

3. CLIMATE AND RAINFALL

3.1 Temperature at Select Stations in Tamil Nadu

3.2 Distribution of Districts by Range of Rainfall

3.3 Rainfall by Districts

3.4 Time Series Data - Rainfall by Seasons in Tamil Nadu

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1 Rainfall by Seasons in Tamil Nadu

3. CLIMATE AND RAINFALL

3.1 TEMPERATURE AT SELECT STATIONS IN TAMIL NADU 2009-10 (in Celsius)

Station: NUNGAMBAKKAM (Chennai North)

Year and Month		Maximum		Minimum		Humidity in %	
		Highest	Mean	Lowest	Mean	8.30 Hours	17.30 Hours
2009	June	40.8	39.1	25.4	28.5	62	62
	July	39.8	37.8	24.5	28.1	66	60
	August	39.1	36.0	23.5	26.3	69	66
	September	38.7	35.6	23.2	26.0	70	65
	October	38.0	34.7	22.5	25.1	72	65
	November	32.4	30.6	21.4	23.3	88	83
	December	30.4	29.3	20.4	21.8	86	76
2010	January	31.5	29.9	17.5	21.2	84	68
	February	34.2	31.3	19.0	21.8	82	65
	March	35.8	33.9	20.4	24.0	79	68
	April	37.0	35.4	25.3	26.9	72	69
	May	40.9	36.6	21.4	26.8	71	69

Station: MEENAMBAKKAM (PBO Chennai)

Year and Month		Maximum		Mean Minimum		Humidity in %	
		Highest	Mean	Lowest	Mean	8.30 Hours	17.30 Hours
2009	June	41.4	39.3	25.8	28.1	55	54
	July	39.9	37.8	23.8	27.7	58	45
	August	38.1	35.7	23.8	26.1	70	65
	September	37.0	35.0	22.0	25.7	73	66
	October	37.5	34.3	22.4	25.2	73	62
	November	32.6	30.4	22.1	23.9	85	79
	December	30.0	28.9	20.5	22.3	87	76
2010	January	32.0	29.9	19.2	21.6	82	66
	February	34.7	31.5	19.5	22.2	81	63
	March	36.9	34.9	20.4	24.5	77	62
	April	38.7	36.9	25.7	27.5	73	65
	May	41.4	37.5	22.6	27.6	70	64

**3.1 TEMPERATURE AT SELECT STATIONS
IN TAMIL NADU 2009-10 (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>
2009	June	36.4	34.3	22.4	24.6	75	53
	July	37.0	34.0	23.0	24.2	77	55
	August	37.3	33.6	22.0	24.1	80	56
	September	35.9	33.1	22.6	23.8	81	61
	October	36.2	34.0	20.6	23.0	74	51
	November	32.8	30.7	19.6	22.3	85	73
	December	32.3	30.0	18.4	21.0	81	62
2010	January	34.4	32.3	17.8	20.3	76	42
	February	38.6	35.3	17.2	20.9	76	32
	March	40.1	38.4	18.8	23.2	66	28
	April	42.2	39.5	24.7	26.8	67	38
	May	40.8	37.7	21.6	25.8	72	45

Station: AMS-COIMBATORE

<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>
2009	June	34.8	32.5	21.2	23.4	77	61
	July	33.0	30.3	21.0	22.3	82	67
	August	33.8	32.0	21.6	22.7	82	63
	September	34.0	31.9	21.6	22.9	81	67
	October	34.2	32.2	20.2	22.3	75	51
	November	32.1	29.9	19.0	22.1	86	68
	December	30.6	29.2	17.8	20.9	81	57
2010	January	32.2	30.6	17.4	20.3	80	30
	February	36.0	33.3	17.4	20.8	77	29
	March	37.7	36.2	19.8	23.0	71	25
	April	39.5	37.3	23.0	25.1	73	40
	May	37.8	35.3	22.0	25.0	78	58

**3.1 TEMPERATURE AT SELECT STATIONS
IN TAMIL NADU 2009-10 (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>
2009	June	39.8	38.4	23.5	26.9	69	48
	July	39.1	37.1	26.3	26.9	70	54
	August	39.6	36.4	23.8	26.3	68	45
	September	38.4	36.1	23.3	26.0	71	50
	October	37.2	35.1	22.7	25.2	72	51
	November	34.5	30.4	20.7	23.6	88	79
	December	30.9	28.9	20.2	22.2	87	74
2010	January	32.4	30.4	18.2	21.2	85	58
	February	35.8	32.6	18.7	21.8	82	42
	March	38.4	36.4	19.2	23.9	78	35
	April	40.4	38.9	25.8	27.3	70	43
	May	40.9	38.1	21.6	27.0	72	46

