

## **Arsenic Free Water for All**

Singhasan Mahto, a 45-year-old man from Khaptola village, Champaran District, Bihar, found his health deteriorating since a long time. Not just him but his 16-year-old daughter also developed small patches on her skin and his wife would often contract conjunctivitis. Singhasan could not understand the deteriorating health of his family till DA collected water samples from his hand pump. The collected samples revealed high concentration of arsenic in the water which the family was consuming. Like Singhasan several other villagers were complaining of similar health problems caused by the presence of high concentration of arsenic in drinking water.

Arsenic contamination in the ground waters of the Ganga- Brahmaputra fluvial plains in India and Padma – Meghna fluvial plains in Bangladesh have been reported to be the world's biggest natural calamity. In India, seven states - West Bengal, Jharkhand, Bihar, flood plains of Uttar Pradesh, Assam, Manipur, Imphal rivers and Rajnandgaon village in Chhattisgarh - are believed to be worst affected. The arsenic contamination in groundwater in these areas is above the permissible limit of 10µg/L.

To address arsenic contamination in drinking water, Development Alternatives has developed an affordable water filtration technological solution. The Jal-TARA Arsenic Filter (JTAF) is an innovative Point-of-Use (POU) water purification system for removing arsenic, pathogens and turbidity from raw water. Along with MeghPyneAbhiyan (MPN), a partner NGO, DA has established 9 JTAFs in the villages of Bihar's worst-affected districts (West Champaran, Khagariaa and Saharsa). A six-month field validation study was carried out to evaluate the performance of the JTAFs and their social acceptance in rural Bihar. After five months of usage, the arsenic level in filtered water was tested at 20 ppb-- a significant reduction from the earlier figure that stood at 200-300 ppb.

Ever since JTAFs were introduced in Khaptola village, Singhasan's life has changed. There is a significant reduction in the cases of skin diseases and stomach ailments from his village; and he is now committed to recommending JTAFs to the people from neighbouring villages.