

Indian Ocean heating up faster than we think, brace for hotter summers

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Summers in India are expected to get hotter, even as monsoons may weaken with interspersed episodes of rains worth a week or few days occurring in a matter of hours. “The Indian Ocean is entering a permanent state of marine heatwave stage. This will have two impacts. One will be the weakening of the monsoon winds as they are determined by the difference in ocean and land temperatures. If the ocean gets warmer, the monsoon winds will weaken. A warmer Indian Ocean will mean more moisture in the air over the seas, and this could result in episodes when the wind is strong, and the higher moisture means heavy shorter concentrated rain spells,”

according to Dr Roxy Mathew Koll, a senior scientist and climatologist at the Indian Institute of Tropical Meteorology.

“The second impact is that India will definitely get hotter in the decades to come. And heatwaves are expected to be not only more frequent, but will also exhibit increased intensity,” Dr Koll said.

The Indian Ocean is likely to hit the dangerous phase of being in a state of permanent marine heatwave conditions between 2071 and 2100. That may sound far off, but is just about a generation away.

On Friday, the India Meteorological Department (IMD), in its March to May (MAM) predictions, said this year, most parts of the country, including Telangana and Andhra Pradesh will see

higher than normal temperatures as well as heatwave days than in the past.

“What we are seeing now is a result of just 1.2°Celsius rise in global temperatures, and by 2050, this increase will be between 1.5° and 2°C. To be prepared for what is to come, assessments of conditions must begin right away from the panchayat-level upward,” Dr Koll said.

Adaptations to the coming changes must begin at the local level. If we are not prepared, then things can become very hard for the people in this country, he added.

One of the impacts of the warming up of the ocean is reduction in chlorophyll levels in the surface layers of the ocean, said Dr Koll, who was the lead author on a research study ‘Future Predictions from the

Tropical Indian Ocean’ that talks in detail about the conditions in the Indian Ocean and how they are expected to develop.

Satellites recognise plankton and other microscopic plant life and algae among others found in the seas. Between 2071 and 2100, marine life that will impact fisheries, will go down by 8 to 10 per cent, particularly along India’s west coast and Arabian Sea, the study said.

The study also warned of increasing acidification of the Indian Ocean. The projected changes in pH may be detrimental to the marine ecosystem since many marine organisms — particularly corals and organisms that depend on calcification to build and maintain their shells — are sensitive to the change in ocean acidity,” it added.