

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 2023****1. Short term plan**

No.	Activity	Implementing agency	Time line	Progress in the month of December-2022	Progress in the month of January-2023	Progress in the month of February 2023	% 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%	100% work of Kuriathy completed. Pumping main of Pattoor, Kannammoola and Enchakkal included in Long term works
							100%	a. Completed
								b. a) Providing RCC lining for the existing two



2.1.2	Rehabilitation/upgradation of Thaliyal and Aranoor Sewerage Pump house by rehabilitation of existing well, construction of new well and grit chamber, installation of new pump Sets	Kerala Water Authority	May 2020	Arannoor	5%	5%	97%	wells. Lining for first well completed. 2 Pump sets erected in first well and commissioned. Pumping main also completed. Lining for 2 nd well partly completed. b) Diesel generator – to be supplied by contractor. Work terminated at the risk and cost of the contractor. Work nearing completion. Probable date of completion 31.03.2023
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May 2020				100%	Work Completed on 8.8.21.
2.1.4	Installation of adequate pumps in Mudavanmughal and Enchakkal pumping stations.	Kerala Water Authority	March 2020				100%	Pump sets installation at Enchakkal and Mudavanmughal pump house completed.
	DG sets in all lift and pumping stations							DG sets installation of seven pumping stations completed. Approval from Electrical inspectorate received. Work completed Trial run also



2.1.5	Mudavanmughal, Aranoor, Thaliyal, Kuriyathi, Pattoor, Kannammola, Pattom, Muringapalam and Enchakkal	Kerala Water Authority	May 2020				100%	completed. that part also completed. For Arannoor and Thaliyal. Erection of diesel generator is already included in the item mentioned 2.1.2. For Enchakkal already exists.
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 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 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 % completed	Rehabilitation work of existing pipe line is included in the work State Plan -2019-20- Rehabilitation of sewer line from Sathya Nagar to Karamana BHS and allied works. Works Completed.
2.1.8	Divert the sewer line from the School compound of Government Karamana High School	Kerala Water Authority	completed				100% completed	Work mentioned is same as the above work which is completed.
								Works completed – 75No.



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%	98%	(Rs. 15.41cr) AMRUT-44, State plan-28 MLA ADF/SDF-3 In progress – 1No. (Rs. 3.cr.) AMRUT-1, State plan-0 Expected to be completed by 31.05.2023 for one AMRUT work
	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 wherever technically feasible in new areas of existing blocks	Kerala Water Authority	May 2020	0.5%	0.5%	97.5%	Works completed - 22 No. (Rs. 5.86 cr.) AMRUT-10, State plan-11 MLA ADF/SDF-1
	In progress/Ongoing (24No.)						In progress –2No. (Rs. 11.35



				0.5%				cr.) AMRUT-2(Details included in Excel sheet attached) State plan-0 Expected date of completion 31.03.23
	Tendering/ To be arranged (1No.) Land acquisition -1 In progress-2						To be arranged-1-Nos. To be (Rs. 7.885 cr.) arranged Land Aquisition in progress-1Nos	Land acquisition process for three work completed and land handed over to KWA and AS obtained for arranging the work under State Plan 22-23 and one work arranged and one tendered. LA for one work in initial stage.(Details shown in excel sheet attached) Direction from head office to cancel one work and recast the estimate and submit for new AS. Same has been approved in State Plan 2022-23 and tendered. Agreement Executed.Expected date of completion 31.05.23
2.1.11	Procurement of sewer cleaning machines and equipment maintenance	Kerala Water Authority	Mar 2020	0%	0%	0%	100%	Work completed.

Maintenance and de-bottlenecking of existing Sewerage Network





The document is digitally approved. Hence signature is not needed.

2. Long Term Works

Sl No.	Long term measures proposed	Implementing agency	Amount Required (Rs.in Crore)	Time line	Progress in the month of February	Progress in the month of March	% 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/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
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							
3.1.6	Procurement of equipments for maintenance of sewerage system							





3.1.7

Additional STP requirement

Kerala Water Authority

Three years

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 9 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 obtaining AS. Cluster 3, which was originally consisting of Thiruvallam, Poonkulam and Vellar is the second in the priority list and is 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) is 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. 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. The DPR for cluster 4 (Thirumala Thrikkannapuram and Punnakkamughal wards) is under preparation.
	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 was prepared earlier but needs modification in lieu of the change in demography. Hence designs was to be prepared for 57 wards including 23 wards for which no designs are available. Consultant appointed for preparing Detailed Project Report (M/s REPL) 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/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. Accordingly, the risk and cost amount was requested from the firm for rearranging the work. As discussed in the Chief Secretary, GoK' s meeting dated 21/06/2022 the work of Preparation of DPRs has to be done internally. The 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 9 clusters. Cluster 1 comprises of 5 wards - Attukal, Kalady, Kallipankulam, Ambalathara and kamaleswaram wards. The DPR for cluster 1 was submitted for obtaining Administrative Sanction on 15.10.2022. The DPR preparation for cluster III comprising of 3 wards namely Thiruvallom, Poonkulam and Vellar is in progress. Cluster 3 originally consisting of Thiruvallam, Poonkulam and Vellar is the second in the priority list and is taken up. This Cluster is modified by adding more wards Puthenpally, Manikkavilakom, Poonthura, Bheemapally, Bheemapally East and Muttathara part and is divided into 3 zones. Zone 1 of Cluster 3 consisting of Puthenpally and Part of Muttathara (until STP) is taken up on priority based on the demand of Thiruvananthapuram Corporation. This DPR is prepared for Cluster 3 Zone 1 consisting of Puthenpally and Muttathara (Part) Wards and submitted to Corporation for according AS under AMRUT. The DPR of Cluster 3 Zone 2 and Zone 3 is also prepared and is under verification. The DPR for Cluster 2 is under verification.



ACTION PLAN FOR RIVER KARAMANA, KERALA-FEBRUARY 2023

1. Short term Plan

Maintenance and de-bottlenecking of existing sewerage network

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% 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%	When 50 % of sewage (35 MLD) was diverted directly to the STP on completion of laying of pumping line from Kuriyathi to STP, overflow to TS Canal has completely stopped. Kuriyathi pumping main- Completed. DER for pumping main from Pattoor, Kannammoola and Enchakkal under RKI is under preparation in PPD Tvm.
	Kuriyathi Pumping line							
2.1.2	Rehabilitation/upgradation of Thaliyal and Aranoor 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	90%	5%	2%	97%	a) Completed.
	Aranoor							b) 1. Providing RCC lining for the existing two wells. Lining for first well completed. 2. Pumpset erected in first well and commissioned. Pumping main also completed. Lining for 2 nd well partly completed. 2. Diesel generator- to be supplied by contractor. Work terminated at the risk and cost of the contractor. Work nearing completion. Probable date of completion 15.03.23.
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May-20				100%	Work Completed.
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 2022	Progress in the month of January 2023	Progress in the month of February 2023	% 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%	DG sets installation of seven pumping stations completed. Approval from Electrical inspectorate received. Work completed. Trial run also completed. For Arannoor and Thaliyal. Erection of diesel generator is already included in the item mentioned 2.1.2. For Enchakkal already exists.
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%	Rehabilitation work of existing pipe line is included in the work State Plan -2019-20- Rehabilitation of sewer line from Sathya Nagar to Karamana BHS and allied works. Works Completed.
2.1.8	Divert the sewer line from the School compound of Government Karamana High School	Kerala Water Authority	Awarded				100%	Work mentioned is same as the above work which is 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				98%	AMRUT-44, State plan-28 MLA ADF/SDF-3 In progress – 1No. (Rs. 3.cr.) AMRUT-1, State plan-0 Expected to be completed by 31.03.2023 for one AMRUT work

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% 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	May-20	0.50%	0.50%	0.5%	97.5%	Works completed -22 No.(Rs.5.86 cr.) AMRUT-10, State plan-11 MLA ADF/SDF-1
	In progress/Ongoing (24No.)							In progress –1No. AMRUT-2 State plan-0 .Expected date of completion 31.03.23.
	Tendering/ To be arranged (1No.) Land acquisition -1 In progress-2					To be arranged	To be arranged - 1 No. (Rs. 7.885 Cr) Land aquisition Progress - 1 no.	Land acquisition process for three work completed and land handed over to KWA and AS obtained for arranging the work under State Plan 22-23, one arranged and one tendered. tendered. LA for one work in initial stage. Direction from head office to cancel one work and recast the estimate and submit for new AS. Same has been approved in State Plan 2021-22 and tendered. Agreement executed. Expected date of completion 31.05.23.
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 2022	Progress in the month of January 2023	Progress in the month of February 2023	% Works Completed	Details of work remaining
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No.	Activity	Implementing Agency	Time line		Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
2.2.1	Slaughter house and poultry waste	Thiruvananthapuram Corporation	Rendering Plant	Dec-22	75%	80%	82%	85%	<p>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, structurecompleted, roof slab casting on progress.Work under progress and willbe completed on Feb.2023.</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. Report November 2022 awaiting. Will be completed on 31st March 2023.</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-19	90%	90%		100%	<p>Kumarichanda: Market Renovation completed. Pilot project implemented fortreatment of wastewater.</p> <p>Pangode: DPR submitted by the agency. Forwarded for getting technical sanction.</p>
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 Colony		45%	45%		50%	

No.	Activity	Implementing Agency	Time line		Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
	garbage generated in the poonthura slum area between Karamana river and sea		Colony 7. Kumari Chantha 8. Poonthur a Marker 9. Moonnat tumukku bridge 10. Ambalat hara- Nilama 11. Fisherme n Flat- Muttatha ra 12. Perunalli Market Road 13. Poundka davu old market 14. Market behind Attipra zonal office						13 Location work completed, remaining location not available. 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 the re is land availability- KWA.
			15. Tsunami Colony near 110 KV tower (Poundkadav) 16. Near Valiyavila Veli St. Thomas Church (Poundk adavu) 17. NearKamales shwaram HSS 18. Valiya veetil Residence associati on 19. Near Arannoor Govt. Quarters 20. Kunjalumoodu Junction						

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
			21. Kumarap uram Thamara bhagam (near comfort station) 22. Near Kannam moola 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					
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, TvpM 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 where there is land availability- KWA.
2.2.5	Around 155 Houses in Kurukuvilakom, Kannettumukku shall be provided with septic and treatment system	Thiruvananthapuram Corporation						Dropped. When the full capacity utilization of CSTP at Muttathara shall be ensured, this area will be covered as it is situated along the banks of Karamana – Killiyar River - KWA. So it is included in KWA DPR.

No.	Activity	Implementing Agency	Time line		Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining	
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						Rs.1889200/- fine collected from 2019 to 2022 till date.	
2.2.6	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Bio- Composter		82%	82%		82%	Installed 51,000 bins in total. Tender invited for installation of 25,000 bio compost bins. Proposal approved by the health standing committee. Proposal placed in the health standing committee and forwarded to purchase committee for negotiaton done, placed before council.	
2.2.7		Thiruvananthapuram Corporation	Thumboormuzhi aerobic bins		60%	60%	63%	65%	Total 154 locations Completed. (Total - 159 units) Santhikavadam - 3 units, Manathala - 3 units, ITI chackai – 11 bins, Kalladimukham -32bins, Neerazhi Market, Ulloor – 6 bins,Thumba station kadavu – 4 units, Womens college– 4 bins completed will be handovered soon, Sanskrithi College – 5 bins, Near Peroorkada Market-35, Kamaleshwaram, Karamana PRS opposite, Cotton hill PS, Cotton hill HSS-25, Poojapura-10, Inside Pratheeksha flat-16, Manvila Market-5. Work in progress Kuravankonam – 4 bins	
2.2.8		Thiruvananthapuram Corporation	Community biogas		60%	60%		65%		
2.2.9		Thiruvananthapuram Corporation	Organic Waste Converter						Dropped	
2.2.10		Thiruvananthapuram Corporation	Portable biogas						Dropped	
2.2.11		Thiruvananthapuram Corporation	Portable aerobins			75%	75%		100%	Project completed

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
2.2.12		Thiruvananthapuram Corporation	Ring compost				42%	Project implementation started. Installed 125 units. Rest of the bins will be installed soon. Action ongoing.
2.2.13		Thiruvananthapuram Corporation	Segregation bins					Dropped.
2.2.14		Thiruvananthapuram Corporation	RRC		40%	40%	40%	Total 2 locations. (i)Work in Manacaud site completed. Tendering activities for electrification are in progress. (ii)Kalladimugham, site cleared after cutting 11 coconut trees. Work started,completed upto plinth level.
2.2.15		Thiruvananthapuram Corporation	Plastic Recycling unit					Dropped.
2.2.16		Thiruvananthapuram Corporation	Mobile MRF					Dropped.
2.2.17		Thiruvananthapuram Corporation	Electronic Weigh bridge					Dropped.
2.2.18		Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Solar electrical cart		Part bil submitted		100%
2.2.19	Thiruvananthapuram Corporation		Swaps shops		90%	95%	98%	Work completed. Revised estimate approved by council. Final part bill will be issued soon.
2.2.20	Thiruvananthapuram Corporation		PET bottle crushing					Project dropped
2.2.21	Thiruvananthapuram Corporation		Community level unit Napkin destroyer		10%	10%	10%	Dropped.
2.2.22	Thiruvananthapuram Corporation		Animal Crematorium at Kattela					Project dropped
2.2.23	Thiruvananthapuram Corporation		Urban Gardening					Project dropped

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
2.2.24		Thiruvananthapuram Corporation	Upgradation of present facilities	100%	100%		100%	Completed
2.2.25		Thiruvananthapuram Corporation	Capacity Building & IEC					Meeting conducted with participation of all thumburmuzhi workers on 31.06.2022.
2.2.26		Thiruvananthapuram Corporation	Viability gap Fund					Issue of third phase of VGF to Haritha Karma Sena completed
2.2.27	Prevent entry of Stormwater into sewer line along with KWA	Thiruvananthapuram Corporation	KWA is authorized to prepare and implement proper sewerage lines under Amrut scheme					Close monitoring is done by health Squad and all Health Inspectors are directed to issue notice and prosecution.
2.2.28	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 place Corporation collected an amount of Rs.1611550/- as fine From 01.01.2022.
Monitoring								
	Activity	Implementing Agency	Time line	Water quality in July/	Water quality in August /	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					
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					

No.	Activity	Implementing Agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
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 - 2 month Orange - 1 month Green - 6 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 November 2022	Progress in the month of December 2022	Progress in the month of January 2023	% Works Completed	Details of work remaining
3.1.1	Extension of sewerage system to Block F to G coastal belt	Kerala Water Authority	200	Three Years					Consultant for preparing Detailed Project Report for uncovered wards of the Thiruvananthapuram Corporation and Rehabilitation of existing system, appointed and DPR preparation in progress under PPD Regional Office Tvm
3.1.2	Extension of sewerage system to Block H to R	Kerala Water Authority	700						
3.1.3	Extension of sewerage system to Newly added	Kerala Water Authority	300						
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 to E	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						
	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

No.	Activity	Implementing Agency	Time line		Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining	
	Long Term measures proposed by Thiruvananthapuram	Implementing Agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% 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.		
3.3.2	De-silting and development of AmayizhanchanThodu	Irrigation Department	1.5 Years	15%	20%		20%	On going		
3.3.3	Improvements to Thekkenekara 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	15%	20%		20%	Flood mitigation works ongoing		
3.3.5	Development of Karamana basin		1.5 Years					Desiltation of river completed. E-flow statement is		

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 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		
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>		
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(x) Rain water harvesting

(xi) Maintaining minimum Environmental flow of river

(xii) Plantation on both sides of the river

(xiii) Setting up biodiversity parks on flood plains by removing encroachment

ACTION PLAN FOR RIVER PAMBA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of January-2023	Progress in the month of February-2023	% works completed	Details of works remaining
A(a)	No industries	-	-	-	-	-	-
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project				
C(ii)	Establishment of de- centralized solid waste treatment facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near Mannar Private Bus Stand. The work was executed by M/s Floret Technologies, Thiruvananthapuram. An amount of Rs. 13,60,000/- was allocated in the annual plan of Mannar GP for this project. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2	Not submitted report		Inauguration of functioning.

