lowest annual rainfall which was 70 per cent of the normal occurred in 1920. In the same fifty year period the rainfall in the district was less than 80 per cent of the normal in six years, two of them being consecutive. Considering the rainfall at individual stations, two or three consecutive years of such low rainfall occurred more than once at seven out of the thirteen stations. It will be seen from table 2 that the annual rainfall in the district was between 900 and 1300 mm i.e. within 20 per cent of the normal in as many as 31 years out of fifty.

On an average there are 56 rainy days (i.e. days with rainfall of 2.5 mm or more) in a year in the district. This number varies from 47 at Kuppili to 71 at Parvatipur.

The heaviest rainfall in 24 hours recorded at any station in the district was 464.8 mm at Chepurupalli on 22nd October 1870

Temperature

There is a meteorological observatory at Kalingapatam and the records of this observatory may be taken as fairly representative of the meteorological conditions prevailing in the district in general. But in the interior of the district particularly the northwestern portions, temperature in the summer season may be higher by a degree or two than in the coastal regions. In the coolest part of the year, December to January, temperatures may be a little lower in the interior. Temperatures begin to increase after February. May is the hottest month with the mean daily maximum temperature at about 34° C and the mean daily minimum at about 27° C at Kalingapatam. During the summer season till the onset of the southwest monsoon the heat is oppressive and the day temperatures in May and June sometimes reach 43° C even in the coastal regions. It is likely to be hotter in the interior parts of the district. Thundershowers and sea breezes in the afternoons in the coastal tracts bring some relief from the heat. With the onset of the southwest monsoon by about the middle of June day temperatures decrease initially and remain more or less steady during July to September. The decrease in the night temperatures is only slight. After the withdrawal of the southwest monsoon by about the middle of October both day and night temperature decrease progressively. December is the coldest month with the mean daily maximum temperature at about 27° C and the mean daily minimum at about 18° C.

The highest maximum temperature recorded at Kalingapatam was 45.0° C on 7th May 1923. The lowest minimum was 12.1° C on 6th January 1962.

Humidity

The air is generally humid throughout the year. In the interior parts of the district the air is slightly less humid than in the coastal parts, especially in the summer season.

TABLE 4
Mean Wind Speed in Km/hr.
 (KALINGAPATAM)

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
9.6	9.5	11.6	15.1	17.0	15.0	14.0	11.8	9.1	10.0	11.2	11.3	12.1

TABLE 5
Special Weather Phenomena
 (KALINGAPATAM)

*Mean No. of days with	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Thunder . . .	0.9	0.6	0.6	1.7	2	3	2	3	5	1.5	0.4	0.3	21
Hail	0	0	0	0	0	0	0	0	0	0	0	0	0
Dust-Storm . . .	0	0	0	0.8	0.7	0	0	0	0	0	0	0	1.5
Squall	0	0	0	0	0	0	0	0	0	0	0	0	0
Fog	3	1.5	1.2	0.2	0.8	0.2	0	0	0	0	0.4	1.0	8

*No. of days 2 and above are given in whole numbers.

VISAKHAPATNAM DISTRICT

The climate of this district is characterised by high humidities nearly all the year round, oppressive summer and good seasonal rainfall. The climate of the hilly parts of the district to the west and northwest is different from that of the plains, the hilly regions getting heavier rainfall are cooler than the plains. The summer season is from March to May. This is followed by the southwest monsoon season which continues up to September. October and November constitute the post monsoon or retreating monsoon season. December to February is the season of generally fine weather.

Rainfall

Records of rainfall in the district are available for 15 rain gauge stations for long periods for most of them. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is 1032.6 mm. The rainfall in the district increases from the coastal region towards the west and northwestern parts of the district which are hilly. The district gets rain both during the southwest monsoon and retreating monsoon season. The rainfall during the southwest monsoon months June to September amounts to 57 per cent of the annual normal rainfall and that during the post monsoon months of October and November amounts to 28 per cent of the annual normal. September and October are the rainiest months each of which accounts for about 19 per cent of annual rainfall. Significant rain of about 10 per cent also occurs during the premonsoon months of April and May. The variation in the annual rainfall from year to year is small. During the fifty year period, 1901 to 1950 the highest annual rainfall in the district as a whole amounting to 136 per cent of the normal occurred in 1931. The lowest annual rainfall which was 60 per cent of the normal rainfall occurred in 1935. The annual rainfall in the district was less than 80 per cent of the normal in 8 years, two of them being consecutive. Two or three consecutive years of rainfall less than 80 per cent of the normal occurred more than once at 7 out of the 15 stations. It will be seen from table 2 that the annual rainfall in the district was between 800 and 1300 mm i.e. within about 26 per cent of the normal in as many as 41 years out of 50.

