Report on

Water Quality across Tamil Nadu

Pre -, During & Post - Idol Immersion on

Vinayagar Chaturthi

2024





VINAYAGAR CHATHURTHI

In India, as a part of widely celebrated Vinayagar Chathurthi festival, it has been a tradition to immerse Vinayagar idols which are worshipped by devotees in water bodies like lakes, ponds, rivers, estuaries, open coastal beaches, wells etc. The immersion of idols concerns in terms of environmental impact of water pollution as the ingredients of the idols made of Plaster of Paris does not completely dissolve in water and leads to environmental pollution. Also, toxic paints used in decorating the idols containing heavy metals like mercury, lead, cadmium, Iron seeps into the water as the idol dissolves. It increases the acid content, Total Dissolved solids (TDS) and heavy metals in water thereby altering the quality of water, damaging ecosystem under water and also leading to bio-accumulation. The idols can also block natural flowing of water, causing its stagnation and further, the decorative materials resurfaces and floats atop the water body resulting in eutrophication. It is therefore very important to celebrate the festival of immersion idol by giving importance being mindful of the need for environment protection and also prevention and control of pollution.

In pursuance to the directions of Hon'ble High Court, Central Pollution Control Board (CPCB) evolved the Guidelines for immersion of idols and other puja materials reaching in the water bodies during festival. These guidelines have been prepared with a view to ensure environmental friendly idol immersion without affecting the quality of water bodies while ensuring religious observance. These guidelines emphasize the need for restriction on single use plastic materials for making idols, use of naturally occurring colors for coloring idols, imposing restrictions on size of the idol, construction of temporary synthetic lined ponds of adequate capacity, etc.

In this regard, it is directed to the State Pollution Control Boards having statutory powers under the Water (Prevention of Pollution) Control Act, 1974 and the Environment (Protection) Act, 1986 to give directions to implement the guidelines issued by the Central Pollution Control Board. And to conduct water quality assessment of the water bodies pre-immersion, during immersion and post-immersion on the basis of prescribed parameters.

Accordingly, in the State of Tamil Nadu, Tamil Nadu Pollution Control Board collected water samples from various water bodies across the State to oversee and monitor water quality and assess the impact of idol immersion activity during Vinayagar Chaturthi- 2024. Inorganic, metals and parameters were analyzed to evaluate the water quality. The reports received from Advanced Environmental Labs (AELs) - Cuddalore, Madurai, Salem Trichy, Tirunelveli and Vellore, District Environmental Labs (DELs) - Dindigul, Hosur, Manali, Nagapattinam, Perundurai and Thoothukudi were compiled and the overall inferences and conclusion were drawn.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Chennai
								Heavy Metals						
Sl. No.	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron (mg/L)
1	Near Kasimdu fishing Harbour	Sea Coast	Pre	04.09.2024	6.3	7.91	6	<0.0008	0.047	<0.05	0.083	<0.015	<0.0015	-
			During	16.09.2024	3.3	8.18	9	0.088	0.065	<0.05	0.044	0.395	<0.0015	-
			Post	20.09.2024	5.9	7.98	7	0.093	0.094	<0.05	0.046	0.347	0.054	-
2	Ramakrishna Nagar at Ennore	Sea Coast	Pre	05.09.2024	6.2	8.34	7	<0.0008	0.047	<0.05	0.08	<0.015	<0.0015	0.12
			During	15.09.2024	6	8.78	9	0.021	0.077	<0.05	0.026	0.246	<0.0015	0.43
			Post	18.09.2024	5.9	7.91	7	0.105	0.048	<0.05	0.039	0.398	0.088	0.25
3	Behind the unit of universal carborandum at Thiruvottiyur	Sea Coast	Pre	05.09.2024	6.2	8.25	6	<0.0008	0.051	<0.05	0.096	<0.015	<0.0015	0.18
			During	15.09.2024	6.2	8.83	7	0.031	0.086	<0.05	0.018	0.334	<0.0015	0.55
			Post	18.09.2024	6.2	8.05	7	0.086	0.048	<0.05	0.036	0.357	0.059	0.4
4	Behind popular weighbridge at Thiruvottiyur	Sea Coast	Pre	05.09.2024	6.1	8.52	6	<0.0008	0.042	<0.05	0.085	<0.015	0.02	0.12
			During	15.09.2024	5.8	8.34	8	0.026	0.082	<0.05	0.034	0.363	<0.0015	0.25
			Post	18.09.2024	6.5	7.71	5	0.086	0.072	<0.05	0.039	0.315	0.059	0.127
5	Srinivasapuram at Pattinapakkam	Sea Coast	Pre	06.09.2024	6.1	8.2	5	<0.0008	0.028	<0.05	NA	<0.015	<0.0015	-
			During	11.09.2024	5.4	7.89	9	0.085	0.065	<0.05	0.034	0.363	<0.0015	-
			Post	18.09.2024	5.9	7.78	8	0.062	0.024	<0.05	0.036	0.315	0.059	-
6	Palkalai Nagar at Neelankarai	Sea Coast	Pre	06.03.2024	6.3	8.6	5	<0.0008	0.042	<0.05	NA	<0.015	<0.0015	-
			During	11.09.2024	5.6	8.35	9	0.065	0.07	<0.05	0.021	0.266	<0.0015	-
			Post	18.09.2024	6.1	8.39	9	0.093	0.082	<0.05	0.039	0.364	0.063	-

Chennai

- pH values at all monitoring stations has been observed to be within the permissible limits.
- A discernible pattern of declining dissolved oxygen levels, concomitant with a rise of BOD values is observed during idol immersion periods.
- Elevated Concentration of Cadmium, Lead and Iron has been observed at the sampled stations.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024										District: Coimbatore-North				
								Heavy Metals						
Sl. No.	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron (mg/L)
1	Thekkampatty Bhathirakaliyamman Temple	River water	Pre	09-06-24	7.8	6.98	2	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	09-09-24	6.2	8.13	3	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	16/09/2024	6.9	7.61	2	<0.0008	0.0462	<0.05	<0.01	0.0246	0.0516	<0.05
2	Mettupalayam Subramaniyar Kovil	River water	Pre	09-06-24	8.1	7.45	2	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	09-09-24	6.0	8.35	4	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	16/09/2024	7.4	7.50	2	<0.0008	0.0189	<0.05	<0.01	<0.015	0.0333	<0.05
3	Elagampalayam	River water	Pre	09-06-24	7.9	7.27	2	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	09-09-24	7.0	7.99	5	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	16/09/2024	7.4	7.14	4	<0.0008	0.0896	<0.05	<0.01	<0.015	0.0292	<0.05
4	Sirumugai - Pazhathottam	River water	Pre	09-06-24	7.6	7.12	4	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	09-09-24	6.6	7.37	2	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	16/09/2024	7.0	7.14	2	<0.0008	0.0771	<0.05	<0.01	<0.015	0.0440	0.312
5	Vellakinar	River water	Pre	09-06-24	5.6	7.78	6	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	09-09-24	5.0	7.62	12	<0.0008	<0.0015	<0.05	<0.01	<0.015	<0.0015	0.602
			Post	16/09/2024	3.8	6.29	12	<0.0008	0.0786	<0.05	<0.01	<0.015	0.0588	0.667

- pH values at all monitoring stations has been observed to be within the permissible limits.
- Dissolved oxygen levels in the water bodies exhibit a predictable pattern of decline during immersion and recovery afterward, demonstrating its resilience.
- The majority of heavy metal concentrations were found to be below the detection limit with the exception of a marginal increase in Iron concentrations at Sirumugai -Pazhathottam and Vellakinar sites and lead and Zinc at other few sites.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024															District: Coimbatore-South
								Heavy Metals							
Sl. No.	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)	
1	Nadumalai River	River water	Pre	05-09-2024	7.5	7.43	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			During	15/09/2024	6.6	6.93	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			Post	16/09/2024	7.2	6.76	2	<0.0008	0.0313	<0.05	<0.001	<0.015	<0.0015	0.401	
2	Mayiladuthurai River	River water	Pre	05-09-2024	8.6	8.22	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			During	09-09-2024	6.9	8.27	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			Post	12-09-2024	8	7.89	3	<0.0008	0.0812	<0.05	<0.001	<0.015	<0.0015	0.473	
3	Kaliyappagoundenpudur	River water	Pre	05-09-2024	7.9	8.36	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			During	07-09-2024	6.1	8.50	3	<0.0008	0.0092	<0.05	<0.001	<0.015	<0.0015	<0.05	
			Post	12-09-2024	7.3	8.20	2	<0.0008	0.0120	<0.05	<0.001	<0.015	<0.0015	0.344	
4	Anaimalai Upparu	River water	Pre	05-09-2024	7.8	8.39	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			During	08-09-2024	6.9	7.70	3	<0.0008	0.0241	<0.05	<0.001	<0.015	<0.0015	<0.05	
			Post	12-09-2024	7.3	8.17	3	<0.0008	0.0644	<0.05	<0.001	<0.015	<0.0015	0.387	
5	Ambarampalayam	River water	Pre	05-09-2024	8.2	8.47	3	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			During	08-09-2024	7	8.38	4	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			Post	12-09-2024	7.6	8.33	3	<0.0008	0.0594	<0.05	<0.001	<0.015	<0.0015	0.549	
6	PAP Canal, Kedimedu	River water	Pre	05-09-2024	7.8	8.72	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			During	09-09-2024	6.6	8.02	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			Post	12-09-2024	7.2	7.66	2	<0.0008	0.0599	<0.05	<0.001	<0.015	0.0938	0.581	
7	Singanallur	Lake	Pre	06-09-2024	5.8	8.73	16	<0.0008	0.0216	<0.05	0.0318	<0.015	0.0928	<0.05	
			During	09-09-2024	5.1	8.75	22	<0.0008	0.1962	<0.05	0.0836	<0.015	0.1024	0.667	
			Post	16/09/2024	5.2	8.94	18	<0.0008	0.2884	<0.05	0.1193	<0.015	0.1442	0.796	
8	Muthannan Lake	Lake	Pre	06-09-2024	6.1	8.52	10	<0.0008	0.0928	<0.05	<0.001	<0.015	0.1416	<0.05	
			During	11-09-2024	5.5	7.90	12	<0.0008	0.6400	<0.05	0.1184	<0.015	0.2249	0.710	
			Post	16/09/2024	5.9	7.70	12	<0.0008	0.8801	<0.05	0.1024	<0.015	0.9235	0.882	
9	Nagarajapuram Lake	Lake	Pre	06-09-2024	5.7	7.49	2	<0.0008	0.1044	<0.05	0.1363	<0.015	0.1235	<0.05	
			During	09-09-2024	5.6	7.45	3	<0.0008	0.1645	<0.05	0.1777	<0.015	0.1366	0.764	
			Post	16/09/2024	6.0	7.18	3	<0.0008	0.2869	<0.05	0.1992	<0.015	0.2339	0.904	
10	Sadivayal	River water	Pre	06-09-2024	6.2	7.38	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			During	09-09-2024	6.0	7.45	3	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05	
			Post	16/09/2024	6.4	7.34	3	<0.0008	0.0754	<0.05	0.0626	<0.015	0.0962	0.419	

