

Item No. 03

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

(By Video Conferencing)

Original Application No. 147/2022

(With report dated 17.08.2022)

Krishna Das K V

Applicant

Versus

State of Kerala

Respondent

Date of hearing: 23.08.2022

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE PROF. A. SENTHIL VEL, EXPERT MEMBER**

Respondent(s): Mr. Jogy Scaria, Advocate for Kerala SPCB

ORDER

1. Grievance in this application is against failure to take remedial action for protecting Ashtamudi Wetland and Vambanad-kol wetland, a Ramsar site in Kollam district of Kerala. The said Wetland has become polluted drain of the city due to dumping of pharmaceutical waste, plastic waste, domestic waste, slaughter-house waste and innumerable other sources. This Kollam canal leads to National Water Highway, and Ashtamudi wetland and Vembanad kol wetlands, both are protected under Ramsar Convention. These wetlands provide habitat for a considerable number of flora and fauna and migratory birds too. The District Authorities and State Authorities have been neglecting the situation for decades. Canal passes right through the centre of the city which is less than a kilometer from District Collectorate and other government offices.

2. The matter was considered on 28.02.2022 and considering the seriousness of the situation and violation of Wetland Rules, 2017 and other norms and directions of the Hon'ble Supreme Court *inter-alia* in *Paryavaran Suraksha case*¹ and *M.K. Balakrishnan & Ors. v. Union of India & Ors*², the Tribunal directed the Chief Secretary, Kerala to hold a meeting with the concerned Departments and file an action taken report.

3. Relevant extract from the said order is reproduced below:-

"2. The situation mentioned in the complaint, if true, shows unsatisfactory state of affairs calling for immediate remedial action on the part of the State Authorities for compliance of mandate of Water (Prevention and Control of Pollution) Act, 1974 as well as Wetland (Conservation and Management) Rules, 2017 and judgments of the Hon'ble Supreme Court inter-alia in Paryavaran Suraksha case³ and M.K. Balakrishnan & Ors. v. Union of India & Ors⁴. The erring officers need to be held accountable for such failure and appropriate action plan prepared and executed for protection of environment and public health and also discharge of constitutional obligations in terms of Public Trust doctrine. We have also noted an Article titled 'Environment Problems and Management Aspects of Vembanad Kol Wetlands in South West Coast of India', by K.N. Remani, P. Jayakumar and T.K. Jalaja, Centre for Water Resources Development and Management, Kunnammangalam, Kozhikode-673 571, Kerala which mentions in detail the problem and need for action. The area in question is part of critically vulnerable coastal area which calls for preparation of integrated management plan as per CRZ Notification, 2011 and 2019.

3. Accordingly, we direct the Chief Secretary, Kerala to forthwith call a meeting of concerned Departments including District Administration, State Wetland Authority and Kerala State Coastal Zone Management Authority (KSCZMA).

4. The National Wetland Authority may also take cognizance of the problem since the site in question is Ramsar site. The State PCB needs to enforce consents/EC conditions applicable to pharmaceutical units and boat houses as well as other authorities dumping of waste and to take appropriate action by way of prosecution and stopping polluting activity.

5. The Chief Secretary, Kerala, National Wetland Authority, State PCB, Public Health Department, Irrigation Department, Urban Development Department and Environment Department may file their

¹ (2017) 5 SCC 326

² (2017) 7 SCC 805

³ (2017) 5 SCC 326

⁴ (2017) 7 SCC 805

respective action taken reports in the matter within three months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

4. In pursuance of above, a report has been filed on 17.08.2022 by the State PCB to the effect that survey was conducted under directions of the Local Fund Accounts Committee of Kerala Legislative Assembly and it was found that huge pollution was being caused to the lakes by discharge of untreated sewage and other wastes. As per analysis report of samples during 2019-2021, huge pollution has been found. Relevant data referred to in the report in the form of the tables 2 and 3 is reproduced below for ready reference:-