			<p>Kadapra Panchayath has resolved to identify all polluting sources involved in pollution of river resources and initiation of penal action against them</p> <p>Niranam Gramapanchayat is an upper Kuttanad area , so no such dry land suitable for solid waste treatment plant is available</p>	<p>Kadapra Panchayath has resolved to identify all polluting sources involved in pollution of river resources and initiation of penal action against them</p> <p>Niranam Gramapanchayat is an upper Kuttanad area , so no such dry land suitable for solid waste treatment plant is available</p>		
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C	Establishment of Material Collection Facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021	<p>Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Non- biodegradable plastic materials has bCollection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for trasportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.</p>	N ot submitted report	100%	Construction of permanant MCF building, collection and transportation of Non-bio degradable Materials to RRF for processing.
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				Material Collection Facility is fully functional in Kadapra Grama Panchayath	Material Collection Facility is fully functional in Kadapra Grama Panchayath		
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				MCF construction completed 13 mini MCF implimentedc in all wards in Niranam Panchayath	MCF construction completed 13 mini MCF implimentedc in all wards in Niranam Panchayath		
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C	Resource Recovery Facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021	As there is no RRF in Mavelikkara Block Panchayat in which Mannar GP belongs, nearby Chengannur Block Panchayat has agreed to receive the plastic materials collected and transported by Mannar GP. Mannar GP has started stockpiling of plastic waste materials collected through HKS in a hall above the Vridhdhasadanam owned by GP and segregated and transported to Clen Kerala company. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021	Not submitted report	100%	Collection and transportation of Non-bio degradable Materials to RRF for processing
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				<p>Resource recovery facility is working as a centralised arrangement at BlockPanchayath level in Kadapra Grama Panchayath</p>	<p>Resource recovery facility is working as a centralised arrangement at BlockPanchayath level in Kadapra Grama Panchayath</p>		
				<p>It will be suitable if RRF is established at Block level in Niranam Grama Panchayath</p>	<p>It will be suitable if RRF is established at Block level in Niranam Grama Panchayath</p>		

C	Installing household and community level solid waste management units	Mannar Panchayat	31.03.2021	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on19/06/2021. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021	Not submitted report	100%	Construction and operation of Aerobic compost unit.

C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.03.2021	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw(final) has been passed by Mannar GP on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021.on 19/06/2021. Action Plan	Not submitted report		Continuing

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 is considered is sewage treatment plants is currently not need with in panchayat area around Parumala	The Panchayat is considered is sewage treatment plants is 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	Due to the lack of space and fund, construction of small STP is not included in the annual plan of Mannar Grama Panchayat. It will be suitable if the Govt . takes necessary steps in this matter	Not submitted report	0%	Not applicable
C	Construction of compound wall with fencing	Irrigation department	31.03.2021	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government	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				
C	Electrical-Light arrangementsand Surveillance cameras	Irrigation department	31.03.2021				
C	Regualting activites in flood plain zone, protection and management of flood plain zone	Irrigation department	31.03.2021				

	Greenery development Plantatioplan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment	Irrigation department	31.03.2021				
C (b) (ii)	Green Protocol implementation in all Offices institution & Public function	Mannar, Kadapra/ Niranam Panchayat	31.05.2020	Green Protocol is strictly observed in Mannar GP and other offices as well as public functions . Strict instruction in writing is given to owners of auditoriums , assembly halls, etc to comply with Green protocol while conducting ceremonies. Rs. 1,50,000/- has been allocated for a project for the setting up of cloth bag/paper bag unit so that use of plastic carry bags can be discouraged . Green Audit was conducted in Mannar GP Office and other 13 Government Offices within the Panchayat Area. 11 offices were certified to have fulfilled Green Audit parameters. Certificates were awarded to the successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021.	Not submitted report	100%	Continuation of Green Protocol .

				Green protocol has been implemented in Public offices of Kadapra Gramapanchayat	Green protocol has been implemented in Public offices of Kadapra Gramapanchayat		
				Necessary instruction are given to all offices and institution to strictly comply with the green protocol and is regularly monitored in Niranam Grama Panchayath	Necessary instruction are given to all offices and institution to strictly comply with the green protocol and is regularly monitored in Niranam Grama Panchayath		
D(a)	Issues relating to E-flow,maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department	30.11.2020	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government		

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	Not submitted report	Not submitted report		

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,2022	Progress in the month of February ,2023	% 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 2023	NOC has not been issued to industries for Ground Water extraction during February 2023	Demand based	1.As per the GEC estimation all the blocks in the District has been categorized as SAFE. 2.Provisions of GW (control & Regulation) Act 2002 is implementing strictly for regulating extraction of GW resource in the district
2	B(ii)	Ground water recharging / rain water harvesting	Artificial Recharge Structure Technical Sanction of 4 sites received and Work Tendered. Selection notice issued for 9 sites.	Artificial Recharge Structure 4 sites Work Tendered and selection Notice issued and 5 sites work completed.	Demand based	All the blocks in the district is categorized as SAFE as per GEC estimation. Kadapra-Niranam Area is not feasible for Ground Water Recharge. However, 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 January 2023 from monitoring wells (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis soon	Groundwater sample collection during the month of February 2023 from monitoring wells (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis soon.	Periodical assessment(Regular programme) Chemical analysis result ofgroundwater samples collected during November-2020 reveals that the gw quality is good and potable.	(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 water for irrigation purpose, adopting good irrigation practices	Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.	Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.	Continuing programme	i)Borewell/tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report of GWD ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose. iii)Awareness programmes organised to the public to adopt rainwater harvesting measures



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കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

KERALA STATE POLLUTION CONTROL BOARD

ജില്ലാ ഓഫീസ്, OPP ജനറൽ ആശുപത്രി, KKNairRoad, കുന്തിമോട്ടത്തിൽബിൽഡിംഗ്, പത്തനംതിട്ട 689645
DISTRICT OFFICE, OPP. GENERAL HOSPITAL, KKNairRoad, KUNNITHOTTATHIL Bldgs, PATHANAMTHITTA 689645

web site: www.keralapcb.nic.in - for Online registration, visit-krocmms.nic.in/KSPCB

No. PCB/PTA/TG-3/2001

13.03.2023

From

Environmental Engineer(I/C)

To

The Member Secretary
Kerala State Pollution Control Board
Pattom P. O.
Thiruvananthapuram

Sub:- Pamba River Monitoring report and the analysis report of Pamba-Njunangar -FEBRUARY,2023 reg:-

Madam,

I am forwarding herewith the Pamba River monitoring report and the analysis report of Pamba-Njunangar for the month of FEBRUARY,2023 for your kind information and necessary action.

Yours Faithfully

ENVIRONMENTEL ENGINEER(I/C)

Encl. As above

STATE WATER MONITORING PROGRAMME (SWMP) 2023

ANALYSIS REPORT FOR THE MONTH OF FEBRUARY

Name of River		PAMBA				
Date & Time of sampling collection		17.02.2023				
Method of analysis		APHA				
Sl.No	parameters	PULINKKUNNU	THAKAZHY	EDATHUA	CHENGANNOOR	KOHENCHERRY
1	Weather	Clear	Clear	Clear	Clear	Clear
2	Colour	clear	clear	clear	clear	clear
3	Temperature ,°C	27	30	28	28	26
4	DO, mg/L	5.8	5.3	5.9	6.8	6.1
5	pH	6.1	6.6	6.1	6.9	6.6
6	Electrical Conductivity , μ /cm	62.36	81.95	64.34	55.13	54.42
7	BOD, mg/L	1.6	1.5	1.4	0.6	1.3
8	Nitrate , mg/L	0.132	0.251	0.262	0.439	BDL
9	FC, CFU/100mL	150	80	120	120	160
10	TC , CFU/100mL	460	240	380	370	490

11	FS , CFU/100mL	Nil	Nil	Nil	Nil	Nil
12	Turbidity ,NTU	2.6	2.3	2.1	2.5	1.0
13	Phenolphthalene Alkalinity, mg/L	Nil	Nil	Nil	Nil	Nil
14	Total Alkalinity, mg/L	12	11	12	10	10
15	Chloride mg/L,	10	14	10	10	8
16	COD	3.2	6.4	3.2	3.2	3.2
17	TKN	0.21	0.3	0.16	0.15	0.28
18	NH ₃ N, mg/L	0.172	0.188	0.232	0.136	0.194
19	Total Hardness, mg/L	22	24	22	20	22
20	Calcium , mg/L	12	14	12	12	12
21	Magnesium, mg/L	10	10	10	8	10
22	Sulphate, mg/L	1.9	3.5	2.0	2.8	2.6
23	Sodium, mg/L	5.6	7.4	6.6	5.4	4.8
24	Pottassium , mg/L	0.462	0.961	0.842	0.387	0.424

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25	Total Dissolved Solids, mg/L	38	48	38	38	34
26	TFS, mg/L	33	42	33	33	29
27	TSS, mg/L	28	37	28	27	24
28	Phosphate , mg/L	BDL	BDL	BDL	BDL	BDL
29	Boron , mg/L	BDL	BDL	BDL	BDL	BDL
30	Fluoride	0.12	0.961	0.18	0.387	0.52
31	% of Sodium	14.51920	17.22594	16.58576	15.6338	12.716162
32	SAR	0.51909	0.65674	0.61179	0.52499	0.44494


ASSISTANT SCIENTIST


STATE WATER MONITORING PROGRAMME (SWMP) 2023

ANALYSIS REPORT FOR THE MONTH OF FEBRUARY

Name of River		PAMBA							
Date & Time of sampling collection		17.02.2023							
Method of analysis		APHA							
Si.no		RANNI	ATHIKAYAM	VADASSERIKKARA	PAMBA (D/S)	THRIVENI (U/S)	KAKKIYAR	KOCHUPAMBA	NJUNAGAR
1	Weather	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
2	Colour	clear	clear	clear	clear	clear	clear	clear	clear
3	Temperature ,°C	26	26	28	28	28	28	28	28
4	DO, mg/L	5.8	6.4	5.9	6.8	7.2	7.2	7.4	2.8
5	pH	6.2	6.3	6.4	6.7	6.9	6.9	6.8	6.0
6	Electrical Conductivity ,µ/cm	48.32	54.32	49.32	73.91	58.45	66	55	86
7	BOD, mg/L	1.5	1.0	1.6	0.9	0.4	0.5	0.7	4.3
8	Nitrate , mg/L	BDL	BDL	BDL	0.271	0.205	0.172	BDL	0.931
9	FC, CFU/100mL	150	110	110	530	230	18	160	1800
10	TC , CFU/100mL	460	340	380	1600	690	580	480	5400

11	FS , CFU/100mL	Nil	Nil	Nil	Nil	Nil	Nil	Nil	4 Nil
12	Turbidity ,NTU	1.5	1.6	1.8	2.9	2.3	1.5	0.5	3.6
13	Phenolphthalene Alkalinity, mg/L	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
14	Total Alkalinity, mg/L	12	11	11	12	10	11	10	14
15	Chloride mg/L,	10	10	10	12	10	10	8	12
16	COD	3.2	3.2	3.2	3.2	3.2	3.2	3.2	6.4
17	TKN	0.9	0.7	0.18	0.25	0.3	0.2	0.5	0.42
18	NH ₃ N, mg/L	BDL	BDL	0.152	0.247	0.208	0.182	0.171	0.846
19	Total Hardness, mg/L	22	24	22	26	24	22	20	24
20	Calcium , mg/L	12	14	12	16	14	12	12	14
21	Magnesium, mg/L	10	10	10	10	10	10	8	10
22	Sulphate, mg/L	1.8	2.0	1.8	2.8	2.2	1.8	1.5	3.2
23	Sodium, mg/L	4.5	4.8	5.7	6.5	5.4	5.8	5.4	9.0
24	Pottassium , mg/L	0.263	0.342	0.269	0.735	0.387	0.347	0.324	0.424

25	Total Dissolved Solids, mg/L	34	38	32	46	38	38	32	46
26	TFS, mg/L	29	33	27	40	33	33	27	41
27	TSS, mg/L	24	28	22	35	28	28	22	36
28	Phosphate , mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29	Boron , mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Fluoride	0.18	0.34	0.8	0.2	0.15	0.24	0.8	0.4
31	% of Sodium	12.04738	12.00170	14.78367	14.69896	13.29366	14.98587	15.65071	20.34240
32	SAR	0.41713	0.42599	0.52836	0.55424	0.47924	0.53763	0.52499	0.79874