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Coimbatore-South
								Heavy Metals						
Sl. No.	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)
11	Thondamuthur Chithirai Chawadi	River water	Pre	06-09-2024	6.9	7.85	3	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05
			During	09-09-2024	6.3	7.89	6	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05
			Post	16/09/2024	6.9	7.69	4	<0.0008	0.0354	<0.05	<0.001	<0.015	0.0666	0.494
12	Kuniyamuthur Lake	Lake	Pre	06-09-2024	6.2	7.28	4	<0.0008	0.0641	<0.05	<0.001	<0.015	0.1482	<0.05
			During	09-09-2024	5.6	7.52	12	<0.0008	0.0746	<0.05	0.1223	<0.015	0.3645	0.602
			Post	16/09/2024	6.7	7.41	6	<0.0008	0.0969	<0.05	0.1786	<0.015	0.6874	0.710
13	Kuruchi Lake	River water	Pre	06-09-2024	6.9	7.27	12	<0.0008	0.2418	<0.05	0.0262	<0.015	0.1087	<0.05
			During	09-09-2024	5.7	8.20	14	<0.0008	0.2884	<0.05	0.0745	<0.015	0.1966	0.667
			Post	13/09/2024	6.6	7.56	12	<0.0008	0.2994	<0.05	0.0990	<0.015	0.1551	0.732
14	Walayar DAM	River water	Pre	06-09-2024	7.0	7.80	2	<0.0008	0.1094	<0.05	<0.001	<0.015	<0.0015	<0.05
			During	09-09-2024	6.6	8.32	3	<0.0008	0.1268	<0.05	0.0230	<0.015	0.1162	<0.05
			Post	13/09/2024	7.4	7.72	2	<0.0008	0.1888	<0.05	0.0068	<0.015	0.2323	0.731
15	PAP, Sulthanpettai	River water	Pre	06-09-2024	6.9	8.63	2	<0.0008	<0.0015	<0.05	<0.001	<0.015	<0.0015	<0.05
			During	09-09-2024	5.9	8.08	2	<0.0008	<0.0015	<0.05	0.0914	<0.015	0.1462	<0.05
			Post	11-09-2024	6.6	8.42	2	<0.0008	0.0388	<0.05	<0.001	<0.015	0.2263	0.452
16	Noyyal, Ravuthur Privu	River water	Pre	06-09-2024	6.2	7.85	6	<0.0008	0.1457	<0.05	0.0846	<0.015	0.0987	<0.05
			During	09-09-2024	5.8	7.84	8	<0.0008	0.1998	<0.05	0.0996	<0.015	0.2119	0.494
			Post	11-09-2024	6.5	7.52	6	<0.0008	0.2996	<0.05	0.1336	<0.015	0.1293	0.570
17	Achankulam Lake, Neelambur	Lake	Pre	06-09-2024	7.1	8.26	6	<0.0008	0.1099	<0.05	0.0662	<0.015	0.1994	<0.05
			During	09-09-2024	5.8	8.51	8	<0.0008	0.1446	<0.05	0.0999	<0.015	0.1555	0.731
			Post	11-09-2024	5.3	8.24	8	<0.0008	0.1998	<0.05	0.0914	<0.015	0.2293	0.796

Coimbatore - South

- pH values at all monitoring stations has been observed to be within the permissible limits.
- Dissolved oxygen levels in the water bodies exhibit a predictable pattern of decline during immersion and recovery afterward, demonstrating its resilience.
- Heavy Metals concentration follows a noticeable pattern in different phases as marginal change in copper, zinc and iron concentrations.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Cuddalore
								Heavy Metals						
Sl.No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron (mg/L)
1	Cuddalore silver beach	Sea	Pre	03.09.24	7.1	7.82	3.2	0.011	0.031	<0.05	<0.01	0.05	0.041	<0.05
			During	09.09.24	6.6	7.42	4	0.09	<0.0015	<0.05	<0.01	0.052	<0.015	<0.05
			Post	13.09.24	5.6	7.91	5.6	0.011	0.047	0.062	0.032	0.062	0.035	0.062
2	Rasapettai road bridge	Sea	Pre	03.09.24	7.6	7.8	2.8	0.01	0.03	<0.05	0.01	0.03	0.06	<0.05
			During	09.09.24	6.8	7.72	3.8	0.011	0.032	<0.05	<0.01	0.032	<0.015	<0.05
			Post	13.09.24	5.6	7.75	6.8	0.014	0.055	0.035	0.035	0.059	0.041	0.068
3	Samiyarpettai beach	Sea	Pre	03.09.24	7.3	7.74	3.4	0.009	0.021	<0.05	0.01	0.021	0.01	<0.05
			During	09.09.24	6.5	7.8	5.2	0.015	0.025	<0.05	<0.01	0.035	0.021	<0.05
			Post	13.09.24	5.2	7.79	8.6	0.01	0.032	0.061	0.032	0.07	0.025	0.071
4	Vallambadugai road bridge	Sea	Pre	03.09.24	7	7.75	2.8	0.012	0.029	<0.05	<0.02	<0.015	0.01	<0.05
			During	09.09.24	6.58	7.76	3.8	0.013	0.033	<0.05	<0.02	<0.015	0.01	<0.05
			Post	13.09.24	5	7.51	6.2	0.023	0.041	0.065	0.035	0.081	0.032	0.62
5	bhuvanagiri road bridge	River	Pre	03.09.24	6.6	7.94	3.2	0.011	0.031	<0.05	<0.01	0.03	0.01	<0.05
			During	09.09.24	6.7	7.84	4.2	0.011	0.031	<0.05	<0.01	0.05	<0.015	<0.05
			Post	13.09.24	5.1	7.53	4.8	0.012	0.053	0.062	0.032	0.086	0.016	0.71
6	Ma.kudikadu lake	Lake	Pre	06.09.24	7.3	8.04	2.2	0.009	0.011	<0.05	<0.01	0.04	<0.015	<0.05
			During	09.09.24	6.9	7.89	3	0.009	0.013	<0.05	<0.01	0.04	0.05	<0.05
			Post	13.09.24	5.1	7.84	5	0.0241	0.029	0.061	0.032	0.083	0.08	0.071
7	Thandavankuppam lake	Lake	Pre	06.09.24	7.6	7.78	2.6	0.009	0.014	<0.05	<0.01	0.04	<0.015	<0.05
			During	09.09.24	7.6	7.1	2	0.009	0.017	<0.05	<0.01	0.04	<0.015	<0.05
			Post	13.09.24	5	7.15	2.8	0.009	0.026	0.059	0.036	0.079	0.021	0.062
8	Nalavadu sea	Sea	Pre	06.09.24	6.8	7.85	3.8	0.009	0.011	<0.05	<0.01	0.05	<0.015	<0.05
			During	09.09.24	6.6	7.49	5.6	0.009	0.014	<0.05	<0.01	0.04	<0.015	0.05
			Post	13.09.24	5.6	7.9	7.2	0.014	0.017	0.071	0.034	0.082	0.043	0.0583
9	Periyakuppam sea	Sea	Pre	06.09.24	6.8	7.75	4.8	0.008	0.021	<0.05	<0.01	0.034	<0.015	<0.05
			During	09.09.24	6.7	7.81	4.6	0.01	0.025	<0.05	<0.01	0.043	0.03	<0.05
			Post	13.09.24	5	7.8	8.2	0.023	0.033	0.062	0.055	0.055	0.043	0.061
10	C.pudhupetai sea	Sea	Pre	06.09.24	6.9	7.86	5.6	0.008	0.021	<0.05	<0.01	<0.015	<0.015	<0.05
			During	09.09.24	6	7.76	8	0.009	0.026	<0.05	<0.01	<0.015	0.081	<0.05
			Post	13.09.24	5.1	7.78	8.6	0.012	0.029	0.061	0.051	0.081	0.085	0.063
11	Veeranallur	Lake	Pre	06.09.24	7.6	7.93	<2	0.008	<0.0015	<0.05	<0.01	<0.015	<0.015	<0.05
			During	09.09.24	7.5	7.96	<2	0.0213	<0.0015	<0.05	<0.01	<0.015	<0.015	<0.05
			Post	13.09.24	5.1	7.89	<2	0.252	0.041	0.072	0.045	0.091	0.052	0.078
12	Kumara odappu vaikaal	River	Pre	06.09.24	7.5	7.76	<2	0.008	<0.0015	<0.05	<0.01	<0.015	<0.015	<0.05
			During	09.09.24	7.6	8.03	<2	0.008	<0.0015	<0.05	<0.01	<0.015	<0.015	<0.05
			Post	13.09.24	6.2	7.94	2.6	0.231	0.052	0.062	0.054	0.092	0.062	0.075