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YEAR	RIVER STATIONS	SWMP	PH	EC μ hos/c	DO mg/l	BOD mg/l	TC MPN/100	FC MPN/100	CLASS
2019	KELTRON KADAVU	MIN	6.8	4428	1.2	1.2	600.0	300	D
		MAX	7.9	8660	5.6	6.4	8000.0	6000	
		Mean	7.5	6289	3.8	3.5	2550.0	1600	
	CHANDIROOR	MIN	6.8	1621	4.7	0.6	400.0	280	D
		MAX	7.6	3098	6.8	5.6	9000.0	4000	
		Mean	7.3	2500	5.4	3.6	2808.0	1550	
	ERAMALLOOR	MIN	6.9	1976	4.0	2.2	800.0	400	D
		MAX	7.8	3190	7.4	4.8	7000.0	5600	
		Mean	7.3	2645	5.7	3.3	2858.0	1908	
	KATTACHIRA KADAVU	MIN	6.8	739	4.9	1.2	0.0	0	D
		MAX	7.6	1539	8.2	5.7	1200.0	700	
		Mean	7.3	1230	6.0	2.6	504.0	278	
	KAYIPURAM	MIN	6.8	682	5.9	1.8	900.0	500	D
		MAX	7.5	1610	7.8	4.6	6000.0	4200	
		Mean	7.2	1120	7.3	2.6	2183.0	1280	
2020	KELTRON KADAVU	MIN	6.7	762	2.5	3.1	300.0	100	D
		MAX	8.1	5981	7.3	6.7	3000.0	1800	
		Mean	7.6	4499	4.2	4.0	1250.0	666	
	CHANDIROOR	MIN	6.9	482	3.6	2.3	300.0	200	D
		MAX	7.9	2872	7.2	4.1	1600.0	800	

		<i>Mean</i>	7.3	1567	3.2	3.0	950.0	492	
	ERAMALLOOR	<i>MIN</i>	6.8	523	4.1	2.1	0.0	0	D
		<i>MAX</i>	7.8	2644.4	8.1	4.2	2500.0	1300	
		<i>Mean</i>	7.4	1800	5.5	3.1	1025.0	565	
	KATTACHIRA KADAVU	<i>MIN</i>	6.8	340	4.1	2.0	0.0	0	D
		<i>MAX</i>	7.8	1809	7.4	3.9	1800.0	1000	
		<i>Mean</i>	7.4	1180	5.7	3.0	583.0	325	
	KAYIPURAM	<i>MIN</i>	6.8	704	4.5	1.0	0.0	0	D
		<i>MAX</i>	7.9	1436	7.3	3.5	2700.0	1400	
		<i>Mean</i>	7.2	1087	6.2	2.3	875.0	475	
2021	KELTRON KADAVU	<i>MIN</i>	7.1	1315.3	6.1	2.2	300.0	0	D
		<i>MAX</i>	7.8	20490	3.7	6.2	4300.0	2300	
		<i>Mean</i>	7.4	7600	2.2	3.3	2236.0	1163	
	CHANDIROOR	<i>MIN</i>	6.7	225.8	2.7	1.6	400.0	200	D
		<i>MAX</i>	7.5	8930	7.6	5.5	6000.0	3800	
		<i>Mean</i>	7.2	3320	5.1	3.1	1916.0	1070	
	ERAMALLOOR	<i>MIN</i>	6.8	223.8	3.2	1.1	0.0	0	D
		<i>MAX</i>	7.5	9690	7.2	5.2	4200.0	1900	
		<i>Mean</i>	7.1	3193	5.4	2.7	1458.0	725	
	KATTACHIRA KADAVU	<i>MIN</i>	6.8	139.5	4.1	1.1	0.0	0	D
		<i>MAX</i>	7.4	6950	7.8	3.8	4500.0	2200	
		<i>Mean</i>	7.1	2331	6.0	2.0	872.7	381	
	KAYIPURAM	<i>MIN</i>	6.7	163.1	4.3	1.0	200.0	0	D
		<i>MAX</i>	7.6	3347	7.9	3.9	3200.0	1900	
		<i>Mean</i>	7.1	1077	6.1	2.0	1533.0	758	

Table 2: Analysis report of the samples collected under SWMP for the period 2019-2021