ASSISTANT SCIENTIST

MONTHLY ANALYSIS REPORT OF POLLUTED RIVER STRETCHES FEBRUARY- 2023

STATION : MANNAR

SAMPLING DATE : 02.02.2023

SI.NO	PARAMETERES	ITTINAYARKADAVU BRIDGE KUTTAMPEROOR	KOTTAKAL KADAVU BRIDGE KORATTIKADAVU	PARUMALA BRIDGE	MANNAR BRIDGE
1	Temp. (°C)	28	28	27	27
2	pH	6.3	6.5	6.4	6.6
3	Conductivity (µS/cm)	50.83	53.28	60.63	58.64
4	DO (mg/L)	5.1	4.2	4.5	5.2
5	BOD (mg/L)	1.4	1.7	1.5	1.2
6	COD (mg/L)	6.4	6.4	6.4	6.4
7	TDS (mg/L)	36	38	38	34
8	TC (CFU/100ml)	1000	700	900	200
9	FC (CFU/100ml)	300	200	300	60
10	FSC(CFU/100ml)	Nil	Nil	10	Nil

WATER QUALITY DATA OF POLLUTED RIVER STRETCHES FEBRUARY- 2023**DISTRICT OFFICE, PATHANAMTHITTA****Date of Sampling: 02.02.2023**

Sl.No	PARAMETERS	THAKZHY	EDATHUA	MANNAR
1	Temperature, °C	30	28	29
2	pH	6.6	6.1	7.0
3	Conductivity, µmhos/cm	81	64	54
4	Turbidity, NTU	2.3	2.1	2.6
5	Phenolphthalein Alkalinity, as CaCO ₃	Nil	Nil	Nil
6	Total Alkalinity, as CaCO ₃	11	12	10
7	Chloride, mg/l	14	10	10
8	COD, mg/l	6.4	3.2	3.2
9	TKN, mg/l	0.3	0.16	0.25
10	Ammoniacal-N, mg/l	0.188	0.232	0.123
11	Hardness, as CaCO ₃ mg/l	24	22	22
12	Calcium, as CaCO ₃ mg/l	14	14	14
13	Magnesium as CaCO ₃ , mg/l	10	10	8
14	Sulphate, mg/l	3.5	2.0	3.1
15	Sodium, mg/l	7.4	6.6	5.3
16	Total Dissolved Solids, mg/l	48	38	38
17	Total Fixed Solids, mg/l	42	33	33
18	Total Suspended Solids, mg/l	37	28	28
19	Phosphate, mg/l	BDL	BDL	BDL
20	Boron, mg/l	BDL	BDL	BDL
21	Potassium, mg/l	0.961	0.842	0.819
22	BOD, mg/l	1.5	1.4	0.9
23	Fluoride, mg/l	0.25	0.18	0.2
24	Dissolved Oxygen, mg/l	5.3	5.9	6.2
25	Nitrate-N, mg/l	0.251	0.262	0.293
26	Total Coliform, CFU/100 ml	240	380	280
27	Faecal Coliform, CFU/100 ml	80	120	90
28	SAR	0.65674	0.61179	0.49128
29	% of sodium	17.22594	16.58576	14.32808
30	Faecal Strepto Coccus,CFU/100 ml	Nil	Nil	Nil

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.</p> <p>Water quality analysis result of the stretch up to February 2023 is enclosed.</p> <p>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 December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project	Result attached	Result attached	Result attached	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.	NIL	NIL	NIL	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%			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%			100%	0
C	Installing household & community level solid and domestic sewage waste management	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.12.2020	NA			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	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 December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% 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					
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**ANALYSIS REPORT OF DRAINS OF MANIMALA BETWEEN KALLOOPARA AND THONDRA
FEBRUARY-2023**

SI NO	BOTTLE NO.	Name of Drains	PH	BOD	TC	FC
1	TK1	Panayampalathodu	7.13	0.1	200	100
2	TK2	Padathupalam Thodu	Nil	Nil	Nil	Nil
3	TK3	Thottappuzha	6.67	0.3	2200	1800
4	TK4	Kuttapuzha under Kattodubridge	6.49	0.2	400	200
5	TK5	Kadavumbara	6.71	0.6	700	400
6	TK6	Drain under Varappalam Bridge	Nil	Nil	Nil	Nil
7	TK7	Drain under kallupalam Bridge	6.57	0.6	2200	1700
8	TK8	Komalamthodu	7.51	0.5	2800	1900
9	TK9	Vennikulam Valiyathodu	6.91	0.7	2400	1800
10	TK10	Paduthodu	6.35	0.3	800	500
11	TK11	Mallappally Valiyathodu	Nil	Nil	Nil	Nil

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		NA
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		NA
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		NA
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		NA

	<ul style="list-style-type: none"> 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 	<p>Monthly (preferably before 20th of every month)</p>	NA

<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>2019-2020</p>	<p>Drains contributing to river pollution were Identified-The drains are seasonal and water quality is above the required limit, no in-situ Treatment is required</p> <p>Since the area does not contain any industry and so do not require any CETP, this action point is revised</p> <p>The adjoining local bodies are in the stage of developing and establishing adequate solid waste management facilities. Also, the solid waste dumping issues were not identified in the stretch during the field visit held during past one year.</p> <p>Water quality analysis results of February 2023 is enclosed.</p> <p>Awareness campaign to be initiated</p>
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	<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>No ground water pollution is noted in the area so action yet to be initiated.</p> <p>Adopted.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</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>		
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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 2022	Progress in the month of JAN 2023	Progress in the month of FEB 2023	% works completed	Details of works remaining
A(a)	No industries	-	-	-			-	-
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project	Result attached	Result attached	Result attached	100%	Nil
C(ii)	Establishment of de-centralized solid waste treatment facility	Mannar Panchayat, Panchayath	31.02.2023	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near		100%	Inauguration of functioning.

				<p>Mannar Private Bus Stand. The work was executed by M/s Floret Technologies, Thiruvananthapuram. An amount of Rs. 13,60,000/- was allocated in the annual plan of Mannar GP for this project. Action Plan on solid waste</p>	<p>Mannar Private Bus Stand. The work was executed by M/s Floret Technologies, Thiruvananthapuram. An amount of Rs. 13,60,000/- was allocated in the annual plan of Mannar GP for this project. Action Plan on solid waste</p>			
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				Management is approved by Grama Panchayat Committee on 27/08/2021.	Management is approved by Grama Panchayat Committee on 27/08/2021.			
C	Establishment of Material Collection Facility	Mannar Panchayat,	31.02.2023	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Non-biodegradable plastic	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Non-biodegradable plastic		100%	Construction of permanent MCF building.

				materials has bCollection , segregation and transportation of non-biodegradable plastic materials is continuing. About 9 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 3 tonnes of	materials has bCollection , segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of			
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				plastic materials is kept ready for trasportati on. Socio-Economic Unit (SEU) has been selected as implementi ng agency for the constructio n of Two mini MCFs in each ward in all the 18 wards of Mannar GP. Plastic Waste manageme nt Bylaw	plastic materials is kept ready for trasportati on. Constructi on of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste manageme nt Bylaw (Final) has been passed by Mannar GP on			
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				(draft) has been passed by Mannar GP on 05/02/2021.	19/06/2021.			
C	Resource Recovery Facility	Mannar Panchayat, Panchayath	31.02.2023	As there is no RRF in Mavelikkar a Block Panchayat in which Mannar GP belongs, nearby Chengannur Block Panchayat has agreed to receive the plastic materials collected and	As there is no RRF in Mavelikkar a Block Panchayat in which Mannar GP belongs, nearby Chengannur Block Panchayat has agreed to receive the plastic materials collected and		100%	

				transported by Mannar GP. Mannar GP has started stockpiling of plastic waste materials collected through HKS in a hall above the Vridhdhasa danam owned by GP and segregated and transported to Clen Kerala company.	transported by Mannar GP. Mannar GP has started stockpiling of plastic waste materials collected through HKS in a hall above the Vridhdhasa danam owned by GP and segregated and transported to Clen Kerala company.			
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				Plastic Waste management Bylaw (draft) has been passed by Mannar GP on 05/02/2021.	Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.			
C	Installing household and community level solid waste management units	Mannar Panchayat	31.02.2023	Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 4.5 tonnes of plastic materials	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection,		100%	Operation of Aerobic compost unit.

				handed over to Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for trasportati on.Socio-Economic Unit (SEU) has been selected as implementi ng agency for the constructio n of Two mini MCFs in each	segregatio n and transportat ion of non-biodegrada ble plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for			
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				ward in all the 18 wards of Mannar GP. Plastic Waste management Bylaw (draft) has been passed by Mannar GP on 05/02/2021.	transportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021. Action Plan on solid waste			
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					Management is approved by Grama Panchayat Committee on 27/08/2021.			
C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.02.2023	Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 4.5 tonnes of plastic materials handed over to	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and		100%	The process has to be repeated throughout the year.

				<p>Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for trasportati on.Socio-Economic Unit (SEU) has been selected as implementi ng agency for the constructio n of Two mini MCFs in each ward in all the 18</p>	<p>transportat ion of non-biodegrada ble plastic materials is continuuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for trasportati on.</p>			
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				wards of Mannar GP.	Constructi on of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste manageme nt Bylaw(final) has been passed by Mannar GP on 19/06/202 1. Action Plan on solid waste Manageme nt is			
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					approved by Grama Panchayat Committee on 27/08/2021.			
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					
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Mannar Town	Mannar Panchayat	30.09.2020	Due to the lack of space and fund, construction of small STP is not included in the annual plan of Mannar Grama Panchayat.	Due to the lack of space and fund, construction of small STP is not included in the annual plan of Mannar Grama Panchayat.		0%	Not applicable

				It will be suitable if the Govt . takes necessary steps in this matter.	It will be suitable if the Govt . takes necessary steps in this matter.			
C	Construction of compound wall with fencing	Irrigation department	31.03.2021					
C	Removing light jungle and muddies from river courses	Irrigation department	31.03.2021					
C	Electrical-Light arrangements and Surveillance cameras	Irrigation department	31.03.2021					
C	Regualting activites in flood plain zone, protection and management of flood plain zone	Irrigation department	31.03.2021					
	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					
C (b) (ii)	Green Protocol implementation in all Offices institution & Public function	Mannar, Panchayat	31.01.2023	Green Protocol is strictly observed in	Green Protocol is strictly observed in		100%	Continuation of Green

				<p>Mannar GP and other offices as well as public functions . Strict instruction in writing is given to owners of auditoriums , assembly halls, etc to comply with Green protocol while conducting ceremonies. Rs. 1,50,000/- has been allocated for a project for the setting up of cloth bag/paper bag unit so that use of plastic carry bags can be discouraged</p>	<p>Mannar GP and other offices as well as public functions . Strict instruction in writing is given to owners of auditoriums , assembly halls, etc to comply with Green protocol while conducting ceremonies. Rs. 1,50,000/- has been allocated for a project for the setting up of cloth bag/paper bag unit so that use of plastic carry bags can be discouraged</p>			<p>Protocol .</p>
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				<p>. Green Audit was conducted in Mannar GP Office and other 13 Government Offices within the Panchayat Area. 11 offices were certified to have fulfilled Green Audit parameters. Certificates were awarded to the</p>	<p>. Green Audit was conducted in Mannar GP Office and other 13 Government Offices within the Panchayat Area. 11 offices were certified to have fulfilled Green Audit parameters. Certificates were awarded to the</p>			
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				successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021.	successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021.			
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	Awariness classes were conducting	Awariness classes were conducting	Awariness classes were conducting	100%	
C	Management of municipal, plastic, hazardous, biomedical and electrical waste	LSGD	31.03.2021	Draft by-law of Plastic Waste	Draft by-law of Plastic Waste		100%	The process is to be repeated

				<p>Handling has been passed by the Grama panchayat Committee on 05/02/2021. Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 4.5 tonnes of plastic materials handed over to</p>	<p>Handling has been passed by the Grama panchayat Committee on 05/02/2021. Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to</p>			<p>periodically.</p>
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				Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for trasportati on.Socio-Economic Unit (SEU) has been selected as implementi ng agency for the constructio n Two mini MCFs in each ward in all the 18 wards	Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for trasportati on.Socio-Economic Unit (SEU) has been selected as implementi ng agency for the constructio n Two mini MCFs in each ward in all the 18 wards			
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				of Mannar GP.For the management of electrical, electronic and hazardous waste, the Grama Panchayat has reached in an agreement with Clean Kerala Company. Collection and handing over of electrical, electronic and	of Mannar GP.For the management of electrical, electronic and hazardous waste, the Grama Panchayat has reached in an agreement with Clean Kerala Company. Collection and handing over of electrical, electronic and			
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				hazardous waste will start. Biomedical waste is being collected from source and transported for processing by IMAGE (IMA Goes + Eco-friendly), an initiative run by IMA (Indian Medical Association).	hazardous waste will start. Biomedical waste is being collected from source and transported for processing by IMAGE (IMA Goes + Eco-friendly), an initiative run by IMA (Indian Medical Association).			
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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 November 2022	Progress in the month of December 2022	Progress in the month of January 2022	% 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					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

Analysis Result of Drains Joining to Mannar-Thakazhi Stretch of Pamba River (2022-2023)

S I. N o	Name of Drain	Parameters														
		pH			Electrical Conductivity(µS/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	7.24	Nil	6.89	64.3	Nil	66.86	1.5	Nil	0.3	500	Nil	1900	200	Nil	800
4	Karuvellil Thodu	7.15	7.4	Nil	98.29	58.23	Nil	2.2	2.9	Nil	1500	500	Nil	800	200	Nil
5	Nochithodu	7.15	6.99	7.01	45.35	54.73	59.84	0.5	0.9	0.7	400	2100	2000	200	1100	1100
6	Pattaparambil Thodu	7.07	6.95	6.99	119.8	50.04	52.84	3.1	1.2	0.06	1000	300	700	600	100	300
7	Kappiyarissery Thodu	7.15	Nil	6.96	155.4	Nil	102	3.3	Nil	0.8	2000	Nil	2600	900	Nil	1600
8	Kombankery Thodu	6.92	6.35	7.15	106.5	98.03	50.99	3.2	0.7	0.3	1200	400	1100	500	200	600
9	Perackalthodu	7.05	6.91	6.98	145.7	137.1	131.7	3.1	0.4	0.4	200	700	1400	0	500	700
10	Erathodu	7.03	6.75	7.03	49.25	53.38	51.89	0.9	2.3	0.5	1900	2500	1600	900	1300	500
11	Kolarayaru	7	6.58	6.98	42.91	58.16	42.97	0.9	1.7	0.06	400	1500	1200	100	700	600

**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 CHITHRAPUZHA. 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		Major units have own treatment facility
	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		Proposed to construct Combined STP with the Thrikkakara Municipality in Brahmapuram Plant(for both Municipalities)
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>	Thrippunithura Municipality	<p>2 persons identified and Fine Imposed Amount – 30,000</p> <p>Plastic Waste given to a Government Approved agency for recycling processing and Bio waste processed in Brahmapuram Plant.</p> <p>Bio Medical waste collect to IMAGE and plastic waste given to government approved agencies, bio waste processing to Brahmapuram Plant.</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>	Thrippunithura Municipality	
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**ACTION PLAN FOR RIVER CHITHRAPUZHA, KERALA
SHORT TERM MEASURES**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% works completed	Details of works remaining
(1) Drain joining Chithrapuzha (near Brahmapuram dumping yard) (Near FACT CD)									
C (ii)	Restricting seepage of leachate of plastic dumped in the dumping yard (Biomining of legacy waste is to be carried out)	Kochi Corporation	3 years	<p>Work is ongoing. Legacy waste spread in sector 4, 5, 6 and 7 is now cleared and area recovered is about 10 acres. 30% work completed. Bio-mining work Stopped. Notice issued for breach of agreement. The company informed that the will resume the bio mining.. The company submitted revised action plan requesting 18 months extension approved by technical committee.</p> <p>Bailing machine is reached in the site. Bio mining will start in November and will complete in next June. But Corporation had informed the company to complete the Bio mining before March.</p>	Bio mining started and progressing.	Bio mining started 8265Cum RDF- 7229Cum Rejects- 7249Cum Good earth- 284Cum Bailing not started	Bio mining stopped due to the outbreak of fire at Bhramapuram dumping yard.		