Cuddalore

- pH values at all monitoring stations has been observed to be within the permissible limits.
- A discernible pattern of declining dissolved oxygen levels, concomitant with a rise of BOD values is observed during idol immersion periods.
- Marginal change in the concentration of heavy metals has been observed in Post immersion samples.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024															District: Dindigul
								Heavy Metals							
Sl.No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)	
1	Plani Shanmuganathi	River	Pre	30.08.2024	6.6	7.22	3	0.008	0.084	<0.05	0.064	0.136	0.178	0.23	
			During	14.09.2024	6.5	7.31	3	0.008	0.086	<0.05	0.071	0.138	0.182	0.241	
			Post	18.09.2024	6.3	7.55	4	0.01	0.089	<0.05	0.083	0.143	0.194	0.253	
2	Oddanchatram - Thalakuthu Falls	Pond	Pre	30.08.2024	6.4	7.21	5	0.006	0.062	<0.05	0.052	0.056	0.098	0.176	
			During	08.09.2024	6.3	7.18	6	0.007	0.063	<0.05	0.064	0.064	0.102	0.18	
			Post	14.09.2024	6	7.48	6	0.009	0.068	<0.05	0.073	0.072	0.124	0.192	
3	Thadicombu Kudaganaru River	River	Pre	30.08.2024	6.5	7.43	4	0.005	0.114	<0.05	0.068	0.784	0.187	0.126	
			During	10.09.2024	6.4	7.48	4	0.006	0.118	<0.05	0.072	0.812	0.192	0.134	
			Post	12.09.2024	6.1	7.67	5	0.009	0.124	<0.05	0.083	0.819	0.198	0.138	
4	Vedasandur Kudaganaru River	River	Pre	30.08.2024	6.2	7.99	6	0.006	0.148	<0.05	0.074	0.624	0.172	0.158	
			During	10.09.2024	5.8	7.91	5	0.006	0.151	<0.05	0.075	0.628	0.178	0.162	
			Post	12.09.2024	5.6	8.2	6	0.008	0.158	<0.05	0.083	0.63	0.186	0.174	
5	Vadamadurai - Nariparai	Surface water	Pre	30.08.2024	6.6	7.14	3	0.004	0.136	<0.05	0.082	0.184	1.193	0.173	
			During	08.09.2024	6.4	7.27	4	0.017	0.142	<0.05	0.084	0.186	0.198	0.176	
			Post	12.09.2024	6.3	7.31	4	0.009	0.159	<0.05	0.091	0.194	0.206	0.185	
6	Shanarpatty - Mathanakulam	Pond	Pre	30.08.2024	6.8	6.77	5	0.005	0.148	<0.05	0.097	0.098	0.076	0.134	
			During	10.09.2024	6.4	7.08	5	0.006	0.153	<0.05	0.101	0.105	0.081	0.143	
			Post	13.09.2024	6	7.17	6	0.008	0.164	<0.05	0.119	0.12	0.102	0.154	
7	Natham - Ammankulam	Pond	Pre	30.08.2024	7	6.76	3	0.005	0.095	<0.05	0.071	0.094	0.165	0.218	
			During	08.09.2024	6.8	6.93	4	0.007	0.103	<0.05	0.082	0.103	0.176	0.216	
			Post	13.09.2024	3.5	7.22	16	0.009	0.124	<0.05	0.094	0.108	0.18	0.243	
8	PattiveeranPatty - Marudhanathi Dam	Dam	Pre	30.08.2024	6.5	7.29	2	0.007	0.064	<0.05	0.036	0.168	0.152	0.098	
			During	08.09.2024	6.4	7.13	3	0.01	0.071	<0.05	0.043	0.172	0.163	0.104	
			Post	13.09.2024	6	6.88	3	0.012	0.082	<0.05	0.08	0.184	0.174	0.126	
9	Kannapatty River - Batalagundu	River	Pre	30.08.2024	6.7	6.74	3	0.006	0.053	<0.05	0.027	0.172	0.163	0.087	
			During	08.09.2024	6.5	6.83	4	0.014	0.062	<0.05	0.036	0.182	0.171	0.098	
			Post	13.09.2024	6.2	6.7	4	0.017	0.074	<0.05	0.042	0.186	0.18	0.124	
10	Eriodu - Karumparai - Nanthvnakulam	Pond	Pre	03.09.2024	6.9	7.2	3	0.062	0.098	<0.05	0.078	0.085	0.174	0.268	
			During	08.09.2024	6.6	7.31	4	0.072	0.106	<0.05	0.078	0.094	0.179	0.269	
			Post	12.09.2024	6.3	7.43	4	0.075	0.119	<0.05	0.084	0.107	0.187	0.278	

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Dindigul
								Heavy Metals						
Sl.No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)
11	Gujiliamparai - R.Kombai Bangalamedu Kulam	Pond	Pre	03.09.2024	6.4	7.29	4	0.004	0.108	<0.05	0.082	0.016	0.124	0.11
			During	09.09.2024	6.1	7.34	4	0.007	0.11	<0.05	0.086	0.019	0.13	0.114
			Post	12.09.2024	5.9	7.42	5	0.014	0.128	<0.05	0.102	0.043	0.148	0.132
12	Nilakottai - Anaipatty vaigai rivar	River	Pre	04.09.2024	7.1	7.82	2	0.005	0.124	<0.05	0.121	0.088	0.107	0.206
			During	08.09.2024	6.7	8.03	3	0.006	0.129	<0.05	0.126	0.09	0.112	0.21
			Post	13.09.2024	6.3	8.16	3	0.017	0.136	<0.05	0.134	0.103	0.131	0.226
13	Chinnalapatti - Thommankulam	Pond	Pre	08.09.2024	6.7	7.41	3	0.005	0.167	<0.05	0.048	0.136	0.142	0.172
			During	08.09.2024	6.5	7.55	4	0.008	0.172	<0.05	0.052	0.142	0.147	0.214
			Post	13.09.2024	6.4	7.59	5	0.016	0.183	<0.05	0.064	0.158	0.153	0.228
14	Kannivadi - Machakulam	Pond	Pre	08.09.2024	6.8	7.5	3	0.006	0.071	<0.05	0.076	0.141	0.153	0.183
			During	09.09.2024	6.4	7.63	4	0.007	0.082	<0.05	0.081	0.152	0.156	0.186
			Post	13.09.2024	6.2	7.88	4	0.011	0.094	<0.05	0.092	0.174	0.168	0.206
15	Reddiyarchatram - Mangarai Kulam	Pond	Pre	08.09.2024	6.2	7.17	10	0.004	0.092	<0.05	0.078	0.152	0.178	0.208
			During	08.09.2024	6	7.55	10	0.006	0.096	<0.05	0.079	0.161	0.182	0.21
			Post	13.09.2024	5.7	7.59	12	0.012	0.114	<0.05	0.086	0.174	0.194	0.214
16	Kodaikanal - Dhobikanal	Surface Water	Pre	09.09.2024	6.7	6.48	3	0.004	0.076	<0.05	0.083	0.024	0.045	0.116
			During	09.09.2024	6.4	6.37	4	0.006	0.084	<0.05	0.084	0.048	0.054	0.118
			Post	16.09.2024	6	6.11	4	0.014	0.096	<0.05	0.086	0.071	0.061	0.143
17	Dindigul - Kottaikulam	Pond	Pre	10.09.2024	Nil	7.71	15	0.004	0.072	<0.05	0.084	0.022	0.034	0.106
			During	10.09.2024	6.3	7.58	4	0.007	0.074	<0.05	0.089	0.035	0.042	0.11
			Post	16.09.2024	Nil	6.95	22	0.024	0.432	<0.05	0.126	0.686	0.524	0.832

Dindigul

- pH values at all monitoring stations has been observed to be within the permissible limits.
- For a sampling station named Dindigul - Kottaikulam, Dissolve oxgyen is found to be NIL, and BOD 22 similarly marginal increase in Lead concentration has also been observered.
- The majority of heavy metal concentrations were found to be below the detection limit with the exception of a marginal increase in Iron concentrations at Sirumugai -Pazhathottam and Vellakinar sites and lead and Zinc at other few sites.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024										District: Erode				
								Heavy Metals						
Sl.No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)
1	Varasathi Vinayagar Temple at River Bhavani, Sathyamangalam	River	Pre	03.09.2024	7.3	6.98	2.1	<0.0028	<0.0045	<0.05	<0.01	<0.015	<0.0015	0.713
			During	12.09.2024	6.4	6.95	2.6	<0.0028	<0.0045	<0.05	<0.01	0.034	0.106	0.309
			Post	19.09.2024	6.8	6.61	2.7	<0.0028	<0.0045	<0.05	<0.01	<0.015	<0.0015	<0.05
2	Thadapalli Canal, Gobichettipalayam	Canal	Pre	03.09.2024	6.6	7.02	2.6	<0.0028	<0.0045	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	12.09.2024	5.4	7.5	2.9	<0.0028	<0.0045	<0.05	<0.01	0.017	0.0151	0.206
			Post	19.09.2024	5.9	7.08	2.6	<0.0028	<0.0045	<0.05	<0.01	<0.015	<0.0015	<0.05
3	Kooduthurai	River	Pre	03.09.2024	5.3	7.57	2.6	<0.0028	<0.0045	<0.05	<0.01	<0.015	<0.0015	0.092
			During	13.09.2024	4.6	7.13	2.8	<0.0028	<0.0045	<0.05	<0.01	<0.015	0.098	0.36
			Post	19.09.2024	4.8	7.75	2.7	<0.0028	<0.0045	<0.05	<0.01	<0.015	<0.0015	<0.05
4	Erode-Pallipalayam Bridge over River Cauvery	River	Pre	03.09.2024	4.8	7.35	2.6	<0.0028	<0.0045	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	13.09.2024	4.3	7.38	2.9	<0.0028	<0.0045	<0.05	<0.01	<0.015	<0.0015	0.069
			Post	19.09.2024	4.4	7.29	2.7	<0.0028	<0.0045	<0.05	<0.01	<0.015	<0.0015	<0.05