On an average there are 55 rainy days (i.e. days with rainfall of 2.5 mm or more) in a year in the district. This number varies from 41 at Lamesinghi to 73 at Chintapalli.

The heaviest rainfall in 24 hours recorded at any station in the district was 510.5 mm at Gajapatnagar on 14th October 1931.

Temperature

The only meteorological observatory in the district is at Visakhapatnam and the records of this observatory may be taken as fairly representative of the meteorological conditions prevailing in the district. In the interior low level tracts of the district the temperatures in summer are about 2 to 3° C higher than in the coastal region. In the hilly tracts the temperature in general may be lower than in the coastal region by about a couple of degrees or so, depending on elevation. From February the temperatures rise progressively till May which is the hottest month with the mean daily maximum temperature of about 34° C and the mean daily minimum of about 28° C over the coastal region. The weather is very oppressive particularly in the coastal region where humidities are generally high. During May and the early part of June before the onset of the monsoon the day temperatures may occasionally exceed 43° C. The sea breeze affords some relief during the afternoons in the coastal areas. Afternoon thundershowers during this period also brings welcome relief from the heat. With the onset of the southwest monsoon in June the day temperatures begin to fall progressively. The period December—January is the coldest part of the year with the mean daily maximum temperature at about 27° C and a mean daily minimum at 18° C over the coastal plains. In the interior, especially in the hilly regions, the temperatures are likely to be a few degrees lower. During the cold season the night temperatures may sometimes drop down to about 10° C over the plains.

TABLE 4

Mean Wind Speed in Km/hr.

(VISAKHAPATNAM)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
6.3	6.4	9.6	14.7	15.9	13.7	16.5	13.5	9.5	8.1	8.1	7.5	10.8

TABLE 5

Special Weather phenomena

(VISAKHAPATNAM)

*Mean No. of days with	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Thunder . . .	0.2	0.3	1.1	4	7	7	5	6	11	7	0.7	0.1	49
Hail . . .	0	0	0	0	0	0	0	0	0	0	0	0	0
Dust-Storm . . .	0	0	0	0	0	0.1	0	0	0	0	0	0	0.1
Squall . . .	0.4	0.2	0.4	1.3	2	2	0.9	1.4	1.3	0.5	0.1	0.1	11
Fog . . .	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0.2

*No. of days 2 and above are given in whole numbers.

WEST GODAVARI DISTRICT

The climate of this district is characterised by an oppressive summer season and good seasonal rainfall. The year may be divided into four seasons. The summer season from March to May is followed by the southwest monsoon season which lasts till September. October and November constitute the post monsoon or retreating monsoon season. December to February is the season of generally fine weather.

Rainfall

Records of rainfall in the district are available for 9 rain gauge stations for sufficiently long periods. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is 1081.7 mm. The rainfall in the district increases in general from the southwest towards the northeast and varies from 988.1 mm at Eluru near the southwest corner of the district to 1189.8 mm at Polavaram near the northeast border of the district. The district gets rain both during the southwest and post-monsoon seasons. The rainfall during the southwest monsoon season, June to September, constitutes about 67 per cent of the annual rainfall while that in the retreating monsoon season accounts for about 23 per cent of the annual rainfall. July is the rainiest month. During the fifty year period, 1901 to 1950, the highest annual rainfall in the district which amounted to 151 per cent of the normal, occurred in 1916 while 1920 was the year with the lowest annual rainfall which was 64 per cent of the normal. During this fifty year period the annual rainfall in the district was less than 80 per cent of the normal in 8 years, of which two were consecutive. At individual stations two consecutive years of such low rainfall occurred twice or thrice at most stations. Even 3 consecutive years of such low rainfall occurred once each at Tanuku and Narsapur. It will be seen from table 2 that the annual rainfall in the district was between 800 and 1300 mm in 38 years out of 50.

On an average there are 58 rainy days (i.e. days with rainfall of 2.5 mm or more) in a year in the district. This number varies from 54 at Bhimavaram to 63 at Polavaram.

The heaviest rainfall in 24 hours recorded at any station in the district was 344.2 mm at Tadepalligudam on 10th July 1954.

