



DISTRICT WISE CLIMATE CHANGE INFORMATION FOR THE STATE OF TAMIL NADU TEMPERATURE PROJECTIONS FOR MADURAI



26.1 About Madurai

Madurai district is situated in the south of Tamil Nadu State. It is bounded on the north by the districts of Dindigul, Thiruchirapalli and on the east by Sivagangai and on the west by Theni and south by Virudhunagar. The district has an area of 3741.73 sq. km. The district lies between 77°28' and 78°27' of the Eastern longitude and between 9°32' and 10°18' of the Northern latitude. Its in the 219 meters to 109 meters elevation range.^{1,2,3}

26.2 Climate of Madurai

The climate of the district is subtropical and the temperature varies from 15°C to 41°C. It is hot in summer. The highest summer day temperature is between 31°C to 41°C. Average temperatures of January is 26°C, February is 26°C, March is 29°C, April is 32°C, May is 33°C.^{2,3}

26.3 Temperature Projections for Madurai

The annual maximum and minimum temperature normal (1970-2000) of the district are 34.2 °C and 23.7°C respectively.⁴ Projections of maximum temperature over Madurai for the periods 2010-2040 (2020s), 2040-2070 (2050s) and 2070-2100 (2080s) with reference to the baseline (1970-2000) indicate an increase of 1.1°C, 2.2°C and 3.2°C respectively. Similarly, the projections of minimum temperature for the same periods indicate an increase of 1.2°C, 2.4°C and 3.5°C respectively.

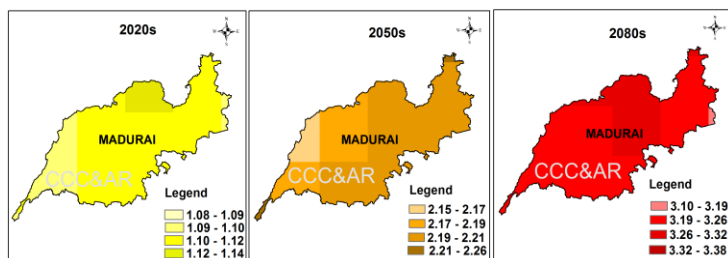


Fig 26.1 Changes in Max. Temperature for 2020s, 2050s & 2080s

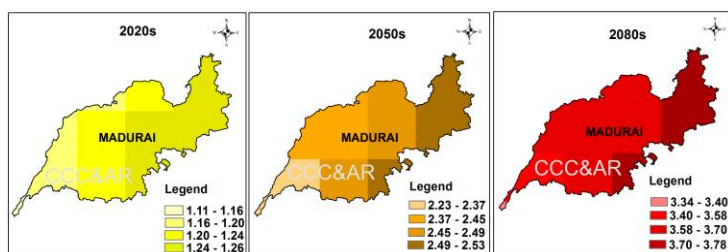


Fig 26.2 Changes in Min. Temperature for 2020s, 2050s & 2080s

Table 26.1 Changes in Temperature

Parameter	2020s	2050s	2080s
Maximum Temperature	+1.1°C	+2.2°C	+3.2°C
Minimum Temperature	+1.2°C	+2.4°C	+3.5°C

26.4 Key Findings

The average change of maximum and minimum temperature for Madurai district are expected to increase by 3.2°C and 3.5°C respectively by the end of the century.

26.5 References

1. <http://www.madurai.tn.nic.in/profile.html>
2. <http://www.onefivenine.com/india/villag/Madurai>
3. Central Ground Water Board 2009. District ground water brochure Madurai district, Tamil nadu. Central Ground Water Board South Eastern Coastal Region, Chennai. Available at cgwb.gov.in/district_profile/tamilnadu/madurai.pdf
4. IMD, 2013. Temperature of Madurai District. Regional Meterological Centre, Chennai.