YEAR	RIVER STATIONS	SWMP	PH	EC µmhos/c	DO mg/l	BOD mg/l	TC MPN/100	FC MPN/100	CLASS
2019	PUNNAMADA FINISHING POINT	<i>MIN</i>	6.7	800	3.4	1.5	0.0	0	D
		<i>MAX</i>	7.8	1268	5.8	3.2	1000.0	550	
		<i>Mean</i>	7.2	999	4.5	2.4	429.0	248	
	1 KM FROM PUMPING STATION	<i>MIN</i>	6.4	470	4.3	2.0	200.0	150	D
		<i>MAX</i>	7.8	1116	7.6	3.1	1200.0	800	
		<i>Mean</i>	7.2	837	5.7	2.7	775.0	440	
	PUMPING STATION	<i>MIN</i>	6.8	440	3.6	1.2	100.0	50	D

		MAX	7.8	982	7.8	3.0	2100.0	1500	
		Mean	7.3	773	5.2	1.6	1108.0	650	
	PATHIRAMANAL	MIN	6.6	812	3.4	0.8	0.0	0	D
		MAX	7.9	1412	7.8	3.0	700.0	350	
		Mean	7.2	1056	5.9	2.0	391.0	176	
	D/S OF THANNERMUKKAM BUND	MIN	6.7	890	6.2	0.9	0.0	0	D
		MAX	7.8	1947	8.0	3.9	1800.0	800	
		Mean	7.2	1338	7.1	1.4	450.0	219	
	U/S OF THANNERMUKKAM BUND	MIN	6.8	1321	4.2	1.2	0.0	0	D
		MAX	7.8	2218	8.1	3.3	1200.0	700	
		Mean	7.2	1706	6.1	2.7	675.0	246	
	D/S OF McDOWELL &CO.	MIN	6.9	1233	4.0	0.8	0.0	0	D
		MAX	7.7	2628	7.6	3.3	1000.0	600	
		Mean	7.2	1698	5.5	2.3	483.0	254	
	THAKAZHY	MIN	6.7	499	3.8	0.6	0.0	0	D
		MAX	7.3	1720	8.0	3.6	2000.0	400	
		Mean	6.9	840	5.3	2.5	483.0	171	
	PULINKUNNU	MIN	6.5	340	4.1	1.5	0.0	0	D
		MAX	7.1	850	7.7	4.0	4200.0	2500	
		Mean	6.9	581	5.9	2.3	1108.0	680	
	PALLATHURUTHU	MIN	6.6	439	3.2	0.9	0.0	0	D
		MAX	7.5	898	6.0	3.3	1200.0	800	
		Mean	6.9	699	4.3	2.3	325.0	217	
	BOARDING POINT	MIN	6.8	811	3.9	2.2	500.0	200	D
		MAX	7.9	1658	5.9	3.5	8000.0	4800	
		Mean	7.2	1201	4.4	2.9	2600.0	1542	

YEAR	RIVER STATIONS	SWMP	PH	EC µmhos/c	DO mg/l	BOD mg/l	TC MPN/100	FC MPN/100	CLASS
2020	PUNNAMADA FINISHING POINT	MIN	6.7	152	3.4	0.1	200.0	100	D
		MAX	7.8	1214	6.5	3.4	2100.0	1000	
		Mean	7.2	575	5.1	2.3	1217.0	591	
	1 KM FROM PUMPING STATION	MIN	6.4	282	4.6	0.5	300.0	100	D
		MAX	7.8	942	6.6	2.8	2400.0	1200	
		Mean	7.2	713	5.6	1.7	1358.0	733	
	PUMPING STATION	MIN	6.8	173	3.4	0.8	100.0	0	D
		MAX	7.8	936	7.0	3.3	1200.0	700	

