

ACTION PLAN FOR RIVER KARAMANA, KERALA- FEBRUARY 2025

1. Short term Plan

Maintenance and de-bottlenecking of existing sewerage network

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
2.1.1	Pumping lines from the terminal pumping stations namely Kuriyathi, Pattoor, Kannammoola and Enchakkal pumping stations are to be connected directly to STP at Muttathara	Kerala Water Authority	May-19				100%	Kuriathy Work Completed. DPR for pumping main from Pattoor, Kannammoola and Enchakkal is under preparation.
	Kuriyathi Pumping line							
2.1.2	Rehabilitation/upgradation of Thaliyal and Arannoor Sewerage Pump house by rehabilitation of existing well, construction of new well and grit chamber, installation of new pump sets	Kerala Water Authority	May-20	5%			100%	a)Completed. b)Work completed.
	Arannoor							
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May-20				100%	Work Completed on 8/8/21
2.1.4	Installation of adequate pumps in Mudavanmughal and Enchakkal pumping stations	Kerala Water Authority	Mar-20				100%	Work Completed.

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
2.1.5	DG sets in all lift and pumping stations - Mudavanmughal, Aranoor, Thaliyal, Kuriyathi, Pattoor, Kannammola, Pattom, Murinjapalam and Enchakkal	Kerala Water Authority	May-20				100%	Work Completed.
2.1.6	Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchanthodu, control storm water entry into sewer to avoid overflow in Thampanoor area Sewage generated in Rajaji Nagar shall be diverted to main sewerline Sewage generated in Thoppil area shall be diverted main sewerline	Kerala Water Authority	Dec-20				100%	Work Completed.
2.1.7	Discharge of sewage in Parayilkadavu shall be stopped as there is overflow of sewage reaches in houses having sewerage connection and this may lead to discharge of sewage into River Karamana	Kerala Water Authority	Completed				100%	Work Completed.
2.1.8	Divert the sewer line from the School compound of Government Karamana High School	Kerala Water Authority	Completed				100%	Work Completed.
2.1.9	Rehabilitation by laying new lines increasing size of undersized main and reconstruction by dilapidated manholes for the last 3 years	Kerala Water Authority	May-20				100%	Works completed – 76No.(Rs.15.41cr) AMRUT-45, State plan-28 MLA ADF/SDF-3 In progress – 1No. (Rs. 3.cr.) AMRUT-1, State plan-0 Two Amrut work short closed due to non obtaining of Road cutting sanction.

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
	Total works in progress/Completed (76 No.) Works dropped (2No.)					Dropped – 2 No. (Rs. 1.52cr.) State plan-2		Two works dropped due to not getting offers on repeated tenders and expiry of AS.
2.1.10	Extension of sewer network wherever technically feasible in new areas of existing blocks	Kerala Water Authority						Works completed -24 No.(Rs.17.21 cr.) AMRUT-12, State plan-11nos, Ongoing MLA ADF/SDF-1
	Tendering/ To be arranged (1No.) Land acquisition -1 In progress-3				May-20	0.10%	0.50%	0.10%

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
2.1.11	Procurement of sewer cleaning machines and equipment maintenance	Kerala Water Authority	Mar-20				100%	Work completed

Solid Waste Management Action Plan

	Activity	Implementing Agency	Unit	Time for Completion	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of work remaining
2.2.1	Slaughter house and poultry waste	Thiruvananthapuram Corporation	Rendering Plant	Dec-22	0%	0%	0%	95%	<p>Slaughter House- Slaughter house kunnukuzhy- Work started for construction of retaining wall, work ongoing for construction of security cabin and visitors lounge. Security cabin , roof slab casting completed, visitors lounge, structure completed, roof slab casting on progress. Work under progress. It will be completed on Dec 2024.</p> <p>poultry waste- TMC has started collecting poultry waste coming under jurisdiction of 25 HI Office from 1st November 2019 with online tracking of vehicles. The entire poultry waste generated in whole Corporation area is collected and sent to rendering plant at Elloor. Collected and send to Ernakulam plant.</p>
2.2.2	Sanitation facility and Treatment of waste water in the markets of Pangode, Kumarichanda	Thiruvananthapuram Corporation	Treatment Plant Portable Aerobic bins	Dec-23	0%	0%	0%	100%	<p>Kumarichanda: Market Renovation completed. Pilot project implemented for treatment of wastewater.</p> <p>Pangode: DPR submitted by the agency . Forwarded for getting technical sanction.</p>

No.	Activity	Implementing Agency	Time line		Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
2.2.3	Provide facility for the treatment of sewage, sullage and	Thiruvananthapuram Corporation	1. Moonnathumukku 2. Poonthura-HI Office 3. Cheriyan muttam-Poonthura 4. Beemapally Compound 5. Tsunami	Mar-24	0%	0%	0%	50%	
	garbage generated in the poonthura slum area between Karamana river and sea		6. Mother Theresa Colony 7. Kumari Chantha 8. Poonthura Marker 9. Moonnathumukku bridge 10. Ambalathara- Nilama 11. Fishermen Flat- Muttathara 12. Perunalli Market Road 13. Pounding old market 14. Market						<p>Only 13 Locations work completed out of 28Nos.</p> <p>This area will be covered in the master plan for providing sewer line for the full capacity utilization of CSTP at Muttathara and by providing Decentralized STP where there is land availability- KWA</p>

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
			15. Tsunami Colony near 110 KV tower (Poundkadav) 16. Near Valiyavila Veli St. Thomas Church (Poundkadavu) 17. NearKamales shwaram HSS 18. Valiya veetil Residence associati on 19. Near Arannoor Govt.					
			21. Kumarapuram Thamara bhagam (near comfort station) 22. Near Kannamoola Bridge 23. Mannant hala Market 24. Santhi Nagar Residents associati on 25. Alanthar a Kattayil 26. UlloorMarket 27. Museum RKV Road 28. New Nalantha road					

No.	Activity	Implementing Agency	Time line		Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
2.2.4	The discharge of waste water from the surrounding houses to the pond at Jagathy is to be stopped	Thiruvananthapuram Corporation	Pond desilting						meeting was conducted on 30-07-21, convened by the Public Work Standing Committee Chairperson with KWA Officials, Tvpam Corporation officials and councillors ward to discuss this concern. This area will be covered in the master plan for providing sewer line for the full capacity utilization of CSTP at Muttathara and by providing Decentralized STP - included in KWA master plan.
2.2.5	Identification of illegal outlets into storm water drains and fine shall be imposed on such units	Thiruvananthapuram Corporation	Fine Imposed and prosecution initiated						2497840 rupees fine collected from 2019 to till date.
2.2.6	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Bio- Composter		82%	82%	82%	82%	Installed 65,080 bins in total.
2.2.7		Thiruvananthapuram Corporation	Thumboormuzhi aerobic bins		60%	60%		65%	Total 154 locations, Total 550 bins installed in 57 location.
2.2.8		Thiruvananthapuram Corporation	Community biogas		0%	0%	0%	65%	27 nos installed, Only 2 in working condition
2.2.9		Thiruvananthapuram Corporation	Ring compost		3%	0%	0%	78%	Installed 350 units.
2.2.10		Thiruvananthapuram Corporation	RRF		4%	0%	0%	100%	Work completed
2.2.11		Thiruvananthapuram Corporation	Plastic Recycling unit						Site not yet identified. Project dropped

No.	Activity	Implementing Agency	Time line		Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
2.2.12	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Solar electrical cart		Part bill submitted			100%	Work completed
2.2.13		Thiruvananthapuram Corporation	Swaps shops		0%	2%		100%	Work completed. Revised estimate approved by council. Final part bill will be issued soon.
2.2.14		Thiruvananthapuram Corporation	Community level unit Napkin destroyer		10%	0%	0%	10%	158 Nos purchased and installed at various locations
2.2.15		Thiruvananthapuram Corporation	Upgradation of present facilities		0%	0%	0%	100%	Completed
2.2.16		Thiruvananthapuram Corporation	Capacity Building & IEC						A training programme was conducted for HI/JHI on 2023 September 23,24 & 2024 January 22,23,24,25.
2.2.17		Thiruvananthapuram Corporation	Viability gap Fund						Issue of the Seventh Phase of VGF to Haritha Karma Sena completed.
2.2.18		Prevent entry of Stormwater into sewer line along with KWA	Thiruvananthapuram Corporation	KWA is authorized to prepare and implement proper sewerage lines					
2.2.19	Take steps to prevent the solid wastes in sewer line as reported by KWA	Thiruvananthapuram Corporation	Squad and Fines Special squad is formed at Corporation level. Health inspectors are authorized for regularly monitoring and preventing the wasted charge						Employees were placed at various spots during night to prevent dumping of solid waste in drains and fines are being charged. Regarding to waste throwing to public places Corporation collected an amount of Rs.25695060/- as fine from 01.01.2022

Monitoring

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
	Activity	Implementing Agency	Time line	Water quality in August/ Pre-monsoon	Water quality in August / Monsoon	Water quality in Post monsoon		
2.3.1	River water quality monitoring - Killiyar, Karamana, Parvathiputhanar, Akkulam-Veli lake	Kerala State Pollution Control Board	Ongoing; monthly					1 Establishment of real time water quality monitoring station is going to install in Karamana river 2 Work order has been issued to access nano technology private Ltd.
2.3.2	Storm drains monitoring - Amayizhanchanthodu, Ulloorthodu, Pattomthodu, Kannamoolathodu, Thekkanakkara canal	Kerala State Pollution Control Board	Ongoing Seasonal monitoring- Pre-monsoon, monsoon, Post-monsoon					Monitoring going on
2.3.3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc in Thiruvananthapuram Corporation area	Kerala State Pollution Control Board	Ongoing Interval; Red - 0 month Orange -10 month Green - 5 month					

2. Long term Plan

Sewerage Network

	Long Term measures proposed	Implementing Agency	Amount Required (Rs. In Crore)	Time Line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of work remaining
3.1.1	Extension of sewerage system to Block F to G coastal belt	Kerala Water Authority	200						Consultant appointed for preparing Detailed Project Report for uncovered wards of the Thiruvananthapuram Corporation and Rehabilitation of existing system was terminated from the contract due to breach of contract by
3.1.2	Extension of sewerage system to Block H to R	Kerala Water Authority	700						

No.	Activity	Implementing Agency	Time line		Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
3.1.3	Extension of sewerage system to Newly added	Kerala Water Authority	300	Three years					<p>the firm vide Proceedings No. KWA/SE/SEW/EOI/REPL/338/2020-2021 of the Superintending Engineer, Sewerage Circle, Kerala Water Authority Thiruvananthapuram dated 31.05.2022 to arrange the balance work at their risk and cost. As discussed in the Chief Secretary, GoK' s meeting dated 21/06/2022 the work of Preparation of DPRs has to be done internally. Mean while the terminated firm M/s REPL filed a complaint against KWA in the Hon'ble High court of Kerala (WP(C) No 26031 of the year 2022) and obtained a stay against KWA at first up to 22.08.22 which is then got extended up to 14.09.22 against taking any coercive actions. DPR preparation of sewerage system to the uncovered areas of TMC is now being carried out internally by KWA. The total wards were divided in to 10 clusters. Cluster1 comprises of 5 wards - Attukal, Kalady,Kallipankulam, Ambalathara and kamaleswaram wards - The DPR for Cluster 1 was submitted on 13/10/2022 for obtaining AS. DPR of Cluster 1 Zone 1 & 2 for Rs 99 Crores and DPR of Cluster 1 Zone 3&4 for Rs.58.50 submitted to the Secretary WRD on 13/04/23.Later as per the direction of Secretary Thiruvananthapuram Corporation the DPR for Cluster 1 was revised including Zone 1&5 for Rs 91.00 Cr and Zone 3&4 for Rs 66.50 Cr and was submitted to theSecretary Thiruvananthapuram Corporation on 28.12.2023 for getting AS under UIDF.Cluster 3, which was originally consisting of Thiruvallam,Poonkulam and Vellar is the second in the priority list and was taken up. This Cluster is then modified by adding more wards and is divided into 3 zones. Zone 1 of cluster 3 is consisting of Puthenpally and Part of Muttathara (until STP) was taken up on priority based on the demand of Thiruvananthapuram Corporation. The DPR for Cluster 3 Zone 1 is prepared consisting of Puthenpally and Muttathara (Part) Wards and submitted to CE on 02.12.22. DPR of Cluster 3.1.7 AdditionalSTP requirement KWA/WASCON/AEEII/NGT-PR/2024I/54473/20243 Zone 1,Puthanpalli ward of 1.5 MLD Sewerage network with 5 year O&M and without centage submitted to Corporation under AMRUT2.0 on 11/1/23.The DPR of Cluster 3 Zone 2 and Zone 3 is</p>
3.1.4	Providing sewerage system in Block A to E	Kerala Water Authority	100						
3.1.5	Rehabilitation of existing Network and pump house in block A toE	Kerala Water Authority	100						
3.1.6	Procurements of equipments for maintenance sewerage system	Kerala Water Authority	10						
3.1.7	Additional STP requirement	Kerala Water Authority	60						

No.	Activity	Implementing Agency	Time line		Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
	Total Amount required		5000 Crores						

* Out of the 100 wards in Thiruvananthapuram Corporation, 43 wards (Blocks A to E) are fully/Partially covered with sewerage facility. For 35 Wards (Blocks F to R) design of sewerage network is available but this needs modification in lieu of the change in demography and for the balance 22 wards new designs are to be prepared. The long term measures are envisaged to cover the entire wards in the Thiruvananthapuram Corporation. For preparing DPR/DER for rehabilitation of existing sewerage system and for establishing sewerage system for uncovered areas of Thiruvananthapuram Corporation, AS has been obtained under RKI (Govt. of Kerala) and preparation of DPR in progress.

Solid Waste Management

	Long Term measures proposed by Thiruvananthapuram	Implementing Agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
3.2.1	Acquire 58 acres of land and rehabilitate 8150 families from the banks of River	Thiruvananthapuram Corporation	5 Years					Dropped
3.2.2	SDM 2.0 Action plan prepared and submitted.							
3.2.3	KSWMD 5.14Crore works submitted to DPC.							

Desilting and Development

3.3.1	Development package for ParvathyPuthanar	Irrigation department included in KIFB by KWIL includes cleaning of canal	3 Years	100%	100%		100%	Phase I (First half) removal of water hyacinth completed Veli to Kadinamkulam Kayal (Ch 16.00 to Ch27.00).Executed by Inland Navigation . Aakkulam to Monnattumukku cleaning works 100% completed- by KWIL - for an amount of 45 Lakhs (3 Months) Now department work is started for clearing.
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No.	Activity	Implementing Agency	Time line		Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% Works Completed	Details of works remaining
3.3.2	De-silting and development of AmayizhanchanThodu	Irrigation Department	1.5 Years				85%	On going	
3.3.3	Improvements to Thekkekara canal and de-silting-		1 Year					Flood mitigation work completed	
3.3.4	Karimadam tank improvements, de-silting sheet piling/under preparation and providing fencing		1.5 Years				20%	Flood mitigation works ongoing	
3.3.5	Development of Karamana basin		1.5 Years					Desiltation of river completed. E-flow statement is submitted.	

SUPERINTENDING ENGINEER

National Mission for Clean Ganga
Format for Submission of Monthly Progress Report by States/UTs
(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)
RIVER KARAMANA, THIRUVANANTHAPURAM
ACTION PLAN FOR RIVER KARAMANA, KERALA - February
2025

1. Short Term Plan

Maintenance and de-bottle necking of existing sewerage network

No.	Activity	Implementing agency	Timeline	Progress in the month of Dec 2024	Progress in the month of Jan 2025	Progress in the month of Feb 2025	% works completed	Details of works remaining
2.1.1	Pumping lines from the terminal pumping stations namely Kuriyathi, Pattoor, Kannammoola and Enchakkal pumping stations are to be connected directly to STP at Muttathara	Kerala Water Authority	May 2019				100%	Work Completed. DER for pumping main from Pattoor, Kannammool & Enchakkal under preparation
2.1.2	Rehabilitation/upgradation of Thaliyal and Aranoor Sewerage Pump house by rehabilitation of existing well, construction	Kerala Water Authority	May 2020	Aranoor			100%	Work completed

	tion of new well and grit chamber, installation of new pump Sets.	uthority		5%				
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May 2020				100%	Work Completed.
2.1.4	Installation of adequate pumps in Mudavanmughal and Enchakkal pumping stations.	Kerala Water Authority	March 2020				100%	Work Completed.
2.1.5	DG sets in all lift and pumping stations – Mudavanmughal, Aranoor, Thaliyal, Kuriyathal, Pattoor, Kuthannammola, Pattom, Murinjapalam and Enchakkal	Kerala Water Authority	May 2020				100%	Work Completed.
	Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchantho							

2.1.6	du, control storm water entry into sewer to avoid overflow in Thampanoor area. Sewage generated in Rajaji Nagar shall be diverted to main sewer line. Sewage generated in Thoppil area shall be diverted main sewer line	Kerala Water Authority	Dec 2020				100%	Work Completed.
2.1.7	Discharge of sewage in Parayilkadaavu shall be stopped as there is overflow of sewage reaches in houses having sewerage connection and this may lead to discharge of sewage into River Karmana.	Kerala Water Authority	Completed				100 % completed	Works Completed.
2.1.8	Divert the sewer line from the School compound of Government Kar	Kerala Water Authority	completed				100% completed	Work Completed.

	mana High School	uthority						
2.1.9	Rehabilitation by laying new lines increasing size of undersized main and reconstruction by dilapidated manholes for the last 3 years	Kerala Water Authority	May 2020	0%	0%	100%	Works completed – 75No. (Rs.15.41cr) AMRUT-44, State plan-28 MLA ADF/SDF-3 Completed (Rs. 3.cr.) AMRUT-1, State plan-0 One AMRUT work short closed due to non-obtaining Road cutting sanction.	
	Total works in progress/ completed (76No.) Works dropped (2No.)					Dropped – 2 No. (Rs. 1.52cr.) State plan-2	Two works dropped due to not getting offers on repeated tenders and expiry of AS	
2.1.10	Extension of sewer network where ever technically feasible in new areas of existing blocks	Kerala Water Authority	May 2020	0.1%	.1%	99.3%	Works completed - 21 No. (Rs. 17.21 Cr.) AMRUT-12, State plan-7 nos, 4 nos on-going MLA ADF/SDF-1	
	In progress/ On-going (4 No.)							
							Land acquisition process for 4 works completed and land handed over to KWA and L	

									Department. Box culvert work completed (98% completed). For another work 26% completed. No further progress in the work by the contractor after march 2024. The contractor steps back from contract. Recommended to terminate the work and arrange at risk and cost. SE has extended the work up to 31.05.2025 to the original contractor.
2.1.11	Procurement of sewer cleaning machines and equipment maintenance	Kerala Water Authority	Mar 2020	0%	0%	0%	100%	Work Completed.	