Temperature

The only meteorological observatory in the district is at Nidadavolu, its records extending to just over 10 years only. The description of the climate, which follows is therefore, based on the records of this observatory and those of the observatories in the neighbouring districts. December and January constitute the coolest part of the year when the mean daily maximum temperature is about 30° C and the mean minimum about 18° C. Temperatures then rise till May, the hottest month of the year with the mean daily maximum temperature at about 38° C and the mean daily minimum at about 27° C. The moist heat during the summer months is very trying and day temperatures at times exceed 45° C, during May and early June. In the coastal parts sea breezes which set in the late afternoons give welcome relief. Thundershowers on the afternoons on some days during the late summer season also give temporary relief. With the onset of the monsoon by about the first week of June there is an appreciable drop in temperature and the weather is comparatively pleasant.

The highest maximum temperature recorded at Nidadavolu in the few years for which data are available was 48.9° C on 26th May 1962. The lowest minimum was 12.3° C on 6th January 1962.

Humidity

The air is humid throughout the year, being more so in the coastal region. The driest part of the year is the period from February to May or early June when the relative humidities are generally about 50 to 55 per cent in the afternoons.

TABLE 4

Mean Wind Speed in Km/hr.
(NIDADAVOLE)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
6.5	5.7	5.4	5.9	7.8	12.2	12.7	11.0	8.0	5.9	7.1	7.0	7.9

TABLE 5

Special Weather phenomena
(NIDADAVOLE)

*Mean with	No. of days	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Thunder	.	0	0.1	0.6	1.8	4	4	2	2	5	5	0.4	0	25
Hail	.	0	0	0	0	0	0	0	0	0	0	0	0	0
Duwt-Storm	.	0	0	0	0	0.2	0.1	0	0	0.7	0	0	0	1.0
Squall	.	0	0	0	0	0	0	0	0	0	0	0	0	0
Fog	.	0	0	0	0	0	0	0	0	0	0	0	0	0

* No. of days 2 and above are given in whole numbers.

RAYALASEEMA

ANANTAPUR DISTRICT

The climate of this district is characterised by oppressive hot weather in the summer season. The year may be divided into four seasons. The period from December to February is the comparatively cool season. The summer season is from March to May and is followed by the southwest monsoon season from June to September. October and November form the retreating monsoon season.

Rainfall

The district has a good network of 17 rain gauge stations with records for long periods. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is 544.1 mm. The rainfall generally increases from the northwest to the southeast. But at Tanekal on the southeastern border of the district the annual rainfall is much less than that at other stations in the southeastern part of the district. September is the rainiest month with about 25 per cent of the annual rain. The variation in the annual rainfall from year to year is large. In the fifty year period 1901 to 1950, the highest annual rainfall amounting to 155 per cent of the normal was received in 1917. 1934 was the year with the lowest rainfall which was only 56 per cent of the normal. In nine years out of the fifty the district received rainfall less than 80 per cent of the normal and no two of them were consecutive. At individual stations two or even three consecutive years with rainfall less than 80 per cent of the normal have occurred on one or two occasions at most of the stations. At Yadiki such low rainfall occurred in seven consecutive years 1942 to 1948. From Table 2 it will be seen that the rainfall of 400 and 700 mm occurred (i.e. within about 29 per cent of the annual rainfall) in 36 years out of 50.

On an average the district has 35 rainy days (days with rainfall of 2.5 mm or more) in a year. This number varies from 26 at Amarapuram to 40 at Madakasira and Kadiri.

The heaviest rainfall in 24 hours recorded at any station in the district was 290.8 mm at Madakasira on 21st May 1879.

Temperature

The district has a meteorological observatory at Anantapur. The data of this observatory can be taken as representative of the conditions in the district as a whole. The period December to January is the coolest part of the year. In December when the mean temperature is the lowest, the mean daily maximum temperature is about 29° C and the mean daily minimum is about 17° C. From February temperatures begin to rise rapidly and by April the hottest month the mean daily maximum temperature is about 39° C and the mean daily minimum temperature about 26° C. May is also nearly as hot as April and in these two months, the heat is oppressive. With the onset of the southwest monsoon by about early June the day temperatures drop rapidly and there is some relief from the heat. After the withdrawal of the southwest monsoon early in October the temperatures begin to decrease gradually.

The highest maximum temperature recorded at Anantapur was 42.2° C on 27th April 1956 and on 2nd May 1953 and the lowest minimum temperature was 11.5° C on 5th January 1962.

