

## NEWS LINE



User Satisfaction Survey for Safe Drinking Water in Bihar through the Jalkalp Filter, a reliable and affordable water filter enables people to access safe drinking water

## **Background**

Poor water quality has been one of the major challenges in Bihar. The groundwater is severely affected by arsenic pollution. This pollution increases with recurring floods as the contamination increases at a rapid rate from time to time. Under such a scenario, people are left with no option but to drink unsafe water. Water purifiers used in urban areas, which could help in filtering the contaminated water, are often expensive and the awareness about the usage of such machines is also low especially among poorer sections of the society. As a result, many people become victim of water borne diseases especially during monsoon period.

Set in this backdrop, IWP in collaboration with Sehgal Foundation (a network partner of IWP) has installed the JalKalp filters in selected 37 villages of Samastipur and East Champaran where arsenic contamination of water is on high level. JalKalp filters are low-cost household water treatment equipment without use of electricity and remove iron and arsenic from water.

Following the installation of the JalKalp filters in the households of thirty seven (37) project villages, IWP conducted a household survey on the usage of the Jalkalp filter. As a result, 2595 villagers out of the 37 villages were made aware about the safe drinking water issues and solutions were provided in the form of Jalkalp filters. This has resulted in making behavioral change among the community towards safe drinking water.

LID- This prevents unwanted contaminants from entering the filter

DIFFUSER- Raw water poured through diffuser trickles down to prevent damage to bio layer

SPOUT-Treated water flows out from this end

CORRUGATION MARK- Mark indicates level of sand column

SAND COLUMN-Sand filters the biological contaminants in dirty water and turbidity from water

COPPER FOIL-This acts as final safeguard against pathogens

STONE GRAVEL-This prevents sand to enter with water into the outlet tube.

- Inexpensive
   Easy to install
   Zero maintenance cost
   Removes biological impurities
- Arsenic contamination iron contamination
   Turbidity

## Impact assessment survey based on user satisfaction

To measure impact of Jalkalp filter, an impact assessment study was conducted by India Water Partnership in two blocks i.e, Samastipur and Pusa of Samastipur District of Bihar in 2018 to determine the long-term filtration efficiency and the rate of sustained use of Jalkalp filter.

The purpose of the impact assessment was to determine the rate of sustained use, efficacy and user satisfaction of the filters and to determine the impact of awareness and capacity building program in reduction of health problems. The research methods included household interviews with the help of questionnaires, water sample collection from the Jalkalp user households and water quality testing for Iron, arsenic and biological contaminants.

The survey included both scientific and behavioral aspects such as; water testing on arsenic, iron and biological contamination along with the interviews with water filter users regarding the operation, maintenance and perceptions towards the filters. Water samples were tested pre and post installation of JalKalp filters to trace the level of contamination in the water. The test reports showed a drastic improvement in drinking water quality after use of Jalkalp filter as arsenic was almost absent from water.

The survey assessment concluded that Jalkalp filter is a sustainable and appropriate technological solution in arsenic affected areas. As per the Jalkalp users of the study area, Jalkalp is a long term investment which reduced their economic burden as they did not have to buy packed water which was much expensive.



Engagement of village communities for awareness generation and water quality testing

## OUTCOMES

- Significant reduction in the incidences of water borne diseases, and its related expenses.
- Behaviour change towards water handling and storage practices.
- Better taste and color of the food cooked with filtered water.
- Significant reduction in health based loss of school attendance.
- Behaviour change and increased awareness level towards the safe drinking water.

For further information, please contact:

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