

Women against arsenic: A Success Story

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'In arsenic infested Haringhata, West Bengal, few housewives are in the business of saving lives by supplying safe drinking water.'

The Challenge: Provision of safe drinking water in arsenic infested areas of West Bengal

India, today, has arguably entered, or at least is on the verge of entering, a phase of 'Hydro Schizophrenia'. In other words, we are opting for myopic solutions towards fulfilling the crisis of safe water scarcity, i.e. MDG 7. Our efforts, in general, are failing to recognise the unity and integrity of the hydrologic cycle. Therefore localities are 'slipping' back after being covered under rural drinking water schemes. The situation is further complicated by the presence of several impurities in groundwater. Premiere among those is arsenic, a proven carcinogen.

In arsenic affected regions of West Bengal, lack of access to safe drinking water sources is compelling individuals to consume their daily dose of poison, every time they quench their thirst. Millions of people of the state are affected by the arsenic crisis. And more than one – third of them have no access to safe drinking water sources till last reported. Majority of those consuming arsenic laced water also belong to the lowest economic strata thereby increasing their vulnerability manifold. Arsenic reduces the working capacity of the affected significantly. And in the case of these poverty-stricken and ill-educated affected individuals their capacity to labour is their only resource to generate income. What makes the situation worse is the fact that there is no medication for Arsenic induced illnesses. The affected die a gradual death and become a burden on the meagre resources at their families' disposal much before their eventual demise.

Experience sharing from the field visit: A success story

After knowing the arsenic menace in Nadia district, a large number of arsenic mitigation options were installed. But all were defunct due to the lack of community participation. During December 2010, a community based arsenic mitigation option under

swajaldhara scheme was installed in the village Haringhata of Haringhata block under Haringhata- I Gram Panchayat in Nadia district. The exact location of the swajaldhara water project is in the premises of Haringhata Rural Hospital, beside Bara Jaguli Chowmatha of National Highway-34 (Figure 1).

Fig. 1

Location of the Swajaldhara Project



Source: Field survey

The Solution: Put Women, the traditional custodian of water in India, in charge of community based safe water filtration and supply programmes

In one such arsenic devastated region, i.e. Haringhata, Nadia district, West Bengal, there is a silent revolution on its way. Women of the community, who have been bearing the brunt of the wrath of the contamination, have taken up matters in their own hands. They have been traditionally providing water for all household requirements. However with the advent of arsenic contamination of groundwater the water they served became slow poison. The psychological scar of this incapacity to provide for the safety and prosperity of the family was intolerable for them. This triggered a self-inspired movement to take charge of the community based Arsenic Removal Plant (ARP) set up in their locality in the year 2010 with 6000 litre plant capacity. Total installation cost of the water project is Rs. 7.33 lakh financed by Central government. Initially, there was no need of community contribution as it is installed in a government plot. The villagers have constituted a water committee so that they can themselves manage the treatment unit. What is important is that the committee has a number of women members at every stage. The water committee has decided that it is maintained and operated by women led SHGs (total 17 members by shifting duties, two hours per day) and the beneficiaries have to contribute small water tariff (20 paisa/liter) towards maintenance of the project.

The women got together. They formed a Self Help Group (SHG) named 'sreema'. And ensured no soul of their village ever needed to consume unsafe water. In the initial days they had to provide the facilities for free for near about 15 days, but later on the panchayet followed by the zillaparishad acknowledged their work and granted them permission for a salaried and paid service. Recently from 2016 this facility is under the jurisdiction of Haringhata Municipal Corporation.

The idea of forming Village Water Suraksha Committees (VWSC) for operation and maintenance (O&M) of water related assets have been mooted by Rajiv Gandhi National Drinking Water Mission (RGNDWM). But sadly, the idea has largely remained on paper. In this context, the Haringhata experience stands out as a welcome exception. This arsenic removal water-treatment unit which is women led, owned, and operated is serving safe water and, in turn, ensuring India's progress on several counts of the MDG. To achieve the goals of universal safe water supply this SHG has put a very affordable price on safe water. The revenue thus generated not only ensures fulfilment of expenses incurred on the account of operation of the plant, but has also generated livelihood for women who operate the unit. It exemplifies the statement by Organisation for Economic Co-operation and Development's secretary-general, Angel Gurría: "Women are the most underutilized economic asset in the world's economy."

