

Temperature Trends

The average yearly temperature in Manipal is clearly going up over the years. When I did a simple straight-line fit, it shows the temperature is rising by about **0.048 °C every year**. That works out to roughly **0.5 °C warmer every 10 years**.

This amount of warming feels pretty serious and matches what other studies say is happening in coastal South India and around the world. The temperature graph looks quite smooth without too many crazy jumps, so it seems like a real long-term change is happening, not just random ups and downs.

Rainfall Trends

When it comes to total yearly rainfall, there is a small upward trend of about **12.5 mm more rain each year** (or around **125 mm extra per decade**).

But unlike temperature, rainfall changes a lot from one year to another. Some years we get way too much rain, some years very little which is that's normal for places that depend on the monsoon. So even though the overall amount is slowly increasing, you still see big wet years and big dry years happening all the time.

What It All Means

Manipal is definitely getting warmer year after year, and the speed of warming is big enough to notice and care about. Rainfall is kind of increasing too, but it's much harder to be sure because it jumps around so much every year.

These patterns look like what people expect from climate change, but this data only shows what actually happened ,it doesn't prove exactly why it's happening.