Aa (iv)	Effluent monitoring from FACT	KSPCB	Periodical	Progressing	Progressing	Progressing	Progressing		
Aa (iv)	Periodical Monitoring	KSPCB	Periodical	Progressing	Progressing	Progressing	Progressing		
(2)Drain from Cochin Refinery area									
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% works completed	Details of works remaining
Aa (iv)	Surveillance to restrict the dumping of wastes into the river and its branches	Vadavucode – Puthencruz Panchayat with the help of Police	Periodical	Progressing	Progressing	Progressing	Progressing		
A(b)	Sanitation Survey	Vadavucode – Puthencruz Panchayat	3 months	Completed 1700 houses. Survey progressing. Covered 5000 houses. DLTC directed to submit the detailed report on sanitation survey	Survey progressing	Survey progressing	Progressing		
E	Periodical Cleaning of Chithrapuzha	Irrigation Department	Twice in 3 years	Reach I – Third term cleaning started Reach II, Second	Work Completed.	Completed.	water hayacinth and weeds are almost filled	100%	

				term cleaning Reach I-66% Reach II -65% For Reach III, Estimate submitted to CE Reach III will be implemented through Operation Vahini.			in the entire stretch, therefore Estimate for the removal of water hyacinth has submitted again.		
	Already implemented Effluent Treatment facility in Kochi Refinery and periodical monitoring are ongoing	KSPCB		ongoing	ongoing	Monitoring continuing	Monitoring continuing		
(3)Athikkayi branch (Provided temporary bund in joining section to check salinity intrusion)									
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% works completed	Details of works remaining
A(b)	Identification of major pollution causing units(Apartments, hospitals, service stations, markets and industries) in upstream	Thrikkakkara Municipality	3 months	Progressing	Progressing	Fine of Rs 41,240/- levied	Action taken for 9 violations . Rs 14090/- levied.		

		KSPCB		Progressing	Progressing	Progressing			
Aa(iv)	Surveillance to restrict the dumping of wastes into the river and its branches	Thrikkakkara Municipality with the help of Police	Periodical Monitoring	Camera installed.40 violations identified and action initiated	Identified 52 violations. 3persons penalized. Details of vehicles collected from RTOffice to identify the vehicle that littering wastes. further actions will be initiated against the violators. Rs 33,000/- collected as fine.	Fine Of Rs.41 ,240/ levied	Action taken for 9 violations . Rs 14090/- levied.		
Aa(iv)	Periodical Monitoring	KSPCB	Periodical	Monthly monitoring progressing.	Monthly monitoring progressing.	Monthly monitoring progressing	Monthly monitoring progressing.		
A(b)	Sanitation Survey	Thrikkakara Municipality	6 months	Sanitation survey progressing. Environmental Engineer, KSPCB informed the municipality to	Sanitation survey progressing.	Sanitation survey progressing	Sanitation survey progressing.		

				submit the report.					
E	Periodical Cleaning.	Irrigation Department	Once in a year	Reach I-Third term cleaning started.Reach II-Second term cleaning. Reach I-66% ,Reach II-65% For Reach III,Estimate submitted to CE.Reach I and Reach II completed.Reach III will be implemented through Operation Vahini.	Work completed.	Work completed		100%	

(4) Drain joining Chithrappuzha from CSEZ(Chittethukara)

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% Works completed	Details of works remaining
A(b)	Ensure proper functioning of ETP in CSEZ	KSPCB	Periodical	The CETP is functional. But, discharge standards not fully complied. Violation noted, action being	New CETP started operational. Complying	New CETP started operational. Complying standards Monitoring	New CETP started operational. Complying standards Monitoring	Monitoring progressing	

				initiated.	standards	progressing			
A(b)	Sanitation Survey and periodical cleaning	Thrikkakara Municipality	6 months	Sanitation survey progressing. Environmental Engineer ,KSPCB informed the municipality to submit the report.	progressing.	Sanitation survey progressing.	76% completed		
Aa(iv)	Periodical Monitoring	KSPCB	Periodical	Ongoing	Ongoing	Ongoing	Ongoing		

(5) Vettuvelikkadavu (Konothupuzha joining Chithrappuzha)

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% Works completed	Details of works remaining
A(b)	Identifying and closing of all unauthorized outlets into the stream joining the river	Thripunithura Municipality	6 months	The secretary reported the action is progressing. 15 notices issued	Action progressing	Action progressing			
A(b)	Sanitation Survey	Thripunithura Municipality	3 months	Completed,	Reported to	Reported to be			

					be completed.				
Aa(iv)	Periodical Monitoring	KSPCB	Periodical	Ongoing	Ongoing	Ongoing			
C(ii)	Surveillance to restrict the dumping of wastes into the river and its branches	Thripunithura Municipality with the help of Police	6 months	Surveillance squad is already formed and action will be initiated for the inspections and night surveillance of squad. Squad inspection progressing. Environmental Engineer, KSPCB informed the municipality to submit the details of inspections. Night Squad inspection progressing. 18 cases identified. Collected Rs 88,750 as fine..	Inspection of night squad progressing. Collect ed fine Of Rs 4.5Lakh (5 months)	5.13Lakhs fine leveled in which 40,000/- fine imposed for violation identified through surveillance cameras.	Inspection progressing		
E	Cleaning of Konothupuzha (work Proposal already submitted by Minor Irrigation)	Irrigation Department (Minor Irrigation)	Twice in a year		Action initiated as per the directions of Hon'ble NGT OA 237/2017				

				Main Stretch (Kadambrayar-Chithrappuzha Confluence point to Irumpanam)						
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% works completed	Details of works remaining	
E	Periodic Cleaning	Irrigation Department	Once in a year	Reach1- Third term cleaning started, Reach-II- Second term cleaning Reach 1- 66%, Reach-II- 65% for reach III, Estimate submitted to CE. Reach 1& Reach II completed. Reach III will be implemented through operation vahini.	Work completed	Work completed	Work completed	completed		
C(ii)	Surveillance to restrict the dumping of wastes into the river	Vadavucode - Puthercruz with the help of Police	Periodical Monitoring	Ongoing.	Ongoing.	Ongoing.	Ongoing.			
		Thripunithura Municipality with the help of Police	6 months	Surveillance squad is already formed and action being taken for the night surveillance	Squad inspection progressing.	Squad inspection progressing. Surveillance reported	Squad inspection progressing. Surveillance reported			

						to be continue d. 5 lakhs fine levied	d to be continued. 5 lakhs fine levied		
Aa(iv)	River water quality monitoring	KSPCB	Ongoing	Conducting monthly monitoring	Conducting monthly monitoring	Conducting monthly monitoring	Conducting monthly monitoring		
A(b)	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc	KSPCB	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing		
C(ii)	Surveillance of restrict dumping of waste to the river, Sanitation survey (with the help of Police)	Vadavukode Puthenkruze Panchayath	6 months	Ongoing	Ongoing	Ongoing	Ongoing		

LONG TERM MEASURES

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of March 2023	% works completed	Details of works remaining
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E	Provide inspection bund for Chithrapuzha	Irrigation Department	3 years	Remind letter submitted to Thahasidar Kanayannur Thaluk regarding the survey	Remind letter submitted to Thahasidar Kanayannur Thaluk regarding the survey	Remind letter submitted to Thahasidar Kanayannur Thaluk regarding the survey	45%	Remaining work is Land survey.
A(b)	Additional STP requirement (if needed)	Thrikkakkara Municipality, Thripunithura Municipality	3 years	No progress	No progress due to adequate land .Secretary informed that special council meeting convened and subcommittee constituted for identifying land for the STP	No progress due to adequate land .Secretary informed that special council meeting convened and subcommittee constituted for identifying land for the STP		
	Restriction of illegal dumping of Septage in to the river	Police						
	Flood Plain Zone(Management and Protection) Preparation of Inundation maps	Irrigation Department	3 years	Detailed study and investigations has to be done with the consultation of Hydrology Wing.	Detailed study and investigations has to be done with the consultation of Hydrology Wing.	Detailed study and investigations has to be done with the consultation of Hydrology Wing.		

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 December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% 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	NA					
2	B(ii)	Ground water recharging / rain water harvesting	Ongoing					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Cleaning of wells are ongoing					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	NA					

**Analysis report of polluted river stretches-R Periyar, R- Chithrapuzha,R-Kadambrayar, R-Chalakudy
For the month of FEBRUARY 2023**

STNCode	Sampling Date	Sampling Time	StnName	TypeWaterBody
2337	No Sampling		Kadambrayar At Brahmapuram	River
2338	07.02.2023	11:00	Kadambrayar At Manackakadavu	River
1573	07.02.2023	12:00	Chithrapuzha At Irumpanam	River
1154	23.02.2023	12:00	Chalakudy at Pulikkakadavu	River

Sl. No.	Parameters				
		2337	2338	1573	1154
1	Temperature, °C		28	27	28
2	Dissolved Oxygen, mg/l		2.3	2.5	6.8
3	pH		7.8	9.1	6.8
4	Conductivity, µmhos/cm		114	2399	400
5	BOD, mg/l		3.4	3.2	2.8
6	Nitrate-N, mg/l		0	10.99	0.97
7	Turbidity, NTU		1.5	3.5	1.4
8	Total Alkalinity, as CaCO ₃		19	18	20
9	Chloride, mg/l	N	22	800	103
10	COD, mg/l	O	8.8	11.2	4.8
11	TKN, mg/l		1.5	6.2	2.1
12	Ammoniacal-N, mg/l	S	0	0.14	0.42
13	Total Hardness, as CaCO ₃ mg/l	A	22	250	72
14	Calcium, as CaCO ₃ mg/l	M	5	80	26
15	Magnesium as CaCO ₃ , mg/l	P	17	170	46
16	Sulphate, mg/l	L	2.59	69.5	10.17
17	Sodium, mg/l	I	12.38	415	53.25
18	Total Dissolved Solids, mg/l	N	65	1750	222
19	Total Fixed Solids, mg/l	G	48	1400	168
20	Total Suspended Solids, mg/l		18	28	22
21	Phosphate, mg/l		0	2.24	0.02
22	Boron, mg/l		0	0	0.05
23	Potassium, mg/l		1.73	134	5.5
24	Fluoride, mg/l		0.1	1.71	0.04
25	Total Coliform, MPN/100 ml		1500	5800	2000
26	Feecal Coliform, MPN/100 ml		400	4000	940
27	Feecal Streptococci, MPN/100ml		120	170	70

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 KADAMBRAYAR, 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		District level committee monitoring regularly.
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>Ongoing by KSPCB and Thrikkakkara Municipality</p> <p>Submitted earlier.</p> <p>Submitted earlier.</p> <p>The Kadambayar river shares the western boundary of Kunnathunadu Grama Panchayat for a stretch of approximately 6Kms. And 90% of this stretch consists of swamps, hence direct access to the river via land is ruled out. And in the remaining stretch, i.e., in and around Manakkakadvu bridge the DTPC operates a boat club with a riverside walkway and park. Any kind of possible river polluting activities by the general public in this area is monitored by the erection of CCTV camera's provided with the CSR aid of Wonderla Amusements Park. Also the police authorities are conducting routine surveillance operation so as to</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>prevent any possible illegal activities which pollutes the river. In addition to these preventive measures, there operates a Ward Monitoring Committee under the supervision of Kunnathunadu Grama Panchayat Committee which ensures the prevention of polluting activities by the local people.</p> <p>Ground Water Department:As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Mulanthuruthiand Vadavakkodu) comes under the Kadambrayarriver basin. All the blocks in the river stretch are safe with stage of groundwater extraction ranges from25.38% to 68.01%</p> <p>Ground Water Department and Irrigation Department : : Not submitted</p>
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ACTION PLAN FOR RIVER KADAMBAYAR, KERALA
SHORT TERM MEASURES

Short term plan

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of Feb 2023		% works completed	Details of works remaining
	(2)		(4) Manakkakkadavu						
2.1.2 C(ii)	Surveillance to restrict the dumping of wastes into river and its branches	KunnathunaduPanchayat and with the help of Police		Installed camera as part of surveillance	Camera operational	Camera operational		100%	
	(6)		(8) Canal joining Kadambayar near Infopark Phasell						
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of Feb 2023	Progress in the month of March 2023	% works completed	Details of works remaining
2.2 .1E	Cleaning of thodu	Kerala Irrigation Department & Vadavucode – PuthencruzPanchayat	6 months	Cleaning work of Padathikkara thodu started through operation vahini	Cleaning work of Padathikkara thodu completed through Operation Vahini	Cleaning work of Padathikkara thodu completed through Operation	completed through Operation Vahini	100%	

				& Manual cleaning for the year 2021-22 started 95% completed	Work completed	Vahini Work completed	Manual cleaning completed		
2.2.3 C(ii)	Surveillance to restrict the dumping of wastes into river and its branches	Vadavucode Puthencruz Panchayat with the help of Police s	-2 month	Action completed. Installed cameras.	Camera operational	Came ra opera tional		1 0 0 %	Work completed
			<p align="center"><u>Main Stream (Manakkadavu to Kadambayar-Chithrappuzha Confluence point) (Provided temporary bund (KozhichiraBund) inKadambayar-Chithrappuzha joining section to check salinity intrusion)</u></p>						
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% works comple ted	Details of works remaining