1. Long Term Works

Sl No.	Long term measures proposed	Implementing agency	Amount Required (Rs. in Crore)	Time line	Progress in the month of January	Progress in the month of February	% works completed	Details of works remaining
3.1.1	Extension of sewerage system to Block F to G coastal belt							Consultant appointed for preparing Detailed Project Report for uncovered wards of the Thiruvananthapuram Corporation and Rehabilitation of existing system was terminated from the contract due to breach of contract by the firm vide Proceedings No. KWA/SE/SEW/EOI/REPL/33 8/2020-2021 of the Superintending Engineer, Sewerage Circle, Kerala Water Authority Thiruvananthapuram dated 31.05.2022 to arrange the
3.1.2	Extension of sewerage system to Block H to R							
3.1.3	Extension of sewerage system to newly added areas of corporation viz,							
3.1.4	Providing sewerage system in Block A to E							

3.1.5	Rehabilitation of existing Network and pump house in block A to E							balance work at their risk and cost. As directed in the Chief Secretary, GoK's meeting dated 21/06/2022 to do the Preparation of DPRs internally, action taken accordingly. Meanwhile the terminated firm M/s REPL filed a complaint against KWA in the Hon'ble High court of Kerala (WP(C) No 26031 of the year 2022) and obtained a stay against KWA at first up to 22.08.22 which is then got extended up to 14.09.22 against taking any coercive actions. DPR preparation of sewerage system to the uncovered areas of TMC is now being carried out internally by KWA. The total wards were divided in to 10 clusters. Cluster 1 comprises of 5 wards - Attukal, Kalady, Kallipankulam, Ambalathara and kamaleswaram wards – The DPR for Cluster 1 was submitted on 13/10/2022 for AS. Later as per the direction of Secretary Thiruvananthapuram Corporation the DPR for
3.1.6	Procurement of equipment for maintenance of sewerage system.							Cluster 1 was revised including Zone 1&5 for Rs.91.00Cr and Zone 3&4 for Rs.66.50Cr and was submitted to Corporation on 28.12.2023 for getting AS under UIDF. AS received for these two works and works te

	3.1. Additional STP 7 requirement	Kerala Water A uthority		Three years			<p>ndered. As the two bidders who quoted for the Tender of Cluster 1- (ZONE-III K alady Part) and (ZONE-IV - Attukal Part) was disqualified the tender was cancelled and action is being taken to retender the work. Prequalification process of Cluster I zone I& V is under process. Cluster 3, which was originally consisting of Thiruvallam, Poonkulam and Vellar is the second in the priority list and was taken up. This Cluster is then modified by adding more wards and is divided into 3 zones. Zone 1 of cluster 3 is consisting of Puthenpally and Part of Muttathara (until STP) was taken up on priority based on the demand of Thiruvananthapuram Corporation. DPR of Cluster 3 Zone 1, Puthanpalli ward for 1.5 MLD Sewerage network with 5 year O&M and without centage submitted to Corporation under AMRU T2.0 on 11/1/23. The DPR of Cluster 3 Zone 2 and Zone 3 is prepared and submitted on 21.01.2023. The DPR for cluster 2 is submitted on 27.02.2023 and is verified and kept in Shelf. The DPR for cluster 4 (Thirumala Thrikkannapuram and Punnakkamughal wards) is prepared and su</p>
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								<p>Submitted on 30.03.2023 and as suggested for identifying Corporation/Govt. lands for the collection well and STP proposed is being done and after obtaining sanction of the puramboke land identified there will be changes in the design network and there by changes will be made in the DPR. DPR for Cluster IX (priority wards (Vizhinjam and Harbour area) completed and submitted on 29.09.2023. Land for STP identified and the confirmation of land not yet received. DPR of cluster X comprising of wards Shangumugham, Vettucaud, Vallakadavu, Beemapalli (part), Beemapalli East (part), Valiyathura and Kadakampally is under preparation. DPR for Cluster 3 Zone 1&3 revised and is under scrutiny for submitting the same to Corporation for getting AS under UIDF.</p>
	Total Amount		5000 CR					

- Works other than that listed in Short Term Action Plan, completed /ongoing in Karamana River Stretch are attached herewith .

Managing Director

STATE WATER QUALITY MONITORING PROGRAMME (SWMP) 2025

Analysis Report for the month of February -2025

Name of River		KARAMANA					
Date and Time of Sample collection		6/2/2025					
Method of analysis							
Sl no.	Parameters	SAMPLE ID					
		Peppara	Aruvikkara	Mangattukadavu	Pallathukadavu	Thiruvallom	Moonnattumukku
1	Temperature, degree celsius	28	28	30	29.5	30	30
2	DO,mg/L	7.7	6.9	5.9	3.4	2.7	0.3 (BDL)
3	pH	6.5	6.4	6.8	6.7	6.8	6.8
4	Electrical Conductivity,µmhos/cm	35	35	96	1503	2563	776
5	BOD,mg/L	0.5 (BDL)	2.3	2	2.1	14	28
6	Nitrate,mg/L	0.3 (BDL)	0.3 (BDL)	0.3 (BDL)	2.2	21.3	28.5
7	Turbidity,NTU	1 (BDL)	1 (BDL)	1 (BDL)	1.9	2.1	3.2
8	Total Alkalinity as CaCO ₃ ,mg/L	8 (BDL)	12 (BDL)	32	108	84	100
9	Chloride,mg/L	8	4 (BDL)	16	275	672	112
10	NH ₃ N,mg/L	0.4 (BDL)	0.4 (BDL)	0.4 (BDL)	0.5	1.6	18.4
11	Total Hardness as CaCO ₃ ,mg/L	8 (BDL)	8 (BDL)	16	190	300	136
12	Calcium Hardness as CaCO ₃ ,mg/L	4 (BDL)	4 (BDL)	8	112	108	72
13	Magnesium Hardness as CaCO ₃ ,mg/L	4 (BDL)	4 (BDL)	8	78	192	16
14	Sulphate,mg/L	5 (BDL)	5 (BDL)	5 (BDL)	36	66	6.6
15	Sodium,mg/L	4.3 (BDL)	2.1 (BDL)	11.9	144	359	84
16	Total Dissolved Solids,mg/L	23	20	60	655	1364	465
17	Phosphate,mg/L	0.2 (BDL)	0.2 (BDL)	0.2 (BDL)	0.2 (BDL)	0.2 (BDL)	0.6
18	Boron,mg/L	0.5 (BDL)	0.5 (BDL)	0.5 (BDL)	0.5 (BDL)	0.5 (BDL)	0.8
19	Potassium,mg/L	2.1	2.8	5.9	98	98.3	32.7
20	Total Coliform,cfu/100ml	500	2700	2400	3800	52000	72000
21	Faecal Coliform,cfu/100ml	200	1600	1800	2200	30400	64000
22	SAR	0.7	0.3	1.3	4.5	9.0	3.1


 ASSISTANT ENVIRONMENTAL SCIENTIST

STATE WATER QUALITY MONITORING PROGRAMME (SWMP) 2025

Analysis Report for the month of February -2025

Name of River		KARAMANA					
Date and Time of Sample collection		6/2/2025					
Method of analysis							
Sl no.	Parameters	SAMPLE ID					
		Peppara	Aruvikkara	Mangattukadavu	Pallathukadavu	Thiruvallom	Moonnattumukku
1	Temperature,degree celsius	28	28	30	29.5	30	30
2	DO,mg/L	7.7	6.9	5.9	3.4	2.7	0.3 (BDL)
3	pH	6.5	6.4	6.8	6.7	6.8	6.8
4	Electrical Conductivity,µmhos/cm	35	35	96	1503	2563	776
5	BOD,mg/L	0.5 (BDL)	2.3	2	2.1	14	28
6	Nitrate,mg/L	0.3 (BDL)	0.3 (BDL)	0.3 (BDL)	2.2	21.3	28.5
7	Turbidity,NTU	1 (BDL)	1 (BDL)	1 (BDL)	1.9	2.1	3.2
8	Total Alkalinity as CaCO3,mg/L	8 (BDL)	12 (BDL)	32	108	84	100
9	Chloride,mg/L	8	4 (BDL)	16	275	672	112
10	NH3N,mg/L	0.4 (BDL)	0.4 (BDL)	0.4 (BDL)	0.5	1.6	18.4
11	Total Hardness as CaCO3,mg/L	8 (BDL)	8 (BDL)	16	190	300	136
12	Calcium Hardness as CaCO3,mg/L	4 (BDL)	4 (BDL)	8	112	108	72
13	Magnesium Hardness as CaCO3mg/L	4 (BDL)	4 (BDL)	8	78	192	64
14	Sulphate,mg/L	5 (BDL)	5 (BDL)	5 (BDL)	36	66	6.6
15	Sodium,mg/L	4.3 (BDL)	2.1 (BDL)	11.9	144	359	84
16	Total Dissolved Solids,mg/L	23	20	60	655	1364	465
17	Phosphate,mg/L	0.2 (BDL)	0.2 (BDL)	0.2 (BDL)	0.2 (BDL)	0.2 (BDL)	0.6
18	Boron,mg/L	0.5 (BDL)	0.5 (BDL)	0.5 (BDL)	0.5 (BDL)	0.5 (BDL)	0.8
19	Potassium,mg/L	2.1	2.8	5.9	98	98.3	32.7
20	Total Coliform,cfu/100ml	500	2700	2400	3800	52000	72000
21	Faecal Coliform,cfu/100ml	200	1600	1800	2200	30400	64000
22	SAR	0.7	0.3	1.3	4.5	9.0	3.1

ANALYSIS REPORT OF RIVERS INCLUDED IN THE LIST OF PRS-2022 FOR THE MONTH OF FEBRUARY 2025

SL NO	PARAMETER	RIVER-NEYYAR		RIVER- KARAMANA		RIVER- MAMOM	RIVER- AYIROOR	RIVER- VAMANAPURAM
		Amaravila	Aruvippuram	Aruvikkara	Moonnattumukku	Mamom	Ayiroor	Vamanapuram
1	Temperature, 0°C	29	29	28	30	29	28.7	28
2	Dissolved Oxygen, mg/l	7.2	6.9	6.9	0.3 (BDL)	6.2	7.7	7.8
3	pH	6.9	6.8	6.4	6.8	6.8	6.9	6.8
4	Conductivity, µmhos/cm	83	68	35	776	170	141	95
5	BOD, mg/l	1.6	1.2	2.3	28	1.4	1 (BDL)	1 (BDL)
6	Nitrate-N, mg/l	0.3 (BDL)	0.3 (BDL)	0.3 (BDL)	28.5	0.3 (BDL)	0.3 (BDL)	0.3 (BDL)
7	Turbidity, NTU	0.8	0.8	1	3.2	1	0.8	0.5
8	Phenolphthalein Alkalinity, mg/l	5(BDL)	5(BDL)	5(BDL)	5(BDL)	5(BDL)	5(BDL)	5(BDL)
9	Total Alkalinity, mg/l	12 (BDL)	32	12 (BDL)	100	48	32	24
10	Chloride, mg/l	20	12	4 (BDL)	112	28	28	16
11	COD, mg/l	5 (BDL)	5 (BDL)	5 (BDL)	520	5 (BDL)	5 (BDL)	5(BDL)
12	TKN, mg/l	1.5 (BDL)	1.5 (BDL)	1.5 (BDL)	46.2	1.5 (BDL)	1.5 (BDL)	1.5 (BDL)
13	Ammoniacal-N, mg/l	0.4 (BDL)	0.4 (BDL)	0.4 (BDL)	18.4	0.4 (BDL)	0.4 (BDL)	0.4 (BDL)
14	Hardness as CaCO ₃ , mg/l	8 (BDL)	32	8 (BDL)	136	32	24	24
15	Calcium as CaCO ₃ , mg/l	5 (BDL)	20	4 (BDL)	72	28	16	20
16	Magnesium as CaCO ₃ , mg/l	4 (BDL)	12	4 (BDL)	64	5	8	4 (BDL)
17	Sulphate, mg/l	5 (BDL)	5 (BDL)	5 (BDL)	6.6	5 (BDL)	5 (BDL)	5 (BDL)
18	Calcium (Ca ²⁺), mg/l	1.6	8.02	1.6	28.9	11.2	6.4	8.0
19	Magnesium (Mg ²⁺), mg/l	0.7	2.9	1.0	15.6	1.0	1.9	1.0
20	Sodium, mg/l	13.2	6.3	2.1 (BDL)	84.2	18.2	17.1	9.7
21	Total Dissolved Solids, mg/l	49.0	50.0	20	465	98	77	54
22	Total Fixed Solids, mg/l	32	30	10	286	42	36	22
23	Total Suspended Solids, mg/l	12	10	10	135	16	12	10
24	Phosphate, mg/l	0.2 (BDL)	0.2(BDL)	0.2 (BDL)	0.6	0.2 (BDL)	0.2 (BDL)	0.2 (BDL)
25	Boron, mg/l	0.5 (BDL)	0.5 (BDL)	0.5 (BDL)	0.8	0.5 (BDL)	0.5 (BDL)	0.5 (BDL)
26	Potassium, mg/l	4.3	1.9	2.8	32.7	7.4	4.7	4
27	Fluoride, mg/l	0.2 (BDL)	0.2 (BDL)	0.2 (BDL)	1	0.2 (BDL)	0.2 (BDL)	0.2 (BDL)
28	Total Coliform, MPN/100 ml	2800	3500	2700	72000	2800	2000	1300
29	Fecal Coliform, MPN/100 ml	1700	2400	1600	64000	1800	1300	1200
30	Fecal Streptococcus, MPN/100 ml	1.8 (BDL)	1.8 (BDL)	1.8 (BDL)	2500	1.8 (BDL)	1.8 (BDL)	1.8 (BDL)
31	% SODIUM	68	28.5	28.3	50.7	48.8	55.3	42
32	SAR	2.1	0.5	0.3	3.1	1.4	1.5	0.9

National Mission for Clean Ganga

**Format for Submission of Monthly Progress Report by States/UTs
(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)**

RIVER MANIMALA, ALAPPUZHA

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation	31.03.2021	NIL
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.2020	Since Large Land holding by local residents on the bank, No
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	22.01.2020	Such issues arises, no need of steps since
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none">• Specifying accountability of nodal authorities not below the Secretary level• Chief Secretaries may have an accountable person attached in their office for this purpose	22.01.2020	No industry/commercial activity
	<ul style="list-style-type: none">• Monitoring at State level must take place	22.01.2020	NIL
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none">• Secretary, Ministry of Jal Shakti• Member Secretary, CPCB	22.01.2020 Fortnightly commencing	NIL

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic</p>	<p>21.12.2019</p> <p>2020-2021</p> <p>2019-2020</p> <p>2020-2021</p> <p>2020-2021</p>	<p>Drains contributing to river pollution were identified. The drains are seasonal and water quality is above the require limit, no in situ.</p> <p>Proposal for setting up an FSTP by Chengannur municipality is initiated.</p> <p>Since the area does not contain any industry no requirement of any CETP, this action. Plan revised.</p> <p>The adjoining local bodies are in the stage of developing and establishing adequate solid waste management facilities also the solid waste during issues were not identified in the stretch during field visit held during past 1 year. Water quality analysis result of the stretch up to DECEMBER 2023 is enclosed. Awareness campaigns initiated.</p> <p>No groundwater pollution is noted in the area action yet to be initiated.</p>
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ACTION PLAN FOR RIVER PAMBA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of Dec 2024	Progress in the month of Jan 2025	Progress in the month of Feb 2025	% works completed	Details of works remaining
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project				100%	NIL
A(b)	Rendering Plant at Eraviperoor or Thiruvalla	Eraviperoor/ Thiruvalla local body	31.03.2021				0%	Work to be initiated
C(ii)	Fencing of bridges, desilting, dredging and protection works, surveillance cameras at vantage points	Irrigation department	31.03.2021				0%	Work to be initiated
C	Preventing illegal discharge of septage and other waste water into the river. Formation of River Protection Group	Panchayath, Police , KSPCB	31.05.2020.				0%	Work pending due to COVID pandemic
C	Greenery development Plantation on both sides of the river, setting up biodiversity parks in flood plains and removing encroachment	Irrigation department in association with panchayath	31.03.2021				0%	Yet to be initiated
C(b)(ii)	Green Protocol implementation in all offices, institution & public functions	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.03.2020				100%	0

D(a)	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department, Hydrographic survey department	31.03.2021					Work to be initiated
C(ii)	Establishment of decentralized solid waste treatment facilities	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.12.2020				100%	0
C	Installing household & community level solid and domestic sewage waste management	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.12.2020				NA	NA
C	Door to door collection of solid waste & Material Collection Facilities (MCF) & Resource Revcovery Facilities (RRF)	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.12.2020				NA	NA

ACTION BY GROUND WATER DEPARTMENT

Sl. No	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Timeline	Progress in the month of Dec 2024	Progress in the month of Jan 2025	Progress in the month of Feb 2025	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	31.03.2021					
2	B(ii)	Ground water recharging / rain water harvesting in Govt offices	31.03.2021					
3	NGT order in O.A no.496/2016 Identification of illegal bore wells in the catchment area.	NGT order in O.A no.496/2016 Identification of illegal bore wells in the catchment area.	31.03.2021					

