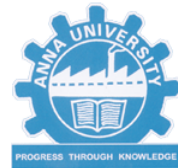




## DISTRICT WISE CLIMATE CHANGE INFORMATION FOR THE STATE OF TAMIL NADU RAINFALL PROJECTIONS FOR MADURAI



### 26.1 About Madurai

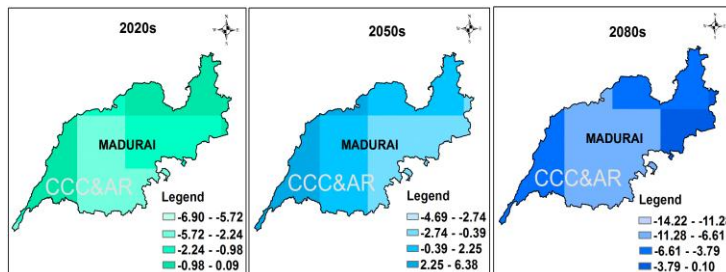
Madurai district is situated in the south of Tamil Nadu State. It is bounded on the north by the districts of Dindigul, Thiruchirapalli and on the east by Sivagangai and on the west by Theni and south by Virudhunagar. The district has an area of 3741.73 sq. km. The district lies between 77°28' and 78°27' 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.<sup>1,2,3</sup>

### 26.2 Climate of Madurai

The normal annual rainfall varies from 806 mm (Sholavandan Rain Gauge Station) in the northern part to 964.1 mm (Melur Rainguage Station) in the eastern part of the district. The entire district experiences a declining trend in annual rainfall except at Melur, where a rising trend is noticed. The district receives rainfall during Northeast monsoon (47%), Southwest monsoon (32%), summer (17%) and winter (4%).<sup>2,3</sup>

### 26.3 Rainfall Projections for Madurai

The annual rainfall normal (1970-2000) of Madurai district is 840 mm.<sup>4</sup> Projections of rainfall over Madurai for the periods 2010-2040 (2020s) and 2070-2100 (2080s) show a general decrease of **1.0%** and **4.0%** with reference to the baseline (1970-2000) but for 2040-2070 (2050s) it indicate an increase of **1.0%** respectively.



**Fig 26.1** Percent change in Annual Rainfall for the period 2020s, 2050s and 2080s

**Table 26.1** Percent change in Annual Rainfall

Parameter	2020s	2050s	2080s
Annual Rainfall	-1.0%	+1.0%	-4.0%

### 26.4 Key Findings

The annual rainfall for Madurai district may reduce by **4.0%** by the end of the century as per the emission scenario of A1B.

### 26.5 References

- <http://www.madurai.tn.nic.in/profile.html>
- <http://www.onefivenine.com/india/villag/Madurai>
- 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](http://cgwb.gov.in/district_profile/tamilnadu/madurai.pdf)
- IMD, 2013. Rainfall of Madurai District. Regional Meterological Centre, Chennai.