

# Can cloud seeding salvage failing rains in Karnataka?

Karnataka govt on Wednesday experimented with its fourth cloud seeding exercise using Beechcraft plane and witnessed heavy rains for 45 minutes

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The Beechcraft King aircraft uses silver iodide, potassium chloride and sodium chloride—chemicals that can aid precipitation when seeded into rain-bearing clouds. Photo: Hemant Mishra/mint

**Bengaluru:** At around 2.20 pm on Wednesday, a Beechcraft King aircraft took off from the Jakkur air strip in Bengaluru, as part of the Karnataka government's ambitious cloud seeding programme aimed at bringing rain and relief to a state that is facing its fourth consecutive drought year after yet another weak, possibly failed, southwest monsoon.

Attached to its wings, the aircraft carried silver iodide, potassium chloride and sodium chloride—chemicals that can aid precipitation when seeded into rain-bearing clouds.

The cloud-seeding procedure is aimed at increasing the amount of precipitation from the clouds, leading to higher chances of rain.

During the flight that lasted one hour and 48 minutes, the Beechcraft aircraft targeted seven rain bearing clouds and shot off 14 flares over Magadi, Nelamangala, Ramanagaram, Maddur and Mandya among other places.

Locals in Mandya said the district witnessed marginally heavy rains for almost 45 minutes at around 4.30 pm on Wednesday.

The flight took off on Thursday as well over districts like Hassan.

The programme was flagged off on Monday after delays in getting clearances from various authorities and setting up radars narrowed the window of success as the process requires the presence of clouds.

The state government is hopeful of enhancing precipitation by at least

15-20%

Karnataka, which is staring at its fourth consecutive drought year and the 14th in 17 years (since 2000), has seen a sharp fall in agricultural activity and also faces an acute drinking water shortage. About 65% of the agricultural land in the state is non-irrigated and dependent on monsoon rains, Krishna Byre Gowda, Karnataka agriculture minister said on Wednesday.

Karnataka is facing the possibility of a drought despite the India Meteorological Department (IMD) forecasting normal rains—96% of a 50-year average of 89cm—across the country this year. India defines average or normal rainfall as being between 96% and 104% of the 50-year average.

From the onset of monsoon in June this year until 22 August, Karnataka has received 23% deficient rainfall, according to the meteorological department.

The state has identified three locations—Bengaluru, Gadag and Shorapur—to set up doppler radars with a range of around 250km to guide aircraft in the process. Bengaluru-based Hoysala Projects Pvt. Ltd has been awarded the Rs30 crore contract for the project which will be taken up over 60 days in three major catchment areas of Cauvery, Malaprabha and Tungabhadra rivers in the state.

H.S. Prakash Kumar, chief engineer, rural water supply, at rural development and panchayat raj department said Hoysala Projects has contracted US-based Weather Modification Inc to carry out the operation.

Both Hoysala and Weather Modification Inc could not be reached for comment.

With assembly elections coming up next year, the successive droughts and any show of helplessness by the Siddaramaiah-led Congress government could have a political backlash, Harish Ramaswamy, political analyst and professor at the Karnatak University, Dharwad said.

The state government announced a loan waiver of up to Rs50,000 in the short term and crop loans taken from cooperative societies totaling Rs8,165 crore in June. However, loans taken from nationalised and commercial banks, impacting almost 80% of farmers, still remain.

With the state experimenting with cloud seeding for the third time since 2000 (2003 and 2012), experts have their doubts about the success of the cloud seeding technique compared with long-term sustainable solutions such as

afforestation and increased water use efficiency.

“These are all reactionary approaches to manipulate the weather,” said T.V.Ramachandra, research scientist at the Centre for Ecological Sciences, Indian Institute of Science (Bengaluru). Ramachandra said the government cannot find solutions by introducing more toxicity into the atmosphere.

Already unable to find solutions to frothing and toxic lakes, flooding sewages and undisposed garbage, cities like Bengaluru, which continue to destroy natural resources, continue to bear the burden of the state government’s apathy.

Although there are few ways of determining the exact impact of cloud seeding, the state government will take a call to extend the project depending on the ‘success’ this time around.