

{ **INTERVIEW** } ROXY MATHEW KOLL, CLIMATE SCIENTIST AT IITM

# ‘Climate crisis accelerating at faster pace than expected’

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**NEW DELHI:** The climate crisis could spell the end of the world for many underprivileged, who have low capacity to adapt to the changes. The fact that all climate indicators are in the red makes climate scientists like **Roxy Mathew Koll** anxious about sharing them. Climate meetings like the one that starts on Monday in Germany's Bonn put climate scientists and most of their recommendations in the back seat, said Koll, who is a climate scientist at the Indian Institute of Tropical Meteorology. Edited excerpts from an interview:

**We experienced a mild summer but parts of eastern India saw extreme temperatures in April, and 11 in Navi Mumbai died due to heat. How do you think India is impacted by climate crisis?**

As more data surfaces, we see that climate change is accelerating at a fast pace, throwing off extreme weather events one after the other. This is faster than what we thought earlier. South Asia has become the poster child of climate change. The entire region, not just India, is witnessing a clear trend in rising heatwaves, floods, landslides, droughts and cyclones. This is already affecting the food, water, and energy security of the region. The 2022 heatwaves were record-breaking. We saw the warmest February. India is now capable of monitoring and forecasting many of the extreme weather events though there are several emerging challenges due to climate change. Investigation of recent weather-related disasters show that forecasts, basic precautions, disaster management, and policies can reduce the number of deaths. India is growing at a fast pace. Amid the challenges, this presents us with an opportunity to learn and disaster-proof ourselves for a climate resilient, sustainable future.

**The World Meteorological Organisation has forecast that we are likely to cross the 1.5 degrees threshold in the next five years, at least temporarily. How will that impact India?**

The steadfast rise in severe weather extremes are in response



to the 1 degree rise in global temperatures due to historical carbon emissions. These events are projected to intensify since the commitments from nations are insufficient to keep the temperature rise from hitting 1.5 degrees by 2040 and 2 degrees between 2040 and 2060. While we are reeling under the impacts of that 1 degree, the grave impacts of doubling that is difficult to visualise for me. This is not somewhere far in the future... Most of us living now will face doubling of the global temperatures in a few decades. This is also a scenario where the cumulative actions of a handful of developed nations have brought permanent climate havoc in the lives of all other nations. This is a climate war where everyone is losing.

**How will the El Niño impact India this year?**

Events like an El Niño — warm water phenomenon in the Pacific with global climate implications — can sometimes amplify the impacts of climate change. Usually, an El Niño starts brewing in the Pacific during summer and reaches peak intensity by winter. This year, global models are expecting El Niño to be in place by June. During El Niño events, the monsoon winds are slow to pick up, and are relatively weaker. An El Niño during the current monsoon season means a delayed onset and deficit rainfall. Forecasts from the India Meteorological Department already indicate dry conditions over north-west and central India. El Niño is becoming stronger as ocean temperatures rise. The relationship between El Niño and the monsoon is also changing with time, and we need to be watchful of these intricate interactions. A deficit in the total amount of rainfall during El Niño does not mean that we are safe from heavy rains.

Heavy rains over a few days still occur during short-term episodes when the monsoon winds carry additional moisture evaporated from the warm ocean waters.

**As a climate scientist, how do you feel when politicians globally do not respond to crisis adequately?**

The climate crisis is the end of the world for many underprivileged with low adaptive capacity, and for many species of flora and fauna... I am ashamed that the global commitments and investments are insufficient to save these lives. We have been negotiating for decades, without transformative decisions. At the same time, I am optimistic about the power of people. I see that communities and local leaders are taking up the climate challenge.

**What are your expectations from the climate meeting at Bonn and the annual summit later in the year?**

The Bonn meeting is supposed to lay the groundwork for the 28th Conference of Parties in Dubai in December. The number 28 indicates that we were well aware of the climate challenges and knew that we should cut down carbon emissions, but have been negotiating for the past three decades. The annual meetings put climate scientists and most of their recommendations in the back seat. As policymakers debate, there is slow progress in terms of climate action, but there are no transformative binding decisions that can address the climate crisis. I would like to see immediate technology development and transfer that can help reduce emissions and embrace sustainable development on a global scale.

**What is your take on the impacts of climate change?**

All the data and science that I have show the graphs going up with red colours, indicating rising temperatures and extremes. I feel anxious to show them since many perceive this as painting a scary end-of-the-world picture. This is but reality. Knowing these numbers and taking precautions can save lives. Climate anxiety might be a factor to consider, but climate crisis is a harsh reality that we have to deal with.