**ANALYSIS REPORT OF DRAINS OF MANIMALA BETWEEN KALLOOPARA AND THONDRA
FEB -2025**

SI NO	BOTTLE NO.	Name of Drains	PH	BOD	TC	FC
1	TK1	Panayampalathodu	7.4	0.4	3000	1600
2	TK2	PadathupalamThodu	8.5	0.8	400	200
3	TK3	Thottappuzha	7.1	1.7	1400	600
4	TK4	Kuttapuzha under Kattodubridge	8.1	0.5	1600	400
5	TK5	Kadavumbara	7.4	1.6	2000	800
6	TK6	Drain under Varappalam Bridge	NIL	NIL	NIL	NIL
7	TK7	Drain under kallupalam Bridge	7.2	0.6	2600	2000
8	TK8	Komalamthodu	7.4	2.8	1000	200
9	TK9	Vennikulam Valiyathodu	7.8	1.7	800	200
10	TK10	Paduthodu	NIL	NIL	NIL	NIL
11	TK11	Mallappally Valiyathodu	NIL	NIL	NIL	NIL

ANALYSIS RESULT OF DRAINS JOINING TO MANNAR-THAKAZHI STRETCH OF PAMBA RIVER FEBRUARY 2025						
Sl.No.	NAME OF DRAIN	PARAMETERS				
		pH	Conductivity(μ S/cm)	BOD(mg/l)	TC (Nos/100 ml)	FC
1	Parumala Drain	NIL	NIL	NIL	NIL	NIL
2	Mannar Town Drain	NIL	NIL	NIL	NIL	NIL
3	Kuriyathkadavu Thodu	NIL	NIL	NIL	NIL	NIL
4	Karuvelil Thodu	8.1	93.97	0.83	1400	400
5	Nochithodu	8.1	106.2	2	1400	800
6	Pattaparambil Thodu	7.6	125.3	2	800	400
7	Kappiyarissery Thodu	8.3	85.43	0.4	2000	1000
8	Kombankery Thodu	7.8	231.9	0.8	800	400
9	Perackal thodu	9	958	3.5	3600	1600
10	Erathodu	8.1	206.5	0.2	3200	1400
11	Kolarayaru	7.9	39.43	0.4	600	200



ANALYSIS REPORT OF DRAINS OF MANIMALA BETWEEN KALLOOPARA AND THONDRA

Feb-25


SI NO	NO.	Name of Drains	PH	BOD	TC	FC
1	TK1	Panayampalathodu	7.4	0.4	3000	1600
2	TK2	Padathupalam Thodu	8.5	0.8	400	200
3	TK3	Thottappuzha	7.1	1.7	1400	600
4	TK4	Kuttapuzha under Kattodubridge	8.1	0.5	1600	400
5	TK5	Kadavumbara	7.4	1.6	2000	800
6	TK6	Drain under Varappalam Bridge	NIL	NIL	NIL	NIL
7	TK7	Drain under kallupalam Bridge	7.2	0.6	2600	2000
8	TK8	Komalamthodu	7.4	2.8	1000	200
9	TK9	Vennikulam Valiyathodu	7.8	1.7	800	200
10	TK10	Paduthodu	NIL	NIL	NIL	NIL
11	TK11	Mallappally Valiyathodu	NIL	NIL	NIL	NIL



**MONTHLY ANALYSIS REPORT OF POLLUTED RIVER
STRETCHES FEBRUARY-2025
STATION: MANNAR**

Sampling Date: 4.02.2025

Sl. No	PARAMETERS	ITTINAYARKKADAVU BRIDGE KUTTAMPEROOR	KOTTAKAL KADAVU BRIDGE KORATTIKADAVU	PARUMALA BRIDGE	MANNAR BRIDGE
1	Temp. (°C)	26	27	24	25
2	pH	6.8	3.7	6.9	7.1
3	Conductivity (µS/cm)	143	130	106	140
4	DO (mg/L)	5	5.5	6.9	5
5	BOD (mg/L)	2.1	2.7	3.1	3.6
6	COD (mg/L)	5.8	6	6.5	7.7
7	TDS (mg/L)	79	72	58	77
8	TC (CFU/100ml)	2000	1700	2500	2800
9	FC (CFU/100ml)	1100	1000	1800	1500
10	FSC(CFU/100ml)	NIL	Nil	Nil	Nil


13/3/2025

சென்னை மாநகராட்சி
செயலாளர் அலுவலகம்

Analysis Result of Drains Joining to Mannar-Thakazhi Stretch of Pamba River (FEB -2025)

Sl. No	Name of Drain	Parameters														
		pH			Electrical Conductivity(μ S/cm)			BOD(mg/l)			TC(Nos/100ml)			FC		
	Months	DEC	JAN	FEB	DEC	JAN	FEB	DEC	JAN	FEB	DEC	JAN	FEB	DEC	JAN	FEB
1	Parumala Drain	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
2	MannarTown Drain	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
3	Kuriyathkadavu Thodu	7.9	8.1	NIL	48.89	163.2	NIL	0.5	2.8	NIL	1000	2200	NIL	600	1600	NIL
4	Karuvelil Thodu	7.9	8.2	8.1	46.06	44.43	93.97	1.6	0.4	0.83	1400	1300	1400	1000	600	400
5	Nochithodu	7.9	7.9	8.1	45.72	105.5	106.2	1.6	1	2	1000	1800	1400	800	1000	800
6	Pattaparambil Thodu	7.9	8.1	7.6	49.63	195.1	125.3	1.8	0.1	2	2000	600	800	800	400	400
7	Kappiyarissery Thodu	7.9	8.2	8.3	69.18	164.1	85.43	1.4	0.8	0.4	3200	400	2000	2400	200	1000
8	Kombankery Thodu	7	8.3	7.8	47.84	157.5	231.9	2.3	4.6	0.8	1800	2000	800	800	1400	400
9	Perackalthodu	7.8	7.9	9	391.3	160	958	4.5	3.6	3.5	2200	2600	3600	600	1800	1600
10	Erathodu	7.1	7.9	8.1	52.49	150.9	206.5	0.9	0.6	0.2	2600	1400	3200	1200	600	1400
11	Kolarayaru	7	8.1	7.9	48.09	170.2	39.43	0.1	0.1	0.4	1600	2000	600	400	800	200

National Mission for Clean Ganga

**Format for Submission of Monthly Progress Report by States/UTs
(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)**

RIVER PAMBA, PATHANAMTHITTA

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		Kadapra Grama Panchayat id totally open defection free. All the sewage generated in the households and other places and inistutions have 100% treatment of sewage-situ
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		Niranam Gramapanchayat is an upper Kuttanad area , so no such dry land suitable for solid waste treatment plant is available . MCF construction completed .13 mini MCF implimentedc in all wards . Necessary instruction are given to all offices and institution to strictly comply with the green protocol and is regularly monitored.

5	<p>Chief Secretaries may set up appropriate monitoring mechanism at state level</p> <ul style="list-style-type: none"> • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose 		
	<ul style="list-style-type: none"> • Monitoring at State level must take place 		
6	<p>Progress report may be furnished by the State/UTs to</p> <ul style="list-style-type: none"> • Secretary, Ministry of Jal Shakti • Member Secretary, CPCB 		

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic</p>	<p>Kadapra Grama Panchayat id totally open defection free. All the sewage generated in the households and other places and inistutions have 100% treatment of sewage-situ</p> <p>No STP in Mannar Panchayath</p> <p>NO CEPT & ETP in Mannar Panchayath</p> <p>Plastic waste is collected by HarithaKarma Sena</p>
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	<p>waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of flood plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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					The Panchayat has resolved to identify all polluting involved in pollution of river resources and initiation of penal against them	The Panchayat has resolved to identify all polluting involved in pollution of river resources and initiation of penal against them	
C	Establishment of Material Collection Facility	Mannar	31.03.2021	Roofing completed	Electrification-sent to TS	86%	14%

		Niranam		Details not reported	Details not reported		
		Kadapra Panchayath		Material Collection Facility id fully functional in Kadapra Grama Panchayat	Material Collection Facility id fully functional in Kadapra Grama Panchayat		
C	Resource Recovery Facility	Mannar	31.03.2021	NO RRF IN PANCHAYATH	NO RRF IN PANCHAYATH	NA	NA

		Niranam		Not submitted the report	Details not reported		
		Kadapa		Resource Recovery Facility due to non-availability of space	Resource Recovery Facility due to non-availability of space		
C	Installing household and community level solid waste management units	Mannar Panchayat	31.03.2021	PLASTIC WASTE COLLECTION	PLASTIC WASTE COLLECTION		

C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.03.2021	73%	77%	77%	23%
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Parumala Town	Kadapra Panchayat	31.12.2020	The Panchayat considered that sewage treatment plants are currently not need with in Panchayat area around Parumala	The Panchayat considered that sewage treatment plants are currently not need with in Panchayat area around Parumala		
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Mannar Town	Mannar Panchayat	31.12.2020	All house hold toilets have individual septic tank and no outlets to pamba river	All house hold toilets have individual septic tank and no outlets to pamba river		
C	Construction of compound wall with fencing	Irrigation department	31.03.2021	Details not reported	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government		

C	Removing light jungle and muddies from river courses	Irrigation department	31.03.2021	Details not reported	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government		
C	Electrical-Light arrangements and Surveillance cameras	Irrigation department	31.03.2021	Details not reported	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government		
C	Regualting activites in flood plain zone, protection and management of flood plain zone	Irrigation department	31.03.2021	Details not reported	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government		
	Greenery developmentPlantation plan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment	Irrigation department	31.03.2021	Details not reported	Detailed project report for the Holistic rejuvenation of the reaches is prepared		

					and submitted to Government		
C (b) (ii)	Green Protocol implementation in all Offices institution & Public function	Mannar	31.05.2020	100% Green protocol has implemented in public offices	100% Green protocol has implemented in public offices		
		Kadapra		Green protocol has implemented in public officers Kadapa Grama Panchayat	Green protocol has implemented in public officers Kadapa Grama Panchayat		
		Niranam		Not submitted the report			

D(a)	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department	30.11.2020				
D (b)	Irrigation practices	Irrigation department	30.04.2020				
E	Awareness programmes for sections of public	Kerala State Pollution Control Board	31.05.2020				
C	Management of municipal, plastic, hazardous, biomedical and electrical waste	LSGD	31.03.2021				Plastic is collected by harithakar masena every month & e-waste once in an year

ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	NOC has not been issued to industries for Ground Water extraction during January 2025	DLEC meeting convened for considering 2 number of proposals (1 renewal, 1 New) The proposals shall be recommended to SGWA for getting Final NOC shortly.	Demand based	<p>1.As per the GEC estimation all the blocks in the District has been categorized as SAFE.</p> <p>2.Provisions of GW (control &Regulation) Act 2002 is implementing strictly for regulating extraction of GW resource in the district</p>
2	B(ii)	Ground water recharging / rain water harvesting	Pond rejuvenation work is going on at Thevearkunnel Kulam & Parapetty Valiyakulam in Pandalam Thekkekkara Grama Panchayath	Pond rejuvenation work at Thevearkunnel Kulam (Pandalam Thekkekkara Grama Panchayath) completed & Parapetty Valiyakulam (Pandalam Thekkekkara Grama	Demand based	<p>All the blocks in the district is categorized as SAFE as per GEC estimation.</p> <p>Kadapra-Niranam Area is not feasible for Ground Water</p>

				Panchayath) Pond rejuvenation work ongoing.		GW recharging programme is taken up in some pockets in the midland area including Manimala basin. Where seasonal GW level fluctuation is noticed.
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Groundwater sample collection during the month of November 2024 for the monitoring wells for General & Iron analysis (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis.	Groundwater sample collection during the month of November 2024 for the monitoring wells for General & Iron analysis (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis. General & Iron samples for selected well (15 Nos) collected from February 2025 and sent to laboratory.	Periodical assessment (Regular programme) Chemical analysis result of groundwater samples received from Analytical Lab, Trivandrum upto December 2023	(i)Maintaining a network of observation wells in various hydrogeomorphic units throughout the district from which water level and water samples have been collected periodically and analysed. (ii)generally groundwater quality is good and potable
4	B(iv)	For regulating use of ground	As per Building Rule	As per Building Rule	Borewell/ tube well	i)Borewell/tube well

		<p>water for irrigation purpose, adopting good irrigation practices</p>	<p>(KPBR) Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the clearance from GWD.</p> <p>ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose</p>	<p>(KPBR) Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the clearance from GWD.</p> <p>ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.</p>	<p>construction is regulated in the district by insisting permit of local bodies based on the clearance from GWD.</p> <p>ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.</p> <p>3 number of Mass Awareness Programme on Ground Water Conservation & regulation completed.</p>	<p>construction is regulated in the district by insisting permit of local bodies based on the feasibility report of GWD.</p> <p>ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.</p> <p>iii) Awareness programmes organised to the public to adopt rainwater harvesting measures</p>
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Analysis Result of Drains Joining to Mannar-Thakazhi Stretch of Pamba River (FEB -2025)

Sl. No	Name of Drain	Parameters														
		pH			Electrical Conductivity(μ S/cm)			BOD(mg/l)			TC(Nos/100ml)			FC		
	Months	DEC	JAN	FEB	DEC	JAN	FEB	DEC	JAN	FEB	DEC	JAN	FEB	DEC	JAN	FEB
1	Parumala Drain	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
2	MannarTown Drain	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
3	Kuriyathkadavu Thodu	7.9	8.1	NIL	48.89	163.2	NIL	0.5	2.8	NIL	1000	2200	NIL	600	1600	NIL
4	Karuvelil Thodu	7.9	8.2	8.1	46.06	44.43	93.97	1.6	0.4	0.83	1400	1300	1400	1000	600	400
5	Nochithodu	7.9	7.9	8.1	45.72	105.5	106.2	1.6	1	2	1000	1800	1400	800	1000	800
6	Pattaparambil Thodu	7.9	8.1	7.6	49.63	195.1	125.3	1.8	0.1	2	2000	600	800	800	400	400
7	Kappiyarissery Thodu	7.9	8.2	8.3	69.18	164.1	85.43	1.4	0.8	0.4	3200	400	2000	2400	200	1000
8	Kombankery Thodu	7	8.3	7.8	47.84	157.5	231.9	2.3	4.6	0.8	1800	2000	800	800	1400	400
9	Perackalthodu	7.8	7.9	9	391.3	160	958	4.5	3.6	3.5	2200	2600	3600	600	1800	1600
10	Erathodu	7.1	7.9	8.1	52.49	150.9	206.5	0.9	0.6	0.2	2600	1400	3200	1200	600	1400
11	Kolarayaru	7	8.1	7.9	48.09	170.2	39.43	0.1	0.1	0.4	1600	2000	600	400	800	200

National Mission for Clean Ganga

Format for Submission of Monthly Progress Report by States/UTs (Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)

RIVER PERIYAR. ERNAKULAM

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none">● Specifying accountability of nodal authorities not below the Secretary level● Chief Secretaries may have an accountable person attached in their office for this purpose		
	<ul style="list-style-type: none">● Monitoring at State level must take place		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none">● Secretary, Ministry of Jal Shakti● Member Secretary, CPCB		

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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ACTION PLAN FOR RIVER PERIYAR, KERALA

SHORT TERM MEASURES

Serial Number	Activity	Implementing agency	Timeline	Progress in the month Of November 2024	Progress in the month Of December 2024	Progress in the month Of January 2025	% works completed	Details of works remaining
(b)	Augmentation and Revamping of existing STP at near Adwaita Ashramam and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	Dec 2019	It was reported that the mechanical works of the STP related to the renovation are yet to be completed and the electrical work and civil work are almost completed. As per the inspection of the STP by the municipality officer, it was found that new Filter, Clarifier and aerator need to be installed. Once the tender process for the mechanical work is completed, the STP can be made operational within 2 months. The capacity of the Advaita Ashram STP is 300 KLD. This is not enough to completely treat the sewage generated in the city. 1 acre of land has been requested from the Irrigation Department to establish a new STP (1.72 MLD) in the Thottakkattukara area. The	It was reported that the mechanical works of the STP related to the renovation are yet to be completed and the electrical work and civil work are almost completed. As per the inspection of the STP by the municipality officer, it was found that new Filter, Clarifier and aerator need to be installed. Once the tender process for the mechanical work is completed, the STP can be made operational within 2 months. The capacity of the Advaita Ashram STP is 300 KLD. This is not enough to completely treat the sewage generated in the city. 1 acre of land has been requested from the Irrigation Department to establish a new STP (1.72 MLD) in the Thottakkattukara area. The KWA Estimate has been prepared for this despite the allocation of funds of Rs. 118 crore from the Suchitha	The committee observed that there was no time-bound progress in the renovation of STP at Advaita Ashram. The entire mechanical machinery of STP needs to be replaced in connection with the renovation. Estimate has been recast. CEE OD Sanction needs to be given. Electrical work and civil work are almost completed. Steps will be taken to obtain the consent of STP from PCB.		

				KWA Estimate has been prepared for this despite the allocation of funds of Rs. 118 crore from the Suchitha Mission. A meeting was held under the chairmanship of the Collector to get the land. It needs to be obtained.	Mission. A meeting was held under the chairmanship of the Collector to get the land. It needs to be obtained.			
(b)	Augmentation and Revamping of existing STP at Aluva Market and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	2021	received administrative approval for the reconstruction of Aluva General Market for Rs. 48 crore under PMSSY, and DPR has been prepared. The reconstruction of Market includes a high-capacity ETP. Since the high-capacity ETP is being established, the proposal for a low-capacity ETP proposed only for the fish market will be discarded. An application has been submitted for the Pollution Control Board's Consent to Establish for the construction work of the market. The work will be completed within one year.	received administrative approval for the reconstruction of Aluva General Market for Rs. 48 crore under PMSSY, and DPR has been prepared. The reconstruction of Market includes a high-capacity ETP. Since the high-capacity ETP is being established, the proposal for a low-capacity ETP proposed only for the fish market will be discarded. An application has been submitted for the Pollution Control Board's Consent to Establish for the construction work of the market. The work will be completed within one year.	PMSSY has received administrative approval of Rs 48 crore for the reconstruction of Aluva General Market and DPR has been prepared. The reconstruction of the market also includes a high-capacity ETP. Since the high-capacity ETP is being established, the proposal for a low-capacity ETP proposed only for the fish market will be discarded. submitted an application for Consent to Establish, - for the construction work of the market. The work will be completed within a year.		
(b)	Discharge of sewage from township to the River through drain near Periyar Hotel shall be stopped.	Aluva Municipality	2020	A special squad has been formed for inspection. The outlets coming into the streams and Periyar are being inspected and fines are being collected.	A special squad has been formed for inspection. The outlets coming into the streams and Periyar are being inspected and fines are being collected.	A special squad has been formed for inspection. The outlets coming into the streams and Periyar are being inspected and fines are being collected.		