The women led VWSC in Haringhata has invested their profits from the ARP venture into establishing a Community Sanitary Complex (CSC). Resultantly basic water-borne ailments such as diarrhoea, dysentery, jaundice, intestinal worms, urinary tract infections (UTI), dengue, malaria, and typhoid amongst others have also reduced significantly. The peace of mind because of not needing to defecate in the open is yet another gift to the villagers from this group.

The Result: a holistical+ly sustainable system which is an epitome of women empowerment

The salary of the members of the SHG who run this unit has increased INR 500 / month to INR 1000/month (for working 2 and ½ hours, a day).they are recently provided with shift break tea and refreshment cost by committee. The work is carried out in five shifts (work comprising recurring periods in which different groups of workers do the same

jobs in relay). Duration of each shift is 2 hours at a stretch (7-9 a.m, 9-11 a.m, 11a.m-1 p.m, 3-5 p.m, 5-7 p.m).Daily water supply is provided at a very low cost @ 40 paisa per litre (following a coupon system). During our first visit the cost of supplying water was 20 paisa per litre. The unit increases the accounts for savings in the tune of INR 12000 - 13000/- per month (as reported in our first visit September, 2012) to INR 17000-18000/- per month (as reported in our second visit May, 2017). They have truly convinced the community to pay for the natural resources they consume and in return, ensured a steady supply of essential resources.

The client base, at the time of the field visit in September 2012 was approximately 250 – 300 families on a daily basis. The tremendous popularity of the project can be deciphered from the fact that people travelled for almost 15-20 km to source water from it and now 400-500 families collect water from this plant (as on May, 2017). The SHG was earning in the range of Rs. 800 – 1400 / day as reported in September, 2012. Now it is Rs 1300-1800/day in May, 2017. The SHG in September 2012 had a savings of more than Rs. 1 lakh and a fixed deposit of Rs. 75 thousand at a nationalised bank. The interest from these investments took care of all operational expenses including salaries of operator, accountant and SHG members. It also footed electricity bills and other material expenses. What was even more encouraging was the fact that this income was well managed and also subsequently invested. In 2016 near about 2.5 lakh has been invested for changing the media vis-a-vis operation and maintenance purpose.

The water treatment plant is cleaned and maintained on a regular basis, the back-wash operation is performed by dedicated workmen at Rs.1500/month salary and the unclean water is passed out through a pipe set up on the backside of the facility. Water testing (quarterly fashion) is also carried out by the Nadia ZilaParishad. The facility is cleaned up every day and has been a standing example as well as been able to supply clean contaminant free water to many households. Though this area has water supply facilitated by GAP (Ganga Action Plan) but the locals complain about presence of chemical smell in the treated water; thus preferring the water supplied by the facility.

At a personal level, all the members have become economically independent for most of their requirements. From buying a mobile phone to accounting for their children's tuition fees, these super women have become truly self-sufficient. Their success has

removed the blanket of anxiety and grief which shrouded Haringhata and turned it into a reincarnation of 'Buen Vivir', literally a place that exudes joy and celebrates the good life. In their achievement one finds the realisation of Mahatma Gandhi's famous saying, "Educate one man, you educate one person, but educate a woman and you educate a whole civilisation."

The SHG has also actively engaged in community welfare activities. For example, Anjaman Biwi, a 75 year old destitute belonging to the below poverty line category lost her house during 'Aila', the cyclone. When the state machinery failed to support this woman it was the SHG which built her a new house. They also supply new clothes to the poor during the Durga Puja festivities. They also make sure that all patients, their kin and the staff of the nearby hospital get free access to safe water, regularly.

There is only a small group of people who may have been complaining about the spectacular success of the SHG. The owners of local medicine shops used to earn a substantial part of their revenue by selling common gastro-intestinal drugs. After all, gastro-intestinal problems are one of the commonest ailments caused by ingestion of arsenic contaminated groundwater. However, they too seem rather happy with the developments. When asked, they replied that they too were suffering from the arsenic induced ailments. And with regular availability of safe water, alike others, their stomach has been also been giving them no troubles!

The women led SHG has been a landmark achievement in the war against arsenic. The success of these women has inspired hopes in nearby villages that they may also get access to safe drinking water. In fact, the SHG have been invited by several adjacent localities to start similar safe water delivery networks. And they are willing to expand their operation to newer horizons, soon.