

3. CLIMATE AND RAINFALL

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3. CLIMATE AND RAINFALL

3.1 TEMPERATURE AT SELECT STATIONS IN TAMIL NADU 2011-12 (in Celsius)

Station: NUNGAMBAKKAM (Chennai North)

Year and Month		Maximum		Minimum		Humidity in %	
		Highest	Mean	Lowest	Mean	8.30 Hours	17.30 Hours
2011	June	38.6	37.2	22.7	27.6	60	58
	July	38.0	35.5	26.3	23.1	70	57
	August	36.9	34.3	20.5	25.3	79	69
	September	36.4	34.7	21.6	24.7	80	74
	October	35.4	33.1	22.6	24.3	84	80
	November	32.6	30.0	18.7	22.0	85	76
2012	December	31.6	29.7	19.0	21.5	80	67
	January	33.6	29.6	17.7	21.2	83	68
	February	31.2	30.9	19.2	21.5	77	61
	March	36.3	33.6	22.4	25.1	76	68
	April	35.6	34.6	25.7	27.6	72	70
	May	42.5	38.6	27.1	29.4	65	65

Station: MEENAMBAKKAM (PBO Chennai)

Year and Month		Maximum		Mean Minimum		Humidity in %	
		Highest	Mean	Lowest	Mean	8.30 Hours	17.30 Hours
2011	June	39.4	38.1	23.5	27.3	57	55
	July	39.3	35.7	22.6	25.8	69	58
	August	37.3	34.4	22.0	25.2	74	65
	September	37.2	35.1	20.9	24.6	75	67
	October	36.2	33.4	22.8	24.4	81	76
	November	32.8	30.5	19.8	22.6	84	75
2012	December	32.1	30.0	17.8	21.3	82	69
	January	31.7	30.3	16.9	20.4	84	66
	February	34.9	32.0	18.1	20.9	79	60
	March	37.4	35.2	20.8	24.1	76	65
	April	38.5	36.2	24.0	26.6	73	65
	May	43.4	40.1	26.0	28.5	62	55

**3.1 TEMPERATURE AT SELECT STATIONS
IN TAMIL NADU 2011-12 (in Celsius) (Contd.)**

Station: SALEM

<i>Year and Month</i>		<i>Maximum</i>		<i>Minimum</i>		<i>Humidity in %</i>	
		<i>Highest</i>	<i>Mean</i>	<i>Lowest</i>	<i>Mean</i>	<i>8.30 Hours</i>	<i>17.30 Hours</i>
2011	June	36.9	34.2	22.5	24.4	75	51
	July	36.0	33.0	22.2	23.6	79	57
	August	35.0	32.2	21.7	23.5	81	58
	September	36.2	33.4	22.2	23.2	77	59
	October	35.8	32.6	21.2	22.8	81	64
	November	32.8	29.7	17.4	20.9	77	62
	December	32.4	29.9	15.5	19.4	77	51
2012	January	32.6	31.0	14.3	18.6	78	40
	February	36.9	33.7	17.3	19.6	72	33
	March	37.6	36.4	19.5	23.3	70	29
	April	40.0	37.2	22.0	25.1	71	39
	May	39.0	36.7	20.4	24.7	72	46

Station: KOVILANKULAM (ARUPUKOTTAI)

<i>Year and Month</i>		<i>Maximum</i>		<i>Minimum</i>		<i>Humidity in %</i>	
		<i>Highest</i>	<i>Mean</i>	<i>Lowest</i>	<i>Mean</i>	<i>8.30 Hours</i>	<i>17.30 Hours</i>
2011	June	40.0	37.9	23.5	25.2	68	48
	July	40.0	36.8	23.0	24.7	70	55
	August	39.0	36.1	22.5	24.4	79	66
	September	39.0	35.9	22.0	24.1	78	66
	October	36.0	32.0	21.0	23.0	89	69
	November	32.0	30.3	18.5	21.6	91	74
	December	32.5	30.2	15.0	19.9	89	63
2012	January	33.0	31.0	14.5	18.0	85	64
	February	36.0	33.2	15.5	19.9	80	54
	March	39.5	32.0	20.5	22.2	81	52
	April	39.5	38.4	18.0	23.3	81	44
	May	41.5	38.2	21.0	23.8	81	42

