

## Securing Safe water in Fluoride affected village of Jhabua, Madhya Pradesh

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**W**hich is the worse option during peak summer: Walking a mile to get water or fetching water from your adjacent hand pump with high fluoride in it?

This used to be common in villages across India where many drinking water sources such as dugwells and handpumps dry up during the harsh summer months. Imagine this in a remote village called Ghosaliya Bada of Jhabua District of Madhya Pradesh, where fluoride is found in most of the water sources.

Jhabua district is well known for its Watershed programmes since the 1990s which pioneered water conservation efforts. However, during summer times, many villages

resort to water tankers bringing Water from faraway water sources to the village.

When INREM Foundation started its work in Ghosaliya Bada in 2019, all the drinking water sources, be it private or government, were tested for fluoride. These tests revealed that all except one dugwell was contaminated with high fluoride. This was shared with the residents, however, it was found that despite knowing about issues caused by fluoride, residents continued to get fluoride contaminated water from other sources

The fluoride problem in Jhabua is a long standing one from the mid 1990s. While more than 150 villages have been reported to have high

fluoride in groundwater, some of the villages also started seeing visible signs of Skeletal Fluorosis, since the 2000s. Villages such as Ghosaliya Bada have had programmes on more awareness of this high fluoride problem. However changing people's behaviours has not been very easy i.e. to shift from high fluoride affected handpumps towards safer water sources such as some of the open wells.

### Why didn't the residents shift to a safe source?

The residents shared that the dugwell, although it had safe and fluoride free water, was located right next to a tree, and was surrounded with heavy growth of wild weeds. It appeared that by simply clearing the





weeds in the immediate surrounding of the well, and covering it would protect it from other possible contamination. Moreover, the dug wells are perceived to go drier in the summer and generally in use for irrigation water during the cropping seasons.

This matter was discussed in the Gram Sabha, where along with the village residents and local representatives, block and district level PHED officials were also present. Not only was it decided to protect the dugwell by covering it, a resolution was passed in the Gram Sabha Meeting to include the dugwell as a water supply scheme within Jal Jeevan Mission for household tap connections for the residents.

### What makes this source safe and sustainable?

At a time when most wells dry up during summer months, this dugwell continues to be the primary drinking water source for the residents of Ghosaliya Bada as it is located downstream from a pond. The pond helps in aquifer recharge and through the tap connections from this protected dug well, the residents continue to get safe drinking water throughout the year.

Additionally, water conservation efforts for increasing the storage capacity of the pond resulted in the sustainability of water supply sources.

Now, thanks to the Jal Jeevan Mission and other water conservation programmes such as the Jal Shakti Abhiyaan, the 1700 + population of Ghosaliya Bada receive safe water at their households, free from fluoride and secured by water conservation.



A district such as Jhabua faces many challenges with water supply, conservation and ensuring water safety. This example from Ghosaliya Bada shows us that by appropriate mapping of water quality, understanding the aquifer and by ensuring recharging of the aquifer supplying

water to the open well, it is possible to design and implement a sustainable water supply programme.

Problems such as Skeletal Fluorosis are now seen much less in Jhabua, thanks to bright spots such as in Ghosaliya Bada.