		<i>Mean</i>	7.2	654	5.3	1.8	658.0	358	
PATHIRAMANAL		<i>MIN</i>	6.6	318	4.2	0.7	0.0	0	D
		<i>MAX</i>	7.9	1185	7.5	2.9	800.0	400	
		<i>Mean</i>	7.2	948	5.8	2.1	300.0	150	
D/S OF THANNERMUKKAM BUND		<i>MIN</i>	6.7	561	6.2	0.9	0.0	0	D
		<i>MAX</i>	7.8	1472	7.8	2.8	900.0	500	
		<i>Mean</i>	7.3	145	6.9	1.8	450.0	216	
U/S OF THANNERMUKKAM BUND		<i>MIN</i>	6.8	218	4.2	1.2	0.0	0	D
		<i>MAX</i>	7.8	1784	7.6	2.8	1200.0	700	
		<i>Mean</i>	7.3	998	6.1	1.8	617.0	358	
D/S OF McDOWELL & CO.		<i>MIN</i>	6.8	237	4.0	0.7	100.0	0	D
		<i>MAX</i>	7.8	1924	7.6	3.2	1200.0	700	
		<i>Mean</i>	7.3	1006	5.7	2.0	525.0	283	
THAKAZHY		<i>MIN</i>	6.9	145	4.2	0.8	200.0	100	D
		<i>MAX</i>	7.7	1091	6.5	3.4	2000.0	1100	
		<i>Mean</i>	7.2	563	5.0	2.1	867.0	491	
PULINKUNNU		<i>MIN</i>	6.5	146	4.5	1.1	300.0	100	D
		<i>MAX</i>	7.7	859	7.4	4.5	1600.0	900	
		<i>Mean</i>	6.9	435	5.5	2.6	892.0	491	
PALLATHURUTHU		<i>MIN</i>	6.6	201	2.8	0.8	200.0	100	D
		<i>MAX</i>	8.4	894	6.4	3.6	1200.0	700	
		<i>Mean</i>	7.0	522	4.5	2.4	617.0	333	
BOARDING POINT		<i>MIN</i>	6.8	184	3.6	1.4	300.0	100	D
		<i>MAX</i>	8.6	1006	6.8	4.1	4000.0	1900	
		<i>Mean</i>	7.3	591	5.1	2.6	1483.0	766	

YEAR	RIVER STATIONS	SWMP	PH	EC µmhos/c	DO mg/l	BOD mg/l	TC MPN/100	FC MPN/100	CLASS
2021	PUNNAMADA FINISHING POINT	<i>MIN</i>	6.7	128	4.5	1.5	0.0	0	D
		<i>MAX</i>	7.4	835	7.8	3.7	2200.0	100	
		<i>Mean</i>	7.2	394	6.4	2.1	758.0	358	
	1 KM FROM PUMPING STATION	<i>MIN</i>	6.7	136	5.1	1.6	0.0	0	D
		<i>MAX</i>	7.5	820	7.7	3.8	2900.0	1200	
		<i>Mean</i>	7.3	396	6.5	2.4	741.0	316	
	PUMPING STATION	<i>MIN</i>	6.8	132	5.3	1.5	0.0	0	D
		<i>MAX</i>	7.4	796	7.8	3.3	1400.0	900	
		<i>Mean</i>	7.2	357	6.6	2.0	408.0	183	

PATHIRAMANAL	MIN	6.7	152	5.9	1.1	0.0	0	D
	MAX	7.4	956	7.9	3.0	1200.0	500	
	Mean	7.1	431	7.3	1.7	150.0	58	
D/S OF THANNERMUKKAM BUND	MIN	6.9	153	5.3	0.9	0.0	0	D
	MAX	7.5	996	7.9	3.4	500.0	300	
	Mean	7.1	503	7.3	2.0	125.0	58	
U/S OF THANNERMUKKAM BUND	MIN	7.0	185	5.9	1.2	0.0	0	D
	MAX	7.5	1228	7.9	3.1	4000.0	2600	
	Mean	7.2	553	7.0	1.9	691.0	408	
D/S OF McDOWELL & CO.	MIN	7.1	150	5.2	1.1	0.0	0	D
	MAX	7.5	1173	7.9	4.4	2200.0	1200	
	Mean	7.2	499	7.0	2.3	433.0	208	
THAKAZHY	MIN	6.8	140	4.1	1.1	0.0	0	D
	MAX	7.8	592	6.1	3.7	1200.0	700	
	Mean	7.2	313	5.3	2.5	616.0	275	
PULINKUNNU	MIN	6.8	110	4.1	1.2	0.0	0	D
	MAX	7.6	379	7.4	5.4	1600.0	900	
	Mean	7.2	256	6.0	2.4	750.0	375	
PALLATHURUTHU	MIN	6.7	131	3.9	1.3	0.0	0	D
	MAX	7.7	598	7.0	3.9	1700.0	1000	
	Mean	7.2	363	5.7	2.3	658.0	291	
BOARDING POINT	MIN	7.1	179	4.2	1.5	300.0	100	D
	MAX	7.5	788	7.4	4.8	6000.0	3200	
	Mean	7.3	421	6.2	2.8	2116.0	1041	