Erode

- pH values at all monitoring stations has been observed to be within the permissible limits.
- Majority of Heavy metals concentration were observed to be below the detection limit.
- The DO and BOD values exhibit a consistent trend across the pre-, during and post-immersion phases highlighting its impact as increased organic matter in the water body.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024					District: Krishnagiri						
					Heavy Metals						
Sl.No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Lead (mg/L)	Zinc (mg/L)
1	KRP Dam	River	Pre	5.9.2024	6.6	7.39	7	0.007	<0.05	<0.015	0.173
			During	11.9.2024	6.1	7.82	5	0.173	<0.05	0.041	0.437
			Post	18.9.2024	6.3	7.88	4	0.371	<0.05	0.074	0.371
2	Thennpennai River at Kaveripattinam	River	Pre	5.9.2024	6.5	7.46	3	<0.0015	<0.05	<0.015	0.275
			During	11.9.2024	6.1	7.74	4	<0.0015	<0.05	<0.015	0.482
			Post	18.9.2024	6.7	7.78	3	0.117	<0.05	0.017	0.417
3	Devarajan Lake at Denkanikottai	Lake	Pre	5.9.2024	6.2	7.7	5	0.047	<0.05	<0.015	<0.0015
			During	10.9.2024	5.8	7.28	5	0.199	<0.05	0.038	0.07
			Post	17.9.2024	5.8	7.35	5	0.331	<0.05	<0.015	0.714
4	Pettariayasamy tank at Denkanikottai	Lake	Pre	5.9.2024	6.3	7.92	4	<0.0015	<0.05	<0.015	0.049
			During	10.9.2024	6.4	7.3	6	0.107	<0.05	0.016	0.334
			Post	17.9.2024	5.7	7.38	4	0.106	<0.05	<0.015	0.172
5	Thally Lake	Lake	Pre	5.9.2024	6.1	7.72	2	<0.0015	<0.05	<0.015	0.081
			During	10.9.2024	5.5	7.33	3	0.082	<0.05	0.065	0.437
			Post	17.9.2024	5.9	7.28	2	0.076	<0.05	<0.015	0.378
6	Gowramma Tank at Mathakondapalli	Lake	Pre	5.9.2024	6	7.38	3	0.047	<0.05	<0.015	0.339
			During	11.9.2024	6.1	7.38	4	0.017	<0.05	<0.015	0.417
			Post	18.9.2024	5.8	7.64	5	0.371	<0.05	<0.015	0.447
7	Panchapalli Dam	River	Pre	5.9.2024	6.6	7.73	4	<0.0015	<0.05	<0.015	0.049
			During	11.9.2024	6.3	7.46	4	0.171	<0.05	<0.015	0.077
			Post	18.9.2024	6.3	7.5	2	0.078	<0.05	0.074	0.119
8	Pachakulam Tank Hosur town	Lake	Pre	4.9.2024	5.1	7.18	12	0.049	<0.05	<0.015	0.017
			During	10.9.2024	5.4	7.48	3	0.211	<0.05	<0.015	0.045
			Post	17.9.2024	3.9	6.75	18	0.049	<0.05	<0.015	0.045

Krishnagiri

- pH values at all monitoring stations has been observed to be within the permissible limits.
- A discernible patte rn of declining dissolved oxygen levels, concomitant with a rise of BOD values is observed during idol immersion periods.
- Elevated Concentration of Copper has been observed at the sampled stations.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Madurai
								Heavy Metals						
Sl. No.	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron (mg/L)
1	Othakadai Thirumohur Kanmoi	Pond	Pre	03.09.2024	6.2	8.21	3	0.004	0.028	<0.05	0.023	0.071	0.023	<0.05
			During	10.09.2024	1.2	7.52	12	0.013	0.080	<0.05	0.029	0.218	0.022	<0.05
			Post	12.09.2024	4	7.46	12	0.023	0.029	<0.05	0.011	0.025	0.023	<0.05
2	Kottampatti - Kovil Teppakulam	Artificial Ponds	Pre	03.09.2024	6	8.33	3	0.009	0.031	<0.05	0.014	0.093	0.029	<0.05
			During	10.09.2024	2	8.78	11	0.014	0.074	<0.05	0.030	0.232	0.024	<0.05
			Post	12.09.2024	5.4	8.18	3	0.028	0.026	<0.05	0.010	0.199	0.020	<0.05
3	Mankatti Teppakulam	Artificial Ponds	Pre	03.09.2024	2	8.20	8	0.007	0.029	<0.05	0.028	0.126	0.025	<0.05
			During	10.09.2024	3	7.62	13	0.014	0.080	<0.05	0.030	0.238	0.023	<0.05
			Post	12.09.2024	5.4	7.68	8	0.018	0.024	<0.05	0.010	0.186	0.021	<0.05
4	Kumaram Kanmoi Vadipatti	Pond	Pre	03.09.2024	9.2	8.14	6	0.007	0.037	<0.05	0.014	0.134	0.027	<0.05
			During	10.09.2024	6	7.39	12	0.013	0.085	<0.05	0.030	0.230	0.021	<0.05
			Post	12.09.2024	10.2	7.53	4	0.022	0.032	<0.05	0.012	0.217	0.024	<0.05
5	Vadipatti Ayyanar Kovil Oorani (Ayyankottai)	Pond	Pre	03.09.2024	5.8	8.12	3	0.007	0.031	<0.05	0.012	0.140	0.026	<0.05
			During	10.09.2024	2	8.39	9	0.011	0.074	<0.05	0.028	0.217	0.019	<0.05
			Post	12.09.2024	8.4	8.02	5	0.021	0.026	<0.05	0.010	0.219	0.020	<0.05
6	Ayanpapakudi Kanmoi Avaniyapuram	Pond	Pre	04.09.2024	7	7.48	3	0.011	0.038	<0.05	0.006	0.195	0.034	<0.05
			During	10.09.2024	9	8.34	3	0.011	0.074	<0.05	0.017	0.217	0.023	<0.05
			Post	12.09.2024	6.4	7.88	6	0.018	0.032	<0.05	0.012	0.186	0.028	<0.05
7	Sevathikulam Kanmoi Thirupparankundram	Pond	Pre	04.09.2024	8	7.81	4	0.007	0.042	<0.05	0.008	0.207	0.070	<0.05
			During	10.09.2024	3	8.03	12	0.013	0.073	<0.05	0.020	0.022	0.021	<0.05
			Post	12.09.2024	4	7.84	12	0.022	0.022	<0.05	0.013	0.198	0.026	<0.05
8	Kundaru Seengulam Kanmoi Thirumangalam	Pond	Pre	04.09.2024	7	7.38	5	0.008	0.040	<0.05	0.011	0.204	0.056	<0.05
			During	09.09.2024	2	7.53	9	0.010	0.054	<0.05	0.030	0.143	0.016	<0.05
			Post	15.09.2024	8	7.01	8	0.012	0.018	<0.05	0.004	0.196	0.024	<0.05
9	Usilampatti Matharai Kanmoi Usilampatti	Pond	Pre	04.09.2024	5.8	9.10	3	0.012	0.043	<0.05	0.016	0.214	0.037	<0.05
			During	11.09.2024	5	7.67	12	0.010	0.064	<0.05	0.016	0.194	0.023	<0.05
			Post	12.09.2024	5	7.78	14	0.014	0.027	<0.05	0.009	0.028	0.022	<0.05
10	Subramania samy Kovil - Kulam Peraiyur	Artificial Ponds	Pre	04.09.2024	7	8.07	2	0.010	0.035	<0.05	0.017	0.237	0.036	<0.05
			During	11.09.2024	2	8.52	8	0.011	0.048	<0.05	0.017	0.197	0.022	<0.05
			Post	12.09.2024	2.7	7.52	8	0.015	0.024	<0.05	0.011	0.199	0.025	<0.05
11	Vaigai Thaikkalpalam	River	Pre	06.09.2024	5.2	7.80	8	0.013	0.042	<0.05	0.016	0.294	0.034	<0.05
			During	09.09.2024	1.3	7.73	18	0.009	0.052	<0.05	0.025	0.154	0.013	<0.05
			Post	12.09.2024	4.6	7.66	11	0.019	0.025	<0.05	0.008	0.192	0.027	<0.05

- pH values at all monitoring stations has been observed to be within the permissible limits.
- Dissolved oxygen levels in the water bodies exhibit a predictable pattern of decline during immersion and recovery afterward, demonstrating its resilience.
- No appreciable changes were detected in heavy metals concentrations, with the exception of a marginal increase in lead levels.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Nagapattinam
								Heavy Metals						
Sl. No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron (mg/L)
1	River vettar mouth at Nagapattinam	River	Pre	06.09.2024	7.3	7.8	4	0.09	0.88	0.306	<0.01	<0.05	0.278	0.997
			During	09.09.2024	7	8.7	5	0.052	0.966	0.754	0.024	0.384	0.363	2.612
			Post	12.09.2024	7.4	8.76	4	0.029	0.526	0.05	<0.01	0.079	0.351	1.78
2	New beach at Nagapattinam	Beach	Pre	06.09.2024	7.1	7.77	2	0.121	0.589	0.604	0.042	0.14	0.363	1.603
			During	09.09.2024	6.4	8.08	3	0.141	0.914	1.575	0.064	0.628	0.413	2.461
			Post	12.09.2024	7.1	8.39	2	0.138	0.697	1.276	0.042	0.14	0.286	1.897
3	Tharangambadi-Poraiyar beach	Beach	Pre	06.09.2024	7.4	8.05	4	<0.002	0.594	<0.02	0.046	0.14	0.34	<0.02
			During	11.09.2024	6.9	8.36	5	0.038	0.982	0.828	0.046	0.628	0.45	1.965
			Post	15.09.2024	7.3	7.88	4	<0.002	0.766	<0.02	<0.01	0.384	0.428	1.578
4	Cauvery River at Mayiladuthurai	River	Pre	06.09.2024	6.6	8.68	3	<0.002	0.582	<0.02	<0.01	<0.05	0.178	1.149
			During	11.09.2024	6.1	8.43	4	0.034	0.64	0.082	<0.01	0.14	0.269	1.659
			Post	15.09.2024	5.9	8.52	3	<0.002	0.582	<0.02	<0.01	<0.05	0.244	1.322
5	Uppanar River at Sirkali	River	Pre	06.09.2024	7.2	8.17	4	<0.002	0.657	<0.02	<0.01	<0.05	0.28	0.363
			During	11.09.2024	6.9	8.21	6	<0.002	0.789	<0.02	<0.01	<0.05	0.283	0.813
			Post	15.09.2024	7.1	8.18	4	<0.002	0.725	<0.02	<0.01	<0.05	0.245	0.521
6	Sea shore and Cauvery River meeting point at Poombukar	Sea shore & River meeting point	Pre	06.09.2024	6.9	7.94	4	0.124	0.566	<0.02	<0.01	<0.05	0.266	1.62
			During	11.09.2024	6.7	8.08	5	0.148	0.686	<0.02	0.055	0.062	0.269	1.92
			Post	15.09.2024	6.7	8.02	5	0.136	0.629	<0.02	<0.01	<0.05	0.224	1.86

