



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



## 9.1 About Salem

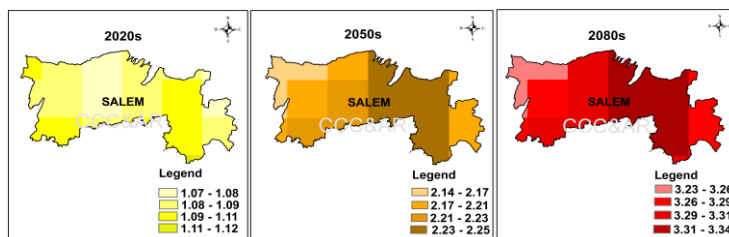
Salem district lies between 11° 14' and 12° 53' North of latitude and between 77°44' and 78° 50' East of longitude, covering an area of 5245 sq. km. Salem is a Geologist's paradise, surrounded by hills and the landscape dotted with hillocks.<sup>1,2</sup>

## 9.2 Climate of Salem

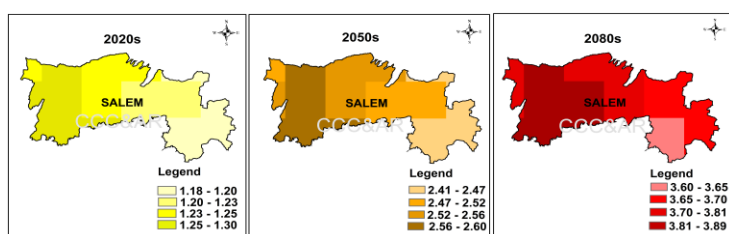
The district enjoys a tropical climate. The weather is pleasant during the period from November to January. Mornings in general are more humid than the afternoons, with the humidity exceeding 75% on an average. In the period June to November the afternoon humidity exceeds 60% on an average. The hot weather begins early in March, the highest temperature is being reached in April and May. From the middle of June and by December, the mean daily maximum temperature drops to 30.2°C, while the mean daily minimum drops to 19.2°C.<sup>1,2</sup>

## 9.3 Temperature Projections for Salem

The annual maximum and minimum temperature normal (1970-2000) of Salem district are 34.1°C and 22.9°C respectively.<sup>3</sup> Projections of maximum temperature over Salem 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 3.3°C respectively. Similarly, the projections of minimum temperature for the same periods indicate an increase of 1.2°C, 2.5°C and 3.8°C respectively.



**Fig 9.1** Changes in Max. Temperature for 2020s, 2050s & 2080s



**Fig 9.2** Changes in Min. Temperature for 2020s, 2050s & 2080s

**Table 9.1** Changes in Temperature

Parameter	2020s	2050s	2080s
Maximum Temperature	+1.1°C	+2.2°C	+3.3°C
Minimum Temperature	+1.2°C	+2.5°C	+3.8°C

## 9.4 Key Findings

The average change of maximum and minimum temperature for Salem district are expected to increase by 3.3°C and 3.8°C respectively by the end of the century.

## 9.5 References

1. Department of Economics and Statistics 2011. District Profile Salem District. Available at: <http://www.salem.tn.nic.in/default.htm>
2. Central Ground Water Board 2008. District groundwater brochure Salem district, Tamil nadu. Central Ground Water Board South Eastern Coastal Region, Chennai. Available at : [cgwb.gov.in/District\\_Profile/TamilNadu/Salem.pdf](http://cgwb.gov.in/District_Profile/TamilNadu/Salem.pdf).
3. IMD, 2013. Temperature of Salem District. Regional Meteorological Centre, Chennai.