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>
2009	June	21.1	19.2	11.4	12.8	76	86
	July	20.3	17.6	11.3	12.2	81	87
	August	20.6	18.1	11.3	12.1	82	89
	September	20.6	17.6	11.2	12.2	87	91
	October	20.0	17.7	8.9	11.0	82	87
	November	20.4	16.5	7.0	10.8	89	91
	December	20.9	16.7	7.9	10.7	81	88
2010	January	20.2	18.0	5.8	8.7	66	84
	February	22.8	20.7	7.9	10.7	49	73
	March	23.4	21.5	8.7	11.5	54	72
	April	24.3	21.4	10.6	13.0	70	88
	May	25.0	21.9	10.9	13.8	74	87

**3.1 TEMPERATURE AT SELECT STATIONS
IN TAMIL NADU 2009-10 (in Celsius) (Concld.)**

Station: AMS-MADURAI

Year and Month		Maximum		Minimum		Humidity in %	
		Highest	Mean	Lowest	Mean	8.30 Hours	17.30 Hours
2009	June	39.6	37.9	24.6	26.2	58	44
	July	39.8	37.7	25.2	26.7	53	42
	August	39.6	37.0	23.4	25.8	62	51
	September	39.6	36.6	23.8	25.8	66	52
	October	37.8	35.9	22.8	25.0	65	46
	November	33.6	30.8	20.6	23.6	81	75
	December	31.8	29.8	20.9	22.7	78	67
2010	January	33.0	31.3	19.8	21.9	75	51
	February	37.0	33.5	19.7	22.1	76	39
	March	38.8	37.2	19.4	24.1	70	32
	April	40.2	38.7	24.4	26.8	66	42
	May	41.4	38.2	23.2	27.2	77	64

Source: India Meteorological Department, Chennai-6

3.2 DISTRIBUTION OF DISTRICTS BY RANGE OF RAINFALL 2009-10

<i>Range of Rainfall</i>	<i>Distribution of districts by range of rainfall</i>	
	<i>Normal Rainfall expected</i>	<i>Actual Rainfall occurred</i>
Below 800 mm	Namakkal, Coimbatore, Erode, Tiruchirapalli, Karur, Tirunelveli and Thoothukudi	Namakkal, Erode, Tiruchirapalli, Karur, Perambalur, Madurai, Virudhunagar and Thoothukudi
801 mm to 1000 mm	Vellore, Salem, Dharmapuri, Krishnagiri, Perambalur, Pudukkottai, Madurai, Theni, Dinugul, Ramanathapuram, Virudhunagar, Sivagangai and Ariyalur	Vellore, Salem, Dharmapuri, Krishnagiri, Thiruvannamalai, Pudukkottai, Dindugul, Theni, Ramanathapuram, Sivagangai, Tirunelveli and Ariyalur
1001 mm to 1200 mm	Thiruvallur, Villupuram, Thiruvannamalai, Thanjavur and Kanniyakumari	Kancheepuram, Thiruvallur, Villupuram, Coimbatore and Kanniyakumari
1201 mm to 1400 mm	Chennai, Kancheepuram, Cuddalore Thanjavur and Nagapattinam	Chennai, Cuddalore, Thanjavur and Thiruvarur
1401 mm to 1800 mm	--	Nagapattinam
1801 mm and above	The Nilgiris	The Nilgiris

Source: India Meteorological Department, Chennai - 600 006

3.3 RAINFALL BY DISTRICTS 2009-10

(in mm)

District	South West Monsoon (June '09 to September '09)		North East Monsoon (October '09 to December '09)	
	Actual	Normal	Actual	Normal
1	2	3	4	5
1. Chennai	220.6	443.5	799.8	753.1
2. Kancheepuram	323.0	462.7	737.1	697.2
3. Thiruvallur	331.7	449.5	589.9	604.1
4. Cuddalore	278.0	373.6	960.5	716.5
5. Villupuram	352.1	433.0	659.2	484.8
6. Vellore	434.4	442.0	238.8	353.0
7. Thiruvannamalai	392.0	465.8	436.4	439.8
8. Salem	462.1	380.0	243.6	347.0
9. Namakkal	250.2	317.0	207.5	291.0
10. Dharmapuri	379.8	361.0	244.3	316.7
11. Krishnagiri	457.4	403.6	231.9	290.9
12. Coimbatore	765.4	192.9	306.1	327.0
13. Erode	209.3	213.1	324.5	323.5
14. Tiruchirappalli	231.3	270.3	385.3	356.1
15. Karur	166.6	249.7	343.4	365.4
16. Perambalur	210.4	349.6	435.3	449.6
17. Pudukkottai	204.6	350.7	478.7	418.0
18. Thanjavur	269.7	342.0	810.5	545.7
19. Thiruvarur	224.8	301.8	955.3	665.4
20. Nagapattinam	159.1	274.1	1340.1	886.4
21. Madurai	259.1	305.4	302.1	373.0
22. Theni	270.6	178.4	382.5	384.0
23. Dindigul	209.9	251.4	468.6	399.2
24. Ramanathapuram	110.5	136.1	658.1	507.4
25. Virudhunagar	78.3	181.8	331.1	431.2
26. Sivagangai	333.5	289.6	440.1	415.5
27. Tirunelveli	127.3	92.6	653.4	429.8
28. Thoothukudi	54.5	86.8	490.5	410.1
29. The Nilgiris	1265.2	1060.0	893.0	367.7
30. Ariyalur	170.9	349.6	585.3	449.6
31. Kanyakumari	355.8	327.8	452.8	427.4
State Average	317.0	316.1	482.6	431.1