(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain and to collect fine based on polluter pay principle	Aluva Municipality, KSPCB	2020	A special squad has been formed for inspection. The outlets coming into the streams and Periyar are being inspected and fines are being collected.	A special squad has been formed for inspection. The outlets coming into the streams and Periyar are being inspected and fines are being collected.	A special squad has been formed for inspection. Inspections are being conducted at the outlets leading to the forests, streams and Periyar and fines are being collected.		
(a)(iv)	Periodical inspection in the Industries, Flats, hotels monitoring of STP,ETP	KSPCB	Periodical	ONGOING	ONGOING	ONGOING		
(ii)	Installation of modern abattoirs	Aluva Municipality	March 2021	It was reported that the DPR for inviting the construction and preparation of a modern slaughterhouse has been approved by the Council on 12.07.2024 and further steps are being taken. This is included in the DPR for the new general market.	It was reported that the DPR for inviting the construction and preparation of a modern slaughterhouse has been approved by the Council on 12.07.2024 and further steps are being taken. This is included in the DPR for the new general market.	the DPR Letter of Intent for inviting the construction and preparation of a modern slaughterhouse has been approved by the Council on 12.07.2024 and further steps are being taken. This is included in the DPR for the new general market.		
(b)	Procurement of sewer cleaning machines and equipment maintenance	Aluva Municipality	March 2020	The cleaning of the canals is being carried out every day. JCB, Hitachi etc. are being used on an annual contract basis. Equipment for cleaning the	The cleaning of the canals is being carried out every day. JCB, Hitachi etc. are being used on an annual contract basis. Equipment for cleaning the canals has been	The clearing operations of the forests are being carried out every day. JCB, Hitachi etc. are being used on an annual contract basis. Equipment for clearing the forests has been purchased.	1 0 0	

				canals has been purchased.	purchased.			
	Installation of cameras at the waste dumping spots	Aluva Municipality	2020	As part of monitoring the dumping sites (places where waste is deposited), 66 cameras have been installed. All are working. Rs. 15 lakh has been allocated for installing new cameras. They will be installed this financial year. Information regarding Fines collected:- Illegal Outlet: 3.1 lakhs Illegal Dumping: 1.4 lakhs Single use Plastic : 40,000 A joint inspection (discharging sewage) was conducted with PWD and a hotel was closed	As part of monitoring the dumping sites (places where waste is deposited), 66 cameras have been installed. All are working. Rs. 15 lakh has been allocated for installing new cameras. They will be installed this financial year. Information regarding Fines collected:- Illegal Outlet: 3.1 lakhs Illegal Dumping: 1.4 lakhs Single use Plastic : 40,000 A joint inspection (discharging sewage) was conducted with PWD and a hotel was closed	As part of monitoring dumping sites (places where waste is dumped), 66 cameras have been installed. All are functional. Rs. 15 lakh has been allocated for installing new cameras. They will be installed this financial year. Details of fines levied Septage Discharge: Rs.25,000/- Illegal Outlet: 3.4 lakh Illegal Dumping: 1.6 lakh Single use Plastic: Rs.60,000/-		
(b)	Construction of retaining wall with HDPE liner at Kalamassery dumping yard in order to prevent the leachate discharge from the yard to ThoombungalThodu	Kalamassery Municipality	Sept 2019	NA	NA	The construction of the dumping yard retaining wall has been completed. The construction of the compound wall has been completed. The STP will be installed immediately after the biomining. The biomining trail run has started.	1 0 0 %	
(ii)	Installation of plastic shredding unit	Kalamassery Municipality	June 2019	NA	NA	A plant has been set up and is functioning. The scraps are being transported by CKCL. It was informed that this is being	1 0 0 %	

						transported to the Palakkad cement factory.		
(a)(iv)	Constitution of squads for night surveillance for finding the unauthorized dumping of sewage at NAD wet lands Kalamassery	Kalamassery Municipality Police department	2020	NAD not provided CCTV. Night squad fine Rs. 2281940	NAD not provided CCTV. Night squad fine Rs. 2171940	A squad has been formed and is constantly monitoring. Those who dump waste are being identified using the cameras available to the municipality. It is not possible to install cameras on NAD roads as NAD has control over them.	N A	
(b)	Installation of common STP for Kalamassery Municipality and ETP at Municipal Market. Obtain a consent from Pollution Control Board	Kalamassery Municipality	December 2019	75 cents land identified at Kalamassery for sewage and septaNorth ge treatment plant. New ETP will be installed after the reconstruction of market according to the capacity needed for the same SSTP Septage come sewage treatment plant of 2.6 mld work will started after biomining contract was awarded to SMS limited for 9.02 cr. The work will start this month & planning to complete the works within 6 months. New	75 cents land identified at North Kalamassery for sewage and septage treatment plant. New ETP will be installed after the reconstruction of market according to the capacity needed for the same SSTP (Septage & sewage treatment plant of 2.6 mld) work will started after biomining contract was awarded to SMS limited for 9.02 cr. The work will start this month & planning to complete the works within 6 months. New MCF of 8000 square feet will be functional next month for non bio waste management. New project were submit in DPC for construction of STP at Kalamassery Townhall & Kanagarappady Mini Townhall	The existing ETP is functioning in the market. During the market renovation, the ETP will be demolished and a new one will be constructed. A detailed report will be submitted. After completion of biomining, an STP will be established at the site of the existing dumping yard. The proposal for the new STP has been sent to the DPC.	N A	

				MCF of 8000 square feet will be functional next month for non bio waste management. New project were submit in DPC for construction of STP at Kalamassery Townhall & Kanagarappady Mini Townhall				
(a)(iv)	Monitoring and surveillance of industries in Kalamassery Industrial Estate in order to prevent unauthorized discharges to Muttar River	KSPCB	2019					
(ii)	Installation of modern abattoirs including poultry and meat rendering plants.	Kalamassery Municipality , Industries Department (for land allotment)	2021	A letter dated 03.10.22 has forwarded to the govt. for allotment of land for the construction of modern abattoirs	A letter dated 03.10.22 has forwarded to the govt. for allotment of land for the construction of modern abattoirs	There is no progress due to the lack of space.	N A	
(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is	Kalamassery Municipality	2020	Inspection conducted on 24/09/2020, 22/07/2021, 13/08/2021, 01/01/2022, 10/01/2022, 11/01/2022, 12/01/2022 & notice issued to 49 persons. 12 persons cleared	Inspection conducted on 22/07/2021, 13/08/2021, 01/01/2022, 10/01/2022, 11/01/2022, 12/01/2022 & notice issued to 49 persons. 12 persons cleared violations. Second notice issued to 2 persons and rectified the defect. Inspection conduted on 28.07.2022, fresh notice	So far Rs. 22,36940/- has been collected as part of the fine for dumping waste and discharging sewage. Waste dumping fine : December- Rs. 40,000/-	N A	

	discharging the sewage to the public drain			violations. Second notice issued to 2 persons and rectified the defect. Inspection conducted on 28.07.2022, fresh notice issued to 5 persons, 1 person cleared violation. Inspection conducted on 15.09.2022, fresh notice issued to 1 person . Inspection conducted on 29.12.2022, 5 persons cleared violation . Inspection conducted on 16.02.2023, 1 person fresh notice issued. 7 outlet of houses, 3 outlet of establishment in may 2023	issued to 5 persons, 1 person cleared violation. Inspection conducted on 15.09.2022, fresh notice issued to 1 person . Inspection conducted on 29.12.2022, 5 persons cleared violation . Inspection conducted on 16.02.2023, 1 person fresh notice issued. 7 outlet of houses, 3 outlet of establishment in may 2023	November 45,000/-		
	Installation of cameras at the waste dumping spots	Kalamassery Municipality	2020	Camera installed on 10 locations. 2 portable (mobile) camera has installed for identifying waste dumping spot. Rs 36560 /- levied till date	Camera installed on 10 locations. 2 portable (mobile) camera has installed for identifying waste dumping spot. Rs 36560 /- levied till date	84 cameras have been installed, 2 each in 42 wards. Work is underway to get visuals. Night connection has not been received. In this regard, Asianet will be involved and net connection will be established by February 15.		
(b)	Identification of sources of sewage discharged to drain near Pathalam bridge and action to stop the discharge which reach river Periyar from hotels, labor camps etc In case	Eloor Municipality , KSPCB (for monitoring)	2020	Inspections are being conducted from time to time. Arrangements have been made to drain the sewage discharged from shopping complexes, shops, etc. into the soak pit and the problem has been resolved.	Inspections are conducted from time to time. Dumping of garbage was not observed during the inspection period.	Inspections are being conducted from time to time. Arrangements have been made to drain the sewage discharged from shopping complexes, shops, etc. into the soak pit and the problem has been resolved. [A notice has been issued to 4 institutions to construct soak pits after inspecting the sewage from the places where migrant workers live and catering units near the bridge. A meeting will be called to ensure		

	the quantity of sewage generated is assessed to be more STP need to be installed					that the catering units have PCB licenses.		
	Installation of cameras at the waste dumping spots	Eloor Municipality	2020	84 cameras have been installed. A fine of Rs. 1000/- was collected last month.	Keltron cameras have been installed in the vicinity of the aerobic bin near the HIL company and the bin near Manjummal Arattukadavu. Also, in the plan 2023-24, money has been allocated for installing cameras in various areas of the municipality and as per 2 projects (Rs. 40,00,000/-) 84 cameras have been installed.	84 cameras have been installed. All are working. Fines are being collected.		
(a)(iv)	Periodical inspection in the Industries, Flats, hotels for monitoring of STP,ETP located in Cochin corporation	KSPCB	periodical					
(a)	Inventory of sources of pollution through a rapid study/Study for identification of pollution sources at Edapally thodu	Kochi Municipal Corporation	3 months	A squad consisting of Engineering & Health has been formed. 4 squads are conducting regular inspections. Desilting and water hyacinth removal work is underway. Night squad is conducting inspections. Special inspection is being conducted regarding septage. Details of fines collected SUP inspection- Rs. 10000	A squad consisting of Engineering & Health has been formed. 4 squads are conducting regular inspections. Desilting and water hyacinth removal work is underway. Night squad is conducting inspections. Special inspection is being conducted regarding septage. Details of fines collected SUP inspection- Rs. 10000. Garbage dumping - Rs. 1.95	A squad has been formed with Engineering & Health to find the sources of sewage discharge. 4 squads are conducting regular inspections. Desilting and water hyacinth removal work is underway. Night squad is conducting inspections. A special squad regarding septage is conducting inspections. Fine details collected A fine of Rs. 5.54 lakhs was collected from 30/11/2024 to 15/01/2025.		

				Garbage dumping - Rs. 1.95 lakh A total of 1.32 crore fines have been collected so far this financial year	lakh A total of 1.32 crore fines have been collected so far this financial year		
	issuing notice to the defaulters	Kochi Municipal Corporation	4 months	Notices have been sent to 5 establishments for discharging sewage. Proper inspections are being carried out at establishments near the river. 317 bottle booths have been installed.	Notices have been sent to 5 establishments for discharging sewage. Proper inspections are being carried out at establishments near the river. 317 bottle booths have been installed.	Notices have been sent to 5 establishments for discharging sewage. Regular inspections are being conducted at establishments near the river. 317 boat booths have been set up.	
(a)(iv)	Periodical inspection in the flats, hotels, shops located along the river	Kochi Municipal Corporation	periodical	Notices have been sent to 5 establishments for discharging sewage. Proper inspections are being carried out at establishments near the river.	Inspections are being carried out regularly in establishments near the river. 317 boat booths have been set up. Container (AMC) has been set up in 74 wards. Fines of around 88 lakhs have been collected till mid-March of this financial year	Notices have been sent to 5 establishments for discharging sewage. Regular inspections are being conducted at establishments near the river. 317 bottle booths have been set up.	
(b)	Identification of natural drains/thodu reaching river Periyar and cleaning of weeds, grasses etc	Irrigation department	2 years	<u>Minor irrigation</u> 23 streams have been cleaned in Elur Municipality (2023-2024). This was a project of 2 crores. There are 40 streams in Karumallur, Kunnukara, Alangad, Kadungallur grama panchayats for desilting. Out of which 8 have been completed. (2023-Agreement, done in 2024) The work of Valiyachal	<u>Minor irrigation</u> 23 drains have been cleaned in Eloor Municipality. It was a 2 crore project. Agreement of Kunnukara and Alangad gram panchayat and Karumallur has been submitted. Tender procedures are completed, agreement is implemented and started works. Valiachal canal works have been completed, The Eerezhal site has been handed over, and work is currently in progress. <u>Major irrigation</u>	<u>Minor Irrigation (Did not participate.)</u> 23 canals have been cleaned in Eloor Municipality (2023-2024). This was a project of 2 crores. There are 40 canals in Karumallur, Kunnukara, Alangad, Kadungallur gram panchayats for desilting. Out of which 8 have been completed. (Agreement was made in 2023, done in 2024) The works of Valiyachal canal have been completed. <u>Major Irrigation</u> Eerezhal Punchathodu site has been handed over. As there are complaints from the residents regarding encroachment, a letter has been sent to	

				<p>stream has been completed.</p> <p><u>Major irrigation</u></p> <p>The site has been handed over (Eerezhuchal Punjathodu). Since there are complaints from the residents regarding encroachment, the a letter to the Paravur Tahsildar for boundary demarcation</p> <p>1. Kuthuthodu (IRR/IA/EST/8495/2022_5_8_7) Rs. 74.40 lakh</p> <p>2.Edathodu (IRR/IA/EST/8495/2022_5_11_10) Rs. 9/- lakh</p> <p>These works have not been approved.</p>	<p>1. Kuthuthodu (IRR/IA/EST/8495/2022_5_8_7) Rs. 74.40 lakh</p> <p>2.Edathodu (IRR/IA/EST/8495/2022_5_11_10) Rs. 9/- lakh. These works have not been approved. Works of Valiyachal thod completed.</p>	<p>the Assistant Executive Engineer, Paravur Tehsildar for boundary demarcation.</p> <p>1. Kuthuthodu (IRR/IA/EST/8495/2022-5-8-7) Rs. 74.40 lakh</p> <p>2. Emadhodu (IRR/IA/EST/8495/2022-5-11-10) Rs. 9/- lakh</p> <p>These works have not been sanctioned. Report submitted to CEE on 17/02/2024.</p>		
(ii)	Clearing of weeds, grasses at the river bank in order to ensure the smooth flow of water	Irrigation department	3 years	Almost all the works have been completed for the year 2024-2025	Almost all the works have been completed for the year 2024-2025	Almost all the works have been completed in the 2024-2025 operation vessel. The work of removing the silt that was obstructing the water sampling in the upstream & downstream part of Patalam RCB has been completed (5 lakhs). The smooth flow of the river has been restored.		
(a)	Maintaining of Minimum flow in river during lean period and	Irrigation department	3 years	The shutters are being opened and operated at regular intervals. A protocol for operating the shutters has	Periodically maintained for the minimum flow of water by operating the shutter properly at pathalam lock cum regulator	The shutters are being opened and operated at regular intervals. The protocol for operating the shutters has been prepared and sent to CEE. It has		

	periodical operation of Regulators at River in-order to maintain minimum flow.			been prepared and sent to CEE.		not been approved.		
(b)	Common Effluent Treatment Plant at Edayar Industrial Estate	Industries department	2022	Based on the minutes of the Environment-Chief Secretary's monthly review meeting with RRC/ Stake holder Departments/ Authorities held on 9.2.2023 it is recorded as "The CETP project may be dropped and all the units may be advised to have their own facilities for treatment of effluent. The fund allotted for the project may be utilized for any other liquid waste treatment project."	Based on the minutes of the Environment-Chief Secretary's monthly review meeting with RRC/ Stake holder Departments/ Authorities held on 9.2.2023 it is recorded as "The CETP project may be dropped and all the units may be advised to have their own facilities for treatment of effluent. The fund allotted for the project may be utilized for any other liquid waste treatment project."	Based on the minutes of the Environment-Chief Secretary's monthly review meeting with RRC/ Stake holder Departments/ Authorities held on 9.2.2023 it is recorded as "The CETP project may be dropped and all the units may be advised to have their own facilities for treatment of effluent. The fund allotted for the project may be utilized for any other liquid waste treatment project."		
(b)	Construction of internal roads and proper drainage in Edayar industrial estate	Industries department		Road drainage works worth Rs. 9.47 crore have been completed in the Edayar Industrial Area under the MSE CDP project and 48% of the drainage works have been completed out of the Rs. 34 lakhs allocated to the Public Works Department for the drainage works in the Edayar	Completed the constructed roads and drainage works in the locality of Edayar which comes under the project of MSE-CDP and costed 9 crore. 6.54 crore rupees has been sanctioned to PWD for works to be completed and construction of 34 lakh rupees drainage is under progress. 50% of work is	Road drainage works worth Rs. 9.47 crore have been completed in the Edayar Industrial Area under the MSE CDP project. In addition, out of the Rs. 34 lakh allocated to the Public Works Department for drainage works in the Edayar Industrial Area, 48% of the drainage construction has been completed. Out of the Rs. 6.20 crore		