Nagapattinam

- pH values at all monitoring stations has been observed to be within the permissible limits.
- A discernible pattern of declining dissolved oxygen levels, concomitant with a rise of BOD values is observed during idol immersion periods.
- Heavy Metals concentration has been found to be following a consistent trend across the pre-,during and post-idol immersion.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Salem
								Heavy Metals						
Sl.No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)
1	Kalvadankam	River	Pre	04.09.24	5.9	7.65	<2	<0.02	<0.0015	<0.05	<0.01	<0.015	0.0918	<0.05
			During	10.09.24	5.6	7.83	<2	<0.02	<0.0015	<0.05	<0.01	0.1241	0.2742	<0.05
			Post	12.09.24	5.4	7.69	2.1	<0.02	<0.0015	<0.05	<0.01	0.0898	0.1264	<0.05
2	Kuppanur	River	Pre	04.09.24	5.7	7.96	2.1	<0.02	0.0478	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.6	7.55	2.4	<0.02	0.1069	<0.05	<0.01	0.1438	0.0622	<0.05
			Post	12.09.24	5.6	7.35	2.4	<0.02	0.098	<0.05	<0.01	0.1008	0.1098	<0.05
3	Poolampatti Santhaipettai	River	Pre	04.09.24	5.9	7.86	<2	<0.02	0.0675	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.8	7.54	<2	<0.02	0.101	<0.05	<0.01	0.099	0.034	<0.05
			Post	12.09.24	5.7	7.4	2.4	<0.02	0.1009	<0.05	<0.01	0.1004	0.0661	<0.05
4	Koodakal	River	Pre	04.09.24	5.6	7.85	<2	<0.02	0.0988	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.7	7.88	<2	<0.02	0.11	<0.05	<0.01	<0.015	0.0987	<0.05
			Post	12.09.24	5.5	7.59	<2	<0.02	0.1088	<0.05	<0.01	<0.015	0.0811	<0.05
5	Pillukurichi	Canal	Pre	04.09.24	5.9	7.91	<2	<0.02	0.0992	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.8	7.58	<2	<0.02	0.1881	<0.05	<0.01	<0.015	0.064	<0.05
			Post	12.09.24	5.9	7.65	<2	<0.02	0.1432	<0.05	<0.01	<0.015	0.0515	<0.05
6	Oonamparai	Canal	Pre	04.09.24	5.7	8.12	<2	<0.02	0.1866	<0.05	<0.01	0.1166	0.088	<0.05
			During	10.09.24	5.8	7.72	2.1	<0.02	0.5864	<0.05	<0.01	0.1328	0.1214	<0.05
			Post	12.09.24	5.7	7.66	2.1	<0.02	0.269	<0.05	<0.01	0.1214	0.1009	<0.05
7	Ellamadai	Canal	Pre	04.09.24	5.9	7.99	<2	<0.02	0.0543	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.8	7.98	<2	<0.02	0.1109	<0.05	<0.01	<0.015	0.079	<0.05
			Post	12.09.24	5.6	7.72	2.1	<0.02	0.1088	<0.05	<0.01	<0.015	<0.0015	<0.05
8	Sendrayaperumal Kovil	River	Pre	06.09.24	5.3	7.72	<2	<0.02	0.0644	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.4	7.65	2.4	<0.02	0.1917	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	12.09.24	5.5	7.56	2.1	<0.02	0.1122	<0.05	<0.01	<0.015	<0.0015	<0.05
9	Kaveripallam Padithurai	River	Pre	06.09.24	5.7	7.65	<2	<0.02	0.1009	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.5	7.29	4	<0.02	0.1919	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	12.09.24	5.3	7.65	<2	<0.02	0.0911	<0.05	<0.01	<0.015	<0.0015	<0.05
10	Thippamapatti	River	Pre	06.09.24	5.9	7.87	<2	<0.02	0.3026	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.7	7.74	2.7	<0.02	0.5981	<0.05	<0.01	0.6643	<0.0015	<0.05
			Post	12.09.24	5.8	7.7	2.4	<0.02	0.212	<0.05	<0.01	0.3848	<0.0015	<0.05
11	Koonandiyur	River	Pre	06.09.24	5.5	8.3	2.1	<0.02	0.1109	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.3	7.26	4.6	<0.02	0.3917	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	12.09.24	5.5	7.53	2.7	<0.02	0.1927	<0.05	<0.01	<0.015	<0.0015	<0.05

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Salem
								Heavy Metals						
Sl.No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)
12	Danishpettai	Lake	Pre	06.09.24	5.8	7.68	<2	<0.02	0.0595	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.7	7.5	<2	<0.02	0.1919	<0.05	<0.01	<0.015	0.021	<0.05
			Post	12.09.24	5.7	7.38	2.1	<0.02	0.1009	<0.05	<0.01	<0.015	<0.0015	<0.05
13	Muttal	Lake	Pre	06.09.24	5.5	7.9	2.1	<0.02	0.0577	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	11.09.24	5.7	7.81	2.7	<0.02	0.1089	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.6	7.96	2.4	<0.02	0.1109	<0.05	<0.01	<0.015	<0.0015	<0.05
14	Jangamasamudhram	Lake	Pre	06.09.24	5.6	7.43	2.1	<0.02	0.061	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	11.09.24	5.4	7.84	3.6	<0.02	0.1208	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.5	8.17	2.7	<0.02	0.1095	<0.05	<0.01	<0.015	<0.0015	<0.05
15	Sentharapatti	Lake	Pre	06.09.24	5.9	8.33	<2	<0.02	0.0663	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	11.09.24	5.8	8.4	2.1	<0.02	0.2464	<0.05	<0.01	0.5971	<0.0015	<0.05
			Post	13.09.24	5.7	8.26	2.7	<0.02	0.1369	<0.05	<0.01	0.3369	<0.0015	<0.05
16	Maniyarkundam	Lake	Pre	06.09.24	5.7	8.58	2	<0.02	0.0711	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	11.09.24	5.8	8.17	2.4	<0.02	0.1235	<0.05	<0.01	0.1669	<0.0015	<0.05
			Post	13.09.24	5.7	8.19	2.4	<0.02	0.108	<0.05	<0.01	0.1872	<0.0015	<0.05
17	Mookaneri	Lake	Pre	06.09.24	5.7	8.01	2.4	<0.02	0.0625	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	11.09.24	5.4	8.54	3.3	<0.02	0.099	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.5	8.12	2.4	<0.02	0.0977	<0.05	<0.01	<0.015	<0.0015	<0.05
18	Ammapet (Kumaragiri)	Lake	Pre	06.09.24	5.8	8	<2	<0.02	0.102	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	11.09.24	5.5	8.2	2.4	<0.02	0.2677	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.7	8.49	<2	<0.02	0.2145	<0.05	<0.01	<0.015	<0.0015	<0.05
19	Seelanaickenpatti	Lake	Pre	06.09.24	5.8	8.24	2.4	<0.02	0.0846	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	11.09.24	5.6	8.43	<2	<0.02	0.1136	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.4	7.87	2.4	<0.02	0.1087	<0.05	<0.01	<0.015	<0.0015	<0.05
20	Anaimadivu, Vazhappady TK	Lake	Pre	06.09.24	5.8	8.08	2.7	<0.02	0.0785	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	11.09.24	5.3	7.95	3	<0.02	0.1023	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.4	8.09	4.4	<0.02	0.1106	<0.05	<0.01	<0.015	<0.0015	<0.05
21	Mohanur Near Shivan Temple	River	Pre	06.09.24	7	7.97	2.4	<0.02	0.0838	<0.05	<0.01	<0.015	<0.0015	-
			During	09.09.24	4.8	7.73	6	<0.02	0.0462	<0.05	<0.01	<0.015	0.1791	-
			Post	13.09.24	5.9	7.69	3.3	<0.02	0.1009	<0.05	<0.01	<0.015	0.108	-
22	Nagamalai Dam	Dam	Pre	04.09.24	5.8	8.6	<2	<0.02	0.0427	<0.05	<0.01	0.079	0.0074	<0.05
			During	10.09.24	5.3	7.73	3.6	<0.02	0.0638	<0.05	<0.01	0.1369	0.0288	<0.05
			Post	13.09.24	5.6	7.4	2.4	<0.02	0.0511	<0.05	<0.01	0.1124	0.0274	<0.05

