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## 3. CLIMATE AND RAINFALL

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### *Table*

- 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

### *Chart*

- 1** Rainfall by Seasons in Tamil Nadu

### 3. CLIMATE AND RAINFALL

#### 3.1 TEMPERATURE AT SELECT STATIONS IN TAMIL NADU 2008-09 (in Celsius)

##### Station: NUNGAMBAKKAM ( Chennai North )

Year and Month		Maximum		Minimum		Humidity in %	
		Highest	Mean	Lowest	Mean	8.30 Hours	17.30 Hours
2008	June	40.9	37.1	22.9	27.5	63	61
	July	38.3	36.1	24.4	27.1	67	63
	August	38.3	34.7	22.6	26.4	73	68
	September	37.0	34.5	23.2	25.9	72	65
	October	35.4	32.4	20.5	24.6	85	75
	November	33.9	31.0	20.1	23.3	81	75
	December	31.4	30.2	18.3	22.1	82	65
2009	January	33.1	30.3	18.4	20.8	81	63
	February	34.9	32.3	18.6	21.7	81	60
	March	36.2	33.4	22.5	24.2	80	64
	April	37.9	35.2	25.2	26.9	74	68
	May	41.1	37.3	22.8	28.1	73	72

##### Station: MEENAMBAKKAM ( PBO Chennai )

Year and Month		Maximum		Mean Minimum		Humidity in %	
		Highest	Mean	Lowest	Mean	8.30 Hours	17.30 Hours
2008	June	40.6	37.2	23.7	27.6	61	51
	July	38.4	36.4	23.6	26.7	66	60
	August	38.3	34.5	22.7	26.0	74	65
	September	37.2	34.5	23.2	25.5	72	62
	October	35.4	32.3	20.7	24.5	82	72
	November	33.4	30.8	20.2	23.3	84	75
	December	31.0	30.1	18.3	22.3	83	67
2009	January	33.5	30.1	19.5	21.1	82	62
	February	36.1	32.2	19.2	21.7	82	58
	March	37.3	34.1	22.1	23.8	79	61
	April	39.6	36.3	24.7	26.5	73	63
	May	42.0	38.4	24.0	27.7	68	62

**3.1 TEMPERATURE AT SELECT STATIONS  
IN TAMIL NADU 2008-09 (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>
2008	June	35.0	33.1	21.4	23.2	81	59
	July	37.0	33.7	21.5	23.4	79	60
	August	34.4	31.4	20.9	22.4	87	65
	September	35.0	31.9	21.0	23.5	80	61
	October	35.2	31.3	18.6	22.3	84	69
	November	33.7	30.5	17.5	20.9	80	63
	December	31.5	29.4	16.7	19.7	82	53
2009	January	33.0	30.8	17.0	19.2	78	42
	February	38.6	34.6	17.6	19.9	72	31
	March	38.6	35.8	19.0	23.0	73	39
	April	39.6	37.5	21.8	25.2	69	38
	May	39.8	36.6	21.7	25.4	72	47

**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>
2008	June	35.2	32.3	21.4	22.8	78	63
	July	34.4	31.5	21.0	22.4	83	65
	August	33.3	31.4	20.4	22.4	83	68
	September	34.7	31.0	19.4	22.3	82	63
	October	33.7	30.4	17.0	21.0	79	58
	November	30.6	29.0	16.3	19.5	83	50
	December	30.5	28.8	16.0	19.0	82	49
2009	January	32.5	30.2	16.1	18.7	78	35
	February	37.0	33.4	17.8	19.9	68	23
	March	37.7	35.2	19.7	22.3	71	27
	April	38.0	36.1	22.6	24.3	73	37
	May	37.4	34.5	21.4	23.8	79	55