**3.1 TEMPERATURE AT SELECT STATIONS
IN TAMIL NADU 2011-12 (in Celsius) (Contd.)**

Station: AMS TIRUCHIRAPPALLI

<i>Year and Month</i>		<i>Maximum</i>		<i>Minimum</i>		<i>Humidity in %</i>	
		<i>Highest</i>	<i>Mean</i>	<i>Lowest</i>	<i>Mean</i>	<i>8.30 Hours</i>	<i>17.30 Hours</i>
2011	June	41.4	37.6	23.8	26.8	62	46
	July	39.1	37.2	23.5	26.6	63	45
	August	38.7	36.0	22.5	25.6	69	56
	September	37.8	35.5	22.2	24.9	71	53
	October	35.8	33.1	20.8	24.1	83	71
	November	32.4	30.2	19.7	22.7	83	75
2012	December	31.3	30.0	17.1	21.4	83	67
	January	32.7	31.2	16.5	20.2	84	55
	February	36.4	33.6	18.0	21.5	76	41
	March	39.6	37.3	20.7	24.2	71	37
	April	40.8	38.4	23.1	26.3	67	41
	May	40.9	38.5	22.8	26.9	64	43

Station: KODAIKANAL

<i>Year and Month</i>		<i>Maximum</i>		<i>Minimum</i>		<i>Humidity in %</i>	
		<i>Highest</i>	<i>Mean</i>	<i>Lowest</i>	<i>Mean</i>	<i>8.30 Hours</i>	<i>17.30 Hours</i>
2011	June	21.8	19.2	10.5	12.3	74	84
	July	20.7	17.8	11.4	12.2	81	90
	August	20.1	17.7	11.5	12.4	86	90
	September	20.2	18.6	10.8	12.3	83	91
	October	20.3	17.6	10.8	11.9	88	92
	November	18.9	16.2	6.9	10.3	87	91
2012	December	20.3	17.0	5.4	9.2	72	81
	January	21.3	17.9	5.4	8.2	51	77
	February	22.4	19.0	5.6	9.1	57	80
	March	22.5	20.5	9.3	11.2	59	71
	April	22.5	20.7	9.7	12.0	67	82
	May	22.9	21.1	10.3	13.4	76	87

**3.1 TEMPERATURE AT SELECT STATIONS
IN TAMIL NADU 2011-12 (in Celsius) (Concl'd.)**

Station: AMS-MADURAI

<i>Year and Month</i>		<i>Maximum</i>		<i>Minimum</i>		<i>Humidity in %</i>	
		<i>Highest</i>	<i>Mean</i>	<i>Lowest</i>	<i>Mean</i>	<i>8.30 Hours</i>	<i>17.30 Hours</i>
2011	June	36.8	37.6	26.1	26.0	61	45
	July	36.0	36.7	25.6	25.6	61	49
	August	35.7	36.0	25.3	25.2	64	52
	September	34.8	36.1	24.3	25.0	62	52
	October	32.7	33.7	23.6	24.0	76	66
	November	30.6	30.4	22.6	22.5	78	69
2012	December	29.7	30.3	21.1	21.5	77	64
	January	30.6	30.9	20.1	20.3	75	50
	February	33.2	33.1	21.1	21.5	69	42
	March	35.8	36.7	23.0	24.5	68	37
	April	37.3	37.8	25.4	25.7	71	49
	May	37.7	38.6	26.1	26.4	64	52

Station: PALAYAMKOTTAI (TNV)

<i>Year and Month</i>		<i>Maximum</i>		<i>Minimum</i>		<i>Humidity in %</i>	
		<i>Highest</i>	<i>Mean</i>	<i>Lowest</i>	<i>Mean</i>	<i>8.30 Hours</i>	<i>17.30 Hours</i>
2011	June	39.6	36.7	24.4	26.9	58	47
	July	39.4	36.3	33.8	27.0	50	47
	August	39.4	36.5	24.6	26.6	59	46
	September	40.1	36.7	25.1	26.6	56	45
	October	39.5	35.1	23.3	24.2	77	66
	November	34.0	30.5	24.0	23.2	84	75
2012	December	32.8	30.6	19.5	22.6	85	70
	January	33.4	31.8	18.4	20.8	84	61
	February	36.2	33.7	19.4	22.7	82	56
	March	38.2	36.2	22.4	24.0	77	54
	April	39.5	36.7	23.5	25.5	70	54
	May	41.0	38.9	24.5	26.6	62	48

