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IBM’S WEATHER FORECAST SYSTEM TO TAP USERS’ PHONES FOR DATA

Relevant for: Environment | Topic: Disaster and disaster management

Weathering the storm: People walking towards a shelter during Cyclone Titli in Odisha in 2018. | Photo Credit: AP

International technology company IBM plans to make a high-resolution weather forecast model that will also rely on user-generated data to improve the accuracy of forecasts available in India.

IBM GRAF, as the forecast system is called, can generate forecasts at a resolution of 3 kilometres. This is a significantly higher resolution than the 12-kilometre models used by the India Meteorological Department to generate forecasts.

These weather forecast techniques rely on dynamic modelling and collect a trove of atmospheric and ocean data, crunch it in supercomputers and generate forecasts over desired time-frames — three days, weekly or fortnightly. “From the tests we’ve done so far, our forecasts are 30% more accurate than those generated by 12-km resolution models,” Cameron Clayton, general manager, IBM Watson Media and Weather, said at a press conference here on Thursday.

For its forecasts, IBM relies on a global network of sensors — automatic weather station, data bouys and barometric pressure data from cellphones of users who’ve downloaded the application. “Nearly 12 trillion pieces of forecast information are issued a day,” said Mr. Clayton. Weather forecasts will be available to individuals for free download and can be used by farmers. The forecast engine will also be used to provide custom forecasts for energy companies, consumer brands, insurance businesses and satellite imagery analysts.

A study by IBM found that 72% Indians believed that the local economy had been disrupted by a severe weather event in the past year and 89% were concerned that climate change could negatively impact the economy.

An independent researcher said that, on its own, a three kilometre resolution didn’t automatically improve accuracy. “It’s the equations used to capture the relationship between atmospheric variables that play a crucial role in the accuracy of a forecast,” said Roxy Mathew Koll, a climate scientist at the Indian Institute of Tropical Meteorology. “A combination of observations, computing and equations underlies forecasts. Moreover forecasting tropical conditions over India is particularly tricky.”

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Heatwaves and floods which used to be ‘once-in-a-century’ events are becoming more regular occurrences, says an annual assessment of the Earth’s climate by the World Meteorological Organization

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