

Community water pollution monitoring programme in Pali

Second monitoring report, September 2008:

The second round of community water pollution monitoring was organizing in Bandi and Luni basins during September 16-18, 2008. The SKPSS Samiti and CSE decided to carry out the monitoring not only in Pali but also in Balotra. The Kisan Samiti of Balotra also actively participated in monitoring and testing,

a. Pali: The members of the SKPSSS undertook sampling and testing of treated effluents from CETP 1, 2 and 3, river water at Sumerpur bridge and well water from Jetpur village. The reports clearly indicate the correlation between inefficient CETP operation and the pollution levels in river and groundwater. Across the board arsenic and zinc were found to be present in high concentrations.

1. CETP outlets: Besides CSE staff, Assistant Environmental Engineer, Rajasthan Pollution Control Board and the Chief chemist of CETP Pali were present. Like in August 2008, the farmers found the CETP 1&2 to be bypassing the untreated effluents. The District collector and the RSPCB were informed of the same.

The monitoring of September once again reiterated the fact that the CETPs are incapable of treating and removing heavy metals, which are toxic in nature. Testing done by the SKPSS revealed that the treated effluents had high concentrations of arsenic and zinc which exceeded the effluent discharge standards. Whereas arsenic was a borderline case, zinc levels were four times higher than the standards. The results were identical in CETP III at Punayata Road.

Table: The quality of treated effluents from Pali CETPs

S. No.	Heavy Metal	CETP 1&2 Mandia Road (ppm)	CETP 3, Punayata Road (ppm)	Effluent Standard (ppm)	Remarks
1	Arsenic	Bet 0.1 & 0.25	Bet 0.1 & 0.25	0.2	Violating the discharge standards
2	Chromium (VI)	0.04	0.01	2.0	With in the standards
3	Lead	Nil	Nil	0.1	With in the standards
4	Nickel	0.1	0.04	3.0	With in the standards
5	Zinc	>20	>20	5.0	Violating the discharge standards

Source: Anon 2008, Second report of the Community Water Pollution Monitoring Programme in Pali, CSE and SKPSS, Pali, September 16,17, *mimeo*

2. Bandi river at Pali-Jodhpur bridge downstream: On the same day samples were tested for the five heavy metals. Since there are no standards for heavy metals in river water, the same is compared with the drinking water standards. It was found that arsenic and zinc exceeded the drinking water standards whereas levels of chromium were equivalent to the prescribed standards. Here the total dissolved solids were 4,200 mg/l.

Table: Bandi river water quality in September 2008

S. No.	Heavy Metal	Results (ppm)	Drinking water standard (ppm)	Remarks
1	Arsenic	0.25	0.01	Violating the discharge standards
2.	Chromium (VI)	0.05	0.05	Borderline
3.	Lead	Nil	0.05	With in the standards
4.	Nickel	0.15	-	No standards
5.	Zinc	>25	5	Violating the discharge standards

Source: Anon 2008, Second report of the Community Water Pollution Monitoring Programme in Pali, CSE and SKPSS, Pali, September 16,17, *mimeo*

3. Groundwater Jetpur: It was observed that the groundwater in Jetpur had almost four times higher levels of zinc as compared to drinking water. Here again arsenic was found to be 0.01 mg/l, which is equivalent to drinking water standards.

Table: Groundwater quality in Jetpur in September 2008

S. No.	Heavy Metal	Result (ppm)	Drinking water standard Standard (ppm)	Remarks
1	Arsenic	0.01	0.01	Matching with standard
2.	Chromium (VI)	Nil	0.05	With in the standards
3.	Lead	Nil	0.05	With in the standards
4.	Nickel	Nil	-	No standards
5.	Zinc	>20	5	Violating the discharge standards

Source: Anon 2008, Second report of the Community Water Pollution Monitoring Programme in Pali, CSE and SKPSS, Pali, September 16,17, mimeo

b. Balotra: On September 18, 2008 Kisan Samiti of Pali and Balotra jointly undertook the monitoring of the CETPs in Balotra. There are three CETPs in Balotra—CETP 1 (6 mld) and CETP 2 (12 mld); CETP Bithuja (30 mld) and CETP Jasol (2.5 mld). The treated partially treated effluents are disposed off into the Luni river.

Samples were collected and tested in the presence of the officials' of the CETP and the Rajasthan State Pollution Control Board. It can be seen from the table that CETP 1, 2 and 4 do not meet the standards for arsenic. In CETP 1 & 2 (18 mld) the concentration of zinc also exceeded the effluent discharge standards.

Table: The quality of treated effluents from Balotra CETPs

S. No.	Heavy Metal	CETP 1&2 (Khedroa d-18 mld)	CETP 3Jasole (2.5 mld) (ppm)	CETP 4 Bithuja (30 mld) (ppm)	Effluent Standard (ppm)	Remarks
1	Arsenic	Bet 0.25 & 0.5	Bet 0.05 & 0.1	0.25	0.2	CETP Khedaroad and Bithuja violating the discharge standards
2.	Chromium (VI)	Nil	Nil	Nil	2.0	With in the standards
3.	Lead	Nil	Nil	Nil	0.1	With in the standards
4.	Nickel	1.0	0.07	Nil	3.0	With in the standards
5.	Zinc	>5.0	3.5	0.5	5.0	CETP I&2 violating the discharge standards
6	TDS	18600	17600	12400	Not specified	

Source: Anon 2008, Second report of the Community Water Pollution Monitoring Programme in Pali, CSE, SKPSS, Pali and Kisan Sangarsh Samiti Balotra, September 18, mimeo

Sampling by farmers