Source: India Meteorological Department, Chennai-6

3 .2 DISTRIBUTION OF DISTRICTS BY RANGE OF RAINFALL 2011-12

Range of Rainfall	Distribution of districts by range of rainfall	
	Normal Rainfall expected	Actual Rainfall occurred
Below 800 mm	Namakkal, Tiruppur, Erode, Coimbatore, Karur, Theni and Thoothukkudi	Namakkal, Dharmapuri, Tiruppur, Coimbatore, Erode, Karur, Perambalur, Ramanathapuram, and Thoothukkudi
801 mm to 1000 mm	Vellore, Salem, Dharmapuri, Krishnagiri, Tiruchirappalli, Perambalur, Pudukkottai, Madurai, Dindigul, Ramanathapuram, Virudhunagar, Sivaganga and Tirunelveli	Vellore, Krishnagiri, Tiruchirappalli, Pudukkottai, Thanjavur, Thiruvarur, Madurai, Theni, Dindigul, Virudhunagar, Tirunelveli and Ariyalur
1001 mm to 1200 mm	Thiruvallur, Villupuram, Tiruvannamalai, Thanjavur, Thiruvarur and Ariyalur	Villupuram, Tiruvannamalai, Salem, Nagapattinam, Sivaganga and Kanyakumari
1201 mm to 1400 mm	Chennai, Kancheepuram, Cuddalore Nagapattinam and Kanniyakumari	Kancheepuram, Thiruvallur and Cuddalore
1401 mm to 1800 mm	The Nilgiris	Chennai and The Nilgiris
1801 mm and above	-	-

Source: India Meteorological Department, Chennai - 600 006

3.3 RAINFALL BY DISTRICTS 2011-12

(in mm)

<i>District</i>	<i>South West Monsoon (June '11 to September '11)</i>		<i>North East Monsoon (October '11 to December '11)</i>	
	<i>Actual</i>	<i>Normal</i>	<i>Actual</i>	<i>Normal</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1. Chennai	769.6	439.1	835.9	789.9
2. Kancheepuram	527.8	490.8	821.1	641.8
3. Thiruvallur	613.7	451.6	669.1	589.3
4. Cuddalore	424.6	383.1	873.4	697.8
5. Villupuram	374.1	408.3	624.9	499.1
6. Vellore	466.9	466.1	372.2	348.7
7. Tiruvannamalai	539.1	468.1	506.6	446.5
8. Salem	448.4	440.6	447.3	370.5
9. Namakkal	256.5	339.3	356.5	291.6
10. Dharmapuri	261.7	393.4	363.9	330.1
11. Krishnagiri	309.2	399.0	376.7	289.4
12. Tiruppur	72.2	154.8	494.6	314.3
13. Coimbatore	252.9	189.8	410.7	328.9
14. Erode	228.0	229.8	409.0	314.6
15. Tiruchirappalli	264.0	293.9	481.5	391.5
16. Karur	154.4	213.6	466.0	314.7
17. Perambalur	254.0	290.7	436.3	440.9
18. Pudukkottai	387.0	350.6	496.4	406.2
19. Thanjavur	297.0	318.4	544.5	550.3
20. Thiruvarur	213.9	296.4	743.3	719.1
21. Nagapattinam	207.1	286.1	845.7	941.0
22. Madurai	190.5	335.9	609.8	419.1
23. Theni	292.2	158.4	531.6	357.9
24. Dindigul	180.0	295.4	617.1	436.4
25. Ramanathapuram	100.0	149.3	613.5	491.7
26. Virudhunagar	145.9	196.8	505.0	419.0
27. Sivaganga	367.6	301.0	527.0	422.7
28. Tirunelveli	107.7	142.4	639.9	467.2
29. Thoothukkudi	30.3	74.9	550.9	427.0
30. The Nilgiris	915.4	759.9	509.9	478.2
31. Ariyalur	238.5	392.0	596.3	545.5
32. Kanniyakumari	251.9	477.4	580.5	496.4
State Average	300.5	321.2	540.8	441.2

3.3 RAINFALL BY DISTRICTS 2011-12 (Concl.)

(in mm)

