

Community water pollution monitoring, Pali

Jan Sabha, October 1, 2008

On October 1, 2008, Pali—a textile town in Rajasthan near Jodhpur—witnessed a unique *jan sabha* (public meeting) wherein the farmers, industry and the government sat together to discuss the solutions to deal with a long pending issue of pollution in the river Bandi and Luni. The meeting was organized by Sri Kisan Paryavaran Sangarsh Samiti (SKPSS—a farmers group in Pali fighting against pollution in the river Bandi) and the New Delhi based Centre for Science and Environment (CSE) to discuss the experiences from a unique initiative wherein community groups monitor pollution in river, groundwater and the treatment plants. 9

Rajendra Singh of Tarun Bharat Sangh, Mahaveer Singh Sukarlai and Gangadan Charan of SKPSS, Push Jain, Member of Parliament Pali, Karan Singh Rathod, District Collector, Pali, Madan Rathod and Gyan Chand Parakh, members of legislative assembly from Sumerpur and Pali respectively, Narsinhdan Charan, President, Kisan Sangarsh Samiti, Balotra, Manvendra Singh, pradhan, Rohit Panchayat Samiti, Mamta Meghwal, Zilla Pramukh, Zilla Parishad, Raja Gopal Singh, ex speaker, Rajasthan Legislative Assembly addressed the meeting. Sunita Narain, director CSE chaired the *jan sabha*. About 300 people from different walks of life—farmers, industrialists, government—not only from the Bandi and Luni basin but also from other places in Rajasthan and other states.

Genesis of the community programme

The Bandi and Luni are infamous for pollution from textile dyeing and printing units. Despite being the first industrial town in the country to install a common effluent treatment plant (CETP), pollution remains unabated. Today, Pali has three CETPs with a capacity to treat 22.5 million litres of industrial waste a day. The industries in Pali also pay a pollution cess of Rs 65 per bale (100 m) of raw cloth for pollution control. But the river still remain dirty. On April 11, 2008, the Rajasthan high court had taken note of Pali's plight: it directed the state pollution control board and the district administration to implement and initiate several actions to clean up the river . While the district administration has been gearing up to implement the directives of the court, no effort has been made to involve the local communities.

Gangadan Charan, president, SKPSS says, "The SKPSS had been requesting the government to make local communities a part of the committee headed by District Collector to monitor and review the implementation of several pollution control measures. One of the decisions taken by the March 10, 2008 meeting held by the state minister for environment was to constitute a monitoring committee comprising the collector and the member secretary of the Rajasthan State Pollution Control Board. But no decisions have been taken yet to involve communities."

At this juncture, CSE decided to step in and work with SKPSS, which has been spearheading the fight against pollution in Pali and the local communities in Balotra. A community driven water pollution monitoring programme was initiated in Pali in August 2008 with the objective of empowering local communities to monitor water quality on regular intervals. "The programme will empower local communities to monitor water quality and engage themselves in the cleaning up processes," explained Sunita Narain, director, CSE. "In our country, people affected by pollution neither have access to data nor are involved in any decision-making processes, leading to conflicts between farmers, industries and the government. Mahaveer Singh Sukarlai, secretary, SKPSS points out, "this is for the first time that farmers in the Bandi basin are monitoring pollution and the data generated under this programme will help us to engage in an informed debate."

Field test kit was provided to the communities and CSE trained them to use it to monitor the common effluent treatment plants and also to sample and test for pollutants in treated effluents, surface and groundwater. About 60 farmers from different villages in the Bandi and Luni river basins were trained in August 2008. The field test kits are used for quantitative determination of five heavy metals — arsenic, hexavalent chromium, lead, nickel and zinc—which are predominant in the basin as confirmed by the lab tests done by CSE in 2006 and 2007. Most of these metals are toxic and extremely harmful, leading to health problems like skin cancer and other skin ailments, damages to the nervous and cardiovascular systems, and reduced immunity.