A(a)	Restricting seepage of leachate of plastic dumped in the dumping yard(Bio-mining of legacy waste going on)	Kochi Corporation	January 2024	<p>Work is ongoing. Legacy waste spread in sector 4, 5, 6 and 7 is now cleared and area recovered is about 10 acres. 30% work completed. Bio-mining work Stopped. Notice issued for breach of agreement. The company informed that the will resume the bio mining.. The company submitted revised action plan requesting 18 months extension approved by technical committee.</p> <p>Bailing machine is reached in the site. Bio mining will start in November and will complete in next June. But Corporation had informed the company to complete the Bio mining before March.</p>	Bio mining re-started and progressing.	Bio mining re-started and progressing.	Bio mining stopped due to fire at Bhramapura m dumping yard	30%	Completion of the work of bio mining by January 2024
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A(b)	Provide proper facilities for restricting the seepage of leachate(Construction of Leachate treatment Plant: Collection tank)	Kochi Corporation	April 2022	<p>Leachate treatment plant is proposing to construct after reconstruction of the composting plant. Project completion April 2023.</p> <p>Leachate presently treating in Septage treatment plant. Inception report of new leachate treatment Plant submitted to Suchitwa mission for vetting. Suchitwa Mission verified the report and informed that Buoyant filter and Bio reactor is not feasible. Instead of High rate renewable Bioreactor shall be used. The report has been given to the Kochi corporation.</p>	<p>Agreement has been placed before the council approval. Council approval pending.</p>	Council approval pending	No progress reported	Leachate treatment Plant construction not started	
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A(c)	Provide proper facilities for collecting and treating leachate (Construction of leachate treatment plant)	Kochi Corporation	April 2023	Leachate started treating from 23/02/2022 at Brahmapuram Septage treatment Plant after its preliminary treatment in ratio:4:1(Septage: Leachate).Daily 20KL of leachate is treated at septage treatment plant. Applied for consent to operate from PCB for treatment of Septage together with Leachate in Septage treatment plant.	Agreement has been placed before the council approval. Council approval pending.	Agreement has been placed before the council approval. Council approval pending.	No progress reported	No progress	Technical committee of Suchitwa Mission held on 25.09.20 suggested treating of the leachate in septage treatment plant till reconstruction of compost plant.
Action plan by Gramapanchayath									
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% works completed	Details of works remaining
E	Installation of CCTV camera at Manakkakadavu	Kunnathunadu	30.09.2019	Installed cameras. Action completed	Action Completed	Action Completed	Action Completed	100%	-

C(ii)	Cleaning of Thodu	Vadavukad-puthenkruze	6 months	Manual cleaning for the year 2021-2022 started 95% completed	Action Completed	Action Completed	Action Completed	100%	-
C(ii)	Surveillance to restrict dumping of waste to the river and branches (with the help of Police)	Vadavukad-puthenkruze	2 months	Installed cameras. Action completed.	Camera operational.	Action Completed	Action Completed	100%	-

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4. Long term Plan

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	Progress in the month of March 2023	% works completed	Details of works remaining
4.5 C(ii)	Solid waste treatment facility at Brahmapuram (Construction of waste to energy plant)	Kochi Corporation	December 2023	About 500 TPD WtE Plant is proposed by KSIDC in this land. M/s. Zonta Infratech Pvt Ltd informed that following procedures should be done before execution. Characterisation report not submitted till date. Construction	Agreement has been placed before the council approval. Council approval pending.	Agreement has been placed before the council approval. Council approval pending.	No progress reported	Not started	

				<p>agreement given for vetting.</p> <p>Matter regarding signing of Concessionaire agreement was discussed in the council held on 30-06-2022 and it was decided to request to the government to check the legal validity of signing the agreement by the secretary as the tender process was done by KSIDC.</p>						
4.6 A(b)	Restriction of illegal dumping of septage in to the river	Police	As soon as possible							
	6	8. REVISED ACTIONPLAN								
No. (as per Action	Activity	Implementing agency	Time line	Progress in the month of	Progress in the month of	Progress in the month of	Progress in the month	% works	Details of works remaining	

Plan)				December 2022	January 2023	February 2023	of March 2023	completed	
3.1	Slaughter house and poultry waste Rendering plant	Thrikkakkara Municipality		The land identified and the land inspected by the sub-committee. The proposal submitted for council approval. Council not approved the proposal since land value is found higher than the market value. The proposal cancelled and decided to give advertisement again	New advertisement given	New advertisement given			Action pending
3.2	Sanitation facility and treatment of waste water in the markets Treatment plant, Portable aerobic bins	Thrikkakkara Municipality	2020-21 2021-22	Requested suchitwamission to prepare DPR for the waste management in market.	No progress	No progress			Action pending
3.3	Provide facility for the treatment of sewage, sullage and garbage generated	Thrikkakkara Municipality		Land have been identified near to NGO quarters for setting up aerobins and the proposal submitted for	No progress	No progress	Market construction completed. Facility for waste		

	<p>Proposed places for the installation of Aerobins</p> <p>(1) Municipal office compound</p> <p>(2) NGO quarters</p> <p>(3) Kakkanad Market</p> <p>Near Eechamukku TV-Centre Anganavadi</p>		<p>council approval.</p> <p>The land identified near NGO quarters found inadequate.</p> <p>Progress</p> <p>Market construction completed. The land identified near NGO quarters found inadequate. Requested suchitwa mission to prepare DPR for the waste management in market.</p>			<p>management not provided. DLTC issued directions to municipality not to start operation of market without providing waste management facilities</p>		
3.4	<p>Providing facility for restricting discharge of waste water from the surrounding houses to the river</p>	<p>Thrikkakkara Municipality</p>	<p>Inspection and Survey reported to be Progressing. 1200 completed. Report of survey not submitted to DLTC.</p> <p>Survey conducted using smart garbage app. 55% completed.</p>	<p>Progressing.</p>	<p>Progressing</p>	<p>Progressing</p>		

3.5	Providing effluent treatment plant for industries No.of industries :75 no.s	Thrikkakkara Municipality		KSPCB is monitoring the industries	KSPCB is ensuring that the industries are operating with proper treatment systems.	Inspection progressing	Progressing		
3.6	Identification of illegal outlets into storm water drains and fine shall be imposed on such units – 30 units	Thrikkakkara Municipality		Action initiated	Fine levied			Action initiated	Action pending
3.7	Biodegradable waste management Bio-Composter – 2000 No.s Thumboormuzhi aerobins - 4 No.s Portable biogas – 1500 No.s Ring compost – 500 No.s Napkin destroyer – 6 No.s Viability gap Fund	Thrikkakkara Municipality		Actions initiated to issue notice to close the outlet.	No progress				

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7. MONITORING

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of Feb 2023	Progress in the month of March 2023	% works completed	Details of works remaining
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4.1	River water quality monitoring – Monitoring of water quality	Kerala State Pollution Control Board	Ongoing; Monthly frequency	Monthly monitoring On going	monitoring progressing				
4.2	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc Monitoring of establishments, service stations, flats, industrial units	Kerala State Pollution Control Board		On going	On going				
	9	11. LONG TERM PLAN							
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of Feb 2023	Progress in the month of March 2023	% works completed	Details of works remaining
5.1	Additional requirement STP DPR Preparation in 6 months (through consultants) To allot land,	Thrikkakkara Municipality	3 years	The Secretary informed action not being taken due to land constraints.	No adequate land.				Action to be initiated.

	Government Procedure are ongoing								
5.2	Acquiring of land and rehabilitate families from the banks of River To allot land, Government Procedure are ongoing	District Collector, Thrikkakkara Municipality, Revenue Dept	5 years	-	-				Action to be initiated.
			<u>DESILTING AND DEVELOPEMENT</u>						
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of Feb 2023	Progress in the month of March 2023	% works completed	Details of works remaining
5.3	Development package Inspection bund for Chithrapuzha and Kadambrayar is included in this package. For this project, preliminary investigation of site which includes survey of land to know its	Irrigation department	3 years	1. Estimate submitted to CE (As a preliminary step Soil investigation estimate is submitted) 2. Demarcation of sides of Kadambrayar is essential for implementing this	1. Estimate submitted to CE (As a preliminary step Soil investigation estimate is submitted) 2. As per our letter only	1. Estimate submitted to CE (As a preliminary step Soil investigation estimate is submitted) 2. A letter has submitted to Thahasildar,	1. Estimate submitted to CE (As a preliminary step Soil investigation estimate is submitted) 2. A letter has submitted to Thahasildar,		

	<p>availability for formation of side bund which is to be provided with tiles. The project also includes side protection work of Chitrapuzha and Kadambayar. Provision for handrail at the edge of the bund is given. Overall cost comes to 25 Crore. The work is being proposed urgently and will be submitted to higher authorities for financial sanction.</p>			<p>work. Therefore letter submitted to Kakkannad, Puthencru and Kunnathunad villages for getting the survey numbers.</p>	<p>Puthencru village has given the reply and submitted a sketch having survey nos.</p>	<p>tion estimate is submitted) 2. A letter has submitted to Tahasildar Kunnathunad, Thaluk regarding demarcation. 3. Estimate for the investigation work submitted to Chief</p>	<p>Kunnathunad and Kanayannur Thaluk regarding demarcation.</p>		
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						Engineer , Irrigation & Administration on 17-02-2023 under the head "Restoring polluted stretches of rivers based on NGT order".			
5.4	Desilting and development It includes clearing and removing water hyacinth of Kadambrayar ,Chitrapuzha and Edachirathodu near Infopark phase II. This is to be done periodically (every four months),	Irrigation Department	1 year (periodical cleaning -4 months x3)	Desilting and water hayacinth removal work started under operation vahini project	Desilting and water hayacinth removal work done operation vahini project	Desilting and water hayacinth removal work done through	1. Work completed in 2022 by operation vahini. 2. Now Kadambrayar and Edachira thodu is completely filled with water hyacinth. Therefore new proposals submitted		

	depending on availability of fund.					operatio n vahini project	again for the removal of water hyacinth from Kadambrayar and Edachira thodu. 3. For Edachira thodu work, AS approved.		
5.5	sheet piling and providing fencing Fencing is provided in Sl.no 5.3	Irrigation Department	1.5years	It can be included in the estimate of construction of Inspection bund (Walk way). Now as a preliminary step Soil investigation estimate is submitted	It can be included in the estimate of construction of Inspection bund (Walk way). Now as a preliminary step Soil investigation estimate is submitted	It can be included in the estimate of construction of Inspection bund (Walk way). Now as a preliminary step Soil investigation estimate is submitted.	It can be included in the estimate of construction of Inspection bund (Walk way). Now as a preliminary step Soil investigation estimate is submitted. Estimate for the Investigation work. submitted to Chief Engineer, Irrigation & Administration on 17-02-2023		

						<p>k way) . Now as a preli mina ry step Soil inves tigati on esti mate is sub mitt ed. Esti mate for the Investig ation work. submitt</p>	<p>under the head “Restoring polluted stretches of rivers based on NGT order”.</p>		
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						<p>ed to Chief Enginee r, Irrigatio n & Adminis tration on 17- 02-2023 unde r the head "Res torin g pollu ted stret ches of river s base d on NGT orde</p>			
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						r".			
5.6	Development of river basin It includes cleaning and removal of water hyacinth from rivers and maintainits natural flow, depending on availability of fund.	Irrigation Department	1.5years	Work in progress (Removal of water hyacinth and desilting)	Work completed	Work completed			
	1	15. RECOMMENDATIONS BY KERALA STATE POLLUTION CONTROL BOARD Activities for compliance with Solid Waste Management Rules, 2016; Bio-medical Waste Management Rules, 2016							
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of Feb 2023	Progress in the month of March 2023	% Works completed	Details of works remaining
6.1	Door-to-door collection and transportation of MSW 100% door to door collection Proposed Kerala Solid Waste Management Authority	Thrikkakkara Municipality Local bodies of Census Town		100% by 2023					

6.2	Modern Solid Waste Treatment Plant Proposed Kerala Solid Waste Management Authority	Thrikkakkara Municipality (To allot land, Government procedure are ongoing) Local bodies of Census Town	The land identified and the land inspected by the sub-committee The proposal submitted for council approval. Council not approved the proposal since land value is found higher, than the market value. The proposal cancelled and decided to give advertisement again	Advertisement given	Advertisement given		Actions initiated to procure land.	
6.3	Rendering plant for slaughter house/poultry wastes Proposed Kerala Solid Waste Management Authority	Thrikkakkara Municipality (To allot land, Government procedure are ongoing)	The land identified and the land inspected by the sub-committee The proposal submitted for council approval. Council not approved the proposal since land value is found higher, than the	Advertisement given	Advertisement given		Actions initiated to procure land.	

				market value. The proposal cancelled and decided to give advertisement again					
6.4	Common bio-medical waste treatment facility Proposed Kerala Solid Waste Management Authority	Health Department		CBWTF started at Ambalamughal, operated by KEIL	Completed	Completed			Completed
6.5	Regional sanitary landfill site identification and land acquisition Establishment and operation of Regional Sanitary Landfills Proposed Kerala State Waste Management Authority.	District Collector Local bodies		-					
			7.OTHERASPECTS						
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of Feb 2023	Progress in the month of Feb 2023	% works completed	Details of works remaining

7.1	Flood plain zone management and E- flow maintaining Flood plain zone management & E- flow maintaining cleaning & desilting, depending on availability of fund. During summer season Irrigation Department Provides temporary bund to prevent the salt water intrusion due to tidal effects. To maintain natural flow, sluice gate is provided. During the low tide, the shutter of the sluice gate is kept open to maintain minimum flow	Irrigation Dept		Desilting of kadambayar in progress	Work Completed (Desilting of kadambayar)	Work Completed	1. Work completed in 2022 by operation vahini. 2. New proposal submitted for the removal of water hyacinth from Kadambayar.		
7.2	Development of bio diversity parks in banks	Thrikkakkara Municipality	1 st Phase 2020-21 2 nd Phase 2021-22						

