Bengaluru to get flood prediction system soon

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The KSNDMC and IISc are working on an integrated urban flood model for Bengaluru city, which includes a rainfall forecast system tailor-made for Bengaluru, that feeds into a hydrologic model.

This system, still in the developmental stage, is on a trial run right now. This has proved accurate and can be used to predict floods based on rain forecast, says Prof Pradeep Mujumdar, Chairman, Interdisciplinary Centre for Water Research, IISc. The professor in IISc's Civil Engineering Department has extensively worked on developing sensors and weather prediction models.

IISc's models integrate various maps, including BDA's RMP 2015 and BWSSB's water and sewage networks, and overlap them with current land use and rain forecasts. "We can play around with this model, creating "what-if" scenarios," says Mujumdar.

This model can be simulated based on granular level data and used for many purposes, right from predicting the effect of clearing an encroachment or changing the use of a particular land on the flooding pattern, to making sense of hyper-local climatic patterns inside Bengaluru.

The changing patterns of rain have posed a challenge even to scientists. Rainfall distribution is non-uniform across the city. This, coupled with the problems in land use, turned problematic for the eastern part of Bengaluru in the rain of September 5 and 6, while the

southwestern parts of the city were originally expected to be hit.

“Rainfall pattern is changing year after year. Short-duration high-intensity rainfalls are common these days in the city. Even within that one hour, the first 15 minutes have the highest intensity,” he says, highlighting the role of climate change in the overall scheme of things.

“Water should be allowed to flow freely, and drains should be designed based on elevation,” he says, adding that no alerts of forecasts can help if the land usage pattern is not right.

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