Unique demo

Is pollution monitoring too simple to be carried out by communities monitor pollution? When Mahaveer Singh was all set to test the water samples for heavy metals, this would have been the question flashing in the minds of many in the gathering. Mahaveer picked up a bottle of water collected from a dug well in Phenkaria a village about 50 kilometers downstream of the textile town of Pali. Though not a scientist by qualification, this farmer like a professional transferred 60 millilitre of the sample into a test tube, added couple of reagents and swirled the sample. Singh explained the gathering he was probing for heavy metals—arsenic and zinc. At the end of twenty minutes of experimentation, he matched the colour of the reaction bottle with the colour code and declared that the concentration of arsenic is 0.025 milligrammes per litre (which is 25 times higher than the drinking water standard) and hence unfit for human consumption. His experimentation with the treated effluent from CETPs revealed the presence of both arsenic and zinc exceeding the effluent discharge standards prescribed by the Pollution Control Board. The Samiti has monitored pollution in Pali and Balotra in the month of August and September 2008. The testing has established widespread occurrences of arsenic and zinc in treated effluent, river and groundwater.

The demonstration evoked quite a few reactions from the dignitaries. Madan Rathod, member of legislative assembly from Sumerpur, a block in Pali expressed his anguish, “this demonstration has really scared me. It is worth remembering that we cannot punish innocent farmers in the name of industrial growth.” Narsinhdan Charan, President, Kisan Sangarsh Samiti, Balotra who has petitioned the Rajasthan High Court on Luni Pollution said, “No polluting industries shall be allowed to operate in water scarce areas.” Bandi and Luni basin are also infamous for scanty rainfall and water scarcity. Rajendra Singh of Tarun Bharat Sangh called for a national policy to protect the rivers from encroachment, over extraction and pollution. Raja Gopal Singh, ex speaker of the Rajasthan Legislative assembly pointed out, “Farmers have the first right to water. Why can't we have industries, which use less water? Can't we preserve water for our rivers?”

There was a detailed discussion on the way forward. Manvendra Singh, pradhan, Rohit Panchayat Samiti says, “Pollution is a slow poison. We need to stop all the illegal bypass from the CETPs and recycling should be the solution.” Naresh Mehta, executive trustee, of the Pali CETP Trust (governing body) informed that they plan to set up two more CETPs and the second one will have a reuse system. Push Jain, Member of Parliament from Pali agreed, “no water treated or untreated, domestic or industrial shall not be released into the river.” He informed the gathering that the government of Rajasthan is investing Rs 35 crore to set up a new CETP (fifth one) with reuse facilities. Mamta Meghwal, Zilla Pramukh, Zilla Parishad broadened the debate, “Why is there no talk of having a reuse system in this CETP?” Michael Mazgaonkar, Paryavaran Suraksha Samiti, Gujarat says, “If farmers are putting pressure then there is hope. However, we need to be cautious with the solutions. Use of reverse osmosis can lead to larger problems.” D Derashri from Bhilwara pointed out that industries are pumping wastewater into the aquifers in the name of zero discharge. Asok Singhal, of Rajasthan Pollution Control Board, Jaipur pointed out that though reverse osmosis and zero discharge is considered as a solution one need to be aware of its economics and the challenges this technology it will throw up. Sunita Narain cautioned, “Bandi is a seasonal river, which flows along the Pali town, receives fresh water only during three monsoon months. In other words, the river do not have the capacity to assimilate the pollution in the treated effluents. The effluent discharge standards have been designed assuming that the effluents will undergo time times dilution in a receiving waterbody.” The panelists unanimously agreed that a larger debate on the solutions is needed especially with respect to the CETP technology and the socio-economic aspects of the technologies being considered for reuse.

Shriprakash, Jharkand Organisation Against Radiation says, “This is meeting is unique as the industrialists, farmers and politicians are sitting together to discuss issues. Other states can learn from this.”

The debate in Pali is now moving one step ahead—from pollution to a finding a conscientious solution which is a win-win solution for the farmers as well as the industry. Still a long way to go. But SKPSS cautions, “whatever be the solution, we will monitor the performance.”