				<p>Industrial Area. Out of the Rs. 6.20 crore allocated to the Public Works Department for the maintenance and repair of internal roads, the work of 3 roads namely sevana Road, Sherin High Fab Road and Malaya Rub Road has been completed. Work has been started on 3 of them. Road work is progressing. The drainage of Sunrise TSR upstream has been partially completed. Therefore, it is not connected to the main drainage. Work has been started in this regard. A joint inspection will be conducted with DIC, PCB and PWD in the Eloor Edayar area to make changes in the drainage system as suggested in the PCB's letter. The inspection will be conducted as soon as the date is received from the PWD.</p>	<p>completed. Process for the construction of internal road which worth Rs 6.20 crore is in progress. The work of 3 roads namely Seva Road, Sherin Highfab Road and Malaya Rub Road has been completed out of the allocation to Public Works Department. 3 pending out of which 30% completed Drainage upstream of Sunrise ISR is partially completed and hence not connected to main drainage. Work has not started. It was suggested in the committee meeting to speed up the construction of canal.</p>	<p>allocated to the Public Works Department for maintenance and repair of internal roads, the work of 3 roads namely Sevana 100, Sherin High Fab Road and Malaya Rub Road has been completed. Work has started on 3 of them. Road work is progressing. The drainage work adjacent to Sunrise TSR is 90% complete. It will be completed by the end of February.</p>		
(b)	<p>Installation of common discharge pipe line at downstream of Pathalam Regulator Bridge</p>	<p>Industries department, Irrigation department</p>	<p>3 years</p>	<p>Based on the minutes of the Environment-Chief Secretary's monthly review meeting with RRC/ Stake holder Departments/ Authorities held on 9.2.2023 it is recorded as "The CETP project may be dropped and all</p>	<p>Based on the minutes of the Environment-Chief Secretary's monthly review meeting with RRC/ Stake holder Departments/ Authorities held on 9.2.2023 it is recorded as "The CETP project may be dropped and all the units may be advised to have</p>	<p>Based on the minutes of the Environment-Chief Secretary's monthly review meeting with RRC/ Stake holder Departments/ Authorities held on 9.2.2023 it is recorded as "The CETP project may be dropped and all the units may be advised to have their own facilities for treatment of effluent. The fund allotted for the</p>		

				the units may be advised to have their own facilities for treatment of effluent. The fund allotted for the project may be utilized for any other liquid waste treatment project."	their own facilities for treatment of effluent. The fund allotted for the project may be utilized for any other liquid waste treatment project."	project may be utilized for any other liquid waste treatment project."		
	Installation of Night vision surveillance cameras at the River Bank side	KSPCB	2020	Installation Completed	Installation Completed	Surveillance cameras and related equipment have been installed.	1 0 0	
(a)(iv)	Periodical Monitoring of Eloor, Edayar, Kalamassery Industrial belts	KSPCB	2020	Routine inspection is going on. Night Surveillance also carried out continuously	Routine inspection is going on. Night Surveillance also carried out continuously	Inspections are being conducted and nighttime surveillance is being conducted continuously with the involvement of more staff.	1 0 0	
(a)(iv)	Monitoring of quality of water at various intake point	Kerala Water Authority	2020					
(a)(iv)	Installation of additional continuous online River water monitoring station	KSPCB	2022	New water monitoring station has been set up at the Upstream side of the Pathalam bund. The online data of water monitoring is available in the office. Quality of water at upstream is satisfactory	New water monitoring station has been set up at the Upstream side of the Pathalam bund. The online data of water monitoring is available in the office. Quality of water at upstream is satisfactory	A water monitoring station has been installed at the top of the bund. Tender processes are in progress for the installation of a station at the bottom of the bund.	1 0 0	

(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Kadungallur Panchayath	2020	Notice given to the establishments identified and fine imposed and closed the outlet	Waste discharging units are been identifies. It has been suggested to check whether there are establishments dumping garbage in Onjithodu	Fines are being levied on establishments that dump sewage. It was suggested that an inspection be conducted to see if there are any establishments that dump waste into the Onjithottu.	50%	
	Installation of cameras at the waste dumping spots	Kadungallur Panchayath	2020	Already 12 camera installed, instalation project for 33 cctv on camera going on	33 Cameras installation works is being carried out. Works will be completed within 2 months.	A Rs 15 lakh project to install 33 cameras at 28 locations is underway. The cameras have been installed. Cable connection needs to be provided.	50%	
(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Choornikkara Panchayath	2020	inspection was conducted and notices were issued to 6 people. A fine of Rs. 10,000 has been collected.	10 Inspections have been done. Notices were given to 10 people. A fine of Rs 40,000 has been levied (August month) 10 Inspections have been done. Notices were given to 10 people. A fine of Rs 40,000 has been levied .	Inspection is being conducted. Waste dumping fine:- December - Rs. 33,000/-		
	Installation of cameras at the waste dumping spots	Choornikkara Panchayath	2020	53 cameras have been installed. 13 more will be installed using KMRL CSR funds.	Cameras have been installed at 11 locations. A letter has been sent to KSEB to get electricity connection. Works will be	53 cameras have been installed. 13 more will be installed by KMRL CSR. Funds have been sent for government approval.		

					completed within 1 month.		
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LONG TERM MEASURES

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of november 2024	Progress in the month of december 2024	Progress in the month of January 2025	% works completed	Details of works remaining
A(b)	Construction of walkway, ring roads etc at the Periyar River bank at industrial belt.	Irrigation department	4 years	FS has been obtained for the construction of surveillance road and dike wall along the industrial belt. Soll investigation work is complete..Survey work will start next week.	FS has been obtained for the construction of surveillance road and dike wall along the industrial belt. Soll investigation work is complete..Survey work is pending	FS has been received for Soil Investigation work. Rs. 92,000/- has been deposited for survey work. Survey process has not started as surveyor has not come.		
C(i)	Fencing of the river banks along the stretches of waste disposal (Edamula stretch)	Cochin Municipal Corporation	1-2 years	Fencing works have been included in the budget. Beautification works are being carried out using own funds. Almost everything has been completed. Work is underway to install about 300 cameras.	work of fencing and beautification of Aryanpadam thodu is recommended to include in the year budget. The work of fencing along Meenchiraftodu in Division B-S has completed. DC-silting activities for thc year 2024 was completed. The desilting works prior the monsoon for	Fencing works have been included in the budget. Beautification works are being carried out using own funds. Almost everything has been completed. Work is underway to install about 300 cameras.		
C(ii)	Beautification of the river stretches (Edamula stretch)	Cochin Municipal Corporation	1-2 years					

					the year 2025-2026 have been started. Estimates were taken for 62 small drains. 64 big drains and 1 16 thodu in Kochi Municipal Corporation area. The projected cost of desilting for the year 2025-2026 is The estimates were submitted for technical sanction.			
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ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of september2024	Progress in the month of october 2024	Progress in the month of november 2024	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps					

Analysis report of polluted river stretches-R Periyar, R- Chithrapuzha,R-Kadambrayar, R-Chalakudy For the month of FEBRUARY 2025

STNCode	Sampling Date	Sampling Time	StnName	Type Of Water Body	Name Of Water Body	River Basin
17	21.02.2025	10:30	Periyar at Eloor	River	Periyar River	
1338	6.02.2025	10:20	Periyar at SDP Aluva	River	Periyar River	
2334	4.02.2025	10:40	Periyar at Pathalam	River	Periyar River	
2335	4.02.2025	12:30	Periyar at Kalamassery	River	Periyar River	
3468	6.02.2025	10:35	Periyar at KWA Aluva	River	Periyar River	
2337	7.02.2025	10:40	Kadambrayar At Brahmapuram	River	Kadambrayar River	
2338	7.02.2025	9:45	Kadambrayar At Manackkadavu	River	Kadambrayar River	
1573	7.02.2025	11:05	Chithrapuzha At Irumpanam	River	Chithrapuzha River	
1154	6.02.2025	12:00	Chalakudy at Pulikkakadavu	River	Chalakudy River	

Sl. No.	Parameters	Values								
		Station Code								
		17	1338	2334	2335	3468	2337	2338	1573	1154
1	Temperature, °C	27	29	26	28	30	27	27	28	29
2	Dissolved Oxygen, mg/l	7.5	7.4	8.2	6.6	7.2	1.1	2.5	7.8	7.7
3	pH	7.8	8.5	7.7	9.0	9.0	8.8	8.9	9.0	8.9
4	Conductivity, µmhos/cm	4730	53	11450	59	56	126	99	4850	212
5	BOD, mg/l	1.9	2.9	2	1.9	1.4	2.8	0.6	3	2.7
6	Nitrate-N, mg/l	0.09	BDL	0.11	BDL	BDL	BDL	BDL	0.16	0.18
7	Turbidity, NTU	0.4	0.7	0.4	0.2	0.3	BDL	0.9	1.1	0.3
8	Phenolphthalein alkalinity	BDL	5	BDL	8	9	1	9	13	5
9	Total Alkalinity, as CaCO3	26	15	22	17	15	28	22	21	19
10	Chloride, mg/l	1549.5	6	3870	8.5	8.5	21.4	12.9	1699.4	56
11	COD, mg/l	5.6	8.8	5.6	5.6	4	8	1.6	8.8	8
12	TKN, mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.5	0.6
13	Ammoniacal-N, mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.3	0.4
14	Total Hardness, as CaCO3 mg/l	650	20	1350	17	15	23	20	680	40
15	Calcium, as CaCO3 mg/l	600	16	1000	13	9	19	16	500	35
16	Magnesium as CaCO3, mg/l	50	4	350	4	6	4	4	180	5
17	Sulphate, mg/l	192.5	0	185	BDL	BDL	BDL	BDL	190.5	BDL
18	Sodium, mg/l	1000	3.5	2500	5.5	5.5	13.9	8.4	1104.6	32.7
19	Total Dissolved Solids, mg/l	3130	32	7390	40	35	72	55	3340	134
20	Total Fixed Solids, mg/l	2504	26	5912	32	28	58	44	2672	107
21	Total Suspended Solids, mg/l	32	25	7	3	1	6	8	447	120
22	Phosphate, mg/l	0.13	0.06	0.7	0.04	0.08	0.06	0.06	1.09	0.05
23	Boron, mg/l	0.191	BDL	0.471	BDL	BDL	BDL	BDL	0.204	0.022
24	Potassium, mg/l	45	0.6	58.00	1.5	1.2	3.4	2.1	60	2.6
25	Fluoride, mg/l	0.087	0.028	0.108	0.033	0.026	0.066	0.032	0.673	0.03
26	Total Coliform, MPN/100 ml	1500	2500	6300	5400	840	5400	2700	7900	3100
27	Feacal Coliform, MPN/100 ml	790	250	4800	2000	94	2100	2200	4300	700
28	Feacal Streptococci, MPN/100ml	43	40	1100	12	40	140	260	340	43

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR -JANUARY 2025
Sampling point: VETTUKADAVU

Sl. No	Parameter	Unit	05.1.2025	25.1.2025
1	Temperature	°c	30.5	31.4
2	pH		7.66	7.7
3	Conductivity	µS/cm	6435.00	13850
4	TDS	NTU	3724.58	8016.38
5	Turbidity	mg/L	*	*
6	Colour	"	20.0	20.0
7	SS	"	8.62	4.28
8	Chlorides	"	1787.2	39
9	Hardness	"	800.00	#
10	D.O.	"	8.1	6.4
11	COD	"	16.0	12.0
12	Calcium	"	80.0	#
13	Magnesium	"	751.40	#
14	Ammoniacal Nitrogen	"	0.620	0.168
15	Free Ammonia	"	BDL	BDL
16	Phosphates		0.214	0.116
17	Hexa Chromium	"	0.055	0.062
18	Oil & Grease	"	4.200	8.060
19	Iron	"	0.225	0.093
20	Sulphides	"	BDL	BDL
21	Sulphates	"	6.014	8.262
22	Total Alkalinity	"	8.0	7.0
23	Nitrate	"	12	26
24	BOD	"	3	3
25	TC	"	40	600
26	FC	"	20	100
27	FS	"	100.000	0.000
28	Sodium	ppm	856.000	2752.000
29	Potassium	ppm	24.2	51.6
30	SAR	meq/L	13.03	#

* TURBIDITY METER IS OUT OF ORDER

As per the directions issued by CEE, Ernakulam on 23/01/2025 the daily river parameters reduced from 23 to 12

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR -JANUARY 2025
Sampling point: PATHALAM BRIDGE

Sl. No	Parameter	Unit	05.1.2025	25.1.2025
1	Temperature	°c	30.6	31.2
2	pH		7.7	31.2
3	Conductivity	µS/cm	175	159
4	TDS	NTU	101.23	91.91
5	Turbidity	mg/L	*	*
6	Colour	"	20.0	20.0
7	SS	"	6.60	6.26
8	Chlorides	"	20	26
9	Hardness	"	21.00	#
10	D.O.	"	7.8	5.7
11	COD	"	8.0	12.0
12	Calcium	"	7.2	#
13	Magnesium	"	16.63	#
14	Ammoniacal Nitrogen	"	0.360	0.062
15	Free Ammonia	"	BDL	BDL
16	Phosphates		BDL	0.092
17	Hexa Chromium	"	0.060	0.054
18	Oil & Grease	"	2.420	3.080
19	Iron	"	0.168	0.330
20	Sulphides	"	BDL	BDL
21	Sulphates	"	12.040	6.421
22	Total Alkalinity	"	0.942	8.121
23	Nitrate	"	14	16
24	BOD	"	1.87	0.6
25	TC	"	100	0
26	FC	"	60	0
27	FS	"	80	0
28	Sodium	ppm	20.5	23.000
29	Potassium	ppm	2.4	14.000
30	SAR	meq/L	1.92	#

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KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR -JANUARY 2025
Sampling point: PUTHALAM KADAVU

Sl. No	Parameter	Unit	05.1.2025	25.1.2025
1	Temperature	°c	30.5	31.2
2	pH		7.13	7.1
3	Conductivity	µS/cm	84.76	67
4	TDS	NTU	49.06	38.99
5	Turbidity	mg/L	*	*
6	Colour	"	20.0	20.0
7	SS	"	4.20	6.40
8	Chlorides	"	12.80	10
9	Hardness	"	37.00	#
10	D.O.	"	5.5	4.1
11	COD	"	8.0	8.0
12	Calcium	"	6.8	#
13	Magnesium	"	4.92	#
14	Ammoniacal Nitrogen	"	BDL	BDL
15	Free Ammonia	"	BDL	BDL
16	Phosphates		0.106	0.146
17	Hexa Chromium	"	0.052	0.041
18	Oil & Grease	"	4.060	3.320
19	Iron	"	0.245	0.78
20	Sulphides	"	BDL	BDL
21	Sulphates	"	6.040	2.81
22	Total Alkalinity	"	2.120	2.67
23	Nitrate	"	12.000	12
24	BOD	"	1	1.4
25	TC	"	240	0
26	FC	"	160	0
27	FS	"	0	0
28	Sodium	ppm	13.1	8.300
29	Potassium	ppm	1.5	1.100
30	SAR	meq/L	0.93	#

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KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR - JANUARY 2025
Sampling point: PATHALAM BUND U/S

Sl. No	Parameter	Unit	05.1.2025	25.1.2025
1	Temperature	°c	30.5	31.1
2	pH		7.0	7.2
3	Conductivity	µS/cm	176	156
4	TDS	NTU	102.1	90.41
5	Turbidity	mg/L	*	*
6	Colour	"	20.0	20.0
7	SS	"	8.02	8.40
8	Chlorides	"	32	27
9	Hardness	"	26.00	#
10	D.O.	"	9.0	6.6
11	COD	"	20.0	28.0
12	Calcium	"	9.6	#
13	Magnesium	"	20.17	#
14	Ammoniacal Nitrogen	"	0.110	BDL
15	Free Ammonia	"	BDL	BDL
16	Phosphates		0.182	0.141
17	Hexa Chromium	"	0.042	0.037
18	Oil & Grease	"	12.6	2.8
19	Iron	"	0.305	BDL
20	Sulphides	"	BDL	BDL
21	Sulphates	"	7.210	6.56
22	Total Alkalinity	"	0.9	1.57
23	Nitrate	"	12	12
24	BOD	"	2.5	0.2
25	TC	"	20	160
26	FC	"	0	100
27	FS	"	0	0
28	Sodium	ppm	14.2	27.500
29	Potassium	ppm	1.2	1.400
30	SAR	meq/L	1.2	#

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As per the directions issued by CEE, Ernakulam on 23/01/2025 the daily river parameters reduced from 23 to 12

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR -JANUARY 2025
Sampling point: PATHALAM BUND D/S

Sl. No	Parameter	Unit	05.1.2025	25.1.2025
1	Temperature	°c	30.5	31.3
2	pH		6.60	7.2
3	Conductivity	µS/cm	10400.00	14390
4	TDS	NTU	6019.52	8328.93
5	Turbidity	mg/L	*	*
6	Colour	"	30.0	30.0
7	SS	"	8.20	5.08
8	Chlorides	"	3234.0	4000
9	Hardness	"	1300.00	#
10	D.O.	"	5.7	4.1
11	COD	"	8.0	12.0
12	Calcium	"	12	#
13	Magnesium	"	1292.7	#
14	Ammoniacal Nitrogen	"	0.221	0.335
15	Free Ammonia	"	BDL	BDL
16	Phosphates		0.206	0.082
17	Hexa Chromium	"	0.055	0.041
18	Oil & Grease	"	BDL	0.760
19	Iron	"	0.621	0.041
20	Sulphides	"	BDL	BDL
21	Sulphates	"	8.102	17.560
22	Total Alkalinity	"	2.16	1.8
23	Nitrate	"	14.000	34
24	BOD	"	2.6	2.8
25	TC	"	0	0
26	FC	"	0	0
27	FS	"	0	0
28	Sodium	ppm	2250	2782.000
29	Potassium	ppm	42.8	53.200
30	SAR	meq/L	268.7	#

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As per the directions issued by CEE, Ernakulam on 23/01/2025 the daily river parameters reduced from 23 to 12

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR -JANUARY 2025
Sampling point: MANJUMMAL BUND

Sl. No	Parameter	Unit	05.1.2025	25.1.2025
1	Temperature	°c	30.2	31.0
2	pH		7.30	7.0
3	Conductivity	µS/cm	96.78	103
4	TDS	NTU	56.02	59.50
5	Turbidity	mg/L	*	*
6	Colour	"	20.0	20.0
7	SS	"	3.06	6.00
8	Chlorides	"	16.2	3
9	Hardness	"	24.000	#
10	D.O.	"	6.300	3.3
11	COD	"	32.000	12
12	Calcium	"	#	#
13	Magnesium	"	#	#
14	Ammoniacal Nitrogen	"	0.168	0.821
15	Free Ammonia	"	BDL	BDL
16	Phosphates		0.148	0.2
17	Hexa Chromium	"	0.028	0.038
18	Oil & Grease	"	4.22	2.0
19	Iron	"	0.514	0.7
20	Sulphides	"	BDL	BDL
21	Sulphates	"	3.8	7.8
22	Total Alkalinity	"	2.1	2.3
23	Nitrate	"	14	12
24	BOD	"	4.83	0.3
25	TC	"	200	0
26	FC	"	160	0
27	FS	"	0	0
28	Sodium	ppm	75	8.000
29	Potassium	ppm	1.4	1.100
30	SAR	meq/L	1.7	#

