

# Parched India harvesting dew

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NEW DELHI: The film grabbed one's attention. It showed a billboard spouting water out of thin air. It seemed just the answer to the drought in India's western regions. Though this was a recent advertising gimmick by the University of Engineering and Technology in Lima and Mayo Peru DraftFCB, can such innovative ideas solve our water crisis?

The billboard, located in Bujama village, Peru, has condensers inside it which generate water from humid air. This is filtered, stored in tanks and dispensed through taps. In just a few months, it has produced over 9,000 litres of drinking water. The cost? \$1,200.

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India, too, is experimenting with technology to generate water. One innovation extracts water from air without the use of expensive electricity. And surprisingly, dew is the magic source of this precious commodity. Dew harvesting is being used in arid Kutch. "Coastal areas are ideal places for collecting dew as it occurs more frequently and in large quantities there," says Prof Girja Sharan, a former IIM-A professor and the first Indian to harvest dew. "From a 300 sqm roof, we can generate 30 litres of water daily," he says. An individual, incidentally, needs four litres of drinking water daily.

He saw dew formation in April-May on plants in the Kutch and was surprised as it normally occurs in winter. A four-year R&D programme by him led to large dew harvesting systems being erected on roofs and the ground. Dew is extracted using non-toxic plastic condensers installed on frames. They cool rapidly at night and the dew thus formed is collected in bottles. It's also used to harvest rain. What's more, Latin America and Gulf states are evincing interest in this technology.

Meanwhile, in some 1,000 villages in Saurashtra, Kutch and the Gulf of Khambhat, Kharash Vistaarothan Yojana (KVY), an initiative of Sir Ratan Tata Trust, is working to reverse the salinity in sea water which causes immense hardship. These efforts fructified in Junagadh where roof rainwater harvesting structures (RRWS) have been installed. These include a domestic rainwater capture component and an underground tanka which can store water for a year. "The first shower is used to clean overhead tanks and then from the second shower, water is collected. Some 60,000 tankas have been constructed in Saurashtra," says Tushaar Shah, senior fellow at the [International Water Management Institute](#). "Over 1,400 households were given funds to build tankas of up to 20,000 litres capacity. Having a RRWS can save a woman 35-40 days a year in drinking water procurement for the family," he says.

In some coastal areas, cement-concrete barriers are also used in wells to segregate sea water and freshwater. Farmers found that their wells could yield fresh water up to a certain 'critical depth', digging beyond which would result in mixing of the two. KVY helped them in

sealing their wells by creating a cement-concrete barrier. Water yields are low, but it is fresh water. Every drop counts, after all.