

## Supplementary Materials

**Table S1.** Water Quality Parameters of IEST Groundwater

Parameters	Concentrations	Permissible limit
pH	7.6	6.5 – 8.5
Total dissolved solids (mg L <sup>-1</sup> )	1,615	2,000
Total coliforms counts (cfu/50 mL)	38	0
<i>E.Coli</i> counts (cfu/50 mL)	3	0
Total alkalinity (mg L <sup>-1</sup> as CaCO <sub>3</sub> )	430	600
Total hardness (mg L <sup>-1</sup> as CaCO <sub>3</sub> )	720	600
Calcium (mg L <sup>-1</sup> )	192	200
Magnesium (mg L <sup>-1</sup> )	57.6	100
Chloride (mg L <sup>-1</sup> )	649	1,000
Sulfate (mg L <sup>-1</sup> )	10	400
Total iron (mg L <sup>-1</sup> )	0.4	1

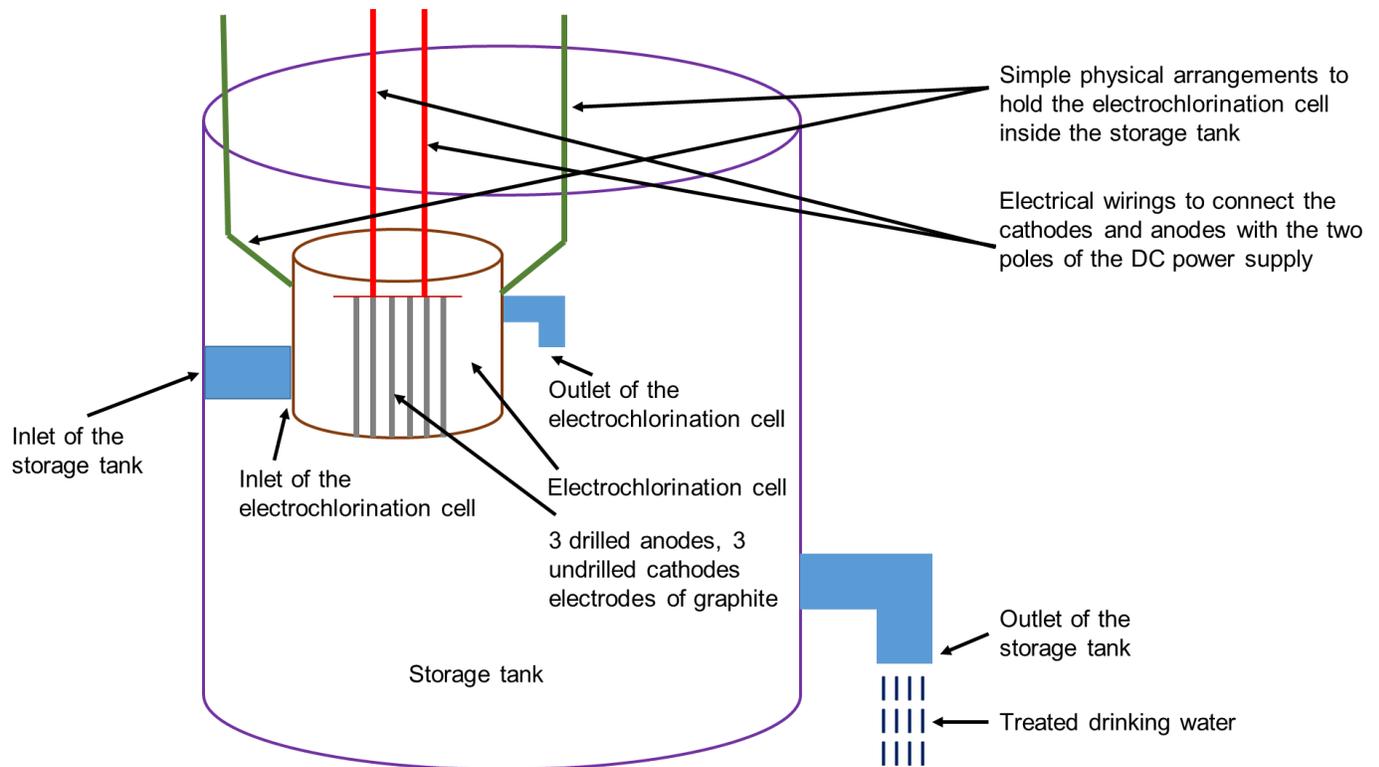
The permissible limits of these parameters were listed according to the limits prescribed by the Bureau of Indian Standards (IS 10500: 2012). Concentrations of the parameters exceeding their respective permissible limits have been marked in red color.

**Table S2.** Brief Description of Cost of the Electrochlorination System

SL. no	Description	Cost (INR)
I..	6 operational + 6 stand by graphite electrodes	4,800
	DC power supply + electrical connections	10,000
	5 L bottle + other physical arrangements	1,500
	Total approximate capital cost	16,300
		Say, 17,000
	EMI at 12% annum interest rate for 5 years design period	380
II.	Maximum power consumption due to electrochlorination (12V-20A) = 0.24 kW	
	Time required to treat 4000 L water @10L/min = 400 min	
	Per day maximum electricity cost @INR 11 KW/h	17.6
	Maximum monthly electricity cost	528
III.	Monthly cost for labor, troubleshooting and other works	3,000

1.	Maximum gross monthly cost for electrochlorination	3,908
2.	Maximum per L cost (for a daily treatment of 4000 L)	0.033
3.	Per capita monthly cost (for 1000 users in rural schools)	3.908

Groundwater pumping cost was not considered as it was required even in the absence of the electrochlorination system to draw groundwater.



**Fig. S1.** Schematic diagram of the designed electrochlorination system. This system was installed in four rural schools of India as described in the manuscript.