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

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		
	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>		
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	<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 PERIYAR, KERALA
SHORT TERM MEASURES**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the months of January 2022	Progress in the months of February 2022	% works completed	Details of works remaining
1.A(b)	Augmentation and Revamping of existing STP at near AdwaitaAshramam and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	Dec 2019	Civil work has been tendered. Estimate for electrical work has been prepared but T.S is not yet received. Estimate for Mechanical work has been prepared by Dredger Division. Tender procedures will be started soon.	Representative from concerned local body has not attended the meeting		
2.A(b)	Augmentation and Revamping of existing ETP at Aluva Market and to increase the capacity of ETP so as to treat more sewage generated in the municipality	Aluva Municipality	2021	There is an existing ETP project. DPR of 3 Lakhs rupees has been approved by DPC. Tender procedures in progress ETP project is under consideration. Project has been move forward to prepare DPR of Rs 3 lakhs. Tender has been called for the work			

				but no one have taken the tender. Directions has been given to accredited agency via letter to prepare estimate including DPR in the Nagarasanjiplan.The estimate is under process.			
3.A(b)	Discharge of sewage from Hotels to the River through drain near Periyar	Aluva Municipality	2020	Health Squad inspection in progress.	Representative from concerned local body has not attended the meeting	100%	
4.A(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	Inspection in progress. Identified 140 households and 124 establishments discharging waste water to public drain. Outlets of 14 establishments have been closed.			
5.A(a)(iv)	Periodical inspection in the Industries, Flats, hotels monitoring of STP,ETP	KSPCB	Periodical	Aluva Municipality has no industries	Aluva Municipality has no industries		
6.C(ii)	Installation of modern abattoirs	Aluva Municipality	March 2021	For the establishment of modern abattoirs, a structural work completed building has been identified. For the preparation of DPR, it has been put up for council approval.	Representative from concerned local body has not attended the meeting		

				Establishment of abattoir will include in this year's project.			
7.A(b)	Procurement of sewer cleaning machines and equipment maintenance	Aluva Municipality	March 2020	Purchased sewer cleaning machines. Cleaning work in progress.	Representative from concerned local body has not attended the meeting		
8.E	Installation of cameras at the waste dumping spots	Aluva Municipality	2020	Cameras are being installed by Health wing as purchase. No need of Technical sanction. 25 Lakhs rupees have been approved by DPC. 52 points have been identified for installing camera. E-Tender has been invited.			
9.A(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	Completed	Completed	100%	
10.C(ii)	Installation of plastic shredding unit	Kalamassery Municipality	June 2019	One plant is already installed and functioning.	One plant is already installed and functioning.	100%	
11.A(a)(iv)	Constitution of squads for night surveillance for finding the unauthorized dumping of sewage at NAD wet lands	Kalamassery Municipality, Police department	2020	.Culprits who were dumping wastes were identified using the cameras installed by	.Culprits who were dumping wastes were identified using		

	Kalamassery			municipality.Rs 6000 were imposed as fine in this month. Rs 74560/- were imposed from culprits who had thrown plastic wastes near roads..	the cameras installed by municipality.Rs31,760/- were imposed as fine in this month. Rs 7,04,610/were imposed total fine till datefrom culprits who had thrown plastic wastes near roads.There are no plastic inspections conducted this month.		
12.A(b)	Installation of common STP for Kalamassery Municipality and ETP at Municipal Market	Kalamassery Municipality	December 2019	75 cents land identified at North Kalamassery for sewage and septagetreatment plant. Procedures for soil testing in progress. DPR is prepared by KWA. DPR procedures in progress	75 cents land identified at North Kalamassery for sewage and septagetreatment plant. Procedures for soil testing in progress. DPR is prepared by KWA. DPR procedures in progress		

13.A(a)(iv))	Monitoring and surveillance of industries in Kalamassery Industrial Estate in order to prevent unauthorized discharges to Muttar River	Kalamassery Municipality	2019	Inspection conducted in 8 establishments and one unit was found having unauthorized discharge. Notice has been issued for the same.	Inspection conducted in 55 houses identified. Notice has been issued for 23 houses the same		
14.C(ii)	Installation of modern abattoirs including poultry and meat rendering plants.	Kalamassery Municipality, Industries Department (for land allotment)	2021	Industries department has informed that land is not available in the industrial estate. This has been informed the collector via letter. It has been instructed to report the same to the Government.	Industries department has informed that land is not available in the industrial estate. This has been informed the collector via letter. It has been instructed to report the same to the Government.		
15.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Kalamassery Municipality	2020	During the inspection conducted in August month, 54 households were found having unauthorized discharge and notice was issued. 13 units have cleared the violation.	During the inspection conducted in August month, 54 households were found having unauthorized discharge and notice was issued. 23 units have cleared the violation.		

16.E	Installation of cameras at the waste dumping spots	Kalamassery Municipality	2020	Camera installed on 10 locations. 2 portable (mobile) cameras has installed for identifying waste dumping spot. RsRs 1000/- has been imposed as fine in the month of January. Total amount of Rs.31,560/- have been levied as fine..	Camera installed on 10 locations. 2 portable (mobile) cameras has installed for identifying waste dumping spot.		
17.A(b)	Identification of sources of sewage discharged to drain near Pathalam bridge and action to stop the discharge which reach river Periyar from hotels, labour camps etc. In case the quantity of sewage generated is assessed to be more STP need to be installed	Eloor Municipality, KSPCB (for monitoring)	2020	Inspection in progress. Notices have been given to shops. Reply from their end has received. Unauthorized outlets are closed. Septic tank – soak pit facility is recommended for all the newly sanctioned commercial buildings.	Representative from concerned local body has not attended the meeting		
18.E	Installation of cameras at the waste dumping spots	Eloor Municipality	2020	The Cameras were installed in the land near HIL & Arattukadavu which was found as Dump sites. But presently those dump sites were cleared without any waste dumping. An amount of Rs.13,020/- were imposed on culprits who dumped wastes during the month of January.			

19.A(a)(i) v)	Periodical inspection in the Industries, Flats, hotels for monitoring of STP,ETP located in Cochin corporation	Kochi Municipal Corporation	Periodical	An amount of Rs. 8,00,000/- were imposed as fine from culprits. Total amount of Rs. 46,02,300/- was collected as fine till date. Under OA147case,it is insrtructed to monitor the wghole stretch of the canal.16 houses and 18 establishments were identified.As a result 11 flats, 4 houses and 3 hotels were closed. Collected Rs 31,00,000/ as fine from 6 hotels due to unauthorized discharge.92 new establishments are also identified where notice is issued to 16 establishments and rest of them are yet to issued.			
20.A(a)	Inventory of sources of pollution through a rapid study/Study for identification of pollution sources at Edappallythodu	Kochi Municipal Corporation	3 months	Survey completed by HI and JHI of KMC. Location of waste disposal in TP canals and Edappallythodu was identified. Closing of outlet exposed to drains	Survey completed by HIand JHI of KMC. Location of waste disposal in TP canals and edappallythodu were identified.Closing of outlet exposed to		

				of TP canals is taken as a joint work by Engineering and Health wing of KMC. Work mainly focused on four zones. They are Central zone,Edappallyzone,Pachalam zone and Vytilla zone.	drains of TP canals is taken as a joint work by Engineering and health wing of KMC.Work mainly focused on four zones. They are Central zone, Edappally zone, Pachalam zone and Vytilla zone. Responsibility of closing outlet of drain was entrusted to engineering wing and necessary advance has been released for concerned Assistant engineer/Overseer. Details of closed outlets to Edappallythodu – 4 outlets of households and 6 outlets from flats.		
21.E	Issuing notice to the defaulters	Kochi Municipal Corporation	4 months	Inspection is going on. Further actions are taken.	Inspection is going on. Further actions are taken.		
22.A(a)(iv)	Periodical inspection in the flats, hotels, shops located along the river	Kochi Municipal Corporation	Periodical	Inspection in progress	Inspection in progress		Being carried out periodically

23.A(b)	Identification of natural drains/thodu reaching river Periyar and cleaning of weeds, grasses etc.	Irrigation department	2 years	4 polluted streams have been identified. The Estimate has been submitted for restoration works. Financial sanction was not yet received. Onjithodu soil test conducted. Streams have been included in Operation Vahini.	4 polluted streams have been identified. The Estimate has been submitted for restoration works. Financial sanction was not yet received. Onjithodu soil test conducted. Streams have been included in Operation Vahini.		Detailed estimate submitted to higher authority for FS. FS not obtained.
24.C(iii)	Clearing of weeds, grasses at the river bank in order to ensure the smooth flow of water	Irrigation department	3 years	The cleaning of river tributaries and desilting is jointly implemented by Local self government department and irrigation through Operation Vahini. Once this cleaning and desilting is completed the water table will increase and which in turn reduces the pollution. Measures are being taken to ensure the natural flow of the river. Desilting work in progress. For the remaining work, request have been submitted to RRC along with the DPR. Financial sanction to	The cleaning of river tributaries and desilting is jointly implemented by Local self government department and irrigation through Operation Vahini. Once this cleaning and desilting is completed the water table will increase and		

			<p>be received. The DIC has informed to clear off the grasses and weeds which are obstructing the smooth flow of drains in the industrial estate. DIC has reported that they have directed Estate Manager to ensure that the units near Periyar river banks are clearing the grass in their unit premises periodically.</p>	<p>which in turn reduces the pollution. Measures are being taken to ensure the natural flow of the river. Desilting work in progress. For the remaining work, request have been submitted to RRC along with the DPR. Financial sanction to be received. The DIC has informed to clear off the grasses and weeds which are obstructing the smooth flow of drains in the industrial estate. DIC has reported that they have directed Estate Manager to ensure that the</p>		
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					units near Periyar river banks are clearing the grass in their unit premises periodically.		
25.D(a)	Maintaining of Minimum flow in river during lean period and periodical operation of Regulators at River in-order to maintain minimum flow.	Irrigation department	3 years	Shutters are being operated periodically at the Pathalam lock cum regulator to maintain the flow of river	Shutters are being operated periodically at the Pathalam lock cum regulator to maintain the flow of river		
26.A(b)	Common Effluent Treatment Plant at Edayar Industrial Estate	Industries department	2022	For the establishment of CETP a government order has come sanctioning Rs. 37.5 Crore to DIC. KWA is entrusted to implement the project. DPR for the same has been submitted. The project is under Government consideration. In the approved amount operational maintenance cost and GST was not included. In the Chief Secretary's meeting	For the establishment of CETP a government order has come sanctioning Rs. 37.5 Crore to DIC. KWA is entrusted to implement the project. DPR for the same has been submitted. The project is under Government		

				held on 23.08.2022, for the revision of CETP project proposal 3 months time has been allotted.	consideration. In the approved amount operational maintenance cost and GST was not included. In the Chief Secretary's meeting held on 23.08.2022, for the revision of CETP project proposal 3 months time has been allotted.		
27.A(b)	Construction of internal roads and proper drainage in Edayar industrial estate	Industries department	Work progressing	For the construction of internal roads and drainage in Edayar industrial estate, Rs. 6.54 crore has been handed over to PWD. The work will be starting soon.	The construction of roads & drains in Industrial Development Area in Edayar was not yet started. A meeting was arranged with P.W.D on 23.01.2023. They have		

					initiated that the work will be started soon.		
28.A(b)	Installation of common discharge pipe line at downstream of Pathalam Regulator Bridge	Industries department, Irrigation department	3 years	It was decided to include the project of installing the common discharge pipeline in the DPR of CETP. Under this circumstance, the work comes under the responsibility of KWA.	It was decided to include the project of installing the common discharge pipeline in the DPR of CETP. Under this circumstance, the work comes under the responsibility of KWA.		
29.E	Installation of Night vision surveillance cameras at the River Bank side	KSPCB	2020	The CCTV cameras and accessories have been installed. 7 new cameras have been installed. Maintenance of two cameras in progress.	The CCTV cameras and accessories have been installed. 8 cameras have been installed. New two cameras is yet to be installed. It will be fixed soon.		
30.A(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.		
31.A(a)(iv)	Monitoring of quality of water at various intake point	Kerala Water Authority	2020	Status not reported	Status not reported		

32.A(a)(iv)	Installation of additional continuous online River water monitoring station	KSPCB	2022	The maintenance works of Online monitoring station in the downstream side of Pathalam Bund have been completed and is working. Online monitoring station in the upstream side has been installed. Connection work to display board in progress.	The maintenance works of Online monitoring station in the downstream side of PathalamBundh ave been completed and is working. Online monitoring station in the upstream side has been installed. Connection work to display board in progress.		
33.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Kadungallur Panchayath	2020	Joint inspections were done by Heath Inspector & Asha workers	. Representative from concerned local body has not attended the meeting		
34.E	Installation of cameras at the waste dumping spots	Kadungallur Panchayath	2020	6 cameras have been installed near Onjithodu. Total Rs. 25000/- have been	Representative from concerned local body has not attended the		

				levied as fine.	meeting .		
35.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotelse tc. who is discharging the sewage to the public drain	Choornikkara Panchayath	2020	Inspection and monitoring is performed regularly to identify the offenders. Issual of notice to those offenders is also being done regularly. 4 flats have been identified and reported to KSPCB..	Soak pits are distributed to residewnts.notice regarding unauthorised discharge of effluent is forwaded to pcbkadavanthara		
36.E	Installation of cameras at the waste dumping spots	Choornikkara Panchayath	2020	12 Cameras have been already installed on waste dumping spots. One more camera installation is left. The fund for remaining camera will be arranged through sponsorship.	Due to un availability of Sponsors purchase pofcvamera is to be done from own fund.		

