How dependable is the weather data?

Not very, going by IMD gauge in Badnapur; insurers depend on Skymet AWS

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If you imagine a rain observatory as a centre with scientific equipment and team of researchers monitoring data, you are mistaken.

The writer visited a rain observatory in Badnapur town of Jalna district in Maharashtra's Aurangabad division. This was in the terrace of the Gram Panchayat Office.

The writer was taken aback by what she saw there: A plastic beaker and next to it a small plastic can with a funnel. This was all the rain observatory about.

The beaker had a brick on each side to keep it from toppling. The plastic can alongside the beaker on the cement slab was crusted with mud, indicating it had not been cleaned for a long time; this could impact correct measurement.

It is data from such 'observatories' across the district that reach the India Meteorological Department (IMD), Pune, and becomes an input for various statistical records.

Gajanan Ambhore, village sarpanch who heads the Gram Panchayat, told this writer that no one regularly comes to take the reading from the rain gauge. "During the monsoon season they come and take the reading, but in other times, we have to call them and inform when it rains, otherwise they don't come..."

The Maharashtra Government's website says that the State initiated the project for recording daily rainfall in 1998. Initially, rainfall data were recorded at the tehsil level and from 2013 the same functionality was extended to the circle level . The Circle Officer was entrusted the duty of sending daily rain data through SMS.

After observing the state of the rain observatory at the Gram Panchayat Office, the writer enquired if there is a weather station in the district. Under the PMFBY, for loss assessment in case of horticulture crops, insurance companies require data on weather, humidity, wind and rainfall.

As per the operational guidelines for PMFBY, every State government is required to explore the possibility of creating dense AWS (Automatic weather station) on public private partnership (PPP) mode. An AWS is a weather station that helps measure weather remotely without human interference. News reports say that the Maharashtra government has over 2,000 AWS installed across the State.

Automatic weather station

None of the local people this writer spoke to in Jalna knew about the location of an AWS.

IMD's rain gauge at Badnapur, Jalna

At the District Agriculture office, it became clear that there are 49 AWS in Jalna district set up by Skymet, a private weather forecaster. Insurance companies use information collected from AWS notified by the State government in their crop loss assessment report for PMFBY.

The writer then visited one of these AWS stations, in Bori village in Jalna district.

The AWS was visible from the road. Getting any closer was not possible as the gate was locked and there was no office or even a security person to enquire with. The gate was rusted and the premises were over-run by wild thorny shrubs.

On enquiry, Yogesh Patil, CEO of Skymet Weather Services, said that the AWS doesn't need constant human monitoring. "It sends data to the monitoring unit on a real time basis through SMS. When data stop coming for some reason, an engineer visits the station. Routine visits though happen once a month for maintenance and other purposes," he added.

Farmers from Jalna claim that more often than not, villages in the same revenue circle experience different weather, and insurers' data do not capture that. Thus, the actual loss suffered is different from what is shown by the data, they add.

There is one AWS in each Revenue Circle in Jalna. Each AWS captures data for a radius of 15 km. So, this data may be pertinent only to villages within this radius. Now, will it be a huge expenditure to put an AWS in every village?

A station with an ultrasonic image sensor would cost about ₹1.75 lakh, according to Skymet.

If the State government wants to have an AWS in every village, Skymet says it is open to providing it. "Like before, we will do the investment for the AWS; the government just needs to make sure that it is commercially viable for us by notifying the weather stations under PMFBY," said Yogesh Patil.

Only when a weather station is notified by the State will insurance companies use its data for PMFBY, for which they pay Skymet.

If not an AWS in every village, there is need for an automatic rain gauge (that is estimated to cost ₹40,000-45,000). An automatic rain gauge will provide more accurate data compared to the manual ones of IMD.

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Skymet's Automatic Weather Station at Bori, Jalna