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Salem
								Heavy Metals						
Sl.No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)
23	Cauvery Hogenkkal	River	Pre	04.09.24	5.9	7.99	2.7	<0.02	0.0403	<0.05	<0.01	<0.015	0.0295	<0.05
			During	10.09.24	5.9	7.91	3	<0.02	0.0714	<0.05	<0.01	<0.015	0.0681	<0.05
			Post	13.09.24	5.8	7.7	3	<0.02	0.0744	<0.05	<0.01	<0.015	0.0693	<0.05
24	Kesargulli Dam	Dam	Pre	04.09.24	5.6	8.65	3.3	<0.02	0.0433	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.2	8.29	5.2	<0.02	0.0511	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.6	7.85	4	<0.02	0.058	<0.05	<0.01	<0.015	<0.0015	<0.05
25	Chinnar Dam	Dam	Pre	04.09.24	5.9	8.34	3	<0.02	0.081	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.4	8.33	2.7	<0.02	0.1009	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.6	8.04	2.7	<0.02	0.055	<0.05	<0.01	<0.015	<0.0015	<0.05
26	Kolasanshalli	Lake	Pre	04.09.24	5.8	8.21	2.1	<0.02	0.0742	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.8	8.34	2.4	<0.02	0.1001	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.7	7.61	2.1	<0.02	0.1066	<0.05	<0.01	<0.015	<0.0015	<0.05
27	Thumbalahalli	Dam	Pre	04.09.24	5.7	8.6	3	<0.02	0.0511	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.2	8.31	4.6	<0.02	0.0879	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	13.09.24	5.3	8.25	4	<0.02	0.0617	<0.05	<0.01	<0.015	<0.0015	<0.05
28	Thenpennai	River	Pre	04.09.24	5.4	8.34	3	<0.02	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.2	8.48	4.8	<0.02	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	14.09.24	5.1	8.29	4.4	<0.02	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
29	K.Ichampadi Dam	Dam	Pre	04.09.24	5.4	8.61	3.6	<0.02	0.0375	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.1	8.59	3	<0.02	0.234	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	14.09.24	5.3	8.28	3.6	<0.02	0.1009	<0.05	<0.01	<0.015	<0.0015	<0.05
30	Varattaru Dam	Dam	Pre	04.09.24	5.8	8.33	3	<0.02	0.0435	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.3	8.24	3	<0.02	0.091	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	14.09.24	5.7	7.98	<2	<0.02	0.0777	<0.05	<0.01	<0.015	<0.0015	<0.05
31	Vaniyur Dam	Dam	Pre	04.09.24	5.8	8.32	2	<0.02	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.6	7.68	3.9	<0.02	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	14.09.24	5.7	7.88	2.1	<0.02	<0.0015	<0.05	<0.01	<0.015	<0.0015	<0.05

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								Heavy Metals						
Sl.No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)
32	Thoppaiyaru Dam	Dam	Pre	04.09.24	5.3	8.93	2.7	<0.02	0.0108	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.2	8.63	4.6	<0.02	0.1468	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	14.09.24	5.2	8.79	4.9	<0.02	0.091	<0.05	<0.01	<0.015	<0.0015	<0.05
33	Nagavathi Dam	Dam	Pre	04.09.24	5.9	8.79	2.7	<0.02	0.0129	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.1	8.46	3.6	<0.02	0.1224	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	14.09.24	5.2	8.59	4	<0.02	0.0917	<0.05	<0.01	<0.015	<0.0015	<0.05
34	Kumarapalayam Bridge	River	Pre	06.09.24	6.3	7.43	<2	<0.02	0.0793	<0.05	<0.01	0.061	<0.0015	<0.05
			During	10.09.24	5.4	7.74	3.6	<0.02	0.1366	<0.05	<0.01	0.3391	<0.0015	<0.05
			Post	16.09.24	6.1	8.02	2.1	<0.02	0.1089	<0.05	<0.01	0.1299	<0.0015	<0.05
35	Pallipalayam Bridge	River	Pre	06.09.24	6	7.54	<2	<0.02	0.0862	<0.05	<0.01	0.0421	<0.0015	<0.05
			During	10.09.24	5.9	7.74	2.1	<0.02	0.3087	<0.05	<0.01	0.606	<0.0015	<0.05
			Post	16.09.24	6	7.87	<2	<0.02	0.1112	<0.05	<0.01	0.2987	<0.0015	<0.05
36	Erayamangalam	River	Pre	06.09.24	6.1	7.56	<2	<0.02	0.091	<0.05	<0.01	0.0468	<0.0015	<0.05
			During	10.09.24	5.4	8.1	2.4	<0.02	0.2707	<0.05	<0.01	0.1098	<0.0015	<0.05
			Post	16.09.24	5.9	7.51	2.1	<0.02	0.1661	<0.05	<0.01	0.0901	<0.0015	<0.05
37	Paramathi Velur	River	Pre	06.09.24	5.9	7.84	2.4	<0.02	0.0537	<0.05	<0.01	<0.015	<0.0015	<0.05
			During	10.09.24	5.8	8.1	2.1	<0.02	0.059	<0.05	<0.01	<0.015	<0.0015	<0.05
			Post	16.09.24	5.7	7.82	2.4	<0.02	0.0444	<0.05	<0.01	<0.015	<0.0015	<0.05

Salem

- pH values at all monitoring stations has been observed to be within the permissible limits.
- The majority of heavy metal concentrations were found to be below the detection limit with the exception of a marginal increase in Copper and lead levels.
- The DO and BOD values exhibit a consistent trend across the pre-, during and post-idol immersion phases indicating its impact as rise in organic load.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024										District: Thoothukudi				
								Heavy Metals						
Sl. No	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron (mg/L)
1	Vembar	Sea Coast	Pre	05.09.2024	5.9	7.85	2.52	<0.0008	<0.0015	<0.05	0.142	<0.015	0.038	0.3
			During	10.09.2024	5.7	7.73	2.68	<0.0008	<0.0015	<0.05	0.17	<0.015	<0.015	0.3
			Post	16.09.2024	5.8	7.85	2.57	<0.0008	<0.0015	<0.05	0.161	<0.015	0.063	0.6
2	Thirespuram	Sea Coast	Pre	05.09.2024	5.7	7.98	2.84	<0.0008	<0.0015	<0.05	0.227	<0.015	<0.015	0.7
			During	15.09.2024	5.6	7.82	2.95	0.01	<0.0015	<0.05	0.301	<0.015	0.074	0.9
			Post	16.09.2024	5.7	7.91	2.86	<0.0008	<0.0015	<0.05	0.276	<0.015	0.067	0.8
3	Muthiyapuram	Sea Coast	Pre	05.09.2024	6	7.97	2.68	<0.0008	<0.0015	<0.05	0.112	<0.015	<0.015	0.2
			During	15.09.2024	5.9	7.76	2.8	0.009	<0.0015	<0.05	0.148	<0.015	0.028	0.4
			Post	16.09.2024	6.1	7.85	2.72	<0.0008	<0.0015	<0.05	0.178	<0.015	0.022	0.5
4	Tiruchendur	Sea Coast	Pre	05.09.2024	6.2	7.94	2.6	<0.0008	<0.0015	<0.05	0.068	<0.015	<0.015	0.2
			During	12.09.2024	6	7.84	2.68	<0.0008	<0.0015	<0.05	0.098	<0.015	0.046	0.5
			Post	16.09.2024	6.3	7.81	2.62	<0.0008	<0.0015	<0.05	0.051	<0.015	0.052	0.4
5	Kulasekara pattinam	Sea Coast	Pre	05.09.2024	6.4	7.97	2.4	<0.0008	<0.0015	<0.05	0.112	<0.015	<0.015	0.2
			During	10.09.2024	6.2	7.82	2.51	<0.0008	<0.0015	<0.05	0.247	<0.015	<0.015	0.5
			Post	16.09.2024	6.6	7.9	2.44	<0.0008	<0.0015	<0.05	0.202	<0.015	0.024	0.4

Thoothukudi

- pH values at all monitoring stations has been observed to be within the permissible limits.
- The majority of heavy metal concentrations were found to be below the detection limit with the exception of a marginal increase in Manganese and Iron levels.
- A predictable trend in DO and BOD values is observed before, during and after idol immersion indicating its impact with a rise in organic load.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024											District: Tirunelveli				
								Heavy Metals							
Sl. No.	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)
1	Karukurichi	Pond	Pre	05.09.2024	7.1	6.17	4	<0.008	0.028	<0.05	<0.1	<0.015	0.034	0.053
			During	08.09.2024	5.9	8.25	10	<0.008	0.036	<0.05	<0.1	<0.015	0.047	0.072
			Post	16.09.2024	6.8	6.94	6	<0.008	0.031	<0.05	<0.1	<0.015	0.039	0.061
2	Vagaikulam	Pond	Pre	05.09.2024	6.9	6.78	4	<0.008	0.031	<0.05	<0.1	<0.015	0.042	0.043
			During	15.09.2024	5.7	8.17	9	<0.008	0.043	<0.05	<0.1	<0.015	0.065	0.068
			Post	16.09.2024	6.6	6.83	6	<0.008	0.039	<0.05	<0.1	<0.015	0.051	0.054
3	Uvari sea	Sea Coast	Pre	06.09.2024	6.2	7.75	3	<0.008	0.052	<0.05	<0.1	<0.015	0.061	0.031
			During	15.09.2024	5.3	8.8	8	<0.008	0.086	<0.05	<0.1	<0.015	0.093	0.064
			Post	16.09.2024	6	8.16	6	<0.008	0.064	<0.05	<0.1	<0.015	0.078	0.056
4	Thillivanam thoppu	Sea Coast	Pre	06.09.2024	6.6	7.77	4	<0.008	0.059	<0.05	<0.1	<0.015	0.068	0.048
			During	15.09.2024	4.8	8.17	12	<0.008	0.081	<0.05	<0.1	<0.015	0.087	0.067
			Post	16.09.2024	6.3	8.09	6	<0.008	0.075	<0.05	<0.1	<0.015	0.072	0.059
5	Chettikulam	Sea Coast	Pre	06.09.2024	6.5	7.86	3	<0.008	0.078	<0.05	<0.1	<0.015	0.083	0.044
			During	15.09.2024	5.3	8.05	9	<0.008	0.089	<0.05	<0.1	<0.015	0.095	0.062
			Post	16.09.2024	6.2	8.06	5	<0.008	0.084	<0.05	<0.1	<0.015	0.089	0.053
6	Temporary pond near peratchi amman kovil	Artificial ponds	Pre	08.09.2024	6.8	7.58	6	<0.008	0.038	<0.05	<0.1	<0.015	0.041	0.024
			During	08.09.2024	5.2	7.6	13	<0.008	0.067	<0.05	<0.1	<0.015	0.079	0.045
			Post	10.09.2024	6.4	7.52	9	<0.008	0.043	<0.05	<0.1	<0.015	0.052	0.035