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As per the directions issued by CEE, Ernakulam on 23/01/2025 the daily river parameters reduced from 23 to 12

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR -JANUARY 2025
Sampling point: ALUVA - MANAPPURAM

Sl. No	Parameter	Unit	05.1.2025	25.1.2025
1	Temperature	°c	30.4	30.9
2	pH		7.1	7.08
3	Conductivity	µS/cm	61.50	57.06
4	TDS	NTU	35.6	33.03
5	Turbidity	mg/L	*	*
6	Colour	"	20	30
7	SS	"	3.40	4.2
8	Chlorides	"	9	7.7
9	Hardness	"	29.00	#
10	D.O.	"	7.5	5.9
11	COD	"	16.0	8
12	Calcium	"	6.8	#
13	Magnesium	"	4.8	#
14	Ammoniacal Nitrogen	"	0.142	0.164
15	Free Ammonia	"	BDL	BDL
16	Phosphates		0.102	0.112
17	Hexa Chromium	"	0.062	0.052
18	Oil & Grease	"	4.22	3.600
19	Iron	"	0.242	0.312
20	Sulphides	"	BDL	BDL
21	Sulphates	"	3.12	2.450
22	Total Alkalinity	"	2.4	6.0
23	Nitrate	"	20	14
24	BOD	"	4.7	0.1
25	TC	"	500	600
26	FC	"	220	400
27	FS	"	0	0
28	Sodium	ppm	19.8	5.600
29	Potassium	ppm	1.8	1.000
30	SAR	meq/L	0.68	#

* TURBIDITY METER IS OUT OF ORDER

As per the directions issued by CEE, Ernakulam on 23/01/2025 the daily river parameters reduced from 23 to 12

**POLLUTED RIVER STRETCH MONITORING PROGRAM
(JANUARY 2025)**

Station Name		RIVER KORAYAR AT KANJIKODE													
Type of Water body		RIVER													
Completed by		DO, PALAKKAD													
Agency		Kerala State Pollution Control Board													
1	Station Code	2	3	2	6										
2	Date and time of sample taken (DD/MM/YY, HH/MM)	1/3/2025													
		1	1	:	2	5									
3	Weather	Cloudy			Clear ✓			Windy			Raining				
4	Approximate depth of main stream	< 50 cm			50 – 100 cm ✓			>100 cm			Flood				
5	Color & Intensity	Clear ✓			Turbid			Green			Brown				
		1 = Light			2 = Moderate ✓			3 = High							
6	Odour	None ✓			Fishy			H ₂ S			Other				
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease			Water Hyacinth				
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓							
9	Human activities around the station	Cattle wading ✓			Tourism spot			Fishing		Bathing ✓		Other			
10	Location details	U/s of town or industrial area			D/s of town or industrial area ✓			Pilgrim center/Bathing Ghat/Water intake			None				
11	Flow rate	20 m ³ /s													
12	Major polluting source	Industrial effluent			MSW		PW		None ✓		Other				
13	Uses of water in downstream	Irrigation			Drinking water source ✓				Fishing		Domestic				
		Organized water source			Cultivation		Bathing Ghat		Others						

Sl.No	Determinant	Value
1	Temperature, °C	29
2	Dissolved Oxygen, mg/l	8.4
3	pH	8.3
4	Conductivity, µmhos/cm	1475
5	BOD, mg/l	2
6	Nitrate-N, mg/l	1
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	265
10	Chloride, mg/l	280
11	COD, mg/l	6
12	TKN, mg/l	0.003
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	300
15	Calcium, as CaCO ₃ mg/l	240
16	Magnesium as CaCO ₃ , mg/l	60
17	Sulphate, mg/l	73
18	Calcium (Ca ²⁺), mg/l	96
19	Magnesium (Mg ²⁺), mg/l	14.58
20	Sodium, mg/l	162
21	Total Dissolved Solids, mg/l	850
22	Total Fixed Solids, mg/l	553
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.1
25	Boron, mg/l	BDL
26	Potassium, mg/l	22
27	Fluoride, mg/l	0.4
28	Total Coliform, MPN/100 ml	400
29	Fecal Coliform, MPN/100 ml	200
30	Fecal streptococci, MPN/100 ml	40
31	% Sodium	51.8
32	SAR	4.07

**POLLUTED RIVER STRETCH MONITORING PROGRAM
(JANUARY 2025)**

Station Name		KALPATHYPUZHA AT KALPATHY												
Type of Water body		RIVER												
Completed by		DO, PALAKKAD												
Agency		Kerala State Pollution Control Board												
1	Station Code	3	4	6	0									
2	Date and time of sample taken (DD/MM/YY, HH/MM)	1/3/2025												
		1	0	:	1	5								
3	Weather	Cloudy			Clear ✓			Windy			Raining			
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm✓			Flood			
5	Color & Intensity	Clear ✓			Turbid			Green			Brown			
		1 = Light			2 = Moderate ✓			3 = High						
6	Odour	None ✓			Fishy			H ₂ S			Other			
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease			Water Hyacinth			
8	Visible effluent discharges in proximity	Industrial			Municipal sewage ✓			None						
9	Human activities around the station	Cattle wading ✓			Tourism spot			Fishing		Bathing ✓		Other		
10	Location details	U/s of town or industrial area ✓			D/s of town or industrial area			Pilgrim center/Bathing Ghat/Water intake			None			
11	Flow rate													
12	Major polluting source	Industrial effluent			MSW ✓		PW		None		Other			
13	Uses of water in downstream	Irrigation			Drinking water source ✓			Fishing		Domestic				
		Organized water source			Cultivation		Bathing Ghat		Others					

Sl.No	Determinant	Value
1	Temperature, °C	28
2	Dissolved Oxygen, mg/l	7.3
3	pH	8.2
4	Conductivity, µmhos/cm	989
5	BOD, mg/l	3.2
6	Nitrate-N, mg/l	1.3
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	180
10	Chloride, mg/l	180
11	COD, mg/l	9.6
12	TKN, mg/l	0.004
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	220
15	Calcium, as CaCO ₃ mg/l	162
16	Magnesium as CaCO ₃ , mg/l	58
17	Sulphate, mg/l	59
18	Calcium (Ca ²⁺), mg/l	64.8
19	Magnesium (Mg ²⁺), mg/l	14.1
20	Sodium, mg/l	105
21	Total Dissolved Solids, mg/l	610
22	Total Fixed Solids, mg/l	396
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.1
25	Boron, mg/l	BDL
26	Potassium, mg/l	7
27	Fluoride, mg/l	0.4
28	Total Coliform, MPN/100 ml	500
29	Fecal Coliform, MPN/100 ml	300
30	Fecal streptococci , MPN/100 ml	20
31	% Sodium	49.90
32	SAR	3.08

**POLLUTED RIVER STRETCH MONITORING PROGRAM
(FEBRUARY 2025)**

Station Name		RIVER KORAYAR AT KANJIKODE															
Type of Water body		RIVER															
Completed by		DO, PALAKKAD															
Agency		Kerala State Pollution Control Board															
1	Station Code	2	3	2	6												
2	Date and time of sample taken (DD/MM/YY, HH/MM)	2/1/2025															
		1	1	:	0	0											
3	Weather	Cloudy			Clear ✓			Windy			Raining						
4	Approximate depth of main stream	< 50 cm			50 – 100 cm ✓			>100 cm			Flood						
5	Color & Intensity	Clear ✓			Turbid			Green			Brown						
		1 = Light			2 = Moderate ✓			3 = High									
6	Odour	None ✓			Fishy			H ₂ S			Other						
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease			Water Hyacinth						
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓									
9	Human activities around the station	Cattle wading ✓			Tourism spot			Fishing		Bathing ✓		Other					
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing			None						
11	Flow rate	20 m ³ /s															
12	Major polluting source	Industrial effluent			MSW		PW		None ✓		Other						
13	Uses of water in downstream	Irrigation			Drinking water source ✓			Fishing		Domestic							
		Organized water source			Cultivation		Bathing Ghat		Others								

Sl.No	Determinant	Value
1	Temperature, °C	28
2	Dissolved Oxygen, mg/l	7.13
3	pH	8.5
4	Conductivity, µmhos/cm	938
5	BOD, mg/l	2
6	Nitrate-N, mg/l	1.4
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	190
10	Chloride, mg/l	121
11	COD, mg/l	5.5
12	TKN, mg/l	0.002
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	305
15	Calcium, as CaCO ₃ mg/l	199
16	Magnesium as CaCO ₃ , mg/l	106
17	Sulphate, mg/l	88
18	Calcium (Ca ²⁺), mg/l	79.6
19	Magnesium (mg ²⁺), mg/l	25.75
20	Sodium, mg/l	70
21	Total Dissolved Solids, mg/l	550
22	Total Fixed Solids, mg/l	335.5
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.22
25	Boron, mg/l	BDL
26	Potassium, mg/l	11.1
27	Fluoride, mg/l	0.3
28	Total Coliform, MPN/100 ml	1000
29	Fecal Coliform, MPN/100 ml	500
30	Fecal streptococci, MPN/100 ml	60
31	% Sodium	32.28
32	SAR	1.74

**POLLUTED RIVER STRETCH MONITORING PROGRAM
(FEBRUARY 2025)**

Station Name		KALPATHYPUZHA AT KALPATHY											
Type of Water body		RIVER											
Completed by		DO, PALAKKAD											
Agency		Kerala State Pollution Control Board											
1	Station Code	3	4	6	0								
2	Date and time of sample taken (DD/MM/YY, HH/MM)	2/1/2025											
		0	9	:	0	0							
3	Weather	Cloudy			Clear ✓			Windy			Raining		
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm✓			Flood		
5	Color & Intensity	Clear ✓			Turbid			Green			Brown		
		1 = Light			2 = Moderate ✓			3 = High					
6	Odour	None ✓			Fishy			H ₂ S			Other		
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease			Water Hyacinth		
8	Visible effluent discharges in proximity	Industrial			Municipal sewage ✓			None					
9	Human activities around the station	Cattle wading ✓			Tourism spot			Fishing		Bathing ✓		Other	
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing			None		
11	Flow rate												
12	Major polluting source	Industrial effluent			MSW ✓		PW		None		Other		
13	Uses of water in downstream	Irrigation			Drinking water source ✓			Fishing		Domestic			
		Organized water source			Cultivation		Bathing Ghat		Others				

Sl.No	Determinant	Value
1	Temperature, °C	26
2	Dissolved Oxygen, mg/l	7.66
3	pH	8.12
4	Conductivity, µmhos/cm	898
5	BOD, mg/l	3.4
6	Nitrate-N, mg/l	1.5
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	175
10	Chloride, mg/l	134
11	COD, mg/l	9.8
12	TKN, mg/l	0.004
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	260
15	Calcium, as CaCO ₃ mg/l	190
16	Magnesium as CaCO ₃ , mg/l	70
17	Sulphate, mg/l	67
18	Calcium (Ca ²⁺), mg/l	76
19	Magnesium (mg ²⁺), mg/l	17.01
20	Sodium, mg/l	78
21	Total Dissolved Solids, mg/l	495
22	Total Fixed Solids, mg/l	306.9
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.2
25	Boron, mg/l	BDL
26	Potassium, mg/l	10
27	Fluoride, mg/l	0.3
28	Total Coliform, MPN/100 ml	700
29	Fecal Coliform, MPN/100 ml	500
30	Fecal streptococci, MPN/100 ml	120
31	% Sodium	38.33
32	SAR	2.1

National Mission for Clean Ganga

**Format for Submission of Monthly Progress Report by States/UTs
(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)**

RIVER TIRUR, MALAPPURAM

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		STP Repairing project DPC approved and sent to TS
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		Action plan prepared
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none">• Specifying accountability of nodal authorities not below the Secretary level• Chief Secretaries may have an accountable person attached in their office for this purpose.		
	<ul style="list-style-type: none">• Monitoring at State level must take place		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none">• Secretary, Ministry of Jal Shakti• Member Secretary, CPCB		

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <ul style="list-style-type: none"> I Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment. II <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline III <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status (iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline (v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river; 		<p>Last updated report submitted was on February 27,2025</p> <ul style="list-style-type: none"> (i) Identified 17 drains out of which 9 were additionally identified on 11.07.2019 (ii) Tirur Fish Market STP - 45 KLD- working condition. Inspection was conducted by pollution control board and repairing works has been done as per the suggestions of pollution control board (ii) Tirur municipal Bus Stand STP-50 KLD – Repairing works under going. Inspection was conducted by pollution control board and STP sample collected and laboratory analysis has been done. iii) NIL (iv) De centralized treatment facilities, Disposal using sanitary landfills, composting operations, MRF, MCF etc. Slaughter house- completed civil work. Electrical installation works started. (v) Attached as Annexure II-Analysis report during the month of February 2025
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<p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices,</p> <p>(ix) Protection and management of food plain Zones (FPZ),</p> <p>(x) Rain water harvesting,</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		<p>(vi) Actions are being initiated to prevent illegal waste dumping. BMW are being disposed scientifically through IMAGE. Municipality have MRF, MCF facilities</p> <p>(vii) NA</p> <p>viii) Complying</p> <p>(ix) NA</p> <p>(x) Complying</p> <p>(xi) Complying</p> <p>(xii) NA</p> <p>(xiii) Reported that encroachment survey is completed and now the process of laying survey stones is in progress.</p>
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ACTION PLAN FOR RIVER TIRUR, KERALA

1	2 IRRIGATION DEPARTMENT							
No.	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
1.1.1	Strengthening the right side bund of Tirur-Ponnani puzha at Porur, ward no.1 Tirur Municipality	Irrigation Department	6 Months	100%	100%	100%	100%	NIL
1.1.2	Cleaning and development of old Ponnani thodu at Thazhepalam	Irrigation Department	6 Months	100%	100%	100%	100%	NIL
1.1.3	Repair and Rehabilitation of Koottayi Regulator cum Bridge across Thirur-Ponnani Puzha	Irrigation Department	18 Months	8%	8%	8%	8%	Cracks on girders and settlement of 4 piers towards right bank has seen on 18/11/2023. So the work can

	<p>in Mangalam Grama panchayatin Malappuram Dist</p>						<p>be continued only after addressing these issues. While preparing the estimate based on the study report from KERI Peechi, the solution for the new issues also has to be finalised. Meeting held on 29-11-2023 at the office of CE I&A in the presence of CE IDR B concluded to conduct a detailed technical study by an expert team. A Technical committee has been formed as per order number M. 9</p>
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								<p>(MCDWC) Mo. 488/2024/WRD dated 28-06-2024. Technical committee team visited the site on 08-08-2024 and suggested for hydro graphic survey at the site. Hydro graphic survey wing has completed the survey work for an amount of 1.34662/- lakhs . The hydrographic chart,Reduced level chart and Cad files submitted by Hydro graphic survey wing are submitted to CE I&A ,Tvm.</p>
3	4 TIRUR MUNICIPALITY – SHORT TERM ACTION PLAN							

No.	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
1.2.1	Provide septic tank for nearest houses	Tirur Municipality	Dec 2019	completed	completed	completed	100	NIL
1.2.2	Establishment of Solid waste Treatment Plant ThumboorMozhi Model Aerobic Bin	Tirur Municipality	March 2020	completed	completed	completed	100	NIL
1.2.3	Establishment of Non Degradable waste treatment Plant Resource Recovery facility Centre Plastic Shredding Unit Segregation shed	Tirur Municipality	March 2020			DPR under preparation		
1.2.4	Slaughtering House	Tirur Municipality	December 2020	On progress	On progress	Project tendered Agreement executed	90	NIL
1.2.5	Fencing on Bridgeside Thalakkadathur Bridge	Tirur Municipality	December 2020	completed	completed	completed	100%	NIL

1.2.6	Installation of CCTV Camera near the river Bank Thalakkadathur Bridge	Tirur Municipality	May 2020	No progress	Project ongoing			
1.2.7	Planting of Bamboo seedlings on the river bank (Thazhepalam)	Tirur Municipality	June 2020	Completed	Completed	Completed		
1.2.8	Renovation of Effluent treatment plant at fish Market AMC Granted ETP with Aeorobic System	Tirur Municipality Tirur Municipality	June 2019	Completed	Completed	Completed	100%	NIL
1.2.9	Setting up of STP at Private Bus stand	Tirur Municipality	June 2020	Completed	Completed	Completed	100%	NIL
1.2.10	Setting up of a new drain after demolishing the old one. The old one was the hub of the waste water outlet of the shops and other establishments. The proposed drain is constructing in the middle of the road so as to avoid intrusion of pipes from outside	Tirur Municipality	June 2020	Completed	Completed	Completed	100%	NIL
1.2.11	Identification of illegal outlets into storm water drains and fine shall be imposed on such units	Tirur Municipality				Fine imposing mechanism going on		

5

6 Cheriyamundam Grama panchayat

No.	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
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1.3.1	Fencing on bridge side Thalakkadatur	Cheriyamundam Grama panchayat	March 2020	completed	completed	completed	100%	NIL
4.Kerala State Pollution Control Board								
No.	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
1.4.1	River water quality Monitoring- Thalakkadathur National Water Quality Programme(NWMP)	KSPCB	Ongoing; Monthly frequency			Ongoing; Monthly frequency		
1.4.2	River water quality Monitoring State Water monitoring programme (SWMP)	KSPCB	Ongoing; Seasonal			Ongoing		
1.4.3	Inspection and effluent quality monitoring of the flats, Industrial units,		Ongoing; Interval; Red - 1			Ongoing		

	Service stations, hospitals, auditorium, hotels in Municipal area		month, Orange- 3 months, Green- 6 months					
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5.Ground Water Department

No.	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
1.5.1.	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier status : As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Tirur and Kuttippuram) comes under the Tirur river basin. These two blocks are semi-critical blocks and the stage of groundwater extraction ranges from 77.75 % to 77.92%)	Ground water Department		NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT		