LONG TERM MEASURES

No. (as per Action Plan)	Activity	Implementin g agency	Time line	Progress in the month of November2022	Progress in the month of December 2022	% works completed	Details of works remaining
1.A(b)	Construction of walkway, ring roads etc at the Periyar River bank at industrial belt.	Irrigation department	4 years	Investigation and detailed Estimate Submitted and waiting for FS	Investigation and detailed Estimate Submitted and waiting for FS		FS not obtained for the work
2.C(i)	Fencing of the river banks along the stretches of waste disposal (Edamula stretch)	Cochin Municipal Corporation	1-2 years	ppallyThodu, which is a tributary of Periyar river touches Cochin Corporation Boundary for a small stretch. The other side of this thodu is belonging to LSGs like Kalamassery, Thrikkakkara, Eloor etc. The work of rejuvenation of Edappally Thodu is included under the IURWTS project of Kochi Metro Rail Limited. The progress of the works undertaken by	The work of rejuvenation of Thevara-Perandoor (TP) Canal is included under the IURWTS project of Kochi Metro Rail Limited. The progress of the works undertaken by KMRL is reported as follows. b) Market canal, work will be carried out this year. KIIFB is the funding agency for the		

				<p>KMRL is reported as follows.</p> <p>a) Applied for land acquisition works for various canal, it's on processing under revenue department.</p> <p>b) As no land acquisition is needed for market canal, work of it will be carried out this year. KIIFB is the funding agency for the work. Tender process for the work is going on.</p>	<p>work. Tender bid had opened for the work on 30-09-2022 Tender has cancelled and going for retendering.</p>		
3.C(iii)	<p>Beautification of the river stretches (Edamula stretch)</p>	<p>Cochin Municipal Corporation</p>	<p>1-2 years</p>	<p>Beautification work has been included in the KMRL IURWTS project. Due to the prevailing public protest, land acquisition procedure is being delayed. DPR will be prepared by Coastal Shipping Inland Navigation. The work will be commenced as soon as T.S is obtained.</p>	<p>Beautification work has been included in the KMRL IURWTS project .Notice regarding land acquisition is pending in district administrative office.Cochin corporation has also undertaken the work of cleaning Edapally canal from kaniyampuzha to muttarpuzha region and also planned to utilize 41,00,000/ rupees for the</p>		

					same.		
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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 October 2022	Progress in the month of November2022	Progress in the month of December2022	% 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					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

Analysis report of polluted river stretches-R Periyar, R- Chithrapuzha,R-Kadambrayar, R-Chalakudy For the month of FEBRUARY 2023

STNCode	Sampling Date	Sampling Time	StnName	TypeWaterBody	NameOfWaterBody	RiverBasin
17	14.02.2023	10:00	Periyar at Eloor	River	Periyar River	
1338	23.02.2023	08:30	Periyar at SDP Aluva	River	Periyar River	
2334	15.02.2023	10:15	Periyar at Pathalam	River	Periyar River	
2335	15.02.2024	11:45	Periyar at Kalamassery	River	Periyar River	
3468	23.02.2023	08:45	Periyar at KWA Aluva	River	Periyar River	
2337	No Sampling		Kadambrayar At Brahmapuram	River	Kadambrayar River	
2338	07.02.2023	11:00	Kadambrayar At Manackakadavu	River	Kadambrayar River	
1573	07.02.2023	12:00	Chithrapuzha At Irumpanam	River	Chithrapuzha River	
1154	23.02.2023	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	30	27	29	30	27		28	27	28	
2	Dissolved Oxygen, mg/l	7	6.8	6.5	6.3	7.4		2.3	2.5	6.8	
3	pH	7.5	7.2	7	7	7.7		7.8	9.1	6.8	
4	Conductivity, µmhos/cm	8743	45	9705	60	36		114	2399	400	
5	BOD, mg/l	2	2.2	2.1	1.1	1.4		3.4	3.2	2.8	
6	Nitrate-N, mg/l	0.002	0.31	8.88	0	0		0	10.99	0.97	
7	Turbidity, NTU	2	1.5	3.6	1.6	2.1		1.5	3.5	1.4	
8	Total Alkalinity, as CaCO3	29	12	15	13	12		19	18	20	
9	Chloride, mg/l	2900	10	3450	11	4	N	22	800	103	
10	COD, mg/l	6.4	4.8	8.8	5.6	3.2	O	8.8	11.2	4.8	
11	TKN, mg/l	0.24	0.42	3.5	0	0		1.5	6.2	2.1	
12	Ammoniacal-N, mg/l	0	0.002	0	0	0	S	0	0.14	0.42	
13	Total Hardness, as CaCO3 mg/l	1300	15	1400	15	14	A	22	250	72	
14	Calcium, as CaCO3 mg/l	600	5	400	7	5	M	5	80	26	
15	Magnesium as CaCO3, mg/l	700	10	1000	8	9	P	17	170	46	
16	Sulphate, mg/l	394.7	0	3.11	0	0	L	2.59	69.5	10.17	
17	Sodium, mg/l	1630	5.6	1800	6.12	2.1	I	12.38	415	53.25	
18	Total Dissolved Solids, mg/l	5520	32	5820	35	20	N	65	1750	222	
19	Total Fixed Solids, mg/l	4355	24	4600	25	15	G	48	1400	168	
20	Total Suspended Solids, mg/l	32	12	33	14	10		18	28	22	
21	Phosphate, mg/l	0.01	0.01	0.09	0.01	0		0	2.24	0.02	
22	Boron, mg/l	0.7	0	0.58	0.3	0		0	0	0.05	
23	Potassium, mg/l	120	0.53	91	1.52	0.21		1.73	134	5.5	
24	Fluoride, mg/l	0.27	0.04	0.37	0.07	0.04		0.1	1.71	0.04	
25	Total Coliform, MPN/100 ml	7900	5400	2700	2000	2000		1500	5800	2000	
26	Feacal Coliform, MPN/100 ml	7000	2000	1300	1100	1200		400	4000	940	

27	Feacal Streptococci, MPN/100ml	790	150	580	150	38	120	170	70
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**Analysis report of polluted river stretches-R Periyar, R- Chithrapuzha,R-Kadambrayar, R-Chalakudy
For the month of JANUARY 2023**

STNCode	Sampling Date	Sampling Time	StnName	TypeWaterBody
2337	04.01.2023	11:30	Kadambrayar At Brahmapuram	River
2338	04.01.2023	11:00	Kadambrayar At Manackakadavu	River
1573	04.01.2023	12:00	Chithrapuzha At Irumpanam	River
1154	07.01.2023	12:40	Chalakudy at Pulikkakadavu	River

Sl. No.	Parameters				
		2337	2338	1573	1154
1	Temperature, °C	30	29	29	28
2	Dissolved Oxygen, mg/l	2.1	5.2	3.1	7
3	pH	6.7	6.8	6.7	7.2
4	Conductivity, µmhos/cm	135	123	1406	143
5	BOD, mg/l	2.5	1.7	3.1	2.6
6	Nitrate-N, mg/l	0.24	0.75	12.21	0.82
7	Turbidity, NTU	5.1	5.3	4.3	1.1
8	Total Alkalinity, as CaCO ₃	30	25	34	20
9	Chloride, mg/l	20	19	425	32
10	COD, mg/l	9.6	8	10.4	7.2
11	TKN, mg/l	3	5.4	10.8	4.1
12	Ammoniacal-N, mg/l	0	0	11.63	3.17
13	Total Hardness, as CaCO ₃ mg/l	29	23	180	36
14	Calcium, as CaCO ₃ mg/l	24	16	140	29
15	Magnesium as CaCO ₃ , mg/l	5	7	40	7
16	Sulphate, mg/l	0.51	1.35	112.03	0.21
17	Sodium, mg/l	10.84	10.56	240	17.21
18	Total Dissolved Solids, mg/l	75	70	952	92
19	Total Fixed Solids, mg/l	60	55	760	72
20	Total Suspended Solids, mg/l	27	26	30	24
21	Phosphate, mg/l	0	0	2.5	0.01
22	Boron, mg/l	0.03	0	0.23	0
23	Potassium, mg/l	2.51	3.04	7.76	2.27
24	Fluoride, mg/l	0.01	0.01	2.82	0.01
25	Total Coliform, MPN/100 ml	1700	1500	6300	1500
26	Feecal Coliform, MPN/100 ml	540	1100	4900	310
27	Feecal Streptococci, MPN/100ml	79	140	350	34

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 KARUVANNUR, THRISSUR

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 KARUVANNUR, KERALA
SHORT TERM MEASURES**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month Of January 2022	Progress in the month of February 2023	% works complete d	Details of works remainin g
Thirukuzhy thodu								
A(a)(iv)	Surveillance to restrict dumping of wastes into river and its branches	Vallachira Panchayat with the help of Police		-	-	-		
E	Cleaning and desilting of canal	Irrigation Department and Vallachira Panchayat	4months	ടി തോടി ന്റെ ഭൂരിഭാ ഗം നീളവു ം നിലവി ലില്ല എന്നു ം ശേഷി ക്കുന്ന ഏകദേ ശം 15 മീറ്ററേ റളം വരുന്ന	ടി തോട ിന്റെ ഭൂരിഭ ാഗം നീള വും നില വിലി ല്ല എന്ന ും ശേ ഷി ക്കു ന്ന ഏക	ടി തോടി ന്റെ ഭൂരിഭാ ഗം നീളവ ും നിലവ ിലില്ല എന്നു ം ശേഷി ക്കുന്ന ഏകദേ ദശം 15 മീറ്ററേ റളം	10 0	ni l

				ഭാഗം തൊഴി ലുറപ്പ് പദ്ധതി കൾ ഉൾപ്പെ ടുത്തി എല്ലാ വർഷ വും വൃത്തി യാക്കു ന്നു എന്നു പഞ്ചാ യത്ത് അധി കൃതർ അറിയ ിച്ചിട്ടു . ആയത ിനാൽ ടി പ്രവൃ ത്തി ആവ ശ്യമില്ല എന്ന ജനപ്ര തിനിധ ികളും, കർഷ	ദേശ 15 മീറ്റേ റാളം വരു ന്ന ഭാഗം തൊ ഴിലു റപ്പ് പദ്ധ തിക ൾ ഉൾ പ്പടു ത്തി എല്ലാ വർ ഷവു ൾ വൃ ത്തി യാ ക്കു ന്നു എന്ന ൾ പഞ്ച യത് അധി കൃത ൾ അറി	വരു ന്ന ഭാഗം തൊഴി ലുറപ്പ് പദ്ധതി കൾ ഉൾ പ്പടു ത്തി എല്ലാ വർഷ വും വൃത്ത ിയാക്ക ൾ എന്നു പഞ്ചാ യത്ത് അധി കൃതർ അറിയ ിച്ചിട്ടു . ആയ തിനാ ൾ ടി പ്രവൃ ത്തി ആവ ശ്യമി ല്ല		
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				<p>കരും അഭിപ്രായപ്പെട്ടു എന്ന വിവരം അസിസ്റ്റന്റ് എഞ്ചിനീയർ, മൈനർ ഇറിഗേഷൻ സെക്ഷൻ, ചേർപ്പ് സ്ഥല പരിശോധനയ്ക്കു ശേഷം റിപ്പോർട്ട് ചെയ്തിട്ടുള്ളതായ 1 എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ, മൈനർ</p>	<p>യിച്ചിട്ടുണ്ട്. ആയതിനാൽ ടിപ്രവൃത്തി ആവശ്യമില്ല എന്ന ജനപതിനിധികളും, കർഷകർഷകരും അഭിപ്രായപ്പെട്ടു എന്ന വിവരം അസിസ്റ്റന്റ് എഞ്ചിനീയർ, മൈനർ ഇറിഗേഷൻ സെക്ഷൻ, ചേർപ്പ് സ്ഥല പരിശോധനയ്ക്കു ശേഷം റിപ്പോർട്ട് ചെയ്തിട്ടുള്ളതായ</p>	<p>എന്ന ജനപതിനിധികളും, കർഷകരും അഭിപ്രായപ്പെട്ടു എന്ന വിവരം അസിസ്റ്റന്റ് എഞ്ചിനീയർ, മൈനർ ഇറിഗേഷൻ സെക്ഷൻ, ചേർപ്പ് സ്ഥല പരിശോധനയ്ക്കു ശേഷം റിപ്പോർട്ട് ചെയ്തിട്ടുള്ളതായ</p>		
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				<p>ഇരിശേ ഷൻ ഡിവി ഷൻ, തൃശ്ശൂർ അറിയ ിച്ചിട്ടു .</p>	<p>ൻ സെ ക്ഷൻ , ചേർ പ്പ് സ്ഥ ല പരിശേ ശാധ നയ് ക്കു ശേ ഷം റിപ്പോ ർട്ട് ചെയ് തിട്ടു ള്ളത ായി എക് സിക് ്യൂട്ടീ വ് എ ഞ്ചിന ീയർ, മൈ നർ ഇരിശേ ഗഷ ൻ ഡിവി ഷൻ, തൃശ്ശൂ</p>	<p>എക് സിക്യ ൂട്ടീവ് എഞ്ചി നീയർ, മൈന ർ ഇരിശേ ഗഷൻ ഡിവി ഷൻ, തൃശ്ശൂ ർ അറിയ ിച്ചിട്ടു .</p>		
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					ൂർ അറിയിച്ചിട്ടു.			
Thodu near Kadalassery bridge								
A(b)	Identification of pollution sources and surveillance to restrict dumping of wastes	Vallachira, Pudukad & Nenmanikkara Panchayats	1 month	Ongoing	Ongoing	Ongoing	100	0
E	Cleaning and desilting	Irrigation Department and Vallachira Panchayat	4months	ടി പ്രവൃത്തിയ്ക്കായി 2.7 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് Price 3.0 ൽ തയ്യാറാക്കി 15/09/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിന് സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിട്ടു. കൂടാതെ ടി പ്രവൃത്തി "Restoring polluted stretches of rivers based on NGT Orders" എന്ന ശീർഷകത്തിൽ ഉൾപ്പെടുത്തിക്കൊള്ളു മുൻഗണനാ ലിസ്റ്റ് ഒരിക്കൽ കൂടി 17-02-2023 ന് ഇറിഗേഷൻ & അഡ്മിനിസ്ട്രേഷൻ ചീഫ് എഞ്ചിനീയർക്ക് സമർപ്പിച്ചിട്ടു.				
Neerolithodu								
E	Cleaning and desilting	Irrigation Department	4months	ടി പ്രവൃത്തിയ്ക്കായി 10.00 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് ജൂൺ 3.0 ൽ തയ്യാറാക്കി 15/09/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിന് സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിട്ടു.				
Painkilikayal thodu								
E	Cleaning and desilting	Irrigation Department and Vallachira	4months	ടി പ്രവൃത്തിയ്ക്കായി 15.00 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് ജൂൺ 3.0 ൽ തയ്യാറാക്കി 15/09/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിന് സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിട്ടു. നടപ്പിലാക്കുന്നതിന് ഫലമായിട്ടില്ല.				