Humidity

The period from February to May is the driest part of the year when the relative humidities are 50-60 per cent in the mornings and 20-30 per cent in the afternoons. Humidities are higher in the southwest monsoon and retreating monsoon seasons, being 70-80 per cent in the morning and only 40-50 per cent in the afternoons.

Cloudiness

During the period May to November skies are moderately to heavily clouded and overcast on some days. In the rest of the year skies are clear or lightly clouded generally.

Winds

Winds are generally light to moderate with some strengthening in the southwest monsoon season. During the period October to April the winds blow from the quadrant northeast to southeast and are calm on many days in the mornings. Winds blow from directions between southwest and northwest in the period May to September.

Special Weather Phenomena

In October and November storms originating in the Bay of Bengal sometimes cross the east coast of India and moving in a westerly to northwesterly direction across the peninsula affect the district and its neighbourhood causing widespread rain. Thunderstorms mostly occur during the period April to October. Dust raising winds occur in April and May.

Table 3, 4 and 5 give the temperature and humidity, mean wind speed and frequency of special weather phenomena respectively for Anantapur.

CHITTOOR DISTRICT

The district has a dry, agreeable climate. The year may be divided into four seasons. The period from December to February is the comparatively cool season. The summer season from March to May is followed by the southwest monsoon season from June to September. October and November constitute the post monsoon or retreating monsoon season.

Rainfall

The district has a good network of 21 rain gauge stations for long periods for most of the stations. Tables 1 and 2 give the rainfall at these stations and for the district as a whole. The average annual rainfall in the district is 827.5 mm. The rainfall generally decreases from the east towards the west and varies from 555.7 mm at Peddatippasamudram near the western border to 1187.8 mm at Satyavedu near the eastern border. The rainfall during the monsoon period June to September constitutes only about 44 per cent of the annual normal rainfall. During May there is some significant amount of rainfall and it is mostly in the form of thundershowers. During the post monsoon season October to November as much as 35 per cent of the annual rainfall is received. The period August to November is the chief rainy season with about 63 per cent of the annual rainfall, October being the rainiest month. The variation in the rainfall from year to year is large. During the fifty year period 1901 to 1950, the highest annual rainfall amounting to 161 per cent of the normal occurred in 1943 while the lowest annual rainfall which was only 63 per cent of the normal occurred in 1904. During this fifty year period the annual rainfall in the district was less than 80 per cent of the normal in seven years, none of them being consecutive. Considering the rainfall at individual stations two consecutive years of rainfall less than 80 per cent of the normal occurred at 12 out of the 21 stations. Two consecutive years of such low rainfall occurred four times at Vayalpad, thrice at Pakala and twice at Chandragiri, Chittoor, Sodam, Piler and Satyavedu during this same fifty year period and three consecutive years of rainfall less than 80 per cent of the normal occurred once at Ramapuram. From table 2 it will be seen that the annual rainfall in the district was between 600 and 1000 mm i.e. within about 15 per cent to 21 per cent in only 29 years out of fifty.

On an average there are 46 rainy days (i.e. days with rainfall of 2.5 mm or more) in a year in the district. This number varies from 26 at Peddatippasamudram to 53 at Palmaner.

The heaviest rainfall in 24 hours recorded at any station in the district was 338.3 mm at Satyavedu on 10th December 1901.

Temperature

The district has a meteorological observatory at Arogyavaram. The records of this observatory can be taken as representative of the meteorological conditions in the district except in the eastern portions of the district where the temperatures may be a little higher. In December when the mean temperature is the lowest, the mean daily maximum temperature is about 26° C and the mean daily minimum is about 15° C. From February temperatures begin to rise rapidly. April and May are the hottest months with a mean daily maximum temperatures of about 35° C. The nights are slightly warmer in May than in April, the mean daily minimum in May being 23° C. The weather is oppressive in the eastern low level tracts of the district during summer. Thundershowers which occur on some days during the afternoons of April and May bring welcome relief. With the onset of the southwest monsoon by about the first week of June day temperatures decrease and weather in the whole of the southwest and post monsoon seasons becomes agreeable. Night temperatures decrease more rapidly after October.

The highest maximum temperature recorded at Arogyavaram was 38.9° C on 26th May 1947. The lowest minimum was 10.5° C on 27th November 1964.