(in mm)

District	Winter Season (January '10 and February '10)		Hot Weather Season (March '10 to May '10)		Annual Total (June '09 to May '10)	
	Actual	Normal	Actual	Normal	Actual	Normal
1	6	7	8	9	10	11
1. Chennai	4.8	37.3	191.1	64.2	1216.3	1298.1
2. Kancheepuram	1.0	32.1	95.7	60.1	1156.8	1252.1
3. Thiruvallur	2.3	33.5	138.1	65.7	1062.0	1152.8
4. Cuddalore	41.3	56.4	71.6	89.3	1351.4	1235.8
5. Villupuram	11.4	34.5	74.2	77.1	1096.9	1029.4
6. Vellore	9.5	20.3	132.1	101.7	814.8	917.0
7. Thiruvannamalai	5.1	32.8	124.2	108.2	957.7	1046.6
8. Salem	0.6	21.3	153.9	149.7	860.2	898.0
9. Namakkal	0.0	18.1	134.6	150.4	592.3	776.5
10. Dharmapuri	1.2	18.5	187.4	156.9	812.7	853.1
11. Krishnagiri	1.8	14.3	229.4	154.7	920.5	863.5
12. Coimbatore	4.8	26.1	101.5	150.2	1177.8	696.2
13. Erode	0.7	20.7	174.1	153.3	708.6	710.6
14. Tiruchirappalli	7.5	25.0	133.2	110.5	757.3	761.9
15. Karur	1.7	24.0	125.4	101.3	637.1	740.4
16. Perambalur	32.5	34.5	82.0	120.6	760.2	954.3
17. Pudukkottai	1.5	38.2	128.9	114.6	813.7	921.5
18. Thanjavur	29.8	50.7	107.0	114.6	1217.0	1053.0
19. Thiruvarur	39.7	57.9	106.0	104.8	1325.8	1129.9
20. Nagapattinam	57.0	81.5	110.7	99.7	1666.9	1341.7
21. Madurai	2.7	29.8	149.4	131.8	713.3	840.0
22. Theni	4.8	48.4	163.5	213.4	821.4	824.2
23. Dindigul	4.2	33.0	137.3	148.0	820.0	831.6
24. Ramanathapuram	10.3	53.9	87.5	123.8	866.4	821.2
25. Virudhunagar	0.1	42.0	93.7	174.6	503.2	829.6
26. Sivagangai	4.1	35.8	114.8	135.1	892.5	876.0
27. Tirunelveli	36.0	72.6	84.4	141.9	901.1	736.9
28. Thoothukudi	23.3	46.6	66.4	112.2	634.7	655.7
29. The Nilgiris	20.1	30.8	190.3	237.2	2368.6	1695.7
30. Ariyalur	13.0	34.5	54.5	111.1	823.7	944.8
31. Kanyakumari	50.7	33.4	283.1	217.4	1142.4	1006.0
State Average	11.5	35.3	126.7	129.1	937.8	911.6

Source: India Meteorological Department, Chennai-600 006

3.4 TIME SERIES DATA – RAINFALL BY SEASONS IN TAMIL NADU

(in mm)

Year	South West Monsoon		North East Monsoon		Winter Season	
	Normal	Actual	Normal	Actual	Normal	Actual
1	2	3	4	5	6	7
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	11.6
2004-05	331.5	360.7	464.6	472.1	37.4	14.3
2005-06	332.8	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	287.6	333.5	431.1	552.7	35.3	7.7
2009-10	316.1	317.0	431.1	482.6	35.3	11.5

(in mm)

Year	Hot Weather Season		Total		% Deviation from Normal
	Normal	Actual	Normal	Actual	
1	8	9	10	11	12
2000-01	138.9	118.4	979.3	785.3	-19.8
2001-02	134.2	85.8	974.6	795.2	-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	961.9	1078.8	12.2
2005-06	129.6	150.9	958.5	1304.1	36.1
2006-07	129.1	100.4	911.6	859.7	-5.7
2007-08	129.1	261.2	911.6	1164.8	27.8
2008-09	129.1	129.2	911.6	1023.1	15.9
2009-10	129.1	126.7	911.6	937.8	2.9

Source: India Meteorological Department, Chennai-600 006