Table3: Analysis report of the sampling points under PROJECT OF BACKWATER RESOURCES for the period 2019-2021

5. The report further mentions that sources of pollution includes Boat breaking activities which were resulting in deposition and burning of the solid wastes on the banks, damaging the mangroves. Aquaculture and fish processing units were also noticed as causing pollution. It is further stated that the analysis reports show high values of fecal coliform than the permissible limit (desirable) of 500 MPN/100ml. Dissolved oxygen content is seen to be below the limit(5mg/l) at certain points. The report further states:-

“Based on the inspections conducted, notices were issued to 10 establishments for non compliance of consent conditions and letters issued to 39 units directing to apply for the consent of the Board which are not still under the consent regime of the Board. The matter is being followed up by the Board.”

6. The value of Fecal Coliforms is well above the permissible limit of 2500 MPN/100 ml which is the maximum permissible value. The inference is that the wastewater needs treatment before it is discharged into the lake. In these stations, the values of Fecal Coliform are high above the permissible limit as per the Primary Water Quality Criteria based on Designated Best Use for coastal waters marine outfalls, specified for the stations. Analysis report of the samples collected from these stations for the month of May 2022 is detailed below as Table 5.

7. In respect of Vembanad Lake also, pollution has been found. It is stated that in order to prevent the water pollution from house boats, DTPC has constructed a Common Sewage Treatment Plant exclusively for house boats at Kavanattumkara Kumarakom. Consent to Operate to the house boats shall only be granted if the houseboat treats the wastewater through this facility. During the inspection and sampling conducted on 26.02.2022 the BOD and COD level of treated water was found to be above the permissible limit. Hence a show cause notice was issued to DTPC. The other area sources of pollution to Vembanad Lake include the discharge of pollutants in the solid and liquid waste generated from nearby panchayats and municipalities. The wastes dumped in the water shed include drainages from houses, small shops, commercial establishments and other small scale industries. There are 10 Panchayats and 2 Municipalities sharing boundary with Vembanad lake and the other 62 Panchayats and 4 municipalities in the water shed and none of them have taken Authorisation for Solid waste management or set up scientific waste

management facilities. The Municipalities and Panchayats are discharging their waste into these rivers and tributaries discharging into Vembanad Lake.

8. From the above, it stands established that serious violation of Water (Prevention and Control of Pollution) Act, 1974 as well as Wetland (Conservation and Management) Rules, 2017 and judgments of the Hon'ble Supreme Court inter-alia in *Paryavaran Suraksha case*⁵ and *M.K. Balakrishnan & Ors. v. Union of India & Ors*⁶ is taking place and remedial action taken is inadequate. Further action needs to be taken in a mission mode with the involvement of authorities at higher level. There is need to set up a Monitoring Committee headed by Additional Chief Secretary, Environment with other members being the Director Tourism, Director Local Bodies, Director Industries, Director, Panchayat, Kerala Coastal Zone Management Authority, State PCB, CPCB, and State Wetland Authority. The State PCB will be the nodal agency for coordination and compliance. The Committee may hold its first meeting within one month and prepare its Monitoring Plan which may include coordination with concerned Departments, raising of necessary funds by recovering Environmental Compensation from the violators and preventing the violations. A restoration plan may be prepared which may take care of cost of restoration and measures to be adopted and also the manner of execution. The monitoring may be conducted at least on fortnightly basis and minutes of the meeting may be placed on the website of the State PCB. The Committee will be at liberty to co-opt any other person and take assistance from any other Expert/Institution. It may undertake visit to the sites and interact with the stake holders.

⁵ (2017) 5 SCC 326

⁶ (2017) 7 SCC 805

9. The Additional Chief Secretary, Environment may remain present in person on the next date with the action taken report.

List for further consideration on 06.01.2023.

A copy of this order be forwarded to Additional Chief Secretary, Environment, Director Tourism, Director Local Bodies, Director Industries, Director, Panchayat, Kerala Coastal Zone Management Authority, State PCB, CPCB, and State Wetland Authority by e-mail for compliance.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

Prof. A. Senthil Vel, EM

August 23, 2022
Original Application No. 147/2022
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