

## **Biosand Filter for Healthy Living**

*By Upasana Upadhyaya*

Rabina Khatoon from East Champaran, Bihar, had already given up hope of being cured from gastric problems. A constant stomachache along with obesity made the problem worse, which hindered her daily functioning. That was before she was aware of the *JalKalp* biosand filter. JalKalp, an initiative of Sehgal Foundation under the Adaptive Technologies Water, was developed to provide access to safe and clean drinking water, a major problem faced in rural areas.

Safe drinking water is the right of every individual. According to the World Health Organization's 2017 report, safe drinking water is water that "does not represent any significant risk to health over a lifetime of consumption, including different sensitivities that may occur between life stages." The World Bank estimates that 21 percent of communicable diseases in India are linked to unsafe water, which in turn poses a grave threat.

India has always faced the challenge of safe drinking water in its vast rural communities. In order to fetch clean water, the women in rural areas must travel long distances, taking a toll on their health as well as time that could have been used for other productive work. With a growing population, the demand of water increases, as a result of which water is overexploited, making it scarce.

The low-cost JalKalp filter attempts to meet the economic and sustainable needs of safe and clean drinking water for rural communities. It is designed in such a way that apart from being cost-effective and having numerous health benefits, it does not require any extra maintenance.

Rabina from Harnarayanpur village, Madhuban block, East Champaran, Bihar, recalls her neighbor Sheikh Abdulla informing her about Sehgal Foundation's solution for safe drinking water. "I used to drink unfiltered water from the hand pump, which caused a lot of health issues, mostly gastric problems, acute stomach pain, and abdomen swelling, but I was helpless as we could not afford to install a water filter at home. After I learned about Sehgal Foundation, I



attended its community meeting held in my village with the hope of obtaining a sustainable solution to the water-related problems. I was told about the JalKalp filter and its various benefits, and in-depth information was provided about its mechanism. It was comparatively cheap as well.”

“My husband, who lives outside for work, was not willing to buy it, as he was skeptical on a filter being so low priced. But I persuaded him with the assurance that we need not pay any amount in future for its maintenance. Soon after, we bought the filter for Rs. 2,500 and had it installed. It has been over fifteen months that we are using the filter. My swelling and stomach pain have reduced, and I can already feel the change within me. Even my neighbors have noticed the difference, and my improved health has encouraged other people to install filters. Money which would have used for my treatment as well as for buying medicines has been saved as well.”

JalKalp combines biological and physical processes to treat water. Water poured through a diffuser in the filter travels through stone and sand gravel. Inside the filter, water trickles through tiny pores between sand particles. Impurities, pathogens, and turbidity larger than the sand are trapped by the sand and removed. Up to 0.7 liters of water are filtered each minute.

Rabina has also stopped consuming gas tablets, adding that by consuming JalKalp water, her stomach pain and gastric problems are better. Health incidence in the family has also decreased. Rabina’s family has greatly benefited from JalKalp.



This household water treatment and storage technology helps raise awareness about the importance of safe drinking water in rural communities and of upholding the right to clean drinking water for every individual.

*(Upasana Upadhyaya is working with Sehgal Foundation as an Ideosync UNESCO Information Fellow)*