Tirunelveli

- pH values at all monitoring stations has been observed to be within the permissible limits.
- A discernible pattern of declining dissolved oxygen levels, concomitant with a rise of BOD values is observed during idol immersion periods.
- A definite pattern of elevated copper, zinc and Iron concentrations were observed during and subsequent to idol immersion periods.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024														District: Trichy
								Heavy Metals						
Sl. No.	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)
1	River Cauvery Iyyalamman Padithurai	River	Pre	03.9.24	6.9	7.51	2.6	0.048	0.156	<0.05	0.040	<0.015	0.012	0.114
			During	09.9.24	6.2	7.68	8.2	0.054	0.180	<0.05	0.048	0.086	0.048	0.187
			Post	12.9.24	6.7	7.2	3.0	0.051	0.163	<0.05	0.045	<0.015	0.018	0.124
2	Pond Manikandam	Pond	Pre	03.9.24	6.4	7.63	4.0	0.062	0.100	<0.05	<0.01	<0.015	0.072	0.096
			During	09.9.24	6.0	7.7	4.6	0.069	0.129	<0.05	<0.01	0.024	0.081	0.123
			Post	12.08.24	6.2	7.18	4.1	0.065	0.420	<0.05	<0.01	<0.015	0.078	0.136
3	Uyyankonan vaikkal Somarasampettai	Canal	Pre	03.9.24	6.2	7.5	3.0	0.075	0.065	<0.05	<0.01	<0.015	0.086	0.102
			During	09.09.24	6.1	7.88	4.8	0.081	0.140	<0.05	<0.01	0.041	0.116	0.148
			Post	12.9.24	6.2	7.29	3.8	0.076	0.072	<0.05	<0.010	0.024	0.092	0.136
4	River Cauvery Jeeyapuram	River	Pre	03.9.24	8.0	7.7	2.6	0.076	0.024	<0.05	<0.01	<0.015	<0.0015	0.034
			During	09.9.24	6.0	7.65	3.1	0.081	0.032	<0.05	<0.01	0.018	0.010	0.068
			Post	12.9.24	7.8	7.42	2.8	0.068	0.026	<0.05	<0.01	<0.015	<0.0015	0.038
5	River Cauvery Pettavaithalai	River	Pre	03.9.24	5.9	7.74	3.3	0.063	0.101	<0.05	<0.01	<0.015	0.082	0.087
			During	9.9.24	5.6	7.85	5.0	0.073	0.140	<0.05	<0.01	<0.015	0.096	0.136
			Post	12.9.24	6.0	7.28	4.4	0.067	0.112	<0.05	<0.010	<0.015	0.088	0.096
6	River Cauvery Thiruengoi malai	River	Pre	03.9.24	7.5	7.9	2.3	0.077	0.024	<0.05	<0.01	0.046	<0.0015	0.078
			During	9.9.24	7.2	7.64	4.6	0.092	0.040	<0.05	<0.01	0.132	0.016	1.102
			Post	12.9.24	7.6	7.33	4.2	0.080	0.030	<0.05	<0.01	0.052	0.033	0.088
7	River Cauvery kattuputhur	River	Pre	03.9.24	5.6	7.88	2.8	0.054	0.134	<0.05	<0.01	<0.015	0.088	0.091
			During	9.9.24	5.5	7.59	3.0	0.060	0.144	<0.05	<0.01	<0.015	0.102	0.180
			Post	12.09.24	5.6	7.47	2.9	0.058	0.138	<0.05	<0.10	<0.015	0.092	0.104
8	River Cauvery Musiri Parisalthurai	River	Pre	03.9.24	7.8	7.75	3.0	0.060	0.121	<0.05	0.018	<0.015	0.080	0.064
			During	9.9.24	7.2	7.44	3.4	0.062	0.132	<0.05	0.026	0.041	0.116	0.154
			Post	13.9.24	7.6	7.4	3.1	0.060	0.125	<0.05	0.020	<0.015	0.090	0.074
9	River Cauvery Vathalai	River	Pre	03.9.24	8.8	7.69	2.1	0.050	0.07	<0.05	0.024	<0.015	<0.0015	0.090
			During	9.9.24	7.2	7.5	3.0	0.068	0.092	<0.05	0.031	0.018	0.012	0.105
			Post	12.9.24	7.8	7.12	2.2	0.055	0.076	<0.05	0.026	<0.015	<0.0015	0.094
10	River Kollidam Thudaiyur	River	Pre	03.9.24	6.7	7.64	2.1	0.059	0.076	<0.05	0.020	<0.015	<0.0015	0.126
			During	9.9.24	6.1	7.86	3.3	0.081	0.093	<0.05	0.026	0.025	<0.0015	0.198
			Post	12.9.24	6.6	7.25	3.0	0.066	0.084	<0.05	0.023	<0.015	<0.0015	0.138
11	Manapparai Pothamattupatti, Mamundi River	River	Pre	04.09.24	6.0	7.74	3.0	0.041	0.12	<0.05	0.022	0.027	0.114	0.146
			During	10.9.24	5.8	7.86	3.4	0.060	0.149	<0.05	0.026	0.106	0.165	0.323
			Post	13.9.24	6.3	7.51	2.7	0.055	0.136	<0.05	0.024	0.030	0.125	0.134
12	Vaiyampatti Ponnaniyar Dam	River	Pre	04.9.24	8.2	7.2	5.7	0.046	0.185	<0.05	0.051	<0.015	0.147	1.302
			During	10.9.24	6.9	7.88	17.8	0.064	0.201	<0.05	0.072	0.101	0.162	1.564
			Post	13.9.24	8.0	7.42	10.6	0.061	0.191	<0.05	0.066	<0.015	0.156	1.316
13	Puthanatham Idaiyapatti, Idaiyapatti Pond	Pond	Pre	04.9.24	5.6	7.36	2.4	0.086	0.049	<0.05	<0.01	<0.015	0.081	1.176
			During	10.9.24	5.5	7.69	12.6	0.089	0.059	<0.05	<0.01	0.048	0.096	1.283
			Post	13.9.24	5.8	7.5	6.0	0.092	0.065	<0.05	<0.01	<0.015	0.104	1.202
14	Thuvarankurichi, Boothanayagi Amman temple Pond	Pond	Pre	04.9.24	5.6	7.11	4.3	0.085	0.034	<0.05	<0.01	0.046	0.100	0.048
			During	10.9.24	5.0	7.71	8.2	0.089	0.061	<0.05	<0.01	0.081	0.245	0.249
			Post	13.9.24	5.4	7.1	4.5	0.090	0.034	<0.05	<0.01	0.052	0.108	0.056
15	Valanadu -Valanadu Village Pond	Pond	Pre	04.9.24	5.7	7.3	13.0	0.074	0.090	<0.05	0.018	0.039	0.103	0.151
			During	10.9.24	5.2	7.04	18.0	0.085	0.096	<0.05	0.024	0.149	0.173	0.197
			Post	13.9.24	5.6	7.18	14.0	0.078	0.098	<0.05	0.020	0.043	0.110	0.160
16	Chinthamani-Cauvey River at chinthamani	River	Pre	04.09.24	7.9	7.44	3.0	0.080	0.060	<0.05	<0.01	<0.015	0.078	0.134
			During	10.9.24	6.8	7.78	4.1	0.086	0.082	<0.05	<0.01	0.038	0.091	0.416
			Post	13.9.24	8.1	7.23	3.3	0.084	0.064	<0.05	<0.01	<0.015	0.084	0.140
17	Thiruverumbur,Sarkar Playam Cauvery River	River	Pre	04.09.24	7.8	7.58	2.8	0.096	0.028	<0.05	<0.01	0.088	0.110	0.145
			During	10.9.24	6.6	7.53	3.2	0.103	0.034	<0.05	<0.01	0.115	0.141	0.386
			Post	13.9.24	8.1	7.3	2.9	0.098	0.031	<0.05	<0.01	0.096	0.116	0.150
18	Thiruverumbur, Vengoor Cauvery River	River	Pre	04.9.24	7.9	7.6	2.6	<0.0008	0.011	<0.05	<0.01	0.015	0.125	0.176
			During	10.9.24	7.0	7.6	3.2	0.096	0.020	<0.05	<0.01	0.076	0.204	0.496
			Post	13.9.24	7.7	7.59	2.9	0.081	0.131	<0.05	<0.01	0.018	0.129	0.183