1.5.2	Ground water recharging / rain water harvesting (Earlier status : The average pre -monsoon groundwater level ranges from 6.14mbgl - 8.49 mbgl.)			NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT		
1.5.3	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or handpumps (Earlier status : No observation well along the river stretches)			NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT		
1.5.4	For regulating use of ground water for irrigation purpose, adopting good irrigation practices (Earlier status : The total irrigation draft in the area ranges from 49.14 - 870.97 ha.m.)			NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT		
6. ACTION PLAN BY VARIOUS GRAMA PANCHAYATHs- Thalakkad, Vettom, Mangalam								

No.	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
1.6.1	Protection of Thirur Ponnani River	Thalakkad grama panchayath handover fund to District Panchayat	31.03.2020	Completed	Completed	Completed	100%	NIL
1.6.2	Installation of CC TV camera on Yetterikadavu Kunjulikkadavu Mangattiri Bridge, Aikkanchiri Bridge, Paravanna Bridge	Vettom - KS SECURITY SYSTEM	Spill over due to lack of fund		Project for installation of cctv camera with high specification is decided to include 2024-25 annual projects			
1.6.3	Installation of CC TV camera	Mangalam grama panchayath Win Plus Agency, Kondotty	Completed	Completed	Completed	Completed	100%	NIL
1.6.4	Haritha Keralam Thirur-Ponnani puzha protection	Mangalam grama panchayath Nirmithi Kendra, Kozhikkodu	31.03.2020	Completed	Completed	Completed	100%	NIL

ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN TIRUR RIVER

FOR THE MONTH OF FEBRUARY 2025

SI NO	Name of point	PARAMETERS				
		pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	FC(cfu/100ml)
1	Drain near Tirur Railway station	6.4	2.8	1.0	4.2	1680
2	Thazhepalam drain	7.0	3.2	2.0	5.1	140
3	Naduvilangadi drain (old ponnanihodu)				Dried	
4	Annassery drain				Dried	
5	Canal at CV Land				Dried	
6	Canal at Mangalam thuruth	7.7	4.2	3.6	6.2	140
7	Canal at Pullooni	6.4	3.0	1.0	3.4	0
8	Drain near Mangattiri bridge				Dried	
9	Drain near Ettirikkadavu bridge	7.8	2.5	1.4	3.2	0
10	Epothingal	6.4	3.0	1	3.5	580
11	Asarikkadav	7.8	2.9	1	3.6	1040
12	Kandanathkadav				Dried	
13	Pancharamoola				Dried	
14	Kakadav	6.9	4.1	1	3.2	40
15	Kanathkadav	6.5	3.0	1.2	3.6	480
16	Drain near tirur railway station				Dried	
17	Payyanangadi (kadayithodu)				Dried	



ASSISTANT SCIENTIST

**ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN KADALUNDY RIVER
FEBRUARY 2025 ALONG WITH HAJIYARPALLY**

SI.No	Name of point	PARAMETERS				
		pH	DO (mg/l)	BOD(mg/l)	COD (mg/l)	FC (cfu/100 ml)
1	Valiyangadi drain	7.6	6.6	1.6	4.8	20
2	Valiyangadi bypass drain			Dried		
3	Valiyathod drain	7.9	5.26	3.2	6.1	360
4	Hajiyarpally	6.8	7.6	1.46	4.8	1680

G. H. P.

National Mission for Clean Ganga
Format for Submission of Monthly Progress Report by States/UTs
(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)
RIVER KADALUNDI, MALAPPURAM

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		STP Repairing project DPC approved and sent to TS
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		Action plan prepared
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none"> ● Specifying accountability of nodal authorities not below the Secretary level ● Chief Secretaries may have an accountable person attached in their office for this purpose. 		
	<ul style="list-style-type: none"> ● Monitoring at State level must take place 		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"> ● Secretary, Ministry of Jal Shakti ● Member Secretary, CPCB 		

<p>6.1</p>	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p>	<p>I) Identified 3 drains on 10/12/2018 at the Hajiyarpally stretch. Already Screen Net installed to both side of the doing.</p> <p>(ii) Malappuram municipality – 30KLD. Kerala State Pollution Control Board granted consent for the revamping activities. Revamping activities not yet started as funds were unavailable due to the prevailing election code of conduct Action plan prepared through KWA</p> <p>(iii) NIL</p> <p>(iv) Activities progressing with decentralised source level treatment method and 2506 devices are distributed. New Project approved for 6000 Ring compost unit. Project Approved .Got T.S.E. Tender.</p> <p>(v) Attached Analysis Report for the month of February 2025. More activities are progressing under the “Thelineer Ozhukum Navakeralam“ scheme</p> <p>(vi) Actions being initiated to prevent illegal waste dumping. Bio-Medical Waste collecting through IMAGE. Municipality has one MRF and 3 MCF’s. Dry Waste Collecting through HKS and stored in these facilities from where recyclable materials are handed over to authorised recyclers and rejects, to KEIL through Clean Kerala Company.</p>
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	<p>(vii)Ground water regulation</p> <p>(viii) Adopting good irrigation practices,</p> <p>(ix) Protection and management of food plain Zones (FPZ),</p> <p>(x) Rain water harvesting,</p> <p>(xi)Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		<p>(vii)NA</p> <p>(viii)Complying</p> <p>ix)NA</p> <p>(x)Complying</p> <p>(xi)Complying</p>
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ACTION PLAN FOR RIVER KADALUNDI, MALAPPURAM, KERALA

2. Malappuram Municipality - Short Term Solid & Liquid Waste Management Action Plan								
No.	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% of works completed	Details of works remaining
1.1	Slaughter house and Poultry house	Malappuram Municipality	July 2010	No progress	No progress	No progress	0	No progress
1.2	Valiyathodu Cleaning - 8 Km length	Malappuram Municipality	Completed	Completed	Completed	Completed	100%	Completed
1.3	Installation of screening net in the Valiyathode	Malappuram Municipality	December 2019	Completed	Completed	Completed	100%	Completed
1.4	Identification of polluting points in Kadalundi river & awareness campaign - River walk (puzha nadatham – 15 km length)	Malappuram Municipality	Completed	Completed	Completed	Completed	100%	Completed

1.5	Sanitation facility and treatment of waste water in the markets - Treatment plant	Malappuram Municipality	Completed	Completed	Completed	Completed	100%	Completed
1.6	The discharge of waste water from the surrounding houses to the Valiyathodu - Blocking of discharge of liquid waste	Malappuram Municipality	Completed	Completed	Completed	Completed	100%	Completed
1.7	Identification of illegal outlets into storm water drains and fine imposed on such units.	Malappuram Municipality	Ongoing	Completed	Completed	Completed	100%	Completed
1.8	Biodegradable waste Bio bins – 176 Bucket compost – 269 Thumboormuzhi Aerobic bins - 4 Biogas plant -55	Malappuram Municipality	 March 2020 March 2020 March 2020 March 2020	Completed	Completed	Completed	100%	Completed

1.9	Non biodegradable waste MCF Plastic shredding and Bailing Echo Kiosk	Malappuram Municipality	March 2020 Completed March 2020	Completed Completed	Completed Completed	Completed Completed	Completed Completed	Completed Completed
1.10	Identification and monitoring of illegal activities CC tv Network installation	Malappuram Municipality	March 2020	Project has been submitted and spot identification for camera installation is going on	No progress	No progress	No progress	No progress
	2.Kerala State Pollution Control Board							
No.	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
2.1	River water quality Monitoring-	KSPCB	Ongoing; Monthly			Ongoing; Monthly frequency		

	Thirurangadi, Hajiyarpally National Water Quality Programme(NWMP)		frequency					
2.2	River water quality Monitoring - Thirurangadi, Kooriyad, Manikut, Hajiyarpally, Anakkayam, Oravambrum - State Water monitoring programme (SWMP)	KSPCB	Ongoing; Seasonal - Pre - monsoon, monsoon, post - monsoon			Ongoing; Monthly frequency		
2.3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc. in Malappuram	KSPCB	Ongoing; Interval; Red - 1 months			Ongoing; Monthly frequency		

	Municipal area							
	3.Ground Water Department							
No.	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January2025	Progress in the month of February2025	% works completed	Details of works remaining
3.1.	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier status : As per Groundwater resources of Kerala, 2017 estimate a total number of 3 blocks (Mankada,	Ground water Department		No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department		

	<p>Vengara and Malappuram) comes under the Kadalundi river basin. Out of three blocks Malappuram and Vengara are semi-critical blocks and the rest is a safe one, stage of groundwater extraction ranges from 69.43 % to 79.84%)</p>							
3.2	<p>Ground water recharging / rain water harvesting</p> <p>(Earlier status : The average pre - monsoon groundwater level ranges from 7.59mbgl - 13.57 mbgl. Groundwater Department has implemented 3 no</p>	Ground water Department		No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department		

	of roof top rain water recharging through recharge pit schemes in Vengara block.)							
3.3	<p>Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps</p> <p>(Earlier status : Groundwater Department has 6 observation dug wells and 14 bore wells in the river stretch. (report attached) (Map No: 7 attached))</p>	Ground water Department		No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department		
3.4	<p>For regulating use of ground water for irrigation purpose, adopting good irrigation practices</p> <p>(Earlier status : The total</p>	Ground water Department		No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department		

irrigation draft in the area ranges from 979.683 - 1857.49 ha.m.)			nt	nt	nt		
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ACTION PLAN FOR RIVER KALLAYI , KERALA

Kerala State Pollution Control Board, District Office, Kozhikode

NATIONAL MISSION FOR CLEAN GANGA

Format for submission of monthly progress report by state/UTs

(Hon'ble NGT in the matter of OA.No.673/2018 dated 6/12/2018) For

the month of FEBRUARY 2025– Kallayi polluted river stretch

Sl.No.	Activity to be monitored	Timeline	Submission of progress by state/UT-compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STP must be ensured.		
3	Timeline for completing all steps of action plans including completion of setting up STP and their commissioning		
4	Chief secretaries may setup appropriate monitoring mechanisms at the state level <ul style="list-style-type: none">● Specifying accountability of nodal authorities not below the secretary level● Chief secretaries may have an accountable Person attached in their office for this purpose		
	<ul style="list-style-type: none">● Monitoring at the state level must take place		

5	<p>Progress report may be furnished by the state/UTs to</p> <ul style="list-style-type: none"> ● Secretary,ministry of Jal Shakti ● Member secretary,CPCB 		
5.1	<p>Progress report may be comprised of details along with completion timeline on:</p> <p>(i) Identification of polluting source including drains contributing to river pollution and action as per NGT order on in situ treatment.</p> <p>(ii) <u>status of STPs,I&D and sewage networks</u> Details of Existing Infrastructure,Gap Analysis,Proposed along with completion timeline</p> <p>(iii) <u>status of CETPs</u></p> <p>Details of existing CETP and ETP infrastructure,Gap analysis,proposed along with completion timeline,No.of industries and complying status.</p> <p>(iv) <u>status of solid waste management&details of processing facilities</u></p> <p>Details of existing infrastructure,Gap analysis proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river,its tributaries,drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) preventing dumping of waste and scientific waste management including bio-medical waste plastic waste and decentralizing waste processing,including waste</p>		

	<p>generated from hotels,ashrams etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) protection and management of flood plain zones(FPZ),</p> <p>(x) Rainwater harvesting</p> <p>(xi) Maintaining minimum environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up bio diversity parks on flood plains by removing encroachment</p>		<p>Monthly progress report enclosed</p>
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KOZHIKODE CORPORATION

No.	Activity	Implementing agency	Time line	Progress in the month of DECEMBER 2024	Progress in the month of JANUARY 2025	Progress in the month of FEBRUARY 2025	% works completed	Details of works remaining
1	Identification of illegal outlets into storm water drain and issue Notice to such units	Kozhikode Corporation	30.12.2020			Continuing random inspections and imposing fine regularly	Continuing random inspections and imposing fine regularly	On going
2	Waste to energy project proposed at Njeliyamparamba	KSIDC	30.06.2021			Project dropped		
3	Establishment of Aerobic compost units	Kozhikode Corporation	Completed and functioning			Completed and functioning	100%	
4	Segregation of solid waste at source-level and treatment of household wastes	Kozhikode Corporation	30.06.2019			Completed	100% Coverage	

5	Setting up of rendering treatment plant for chicken stall wastes	Kozhikode Corporation	30.06.2019			Rendering plant installed in Thamarassery Panchayath(Fresh cut rendering plant).Chicken waste generated from chicken stalls under Kozhikode corporations are being transported to rendering plant at Thamarassery. 217chicken stall handed over the chicken waste in in to fresh cut rendering plant	100% Coverage	Functioning
6	Implementation of Green protocol unit	Kozhikode Corporation	30.06.19			On going		Ongoing
7	Setting up of common STP of (13MLD) (6 MLD At Kothi bridge)&(7 MLD At Avikkal	Kozhikode Corporation	31.03.2020			Project dropped due to Public protest and court cases..	Project dropped	

8	Implementation of 27 MLD STP at Kottoli(Sarovaram)					After receiving Council approval, the project was submitted to the Government for Administrative sanction. The AS was deferred and directed to revise the proposal to increase the number of connections. KWA is revising the proposal. The administrative sanction for constructing a 27MLD STP at Kottoli(Sarovaram) was received on 08.01.2024. Technical sanction is pending with the KWA		27 MLD STP with 220 KLD FSTP as co-treatment with 54 km network
9	Cleaning of Canoli canal	Kozhikode Corporation	Periodical			Periodical cleaning		Continuous - seasonal
10	Purchasing of Solar Boat for Canoli canal cleaning	Kozhikode Corporation	31.03.2020			Project dropped		Project dropped

11	Installation of CCTV Camera for the Identification and monitoring of illegal activities	Kozhikode Corporation				On going		On going
12	Establishment of Mobile Septage Units	Kozhikode Corporation	31.03.2020			Project dropped		Project dropped
13	Action taken against dumping of wastes into river and public places	Kozhikode Corporation	On going action			Continuing random inspections and imposing fine regularly	Continuing random inspections and imposing fine regularly	Continuous
14	Cleaning of B.K canal	Kozhikode Corporation	31.03.2020			Completed	100%	
15	Establishment of treatment plant at Medical college (3MLD plant) 15.1-2 MLD plant proposed 15.2-1 MLD plant proposed	Kozhikode Corporation	31.03.2020			Completed and functioning.	100%	Functioning

16	Construction of drains at Y.M.RC Ayyankarcolony	Kozhikode Corporation	31.03.2020			90% coverage	90%	Progressing
17	Provide facility for MRF,RRF,Super MRF Three units existing 17.1 Njeliyanparamb 17.2 Industrial estate 17.3 Mayor Bhavan jayanthi nagar colony	Kozhikode Corporation				3.MRFand 5.MCFare already existing. New project going on.		New project under consideration
18	Identification of illegal outlets from house to storm water drain and issue Notice to such Houses	Kozhikode Corporation				On going - Continuous process	On going - Continuous process	Continuous
19	Establishment of Plastic shredding unit	Kozhikode Corporation				Project started		
20	Establishment of slaughtering unit	Kozhikode Corporation				Project under Consideration	Project under Consideration	Not reported
21	Cleaning of drains in Kozhikode Town	Kozhikode Corporation				On going - Continuous process		Continuous

Perumanna Grama Panchayath

No	Activity	Implementing agency	Progress in the month of Decemberr 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
1	Outlets into storm Water drain and issue notice	Perumanna Panchayat, kozhikode			Inspection conducting regularly	Continuous	
2	Establishment of six aerobic compost units in panchayat	Perumanna Panchayat , Kozhikode through MGNREGS			Work completed(100% coverage)	100% coverage	Completed
3	Collection and segregation of solid waste in the river	Perumanna Panchayat			Work completed	Completed	
4	Setting up of 360 soak pit plant in all houses near the river area and panchayat	Perumanna Panchayat through MGNREGS			Progressing 80% completed	80% completed	Progressing
5	Implementation of 360 compost unit near river side and panchayat	Perumanna Panchayat , Kozhikode through MGNREGS			80% completed Progressing	80% completed	Progressing
6	Implementation of water flow project (Aluvangal Thazham Perumbatta Elamanapadam, Valiyapadam, Mampuzhthode	Perumanna Panchayat			Technical sanction obtained. Tender procedure completed.		