Humidity

The relative humidity is about 70 to 80 per cent in the mornings and about 55 to 65 per cent in the afternoons during the period July to December, and decreases thereafter. The driest part of the year is the period from February to May when the relative humidities in the afternoons are between about 25 and 40 per cent on the average. Relative humidities may be higher in the eastern portions of the district.

Cloudiness

During the period June to November the skies are moderately to heavily clouded and overcast on a few days. In the rest of the year skies are clear or lightly clouded.

Winds

Winds are generally light. Winds blow mainly from directions between southwest and northwest during the period May to September. In the rest of the year winds are light and variable in the mornings. Afternoon winds are stronger and in the period October to January they are mainly northeasterly or easterly. In the next three months, afternoon winds are mostly from directions between east and south.

Special Weather Phenomena

In October and November some of the storms and depressions from the Bay of Bengal cross the east coast and affect the district and its neighbourhood causing widespread heavy rain and gusty winds. Thunderstorms occur mostly from April to October, their frequency being maximum in the period April—May.

Tables 3, 4 and 5 give the temperature and relative humidity, mean wind speed and special weather phenomena for Arogyavaram.

TABLE 4
Mean Wind Speed in Km/hr.
 (AROGYAVARAM)

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
5.9	7.1	8.6	8.1	9.9	13.8	13.8	13.4	9.9	5.8	5.1	5.1	8.9

TABLE 5
Special Weather Phenomena
 (AROGYAVARAM)

*Mean No. of days with	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Thunder . . .	0	0.2	0.8	4	6	3	1.7	2	3	5	0.4	0.1	26
Hail . . .	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1
Dust-Storm . . .	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1
Squall . . .	0	0	0	0	0	0	0	0	0	0	0	0	0
Fog . . .	0.2	0.1	0	0	0	0	0	0	0	0	0	0.3	0.6

*No. of days 2 and above are given in whole numbers.

CUDDAPAH DISTRICT

The climate of this district is marked by oppressive hot weather in the summer season. The year may be divided into four seasons. The period from December to February is the dry, comparatively cool season. The summer season is from March to May and is followed by the southwest monsoon season from June to September. October and November constitute the post monsoon or the retreating monsoon season.

Rainfall

The district has a good network of 15 rain gauge stations for most of which the records for long periods are available. Tables 1 and 2 give the details of the rainfall at these stations and for the district as a whole. The average annual rainfall in the district is 685.5 mm. The rainfall generally increases from the northwest to the southeast in the district. Chitwel near the southeastern border of the district gets annually 909.4 mm of rain while Pulivendla near the western border has an average annual rainfall of 563.9 mm. 54 per cent of the annual rainfall occurs during the monsoon season while the two post monsoon months of October and November account for about 31 per cent. September is the month with the highest rainfall. The annual rainfall shows large variations from year to year. In the fifty year period 1901 to 1950 the highest annual rainfall amounting to 163 per cent of the normal occurred in 1903. In the very next year 1904 the district had the lowest annual rainfall in the fifty year period which amounted to 49 per cent of the normal. In ten years out of fifty the annual rainfall was less than 80 per cent of the normal. Although considering the district as a whole no two consecutive years had rainfall less than 80 per cent of the normal, two or even three consecutive years with rainfall less than 80 per cent of the normal have occurred on two or three occasions at some of the stations. From Table 2 it will be seen that the rainfall was between 500 and 800 mm i.e. within about 20 per cent in 34 years out of 50.

On an average the district has 43 rainy days (days with rainfall of 2.5 mm or more) in a year. As in the case of the amount of rainfall the number of rainy days decrease from the southeastern part of the district to the northwest and west.

The heaviest rainfall in 24 hours recorded at any station in the district was 266.7 mm at Rajampet on 24th October 1874.

Temperature

The district has a meteorological observatory at Cuddappah. The data of this observatory can be taken as representative of the conditions in the district as a whole. The period from about the later half of November to the middle of January is the coolest part of the year. In December when the mean temperature is the lowest, the mean daily maximum temperature is about 30° C and the mean daily minimum is about 19° C. From February, temperatures begin to rise rapidly and by May the hottest month the mean daily maximum temperature is about 40° C. The weather is oppressive in the summer season. With the onset of the southwest monsoon early in June temperatures begin to drop rapidly at first and progressively later till December.

The highest maximum temperature recorded at Cuddappah was 46.1° C on 18th May 1906 and the lowest minimum temperature was 10.6° C on 23rd December 1914.