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024															District: Trichy
								Heavy Metals							
Sl. No.	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron(mg/L)	
19	Lalgudi Senkaraiyur at Kollidam River	River	Pre	04.09.24	8.1	7.51	2.2	0.090	0.027	<0.05	<0.01	<0.015	0.107	0.154	
			During	11.9.24	7.6	7.42	2.7	0.103	0.049	<0.05	<0.01	0.216	0.186	0.384	
			Post	13.9.24	8.2	7.22	2.4	0.096	0.032	<0.05	<0.01	<0.015	0.110	0.162	
20	Lalgudi ,Anbil at Kollidam River	River	Pre	04.9.24	7.6	7.69	2.2	0.107	0.037	<0.05	<0.01	0.090	0.100	0.204	
			During	9.9.24	6.8	7.91	3.1	0.118	0.060	<0.05	<0.01	0.126	0.138	0.916	
			Post	13.9.24	7.7	7.94	2.4	0.112	0.041	<0.05	<0.01	0.095	0.116	0.210	
21	Kallakudi-Pullampadi Vaikkal	Canal	Pre	04.9.24	7.1	7.71	2.8	0.088	<0.0015	<0.05	<0.01	0.022	0.084	0.108	
			During	9.9.24	6.4	7.87	4.0	0.096	0.010	<0.05	<0.01	0.102	0.093	0.695	
			Post	13.09.24	7.3	7.75	3.0	0.093	<0.0015	<0.05	<0.01	0.025	0.106	0.174	
22	KK Nallur, Pungai Sangenthi-Pullambadi Vaikkal	Canal	Pre	04.9.24	7.9	7.63	2.2	0.095	0.158	<0.05	<0.01	0.019	0.116	0.160	
			During	9.9.24	7.2	7.7	2.6	0.100	0.160	<0.05	<0.01	0.092	0.146	0.984	
			Post	13.9.24	8.0	7.69	2.4	0.099	0.165	<0.05	<0.01	0.022	0.122	0.172	
23	Lalgudi, Iyyanvaikkal-kolidam River	River	Pre	04.9.24	7.7	7.92	2.1	0.050	0.163	<0.05	<0.01	<0.015	0.116	0.240	
			During	9.9.24	7.2	7.57	3.8	0.066	0.171	<0.05	<0.01	0.065	0.136	0.530	
			Post	13.9.24	7.9	7.44	2.6	0.051	0.170	<0.05	<0.01	0.029	0.125	0.226	
24	Puliyancholai-Puliyancholai River	River	Pre	05.9.24	5.4	7.94	2.2	0.068	0.041	<0.05	<0.01	<0.015	0.103	0.213	
			During	9.9.24	5.1	7.81	3.2	0.080	0.095	<0.05	<0.01	0.105	0.148	0.614	
			Post	12.9.24	5.9	7.22	2.3	0.077	0.044	<0.05	<0.01	<0.015	0.011	0.220	
25	Pullambadi Vaikkal Mannachanallur	Canal	Pre	05.9.24	6.1	7.16	2.2	0.088	0.042	<0.05	<0.01	<0.015	0.093	0.428	
			During	9.9.24	5.5	7.93	3.0	0.091	0.080	<0.05	<0.01	0.316	0.102	0.747	
			Post	12.9.24	6.2	7.19	2.4	0.092	0.046	<0.05	<0.01	<0.015	0.098	0.436	
26	River Kollidam Nochiyam	River	Pre	05.9.24	7.4	7.9	2.6	0.095	<0.0015	<0.05	<0.01	<0.015	<0.0015	0.612	
			During	9.9.24	6.9	7.8	2.8	0.106	0.031	<0.05	<0.01	0.315	0.019	1.016	
			Post	12.9.24	7.2	7.72	2.9	0.097	<0.0015	<0.05	<0.01	<0.015	<0.0015	0.628	
27	River Cauvery Srirangam City	River	Pre	05.9.24	8.1	7.63	2.5	0.056	0.179	<0.05	<0.01	<0.015	0.124	0.381	
			During	9.9.24	7.6	7.99	2.9	0.062	0.200	<0.05	<0.01	0.310	0.165	0.648	
			Post	12.09.24	7.9	7.35	2.7	0.060	0.184	<0.05	<0.010	<0.015	0.130	0.396	
28	K.K. Nallur Pungai Sangenthi-Pond	River	Pre	04.9.24	7.8	7.29	2.1	0.054	0.207	<0.05	<0.01	0.029	0.123	0.187	
			During	9.9.24	7.2	7.63	3.1	0.060	0.215	<0.05	0.010	0.096	0.140	0.581	
			Post	13.9.24	7.6	7.57	2.4	0.062	0.217	<0.05	<0.010	0.035	0.130	0.198	

Trichy

- pH values at all monitoring stations has been observed to be within the permissible limits.
- DO and BOD levels follow a noticeable pattern in pre-, during and post-idol immersion periods demonstrating its impact as organic load in the water body intensifies.
- Heavy metals concentration also follows a predictable trend in pre-, during and post-idol immersion periods with a marginal increase as per the prescribed standards.

Results of the Analysis (Physio - Chemical Parameters and Heavy Metals) of the Water bodies in Tamil Nadu Monitored - Pre, During and Post - Idol Immersion Activity During the Vinayagar Chathurthi - 2024																District: Vellore
								Heavy Metals								
Sl. No.	Sampling Location	Type of Water Body	Immersion Sampling (Pre/ During/ Post)	Date	DO (mg/L)	pH	BOD (mg/L)	Cadmium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Chromium Total (mg/L)	Manganese (mg/L)	Lead (mg/L)	Zinc (mg/L)	Iron (mg/L)	
1	Esanodi Katpadi	Surface water	Pre	06.09.2024	6.5	7.96	3	0.007	0.031	1.61	<0.05	0.054	0.071	2.943	0.917	
			During	10.09.2024	5.5	7.81	5	0.006	0.033	1.636	<0.05	0.24	0.285	2.94	0.947	
			Post	12.09.2024	6.1	7	3	0.004	0.024	1.631	<0.05	0.238	0.284	2.959	0.932	
2	Sadhuperi Vellore	Surface water	Pre	06.09.2024	5.4	8.84	5	0.006	0.035	1.604	<0.05	0.145	0.148	3.069	0.871	
			During	10.09.2024	2.8	7.64	15	0.006	0.066	1.626	<0.05	0.147	0.251	3.073	0.873	
			Post	12.09.2024	3.9	7.49	12	0.01	0.037	1.623	<0.05	0.377	0.249	3.404	0.932	
3	Karugampathur Vellore	Surface water	Pre	06.09.2024	6.7	8.86	4	0.006	0.031	1.955	<0.05	0.059	0.081	3.691	0.802	
			During	10.09.2024	5.7	9.09	4	0.005	0.034	1.95	<0.05	0.127	0.291	3.693	0.942	
			Post	12.09.2024	5.9	8.36	5	0.005	0.032	1.98	<0.05	0.125	0.284	3.636	0.94	
4	Thellur Lake Anaicut	Surface water	Pre	06.09.2024	6.8	7.25	2	0.007	0.045	1.294	<0.05	0.06	0.079	2.206	0.845	
			During	10.09.2024	5.6	8.1	5	0.008	0.047	1.345	<0.05	0.195	0.273	2.581	0.843	
			Post	12.09.2024	5.8	7.9	3	0.003	0.046	1.345	<0.05	0.192	0.27	2.579	0.885	
5	Thangal Lake K.V.Kuppam	Surface water	Pre	06.09.2024	6.5	7	6	0.007	0.03	1.402	<0.05	0.066	0.086	2.929	1.185	
			During	10.09.2024	6.2	8.03	2	0.007	0.031	1.473	<0.05	0.133	0.248	2.926	1.413	
			Post	12.09.2024	6.5	7.66	2	0.004	0.044	1.472	<0.05	0.132	0.246	2.955	1.41	
6	Nellorepettai,Gudiyatham	Surface water	Pre	06.09.2024	5.1	8.11	12	0.004	0.049	2.157	<0.05	0.178	0.112	4.027	1.881	
			During	10.09.2024	3.1	7.72	16	0.003	0.052	2.159	<0.05	0.179	0.311	4.029	1.89	
			Post	12.09.2024	3.5	7.68	10	0.007	0.049	2.206	<0.05	0.302	0.31	4.402	1.165	

Vellore

- pH values at all monitoring stations has been observed to be within the permissible limits.
- The DO and BOD values exhibit a consistent trend across the pre-, during and post-idol immersion phases indicating its impact as rise in organic load.
- No appreciable changes were detected in heavy metals concentrations.

Overall Inferences / Conclusion :

As per the direction of Hon'ble NGT in O.A. No. 135 of 2023, Central Pollution Control Board has issued directions to all the State Pollution Control Boards to carry out "Water Quality Monitoring of Water Bodies on Pre- immersion, During- immersion and Post- immersion of Vinayagar idols". Accordingly Tamil Nadu Pollution Control Board has taken water samples from water bodies (Rivers, Lakes, tanks) and sea water from various districts of Tamil Nadu, where Idol immersion takes place at the time of Pre- immersion, During- immersion and Post- immersion.

Tamil Nadu Pollution Control board has Collected Water Samples from Water Bodies located across the State of Tamil Nadu.

The following inferences are drawn from the ROA of samples received from various Advanced and District Laboratories of Tamil Nadu Pollution Control Board:

1. pH, a quantitative parameter of how acidic / basic water is, irrespective of idol immersion remains pH of water bodies within the water quality standards of Lake, rivers and Coastal waters.

Pre-/ During-/ Post- Immersion	pH Range
Pre- Immersion	6.17 - 9.10
During- Immersion	6.37 - 9.09
Post- Immersion	6.11 - 8.94

2. Heavy Metals Concentrations generally comply with the prescribed limits as per CPCB standards, with the exception of lead, which marginally exceeds the prescribed limit.

3. In majority of samples a general decrease in the Dissolved Oxygen concentration have been noticed indicating depletion of oxygen which can be confirmed with increased values of Biological Oxygen Demand affirming that organic load got increased due to idol immersion.

Pre-/ During-/ Post- Immersion	DO Range (mg/L)
Pre- Immersion	4.8 - 10.2
During- Immersion	1.3 - 7.6
Post- Immersion	Nil - 9.2

Pre-/ During-/ Post- Immersion	BOD Range (mg/L)
Pre- Immersion	<2 - 16
During- Immersion	<2 - 22
Post- Immersion	<2 - 22

4. Changes in water quality parameters appears to be slightly higher in lakes, Ponds, tanks and pits that river water due to natural dilution and continuous flow water.

5. Coastal water samples showed negligible changes.

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