	Naveekarana, project no 260/2021 project cost16.67Lakhs).						
8	Cleaning of Mambuzha river (project name : Mambuzha water flow restoration, project no 01/2018-19	District Panchayat , Kozhikode			Work has been completed by District Panchayat, Kozhikode	Completed	
9	Establishment of 18 nos of mini MCF in different wards including Payyadi methal where the river is flowing	Perumanna Panchayat , Kozhikode through MGNREGS			Completed.	Completed.	
10	Collection of plasticWaste from the river	Perumanna Panchayat			Process will be done every year	Continuous	Continuous

Peruvayal Grama Panchayath

No .	Activity	Implementing agency	Time line	Progress in the month of DECEMBER 2024	Progress in the month of JANUARY 2025	Progress in the month of FEBRUARY 2025	%works completed	Details of works remaining
1	Outlet in storm water drain and issued notice	Peruvayal G P	Continuous process			Ongoing		Continuous
2	Establishment of 56 units anaerobic composed unit in panchayat.	Peruvayal GP through MGNREGS	04/2023 to 03/2021			Ongoing	Ongoing	Continuous process
3	Setting up of 379 soak pit plant in all houses	Peruvayal G P	04/2023 to 03/2024			Completed	Completed	Completed
4	Cleaning of Mambuzha river (Mambuzha renovation) project no :190/2017-18	District panchayat Kozhikode	2017-2018			Completed	Completed	

5	Establishment of 8 numbers of mini MCF	Peruvayal GP through MGNREGS	04/2023 TO 03/2024			70% completed	70% completed	No further progress reported
6	Collection of plastic waste from the river	Peruvayal GP	Continuous process			Work completed	100% coverage	
7	Collection and segregation of solid waste in the river	Peruvayal GP	Continuous process			Ongoing	Ongoing	Continuous process
8	Establishment of Bio gas plant	Peruvayal GP	2023-24			Work completed (70% coverage)	70% coverage	No further progress reported
9	Well recharge	Peruvayal GP through MGNREGS	2023-24			Work completed (60% coverage) .	60% coverage	No further progress reported

Mavoor Grama Panchayat

No.	Activity	Implementing agency	Time line	Progress in the month of DECEMBER 2024	Progress in the month of JANUARY 2025	Progress in the month of FEBRUARY 2025	% Work completed	Details of work remaining
1	Transportation of waste management to refinement unit	Konnari Advanced Polymers Limited	2022-23			Completed	100%	
2	Cleaning of Cherupuzha (Kuniyakadav to Thenghilakadav)	Mavoor GP	2022-23			Completed	100%	
3	Valayannor Thodu cleaning	MGNREGS	2022-23			Completed		
4	Arayancode kalchira Thodu Cleaning	MGNREGS	2022-23			Completed		
5	Vellaram Kandi Chirakkal thazham thodu	Mavoor GP	2023-24			Completed	100%	
6	Ring compost	Mavoor GP	2023-24			Completed		
7	Kadayan thodu	MGNREGS	2023-24			Completed	100%	
8	Chalippadam Punchappadam thodu	MGNREGS	2023-24			Completed	100%	
9	Puthiyottil thazham Elaram thodu	MGNREGS	2023-23			Completed	100%	

OLAVANNA GRAMAPANCHAYAT

No	Activity	Implementing Agency	Time line	Progress in the month of DECEMBER 2024	Progress in the month of JANUARY 2025	Progress in the month of FEBRUARY 2025	% Works Completed	Details Of Remaining
1	Collection of plastic waste from the river	Olavanna Gramapanchayat	Continuous process			Completed	Completed	
2	Collection of segregation of solid waste in the river	Olavanna Gramapanchayat	Continuous process			Completed	Completed	
3	Cleaning of Mambuzha river	Olavanna Gramapanchayat	Continuous process			Process continuing	98% completed	Continuous
4	Well recharge	Olavanna Gramapanchayat through MGNREGS	4/2023 To 3/2024			Completed	100%	
5	Setting up of soak pit in houses	Olavanna Gramapanchayat through MGNREGS	4/2022 To 3/2024			Completed	100%	
6	Action taken against dumping of waste in to river	Olavanna Gramapanchayat	Continuous process			Process continuing	97% coverage	Continuous
7	Collection of non-biodegradable waste	Harith karma sena	Throughout the year			Process continuing	Process continuing	Continuous

IRRIGATION DEPARTMENT

No	Activity	Implementing Agency	Timeline	Progress in the month of DECEMBER 2024	Progress in the month of JANUARY 2025	Progress in the month of FEBRUARY 2025	% Works Completed	Details Of Remaining Work
1	Desilting of Kallayi river from Kaduppini to Kothi in Kozhikode Corporation	Irrigation department	31.03.2021	Desiltation of Kallai river under urban agglomeration scheme SHO on 12.09.2024 and Dredging work started				
2	Provide fencing on the sides of the Bridge	Irrigation department	31.03.2021	SHO on 22.08.2024 for providing chain linked fencing on Kothi bridge(Work in progress 30% completed) & SHO on 20.07.2024 for providing chain linked fencing for Mooriyad road bridge(Work 100% completed)				
3	Dredging , Desilting & removal of weeds from E K canal (11.21 km)	Irrigation department	31.07.2019	Work entrusted to Kerala Waterways & Infrastructure Ltd (KWIL)				
4	Bio park in Kozhikode District	Irrigation department		Land for the proposed bio park is to be demarcated by the Revenue authorities after necessary boundary survey and subsequent bio cover works are to be done by the Social Forestry Department				
5	Flood prone mapping in Kozhikode District	Irrigation department		Action to be taken by the Hydrology Wing of Irrigation Department as this needs data collection, scientific analysis and modelling skills				

Kerala State Pollution Control Board

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of DECEMBER 2024	Progress in the month of JANUARY 2025	Progress in the month of FEBRUARY 2025	% works completed	Details of works remaining
1	River water quality monitoring-Kallayi river National Water Quality Monitoring Programme (NWMP)	KSPCB	Ongoing ; monthly frequency			Process continuing		
2	River water quality monitoring-Kallayi rivers State Water Monitoring Programme,KSPCB fund(SWMP)	KSPCB	Ongoing. Seasonal monitoring- pre-monsoon , monsoon , post-monsoon			Process continuing		
3	Inspection and effluent quality monitoring of the flats,industrial units,service stations, hospitals, Hotels etc. In Malappuram Municipal area	KSPCB	Ongoing Interval: Red- 1 month. Orange-3months. Green-6months.			Process continuing		

Suchitwa Mission

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of DECEMBER 2024	Progress in the month of JANUARY 2025	Progress in the month of FEBRUARY 2025	% works completed	Details of works remaining
1	Board displaying messages against dumping to be placed in river banks	Suchitwa Mission	15.07.19			Process continuing		

Action Plan by Ground Water Department

No. (as per Action Plan)	Activity	Implementing agency	Time line Progress in the month of DECEMBER 2024	Progress in the month of JANUARY 2025	Progress in the month of FEBRUARY 2025	% works completed	Details of works remaining
B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones / blocks	Ground Water Department			As per Ground water resources of Kerala,2017 estimate, Kozhikode Block comes under the Kallai river basin and the block is safe with stage of ground water Extraction 68.49%		
B(ii)	Ground water recharging/ rain water harvesting	Ground Water Department			The average pre - monsoon ground water level is 7.23 mbgl. Ground water Department has implemented 3 no of dug well recharge schemes at Kozhikode block		
B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/ bore wells or hand pumps	Ground Water Department			Ground water Department has 1 observation Piezometer (BW) in the river stretch.)		
B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	Ground Water Department			The total irrigation draft in the Block area is 488.76 ha.m.)		

Action plan by irrigation Department

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of DECEMBER 2024	Progress in the month of JANUARY 2024	Progress in the month of FEBRUARY 2025	% works completed	Details of works remaining
E	Dredging and desilting	Irrigation Department	3 years			Desiltation of kallayi river under urban agglomeration. SHO on 12.09.2024 and Dredging work started		
E	E-flow (by micro water shed management)	Irrigation Department	3 years			Action to be taken by the hydrology wing of irrigation department as this needs data collection, scientific analysis and modeling skills. The matter has been communicated to the Hydrology wing Assistant Engineer at Kozhikode.		
E	Flood plain zone (protection and management)	Irrigation Department	3 years			Action to be taken by the hydrology wing of irrigation department. The matter has been communicated to the Hydrology wing.		
E	Greenery development (plant in trees on the banks)	Irrigation Department	3 years			Not reported		Not reported



KERALA STATE POLLUTION CONTROL BOARD
കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

REGIONAL OFFICE, KOZHIKODE
 Phone: 0495-2300744 Mail: pcbkzd@gmail.com Website: kspcb.kerala.gov.in
 3rd FLOOR, ZAMORRY'S SQUARE, LINK ROAD, KOZHIKODE - 673 002



Environmental Engineer
 Pollution Control Board
 19/03/2025

ANALYSIS REPORT OF RIVER WATER

Report No.	K R O S 5 4 2 4 / 1 to 5	Date:	1 7 0 3 2 0 2 5
Date of Sample Collection	0 1 0 2 2 0 2 5	Date of receipt of the sample	0 1 0 2 2 0 2 5
Sampled by:	RL ,KKD	Time	Hours: 0 4 : 0 0 PM
Sampling Method	APHA1060B,a	Sample ID	KL1, KL2, KL3, KL5, & KL6
Sample container	PC 2.5 L	Sample Lab Code	KROS :5424/1-5
Source:	KALLAI RIVER WATER	Ref.letter No.	PCB/KKD/DO/ Polluted River Stretch/2018 Vol. IV, Dated 15.01.2025
Specific sampling location:	KALLAI POLLUTED RIVER STRETCH	Received from:	EE,DO,KKD
Sample preservation:	Ice box	Period of analysis:	01.02.2025-12.03.2025
		No. of samples	5
		Analysed by:	SNS/NSS/PVH/MT/AKR
		Method: Standard Methods for the examination of Water and Wastewater, APHA AWWA WEF (22nd Ed.)	

Sl no	Parameters	unit	Method No.	SAMPLE ID				
				KL 1	KL 2	KL 3	KL 5	KL 6
1	pH	-	APHA 4500-H+,B	7.59	7.21	7.27	7.6	8.07
2	CONDUCTIVITY	µmhos /cm	APHA 2510B	21200	29700	35400	44000	52000
3	BOD	mg/L	IS3025 (Part 44)	2.3	3.6	0.73	3.2	1
4	DISSOLVED OXYGEN	mg/L	APHA 4500-O,C	4.4	1.9	4	1.3	6.1
5	TOTAL COLIFORM,	CFU/100ml	APHA 9222B	5000	8000	27000	16000	1000
6	FECAL COLIFORM	CFU/100ml	APHA 9222D	4000	6000	24000	30000	200
7	FECAL STREPTOCOCCUS	CFU/100ml	APHA 9230 C	60	260	70	150	80
8	TEMPERATURE	°C	APHA 2550B	26	26	26	26	26

Remarks: LDL-Lower Detection Limit BDL-Below Detection Limit

KL1-KALLAI RIVER AT PALATHUMKANDI BRIDGE, POKKUNNU, KL2-KALLAI RIVER AT KADUPPINI BRIDGE, K.L3- KALLAI RIVER AT MANKAVU BRIDGE, KL5- KALLAI RIVER AT KALLAI BRIDGE & KL6- KALLAI RIVER AT KOTHI BRIDGE, THEKKEPURAM .

AE/PA

19/3/25

Scientist in charge

Monthly Analysis report of river -Pullur- FEBRUARY 2025		
Sampling Date: 03/02/2025		
Station Name	RIVER PULLUR AT PULLUR BRIDGE	
Type of Water body	RIVER	
Sl.No	Determinants	Values
1	Temperature, 0C	RIVER DRY/STAGNANT
2	Dissolved Oxygen, mg/l	RIVER DRY/STAGNANT
3	pH	RIVER DRY/STAGNANT
4	Conductivity, μ mhos/cm	RIVER DRY/STAGNANT
5	BOD, mg/l	RIVER DRY/STAGNANT
6	Nitrate-N, mg/l	RIVER DRY/STAGNANT
7	Turbidity, NTU	RIVER DRY/STAGNANT
8	Phenolphthalein Alkalinity, mg/l	RIVER DRY/STAGNANT
9	Total Alkalinity, mg/l	RIVER DRY/STAGNANT
10	Chloride, mg/l	RIVER DRY/STAGNANT
11	COD, mg/l	RIVER DRY/STAGNANT
12	TKN, mg/l	RIVER DRY/STAGNANT
13	Ammoniacal-N, mg/l	RIVER DRY/STAGNANT
14	Total Hardness as CaCO ₃ , mg/l	RIVER DRY/STAGNANT
15	Calcium as CaCO ₃ , mg/l	RIVER DRY/STAGNANT
16	Magnesium as CaCO ₃ , mg/l	RIVER DRY/STAGNANT
17	Sulphate, mg/l	RIVER DRY/STAGNANT
18	Calcium (Ca ²⁺), mg/l	RIVER DRY/STAGNANT
19	Magnesium (Mg ²⁺), mg/l	RIVER DRY/STAGNANT
20	Sodium, mg/l	RIVER DRY/STAGNANT
21	Total Dissolved Solids, mg/l	RIVER DRY/STAGNANT
22	Total Fixed Solids, mg/l	RIVER DRY/STAGNANT
23	Total Suspended Solids, mg/l	RIVER DRY/STAGNANT
24	Phosphate, mg/l	RIVER DRY/STAGNANT
25	Boron, mg/l	RIVER DRY/STAGNANT
26	Potassium, mg/l	RIVER DRY/STAGNANT
27	Fluoride, mg/l	RIVER DRY/STAGNANT
28	Total Coliform, MPN/100 ml	RIVER DRY/STAGNANT
29	Fecal Coliform, MPN/100 ml	RIVER DRY/STAGNANT
30	Fecal Streptococcus, MPN/100 ml	RIVER DRY/STAGNANT
31	% SODIUM	RIVER DRY/STAGNANT
32	SAR	RIVER DRY/STAGNANT

Sd/
ASSISTANT SCIENTIST

National Mission for Clean Ganga

**Format for Submission of Monthly Progress Report by States/UTs
(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)**

RIVER UPPALA, KASARGOD

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none">• Specifying accountability of nodal authorities not below the Secretary level• Chief Secretaries may have an accountable person attached in their office for this purpose		
	<ul style="list-style-type: none">• Monitoring at State level must take place		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none">• Secretary, Ministry of Jal Shakti• Member Secretary, CPCB		

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic</p>		
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	<p>waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of flood plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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ACTION PLAN FOR RIVER UPPALA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2024	Progress in the month of January 2025	Progress in the month of February 2025	% works completed	Details of works remaining
C(ii)	Material collection facility. Operation	Mangalpady Grama Panchayath	2019			Not submitted		Completed. Kubanoor Plant is working
C	Waste management including purchase of vehicle to collect waste.	Mangalpady Grama Panchayath	2019-2020			Not submitted		Approval for purchase of vehicle not sanctioned from Government.
E	Installation of camera	Mangalpady Grama Panchayath	March 2020			Not submitted		
C	Electrification of material collection facility	Manjeshwaram Grama Panchayat	2019-2020	Electrified	Electrified	Electrified	100%	Completed
C	Transportation of collected waste	Manjeshwaram Grama Panchayat	March 2020	1081 KG REJECTED WASTE TRANSPORTED	1710 KG REJECTED WASTE TRANSPORTED	830 KG SEGREGATED AND 2320 KG REJECTED WASTE TRANSPORTED	100%	Completed

E	Installation of camera	Manjeshwaram Grama Panchayat	March 2020	CCTV INSTALLED AT 4 PLACES BY KELTRON, CONNECTED TO POLICE STATION AND PANCHAYATH OFFICE 50% ADVANCE PAYMENT MADE TO KELTRON FOR INSTALLATION OF 14 CC CAMERA	CCTV INSTALLED AT 4 PLACES BY KELTRON, CONNECTED TO POLICE STATION AND PANCHAYATH OFFICE 50% ADVANCE PAYMENT MADE TO KELTRON FOR INSTALLATION OF 14 CC CAMERA , COMPLETED INSTALLATION OF 10 CAMERAS , ONGOING	CCTV INSTALLED AT 4 PLACES BY KELTRON , CONNECTED TO POLICE STATION AND PANCHAYATH OFFICE 50% ADVANCE PAYMENT DONE TO KELTRON FOR INSTALLATION OF 14 CC CAMERA , CAMERA INSTALLATION COMPLETED	100%	Completed
C	Tying of net on both sides of the bridge	Irrigation Department				A letter has been sent to the Project director, Project Implementation Unit, NHAI Kannur for including fencing on both		

						across Uppala river which are under construction as part of NH 66 widening.		
E	Continuous vigil on waste dumping on roads	Police Department						
A(a)	Water quality monitoring	KSPCB	Being done regularly	Being done regularly	Being done regularly			

UPPALA RIVER - UPPALA BRIDGE (Existing NWMP Station)		
Sampling Point		Uppala Bridge
NWMP Station Code		2306
Latitude		12°41'41.7"N
Longitude		74°54'16.9"E
Date of Sampling		10.02.2025
Nature and flow of the river		Moderate flow, water level increased
Sl.No	Parameters	Uppala Bridge
1	Temperature, 0C	30
2	Dissolved Oxygen, mg/l	4
3	pH	7.22
4	Conductivity, µmhos/cm	10300
5	BOD, mg/l	2.8
6	Nitrate-N, mg/l	1.625
7	Turbidity, NTU	1
8	Phenolphthalein Alkalinity, mg/l
9	Total Alkalinity, mg/l	59
10	Chloride, mg/l	3100
11	COD, mg/l	6.1
12	TKN, mg/l
13	Ammoniacal-N, mg/l	0.512
14	Total Hardness as CaCO ₃ , mg/l	139
15	Calcium as CaCO ₃ , mg/l	24
16	Magnesium as CaCO ₃ , mg/l	115
17	Sulphate, mg/l	27.56
18	Calcium (Ca ²⁺), mg/l	9.619
19	Magnesium (Mg ²⁺), mg/l	27.95
20	Sodium, mg/l	1620
21	Total Dissolved Solids, mg/l	5792
22	Total Fixed Solids, mg/l	4078
23	Total Suspended Solids, mg/l	42
24	Phosphate, mg/l	0.2
25	Boron, mg/l	0.763
26	Potassium, mg/l	38.5
27	Fluoride, mg/l	0.212
28	Total Coliform, cfu/100 ml	3100
29	Fecal Coliform, cfu/100 ml	1700
30	Fecal Streptococcus, cfu/100 ml	110
31	% SODIUM	94.9
32	SAR	59.78

UPPALA RIVER - UPPALA RIVER NEAR BHAGAVATHI TEMPLE (Bhagavathi Gate) - (Proposed NWMP Station)			
Sampling Point		Uppala River Near Bhagavathi Temple (Bhagavathi Gate)	
Distance from existing NWMP Station		878.66 m	
Latitude		12°41'20.1"N	
Longitude		74°54'34.0"E	
Date of Sampling		10.02.2025	
Nature and flow of the river		Water level increased, moderate flow	
Sl.No	Parameters	Unit	Uppala River Near Bhagavathi Temple (Bhagavathi Gate)
1	Temperature	° C	29
2	pH	-	7.3
3	Conductivity	µmhos/cm	2840
4	Turbidity	NTU	1
5	BOD	mg/l	1.87
6	Dissolved Oxygen	mg/l	7.53
7	Total Coliforms	cfu/100ml	2000
8	Feecal Coliforms	cfu/100ml	580
9	Feecal Streptococcus	cfu/100ml	100
10	Chlorides	mg/l	1010
11	Total Alkalinity	mg/l	31
12	Total Hardness	mg/l	24
13	Calcium Hardness	mg/l	19
14	Magnesium Hardness	mg/l	5
15	Calcium	mg/l	7.62
16	Magnesium	mg/l	1.215
17	Total Dissolved Solids	mg/l	1620
18	Sodium	mg/l	545
19	Potassium	mg/l	6.1
20	Nitrate	mg/l	6.476

Sd/
Assistant Scientist