Humidity

In the summer season the relative humidities are generally 50 to 60 per cent in the mornings and 35 to 40 per cent in the afternoons. In the rest of the year humidities are between 50 to 75 per cent.

TABLE 4
Mean Wind Speed in Km./hr.
 (KURNOOL)

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
6.1	6.9	7.7	8.7	13.4	21.1	21.3	18.4	12.6	6.0	5.1	4.9	11.0

TABLE 5
Special Weather Phenomena
 (KURNOOL)

*Mean No. of days with	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Thunder . . .	0	0.3	1.3	3	5	3	1.1	2	4	4	0.5	0.1	24
Hail . . .	0	0	0	0	0	0	0	0	0	0	0	0	0
Dust-Storm . . .	0	0.1	0	0.6	0.8	0.3	0	0.1	0	0	0	0	1.9
Squall . . .	0	0.1	0.1	0.6	1.4	5	4	3	1.1	0.1	0	0	15
Fog . . .	0	0	0	0	0	0	0	0	0	0	0	0	0

*No. of days 2 and above are given in whole numbers.

ADILABAD DISTRICT

The climate of this district is characterised by a hot summer and is generally dry except during the southwest monsoon season. The year may be divided into four seasons. The cold season from December to February is followed by the summer season from March to May. The period from June to September constitutes the southwest monsoon season. October and November form the post monsoon season.

Rainfall

Records of rainfall in the district are available for 5 stations. Tables 1 and 2 give the details of the rainfall at these stations and for the district as a whole. The average annual rainfall in the district is 995.1 mm. The rainfall in the district, in general, increases from the southwest towards the northeast. About 85 per cent of the annual rainfall is received during the southwest monsoon season, July being the rainiest month with 31 per cent share of the annual rainfall. The variation in the annual rainfall from year to year is not large. In the 50 year period 1901 to 1950, the highest annual rainfall amounting to 152 per cent of the normal occurred in 1933 while 1920 was the year with the lowest annual rainfall which was 44 per cent of the normal. The annual rainfall in the district was less than 80 per cent of the normal in 7 years, no two of them being consecutive. It will be seen from table 2 that the annual rainfall in the district was between 800 and 1200 mm (i.e. within 20 per cent of the normal) in as many as 35 years out of 46.

On an average there are 56 rainy days (i.e. days with rainfall of 2.5 mm or more) in a year in the district. This number varies from 53 at Laxmanchandra to 60 at Nirmal.

The heaviest rainfall in 24 hours recorded at any station in the district was 325.9 mm at Asifabad on 27th September 1891.

Temperature

There is no meteorological observatory in the district. The description which follows is based on the records of the observatories in the neighbouring districts where similar meteorological conditions prevail. The cold weather commences towards the end of November. December is generally the coldest month with the mean daily maximum temperature at about 29°C. and the mean daily minimum at about 15°C. The minimum temperature may sometimes go down to about 9°C. The period from March to a May is one of continuous increase in temperature. May is the hottest month with the mean daily maximum temperature at about 42°C and a mean daily minimum of about 29°C. The days are intensely hot and on individual days the temperature may go up to about 46°C. Afternoon thundershowers which occur on some days bring welcome relief from the heat. With the advance of the southwest monsoon into the district by about the middle of June there is an appreciable drop in temperatures. With the withdrawal of the monsoon day temperatures increase slightly due to increased insolation; but the night temperatures steadily decrease. Later both day and night temperatures decrease rapidly.

Humidity

The relative humidities are high generally during the southwest monsoon season. The air is generally dry during the rest of the year, the driest part of the year being the summer season when the humidity in the afternoons is about 25 per cent.

Cloudiness

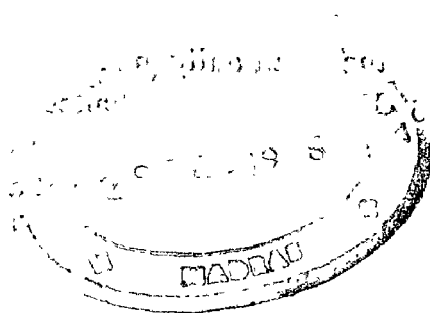
During the southwest monsoon season the skies are heavily clouded to overcast. There is rapid decrease of cloudiness during the post monsoon season. In the rest of the year the skies are mostly clear or lightly clouded.