District	Winter Season (January '12 and February '12)		Hot Weather Season (March '12 to May '12)		Annual Total (June '11 to May '12)	
	Actual	Normal	Actual	Normal	Actual	Normal
1	6	7	8	9	10	11
1. Chennai	17.0	36.8	0.5	58.5	1623.0	1324.3
2. Kancheepuram	7.9	29.1	6.0	66.0	1362.8	1227.7
3. Thiruvallur	8.3	31.5	24.4	67.2	1315.5	1139.6
4. Cuddalore	6.0	44.1	43.9	81.7	1347.9	1206.7
5. Villupuram	7.3	28.2	6.5	76.0	1012.8	1011.6
6. Vellore	3.4	14.9	54.6	106.5	897.1	936.2
7. Tiruvannamalai	0.0	26.5	56.9	98.9	1102.6	1040.0
8. Salem	0.0	16.0	115.3	170.8	1011.0	997.9
9. Namakkal	0.1	13.9	68.6	148.6	681.7	793.4
10. Dharmapuri	0.0	18.2	136.0	160.4	761.6	902.1
11. Krishnagiri	0.0	10.7	152.6	151.6	838.5	850.7
12. Tiruppur	1.7	14.0	86.9	135.1	655.4	618.2
13. Coimbatore	2.6	20.3	116.0	150.3	782.2	689.3
14. Erode	1.0	16.1	124.6	142.4	762.6	702.9
15. Tiruchirappalli	2.9	22.7	126.1	109.9	874.5	818.0
16. Karur	2.5	17.5	152.6	109.2	775.5	655.0
17. Perambalur	0.0	21.4	78.4	108.9	768.7	861.9
18. Pudukkottai	2.9	33.1	60.7	97.5	947.0	887.4
19. Thanjavur	2.9	42.3	29.9	102.1	874.3	1013.1
20. Thiruvarur	0.5	60.1	34.3	97.7	992.0	1173.3
21. Nagapattinam	12.1	85.7	22.7	80.5	1087.6	1393.3
22. Madurai	10.8	28.1	129.2	144.8	940.3	927.9
23. Theni	29.8	35.4	123.1	168.3	976.7	720.0
24. Dindigul	3.0	30.9	140.4	168.0	940.5	930.7
25. Ramanathapuram	7.2	51.3	46.5	115.5	767.2	807.8
26. Virudhunagar	23.9	42.8	142.5	161.5	817.3	820.1
27. Sivaganga	6.0	27.9	101.3	121.2	1001.9	872.8
28. Tirunelveli	70.7	69.3	100.7	166.2	919.0	845.1
29. Thoothukkudi	16.2	42.8	72.8	111.6	670.2	656.3
30. The Nilgiris	18.6	49.3	135.3	235.3	1579.2	1522.7
31. Ariyalur	8.4	32.5	43.0	101.8	886.2	1071.8
32. Kanniyakumari	31.2	40.4	147.9	288.3	1011.5	1302.5
State Average	9.5	31.3	86.3	127.9	937.1	921.6

Source: India Meteorological Department, Chennai-600 006

**3.4 TIME SERIES DATA –
RAINFALL BY SEASONS IN TAMIL NADU**

(in mm)

<i>Year</i>	<i>South West Monsoon</i>		<i>North East Monsoon</i>		<i>Winter Season</i>	
	<i>Normal</i>	<i>Actual</i>	<i>Normal</i>	<i>Actual</i>	<i>Normal</i>	<i>Actual</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
2000-01	322.8	314.5	470.3	335.6	47.3	16.8
2001-02	322.8	260.0	470.3	379.4	47.3	70.0
2002-03	329.5	185.4	468.1	407.1	36.8	8.7
2003-04	331.5	336.5	464.6	403.1	37.4	12.0
2004-05	331.5	360.7	464.6	472.1	37.4	14.3
2005-06	332.9	308.5	459.2	828.8	36.8	15.9
2006-07	316.1	250.9	431.1	497.5	35.3	10.9
2007-08	316.1	341.6	431.1	515.4	35.3	46.6
2008-09	316.1	333.5	431.1	552.7	35.3	7.7
2009-10	316.0	317.0	431.1	482.6	35.3	11.5
2010-11	319.2	383.6	430.3	605.2	31.3	36.3
2011-12	321.2	300.5	441.2	540.8	31.3	9.5

(in mm)

<i>Year</i>	<i>Hot Weather Season</i>		<i>Total</i>		<i>% Devia- tion from Normal</i>
	<i>Normal</i>	<i>Actual</i>	<i>Normal</i>	<i>Actual</i>	
<i>1</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>
2000-01	138.9	118.4	979.3	785.4	-19.8
2001-02	134.2	83.3	974.6	792.7	-18.4
2002-03	129.8	129.8	964.1	731.0	-24.2
2003-04	128.4	283.4	961.8	1034.6	7.6
2004-05	128.4	231.7	961.8	1078.9	12.2
2005-06	129.6	150.9	958.5	1304.1	36.1
2006-07	129.1	100.4	911.6	859.7	-5.5
2007-08	129.1	261.2	911.6	1164.8	27.8
2008-09	129.1	129.2	911.6	1023.1	12.2
2009-10	129.1	126.7	911.6	937.8	2.9
2010-11	127.8	140.0	908.6	1165.1	28.2
2011-12	127.9	86.3	921.6	937.1	1.7

Source: India Meteorological Department, Chennai-600 006