**3.1 TEMPERATURE AT SELECT STATIONS  
IN TAMIL NADU 2008-09 (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>
2008	June	39.1	37.4	23.0	26.4	62	41
	July	39.2	36.7	22.5	26.2	69	48
	August	37.1	34.9	20.6	25.4	72	50
	September	36.7	34.5	23.1	24.9	71	49
	October	36.8	32.5	21.4	24.4	84	64
	November	34.6	30.8	19.9	22.8	84	68
	December	31.1	29.6	16.8	21.4	86	66
2009	January	33.1	30.5	18.2	26.1	83	51
	February	37.0	33.3	18.0	20.6	80	34
	March	38.0	35.5	18.2	23.4	77	36
	April	39.9	37.3	22.6	26.1	73	42
	May	41.2	38.7	23.6	27.1	69	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>
2008	June	20.6	18.4	10.9	12.2	79	89
	July	19.9	17.4	11.3	12.0	82	92
	August	19.0	17.3	10.0	11.8	84	91
	September	20.1	17.9	9.8	11.5	75	88
	October	19.6	17.1	8.3	11.4	87	91
	November	20.3	16.5	7.9	10.0	81	89
	December	20.7	16.8	6.3	9.3	65	82
2009	January	22.3	18.2	4.8	8.7	50	76
	February	21.9	18.9	5.1	8.6	53	63
	March	22.6	20.1	8.7	11.1	51	71
	April	22.1	20.4	6.1	12.3	57	72
	May	23.3	20.7	10.9	13.3	68	84

**3.1 TEMPERATURE AT SELECT STATIONS  
IN TAMIL NADU 2008-09 (in Celsius) (Concld.)**

**Station: MADURAI AIRPORT**

Year and Month		Maximum		Minimum		Humidity in %	
		Highest	Mean	Lowest	Mean	8.30 Hours	17.30 Hours
2008	June	39.0	37.4	25.0	26.3	57	45
	July	39.0	36.5	24.4	25.9	58	48
	August	38.6	35.7	21.4	25.1	65	52
	September	37.4	35.2	23.2	24.6	64	50
	October	36.2	33.0	22.9	24.3	79	64
	November	35.0	31.6	20.8	23.3	75	63
	December	31.8	30.2	17.4	21.6	75	60
2009	January	33.0	31.0	18.2	20.9	73	48
	February	37.2	33.7	19.0	21.1	71	35
	March	38.0	36.4	21.4	23.5	67	37
	April	39.2	37.1	21.4	25.6	67	44
	May	40.0	37.8	22.6	26.3	61	48

**Station: ERODE**

Year and Month		Maximum		Minimum		Humidity in %	
		Highest	Mean	Lowest	Mean	8.30 Hours	17.30 Hours
2008	June	N.A.					
	July						
	August						
	September						
	October						
	November						
	December						
2009	January						
	February						
	March						
	April						
	May						

Source: India Meteorological Department, Chennai  
www.jeywin.com

**3.2 DISTRIBUTION OF DISTRICTS BY RANGE OF RAINFALL 2008-09**

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

Source: India Meteorological Department, Chennai - 600 006

## 3.3 RAINFALL BY DISTRICTS 2008-09

(in mm)

District	South West Monsoon (June '08 to September '08)		North East Monsoon (October '08 to December '08)	
	Actual	Normal	Actual	Normal
1	2	3	4	5
1. Chennai	285.7	443.5	875.6	753.1
2. Kancheepuram	313.0	462.7	839.8	697.2
3. Thiruvallur	420.2	449.5	740.1	604.1
4. Cuddalore	280.8	373.6	1136.5	716.5
5. Villupuram	292.5	433.0	771.4	484.8
6. Vellore	312.3	442.0	370.5	353.0
7. Thiruvannamalai	401.0	465.8	542.0	439.8
8. Salem	466.3	380.0	359.0	347.0
9. Namakkal	380.8	317.0	321.3	291.0
10. Dharmapuri	348.0	361.0	330.1	316.7
11. Krishnagiri	439.9	403.6	314.5	290.9
12. Erode	229.9	213.1	308.5	323.5
13. Coimbatore	695.0	192.9	312.2	327.0
14. The Nilgiris	1067.9	1060.0	516.3	367.7
15. Tiruchirappalli	259.1	270.3	575.6	356.1
16. Karur	203.9	249.7	407.8	365.4
17. Perambalur*	185.1	349.6	648.1	449.6
18. Pudukottai	292.0	350.7	545.0	418.0
19. Thanjavur	255.4	342.0	1015.3	545.7
20. Nagapattinam	175.8	274.1	1222.4	886.4
21. Thiruvarur	218.5	301.8	1122.6	665.4
22. Madurai	310.8	305.4	388.2	373.0
23. Theni	345.0	178.4	325.2	384.0
24. Dindigul	349.8	251.4	439.7	399.2
25. Ramanathapuram	145.6	136.1	834.2	507.4
26. Virudhunagar	148.9	181.8	487.3	431.2
27. Sivagangai	331.8	289.6	456.0	415.5
28. Tirunelveli	145.2	92.6	564.1	429.8
29. Thoothukudi	65.7	86.8	584.1	410.1
30. Kanyakumari	475.3	327.8	584.2	427.4
<b>State Average</b>	<b>333.5</b>	<b>287.6</b>	<b>552.7</b>	<b>431.1</b>