Winds

Winds are light to moderate with some strengthening in the period May to August. During the post monsoon and cold season winds blow mostly from the east or northeast. By March south-westerlies and westerlies start blowing and in the rest of summer and the southwest monsoon seasons winds are mostly from directions between southwest and northwest.

Special Weather Phenomena

Thunderstorms occur mainly during the summer and southwest monsoon seasons. Dust-raising winds blow during the summer afternoon. Storms and depressions which originate in the Bay of Bengal during the monsoon and post monsoon seasons and move westwards affect the weather over the districts causing widespread heavy rain and strong winds.



HYDERABAD DISTRICT

The climate of this district is characterised by a hot summer and is generally dry except during the southwest monsoon season. The year may be divided into four seasons. March to May is the summer season. June to September constitutes the southwest monsoon season. October and November form the post monsoon or retreating monsoon season. December to February is the cold weather season.

Rainfall

Records of rainfall in the district are available for 13 stations for fairly long periods. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is 769.9 mm. The rainfall in the district in general, increases from the south towards the north and varies from 642.4 mm at Shankarapalli to 896.3 mm. at Ibrahimpatnam. The rainfall during the southwest monsoon months June to September constitutes about 78 per cent of the annual rainfall. September is generally the rainiest month. There is some rainfall during the latter part of the summer and the early part of the post monsoon season, mainly in the form of thundershowers. The variation in the annual rainfall from year to year is appreciable. During the 50 year period 1901 to 1950 the highest annual rainfall which was 166 per cent of the normal occurred in 1903. In 1941, the year with the lowest annual rainfall, it was 65 per cent of the normal. The annual rainfall in the district was less than 80 per cent of the normal in 10 years during the same 50 year period but none of them were consecutive. Considering the annual rainfall at the individual stations it is found that during the period 1901 to 1950 two consecutive years of such low rainfall occurred generally once at most of the stations. Two consecutive years of such low rainfall occurred four times at Sultanbazar. Even three consecutive years of such low rainfall occurred once each at Bulkapur, Himayatsagar and Bolaram during the same 50 year period. It will be seen from table 2 that the annual rainfall in the district was between 600 and 900 mm (i.e. within about 20 per cent) in 33 years out of 50.

On an average there are 48 rainy days (i.e. days with rainfall of 2.5 mm or more) in a year in the district. This number varies from 35 at Shankarapalli to 53 at Tandur.

The heaviest rainfall in 24 hours recorded at any station in the district was 325.1 mm at Ibrahimpatnam on 28th September 1908.

Temperature

There is a meteorological observatory in the district Begampet and the records of this observatory may be taken as representative of the meteorological conditions which prevail in the district in general. From February temperatures begin to increase rapidly. May is the hottest month with the mean daily maximum temperature at about 39°C and the mean daily minimum at about 26°C. During the summer season and in June before the onset of the southwest monsoon the day temperatures often go above 40°C. The days are intensely hot. There is welcome relief from the heat when afternoon thundershowers occur. With the onset of the southwest monsoon in the district early in June there is appreciable drop in temperatures and the weather becomes more pleasant. After September when the southwest monsoon withdraws there is a slight increase in the day temperatures. But the night temperatures continue to decrease. During November the decrease in both the day and night temperatures is most rapid. December is the coldest month with the mean daily maximum temperature at about 28°C and the mean daily minimum at about 13°C. In this season the night temperatures sometimes drop down to about 7°C.

The highest maximum temperature recorded at Begampet was 44.4°C on 28th May 1935. The lowest minimum was 6.1°C on 8th January 1946.

Humidity

During the southwest monsoon season the relative humidities are generally high being between 70 and 80 per cent on the average. Humidity decreases from the post monsoon season onwards. The driest part of the year is the summer season when the humidity is generally between 30 and 35 per cent in the after noons.

Cloudiness

During the southwest monsoon season the skies are generally heavily clouded or overcast. The cloudiness decrease in the post monsoon season. The skies are mostly clear or lightly clouded in the succeeding seasons. Cloudiness increases progressively from the commencement of the summer season.

Winds

Winds are generally light to moderate with some increase in force during May and the southwest monsoon season. During the post monsoon and the early half of the cold season winds are very light and variable in direction in the mornings and mostly northeasterly to easterly in the afternoons. During the latter half of the cold season and in March—April the morning winds continue to be light and variable in direction, the afternoon winds being mostly easterly to southeasterly. Winds from a westerly direction begin to blow from May and in the southwest monsoon season winds are mainly from a westerly to northwesterly direction.

