



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



16.1 About The Nilgiris

The Nilgiris is India's first biosphere. It has been declared as one of the 14 'hotspots' of the world because of its unique bio-diversity. The Nilgiris is a part of the Western Ghats. Ooty the "Queen of Hill Stations", Coonoor 19 kms from Ooty and Kotagiri 31 kms from Ooty, are the three hill stations of this district. The district is located between 11°12' to 11°37' North latitude and between 76°30' to 76°55' East longitude. The district covers an area of 2452.50 sq. km.^{1,2,3}

16.2 Climate of The Nilgiris

High elevation of this district result in low temperature, which is further lowered by the excessive moisture content of the atmosphere resulting from the exhalation by the vegetation. The day temperature ranges from 22.1°C in summer to 5.1°C in winter. The night temperature touches 0 °C sometimes.^{1,3}

16.3 Temperature Projections for The Nilgiris

The annual maximum and minimum temperature normal (1970-2000) of the district are 28.5°C and 18.7°C respectively.⁴ Projections of maximum temperature over the Nilgiris 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 1.1°C, 2.2°C and 3.4°C respectively.

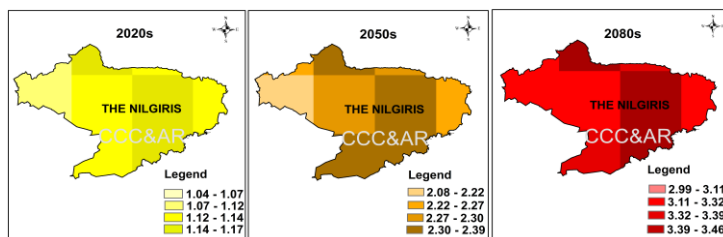


Fig 16.1 Changes in Max. Temperature for 2020s, 2050s & 2080s

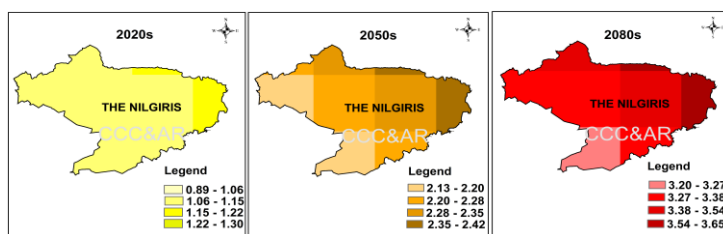


Fig 16.2 Changes in Min. Temperature for 2020s, 2050s & 2080s

Table 16.1 Changes in Temperature

Parameter	2020s	2050s	2080s
Maximum Temperature	+1.1°C	+2.2°C	+3.3°C
Minimum Temperature	+1.1°C	+2.2°C	+3.4°C

16.4 Key Findings

The average change of maximum and minimum temperature for the Nilgiris district are expected to increase by 3.3 °C and 3.4 °C respectively by the end of the century.

16.5 References

- <http://nilgiris.nic.in/>
- <http://www.mapsofindia.com/maps/tamilnadu/districts/nilgiri.htm>
- Central Ground Water Board 2009. District ground water brochure Nilgiris district, Tamil nadu. Central Ground Water Board South Eastern Coastal Region, Chennai. Available at cgwb.gov.in/District_Profile/TamilNadu/Nilgiri.pdf
- IMD, 2013. Temperature of Nilgiris District. Regional Meteorological Centre, Chennai.