\* Perambalur Includes Ariyalur

**3.3 RAINFALL BY DISTRICTS 2008-09 (Concl.)**

(in mm)

<i>District</i>	<i>Winter Season (January '09 and February '09)</i>		<i>Hot Weather Season (March '09 to May '09)</i>		<i>Annual Total (June '08 to May '09)</i>	
	<i>Actual</i>	<i>Normal</i>	<i>Actual</i>	<i>Normal</i>	<i>Actual</i>	<i>Normal</i>
<i>1</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
1. Chennai	13.1	37.3	14.7	64.2	1189.1	1298.1
2. Kancheepuram	16.0	32.1	50.4	60.1	1219.2	1252.1
3. Thiruvallur	11.4	33.5	15.0	65.7	1186.7	1152.8
4. Cuddalore	20.2	56.4	127.0	89.3	1564.5	1235.8
5. Villupuram	3.0	34.5	44.3	77.1	1111.2	1029.4
6. Vellore	2.4	20.3	83.1	101.7	768.3	917.0
7. Thiruvannamalai	6.4	32.8	32.1	108.2	981.5	1046.6
8. Salem	2.3	21.3	189.7	149.7	1017.3	898.0
9. Namakkal	0.0	18.1	155.9	150.4	858.0	776.5
10. Dharmapuri	3.8	18.5	188.1	156.9	870.0	853.1
11. Krishnagiri	0.4	14.3	217.0	154.7	971.8	863.5
12. Erode	0.0	20.7	204.8	154.1	743.2	711.4
13. Coimbatore	1.3	26.1	157.3	148.4	1165.8	694.4
14. The Nilgiris	1.7	30.8	286.5	237.2	1872.4	1695.7
15. Tiruchirappalli	7.6	25.0	51.6	110.1	893.9	761.5
16. Karur	2.1	24.0	75.4	103.1	689.2	742.2
17. Perambalur*	9.8	34.5	91.3	115.9	934.3	949.6
18. Pudukottai	13.7	38.2	80.9	114.6	931.6	921.5
19. Thanjavur	19.4	50.7	97.2	114.6	1387.3	1053.0
20. Nagapattinam	58.3	81.5	288.1	99.7	1744.6	1341.7
21. Thiruvarur	31.9	57.9	202.7	104.8	1575.7	1129.9
22. Madurai	8.1	29.8	173.0	131.8	880.1	840.0
23. Theni	3.7	48.4	157.2	222.7	831.1	833.5
24. Dindigul	6.9	33.0	114.9	148.0	911.3	831.6
25. Ramanathapuram	18.8	53.9	137.4	123.8	1136.0	821.2
26. Virudhunagar	2.2	42.0	124.4	174.6	762.8	829.6
27. Sivagangai	1.4	35.8	123.1	135.1	912.3	876.0
28. Tirunelveli	8.2	72.6	123.9	141.9	841.4	736.9
29. Thoothukudi	7.0	46.6	113.3	112.2	770.1	655.7
30. Kanyakumari	0.6	33.4	298.7	217.4	1358.8	1006.0
<b>State Average</b>	<b>7.7</b>	<b>35.3</b>	<b>129.2</b>	<b>129.1</b>	<b>1023.1</b>	<b>911.6</b>

\* Perambalur Includes Ariyalur

Source: India Meteorological Department, Chennai-600 006

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**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
1999-00	320.4	199.9	470.5	499.5	47.8	119.5
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

(in mm)

Year	Hot Weather Season		Total		% Deviation from Normal
	Normal	Actual	Normal	Actual	
1	8	9	10	11	12
1999-00	138.8	77.9	977.5	896.8	-8.3
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

Source: India Meteorological Department, Chennai-600 006