Special Weather Phenomena

Storms and depressions which originate in the Bay of Bengal during September and the post monsoon months move in a westerly or northwesterly direction across the peninsula. Some of these depressions affect the weather over the district causing widespread heavy rain and gusty winds. Thunderstorms occur in the summer season and before the onset of the monsoon and towards the end of the southwest monsoon and early part of the post monsoon seasons.

Tables 3, 4 and 5 give the temperature and humidity, mean wind speed and special weather phenomena respectively for Begampet.

KARIMNAGAR DISTRICT

The climate of this district is characterised by a hot summer and is generally dry except during the southwest monsoon season. The year may be divided into four seasons. The cold season from December to February is followed by the summer season from March to May. June to September is the southwest monsoon season. October and November constitute the post-monsoon season.

Rainfall

Records of rainfall in the district are available for four stations. The details of the rainfall at these stations and for the district as a whole are given in tables 1 and 2. The average annual rainfall in the district is 914.2 mm. The rainfall in the district in general increases from the southwest towards the northeast and varies from 879.0 mm. at Karimnagar to 946.6 mm at Peddapalli. About 81 per cent of the annual normal rainfall is received during the southwest monsoon season. The variation in the annual rainfall from year to year is large. During the 50 year period 1901 to 1950 the highest annual rainfall in the district amounting to 152 per cent of the normal occurred in 1933 while 1920 was the year with the lowest annual rainfall which was only 43 per cent of the normal. During the same 50 year period the annual rainfall in the district was less than 80 per cent of the normal in 11 years but none of them were consecutive. Considering the rainfall at the individual stations also, consecutive years of such low rainfall is rare in the district. Two consecutive years of low rainfall occurred once at Peddapalli. It will be seen from table 2 that the annual rainfall in the district was between 700 and 1200 mm (i.e. within about 25 per cent of the normal) in 33 years out of 46 for which the data are available.

On an average there are 51 rainy days (i.e. days with rainfall of 2.5 mm of more) in a year in the district. This number varies from 44 at Peddapalli to 54 at Jactial.

The heaviest rainfall in 24 hours recorded at any station in the district was 308.1 mm at Jactia on 24th October 1939.

Temperature

The only meteorological observatory in the district is at Ramagundam. The records of this observatory may be taken as fairly representative of the meteorological conditions which prevail in the district in general. There is rapid increase in the temperature from February. May is the hottest month with the mean daily maximum temperature at 43° C and the mean daily minimum at about 30° C. On many days during the summer the day temperature exceeds 40° C and occasionally reaches 47° C in May or before the onset of the rains and the days are intensely hot. Occasional thundershowers which occur in the afternoons bring welcome relief. With the advance of the southwest monsoon into the district by about the middle of June day temperatures drop down appreciably and the weather becomes cool. By about the first week of October the monsoon withdraws and there is a slight increase in the day temperature. However the night temperatures continue to decrease steadily. From about the beginning of November night temperatures decrease rapidly till December which is the coldest month with the mean daily maximum at about 30° C and the mean daily minimum at about 15° C. The night temperature sometimes drop down to about 9° C.

The highest maximum temperature recorded at Ramagundam was 47.2°C on 19th May 1948 and 9th June 1953. The lowest minimum temperature was 8.5°C on 26th December 1959.

Humidity

The relative humidities are generally high during the southwest monsoon season. The relative humidities decrease after the withdrawal of the southwest monsoon. The summer season is the driest part of the year with the humidities in the afternoon being below 25 per cent.

TABLE 4
Mean Wind Speed in km/hr.
 (HANAMKONDA)

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
7.2	9.1	9.7	10.9	12.1	13.1	12.4	10.7	8.5	6.1	5.3	5.1	9.2

TABLE 5
Special Weather Phenomena
 (HANAMKONDA)

*Mean No. of days with	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Thunder . . .	0.1	1.0	1.8	4	5	6	3	3	7	4	1.1	0.5	37
Hail . . .	0	0.1	0	0	0	0	0.1	0	0	0	0	0	0.2
Dust-Storm . . .	0	0.1	0.1	0.5	0.8	0.4	0	0	0	0.2	0.1	0	2
Squall . . .	0	0	0	0	0	0	0	0	0	0	0	0	0
Fog . . .	0.2	0.9	0.1	0	0	0	0	0	0	0.1	0.4	1.9	4

*No. of days 2 and above are given in whole numbers.

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