

# DECCAN Chronicle

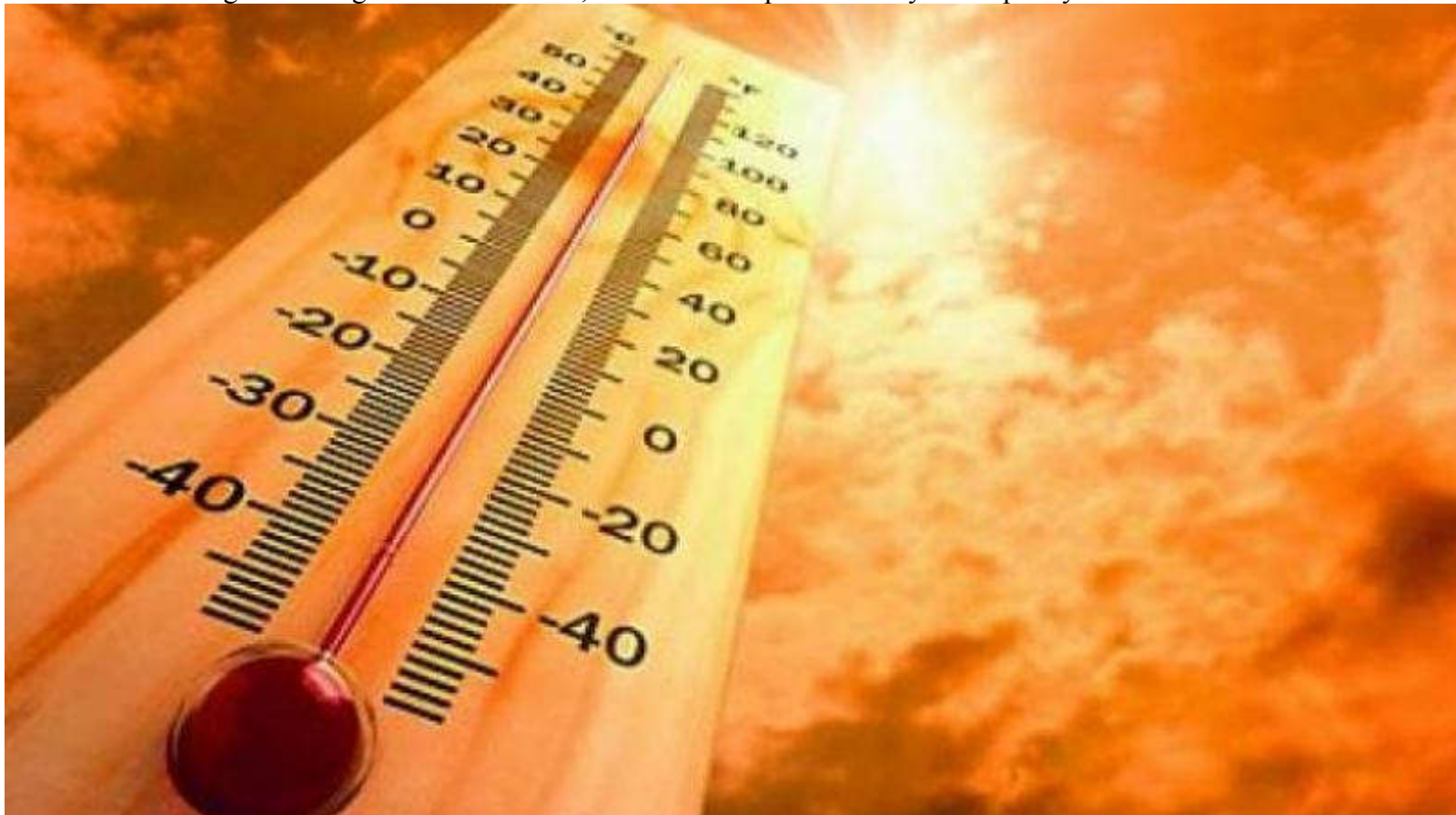
## Green cover stops spread of heat

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Telangana has a green cover of 24%, less than 33% prescribed by forest policy.



The difference is due to the thick green cover inside the campus which has 480 trees of 54 species.

**Hyderabad:** The temperature inside the campus of the Indian Institute of Science in Bengaluru is 2°C less than the temperature outside its gates. The difference is due to the thick green cover inside the campus which has 480 trees of 54 species.

Though no weather model has shown a direct correlation between the number of trees and searing temperatures, scientists say they are co-related. Telangana state has a green cover of 24 per cent which is less than the 33 per cent envisaged in the national forest policy of India 1988.

Likewise several pockets in Hyderabad — for instance, Alwal, LB Nagar, Chandanagar, and Saroornagar — crossed the 44°C mark in mid-May while thickly wooded areas like AOC and Mehdiapatnam Military Barracks, beyond Bolaram registered lower temperatures.

Explaining the science behind it, IFS officer Parveen Kaswan said, “Structures made of concrete get heated up by strong radiation. These buildings emit infrared radiation even after sunset which allows the heat to linger. But having a balanced green cover or planting many trees, avenues, or even a home garden (makes things cooler).”

He said the trees absorb this radiation and reduce the temperature by a degree or two. This is the science behind it. It is proved that trees mitigate the effects of the ‘urban heat island. “History shows that scientists often have faced difficulty demonstrating these cooling properties,” Mr Kaswan said.

There is a difference between the temperatures recorded at a park and at such ‘heat islands’. However, so far no weather model has proved co-relation between the green cover and soaring temperatures.

Regardless of this, the fact remains that the weather in the state has changed drastically. TS is experiencing many more heat waves (when the day temperatures increase by 5°C above the normal).

Mr Y.K. Reddy, director, Indian Meteorological Department, Hyderabad, said, “Between 2013 and 2018, there is about 1.5°C change in temperature in the state. As a result, there have been more heat waves, also called ‘silent killers’. The state has been witnessing abnormal summers where a few days at a stretch register beyond 44°C to 46°C while the rest record between 41°C and 43°C.”

Chief Meteorologist Mahesh Palawat said that in Vidarbha, Maharashtra, the Chandrapur region registers the highest temperatures because the area is nothing but barren land. Temperatures are lower where there is vegetation, farmland, and forests, and much higher in urban areas full of concrete structures and vehicular emissions. The difference can be at least two to three degrees.

The hottest zone in Telangana (based on the temperatures registered in 2019) is Adilabad, Medak, Nalgonda, Warangal, Peddapalli and Nizamabad, where the day temperatures across 46°C.

According to satellite imagery captured by the state forest department, 4,656 hectares of forest land has been encroached upon in recent years, and a majority of this falls in the hottest districts. Secondly, over five lakh acres of land that have very dense forest cover lies in dispute where the government cannot move an inch.

A senior officer of the state forest board asked what measures are being undertaken to preserve the green cover especially in these hot zones, said, “In the 1940s, Telangana’s very dense forest cover was 286.66 sq km, Moderate dense forest was 7,789.48 sq km. The no-forest area was 5,930.76 Sq km, but today the forested area has reduced and the no-forest area has drastically increased.”

He said the department has taken up block plantation, artificial regeneration, avenue plantation, barren hill afforestation, peripheral trench, firelines, and other measures to boost the green cover.

Prof. C. Srinivasulu of Osmania University said, “Rapid industrialisation and other anthropogenic emission have led to rapid climate change leading to low and erratic rains, high diurnal temperatures, reduced water flow in the forest streams, frequent drought and floods. This apart, encroachment is a key cause and this has happened because of the failure of officials to keep out the entry of land sharks.”