		Panchayat						
		Kadathodu						
A(b)	Identification of pollution sources and surveillance to restrict the dumping of wastes	Vallachira & Nenmanikkara Panchayats	1 month	Ongoing	Ongoing	Not included in the Nenmanikkara Gramma panchayath	100	0
E	Cleaning and desilting	Irrigation Department	4months	<p>ടി പ്രവൃത്തിയ്ക്കായി 9.5 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് Price 3.0 ൽ തയ്യാറാക്കി 15/09/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിന് സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിട്ടു .</p> <p>കൂടാതെ ടി പ്രവൃത്തി “Restoring polluted stretches of rivers based on NGT Orders” എന്ന ശീർഷകത്തിൽ ഉൾപ്പെടുത്തിക്കൊള്ളു മുൻഗണനാ ലിസ്റ്റ് ഒരിക്കൽ കൂടി 17-02-2023 ന് ഇറിഗേഷൻ & അഡ്മിനിസ്ട്രേഷൻ ചീഫ് എഞ്ചിനീയർക്ക് സമർപ്പിച്ചിട്ടു .</p>				
		Main Stream –along Karuvannur						

A(a)(iv)	Periodic Surveillance to restrict the dumping of waste into river and imposing Fine	Irinjalakkuda Municipality, Police Dept.		Presently no such dumping of waste. Square inspection ongoing well including night squad	Presently no such dumping of waste. Squad inspection ongoing well including night squad.	Presently no such dumping of waste. Squad inspection ongoing well including night squad.		
A(b)	Sanitation Survey	Irinjalakkuda Municipality	3 Months	100% Completed	100% Completed	100% Completed		
A(b)	Closing of all un authorized outlets leading to the river	Irinjalakkuda Municipality		Inspection is going on. There is no unauthorized outlets leading to the river.	Inspection is going on. There is no unauthorized outlets leading to the river.	Inspection is going on. There is no unauthorized outlets leading to the river		
A(b)	Closing of all un authorized outlets in the drain leading to the river	Irinjalakkuda Municipality		There is no unauthorized outlets in the drain leading to the river.	There is no unauthorized outlets in the drain leading to the river	There is no unauthorized outlets in the drain leading to the river.		

E	Boards to display slogans against littering waste in various Places other IEC Activities Like posters, notices and classes	Irinjalakkuda Municipality	6 months	Installed boards along Karuvannur river side against littering waste and animal bath. Board installation process is going on in various places of municipal area. We used tp conduct surveys, distributed notices to all the houses near to the riverside.	Installed boards along Karuvannur river side against littering waste and animal bath. Board installation process is going on in various places of municipal area. We used tp conduct surveys, distributed notices to all the houses near to the riverside.	Installed boards along Karuvannur river side against littering waste and animal bath. Board installation process is going on in various places of municipal area. We used tp conduct surveys, distributed notices to all the houses near to the riverside.		
Monitoring								

A(a)(iv)	River water quality monitoring	KSPCB	Ongoing; monthly frequency	Monitoring is going on November monthly basis	Monitoring is going on December monthly basis	Monitoring is going on monthly basis		
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Going on November monthly basis.	Going on December monthly basis.	Going on monthly basis		
Long Term Plan								
A(b)	Sewage treatment facilities to all house holds	Vallachira Grama Panachayat	1 yr	Nil	Nil	nil	100	0
A(b)	Construction of FSTP and STP	Irinjalakkuda Municipality	2 years	Constructio n of STP plant at General Hospital, Irinjalakuda – DPR approved by Suchitwa Mission	Constructi on of STP plant at General Hospital, Irinjalakud a – DPR approved by Suchitwa Mission	Constructio n of STP plant at General Hospital, Irinjalakuda – DPR approved by Suchitwa Mission		
C(ii)	Setting up of a modern crematorium at Mandarakkadavu, Arattupuzha	Vallachira Grama Panachayat	2 years	No Fund	No fund	No fund		100

C(ii)	Solid waste treatment facility	Vallachira Grama Panachayat	2 years		100%		Mini MCF	
C(ii)	Construction of Windrow composting plant	Irinjalakkuda Municipality	2 years	Windrow Compost plant having 4 ton capacity. Construction has been already completed. Presently it is functioning well and producing Bio manure for sale.	Windrow Compost plant having 4 ton capacity. Construction has been already completed. Presently it is functioning well and producing Bio manure for sale.	Windrow Compost plant having 4 ton capacity. Construction has been already completed. Presently it is functioning well and producing Bio manure for sale.		
E	Rejuvenation of Kanathodu	Irrigation Department	1 year	<p>ടി പ്രവൃത്തിയ്ക്കായി 10.00 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് Price 3.0 ൽ തയ്യാറാക്കി 15/09/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിന് സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിട്ടു .</p> <p>കൂടാതെ ടി പ്രവൃത്തി “Restoring polluted stretches of rivers based on NGT Orders” എന്ന ശീർഷകത്തിൽ ഉൾപ്പെടുത്തിക്കൊ ള്ള മുൻഗണനാ ലിസ്റ്റ് ഒരിക്കൽ കൂടി 17-02-2023 ന് ഇറിഗേഷൻ & അഡ്മിനിസ്ട്രേഷൻ ചീഫ് എഞ്ചിനീയർക്ക് സമർപ്പിച്ചിട്ടു .</p>				
E	Installation of CCTV for Surveillance to prevent the dumping of waste in to the river	Irinjalakkuda Municipality	2 years	Police Department installed	Police Department installed	Police Department installed		

				CCTV and currently functioning Near Karuvannur Bridge	CCTV and currently functioning Near Karuvannur Bridge	CCTV and currently functioning Near Karuvannur Bridge		
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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 December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% 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	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.		
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	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.		
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	-	-	-	-	-

ACTION PLAN BY GRAMPANCHAYATH

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
C	MANALIPUZHA RIVER PROTECTION -Jalaraksha Jeevaraksha - Manalipuzha conservation	Vallachira Grama Panchayath	1 year	Nil	Nil	Nil	1000m	500m
C	Setting up of Nursery for Bamboo seedlings in Kadalassery	MGNREGS	31.03.2020	TS SAN CTIO NED, BUT NOT PUBL IC PLAC	TS SANCTI ONED, BUT NOT PUBLIC PLACE	nil	25	75

				E				
C	Side protection of Manalippuzha with organic materials available locally	MGNREGS	31.03.2020	Nil	Nil	nil	25	75
C	Side Protection of Manalippuzha with Bamboo plants	MGNREGS	31.03.2020	Nil	Nil	nil	100	0
C	Deepening & Protecting Muttikkal Thodu by Spreading Geo Textiles	MGNREGS	31.03.2020	600 m	600 m	nil	100	0
C	Cluster 2-Kurumaly puzha sub river bed -Project document preparation	Puthukkad Panchayath	1 year	Documentation completed	Documentation completed		100	Documentation completed
C	Manalippuzha River Protection-Jala Raksha, Jeeva Raksha , Survey and Tree Plantation	Nenmenikkara Grama Panchayat	31.03.2020	3.5 km survey out of 7 k.m have been completed	3.5 km survey out of 7 k.m. have been completed and survey posts have	3.5 km survey out of 7 k.m. have been completed & survey posts have been fixed.	50 %	3.5 k.m. survey yet to be completed

				d and surv ey posts have been fixed .	been fixed.			
C	Manalipuzha River protection	MGNREGS	31.03.2020	3.5 km surv ey out of 7 k.m have been com plete d and surv ey posts have been fixed	3.5 km survey out of 7 k.m have been complet ed and survey posts have been fixed.	3.5 km survey out of 7 k.m. have been completed & survey posts have been fixed		As surve y did not compl ete

A(b)	Protection and reconstruction and protection of Paliyekkara Kayalathod	MGNREGS	31.03.2020	COMPLETED	COMPLETED	Completed	100 %	COMPLETED
A(b)	Reconstruction and protection of Paliyekkara Karama Thodu	MGNREGS	31.03.2020	COMPLETED	COMPLETED	Completed	100 %	COMPLETED

KARUVANUR

Date of sampling

08.02.2023

SL. NO	PARAMETER	UNIT	KT	MRK	KND	MDK	THR	KRV
1	PH		7.34	7.25	7.45	7.94	8.25	7.46
2	EC	µ/cm	48.69	56.89	81.66	108	48.16	48.45
3	BOD	mg/L	1.6	1.87	2.89	1.07	1.6	1.76
4	DO	mg/L	6.25	7.56	6.58	6.37	7.13	7.28
5	COD	mg/L	4	4	4	4	4	8
6	TC	CFU/100 ml	200	150	200	300	400	350
7	FC	CFU/100 ml	100	50	50	100	150	100
8	FSC	CFU/100 ml	NIL	NIL	NIL	NIL	NIL	NIL

KT - KANAKKAN KADAVU, KARUVANNUR

MRK - NEEROLI THODU

KND - KANATHODU, KARUVANNUR

MDK - MUTTIKKAL DAM, KARUVANNUR

THR- THIRUKUZH, KARUVANNUR

KRV - PAINKILIKAYAL THODU, KARUVANNUR

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 KECHERY, THRISSUR

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 KECHERY, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works complete d	Details of works remaining
WADAKKENCHERY RIVER -SHORT TERM MEASURES								
A(b)	Identification of illegal outlets from houses and shops/other establishments in town and imposing fine	Wadakkanchery Municipality, Ayyakali Urban Employment Guarantee Scheme & health squad	Completed	Polluting Sources & Illegal outlets were identified, notice issued as per Kerala Municipal Act and removed. Doing	Polluting Sources & Illegal outlets were identified, notice issued as per Kerala Municipal Act and removed. Doing	Completed		

				regular inspection	regular inspection.			
E	Installation of CCTV s on the bank of river in town	Wadakkanchery Municipality	31.03.2022		It has been informed that steps have been taken to obtain approval from the council to get funds for setting up CCTV		0%	Work not started due to scarcity of Municipal fund

C(ii)	Material recovery facility	Wadakkanchery Municipality	Completed					
C(ii)	Resource recovery facility	Wadakkanchery Municipality	Completed					
C(ii)	Renovation of existing biogas plant	Wadakkanchery Municipality	Completed					Presently functioning well
Monitoring								
A(a)(iv)	River water quality monitoring	KSPCB	Monthly Monitoring in progress	Analysis report for the month of December enclosed herewith	Analysis report for the month of January enclosed herewith	Analysis report for the month of February enclosed herewith		Continuing
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Ongoing	Ongoing	Ongoing		Continuing
Long Term Plan								
E	Identification and cleaning of polluted drains reaching wadakkancheri river	Irrigation Dept	30-03-2022	Estimate submitted for fund	Estimate submitted for FS.	ടി പ്രവൃത്തിയുടെ എസ്റ്റിമേറ്റ് സാമ്പത്തികാനുമതി		Estimate submitted for FS.

						മതി ക്കാ യി ജലഭേ സച നവും ഭരണ വും ചിപ് എ ത്തിന ിയർ ക്ക് അയ ച്ചിട്ടു . കൂടാ തെ ടി പ്രവൃ ത്തി “Res tori ng poll uted stre tche s of river s base		
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						<p>d on NGT Ord ers” എന്ന ശീർ ഷക ത്തി ൽ ഉൾ പ്പെ ത്തി യ കാ ള്ള മുൻ ഗണ നാ ലിസ് റ്റി ൽ കുടി 17 - 0 2- 20 23 ന് ഇനി ഗണ ൻ & അഡ് മിനി സ്ട്രേ ഷൻ ചീഫ് എ</p>		
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						ബിന റയർ ക്ക് നമർ പിച്ച് ട്.		
A (b)	Common STP	Wadakkanchery Municipality, Kerala Infrastructure Investment Fund Board	March 2022	Topographical survey completed . Site identified and report submitted before Hon. District Collector for getting land	Topogr aphical survey comple ted . Site identifi ed and report submitt ed before Hon. District Collect or for getting land.			Site for one STP identified. Applied for NOC from District Collector (Land is Puzha Puramboke and Irrigation Department Canal Puramboke)
C(iii)	Windrow composting at Kumbalangad yard	Wadakkanchery Municipality	March 2022	Construction of windrow compost plant work completed and	Construction of windrow compost plant work completed		90% work comple ted	Construction of windrow compost plant work completed and trial run

				trial run started				started
C(ii)	Modern slaughter House	Wadakkanchery Municipality, Kerala Infrastructure Investment Fund Board	March 2022	Lack of suitable site for the project	Lack of suitable site for the project			Lack of suitable site for the project
E	Forestation, desilting & deepening of Wadakkanchery river and fitting river side with coir geo net	Wadakkanchery Municipality	desilting deepening of Wadkanchery River 3 km in Municipal area completed 7655m ³ desilt removed	Fitting river side with Coir Geo Net. Awaiting Municipal Council Decision for fund allocation	Fitting river side with Coir Geo Net. Awaiting Municipal Council Decision for fund allocation	Fitting river side with Coir Geo Net. Awaiting Municipal Council Decision for fund allocation		Fitting river side with Coir Geo Net. Awaiting Municipal Council Decision for fund allocation

	Rain water harvesting	Wadakkanchery Municipality	Ongoing work					
	Ground water recharge	Wadakkanchery Municipality	Ongoing work					
	River survey	Wadakkanchery Municipality	Ongoing work					
	Regulating activities in flood plain zone, protection and management of flood plain zone	Wadakkanchery Municipality	30-03-2022	As part of the action plan prepared in relation to the revival of Kecheri River, the plastic wastes that have fallen into	As part of the action plan prepared in relation to the revival of Kecheri River, the plastic wastes that have fallen into the river			

				<p>the river have been included in the Job Guarantee Project and removed. 913741 rupees were spent in this work. Garbage that fell due to rain was removed</p>	<p>have been included in the Job Guarantee Project and removed. 913741 rupees were spent in this work. Garbage that fell due to rain was removed in many places.</p>			
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				ed in many places.				
	Greenery development Plantation plan. Plantation on both sides of the river, settling up biodiversity parks on flood plains by removing encroachment	Wadakkanchery Municipality	30-03-2022	Bambo o sapling s were plante d on both sides of the river throug h "Wada kanch erry riversi de affores tation" . 15597 6 rupees were spente	Bambo o sapling s were planted on both sides of the river throug h "Wada kanche rry riversid e afforest ation". 155976 rupees were spente d for this work.			

				d for this work. The garbage in the flood-prone areas has been removed and the flow has been facilitated.	The garbage in the flood-prone areas has been removed and the flow has been facilitated.			
Short term plan (Kecheri river)								
E	Installation of CCTV in different locations along river side	PWD Electronic division		Progress has not been reported	Progress has not been reported			Including 2023-24 pr

								oject
E	Fixing Boards	Choondal Grama Panchayat	Completed					Board fixed (including 2021-22 project)
A(a)(iv)	Surveillance to prevent flow of sewage /effluent to river	Choondal Grama Panchayat	Ongoing					Action taken
A(b)	Stoppage of effluent from residential apartment (Shajan's flat) and pig farm into the river	Choondal Grama Panchayat	Action taken					Stop Memo Had been Given to Concerned persons
Long Term Plan (Kecheri river)								
E	Side protection by fixing coir geo nets	Choondal Grama Panchayat	Not started	Not started	Primary action started			
E	Survey process of Kechery river portion belong to Choondal Grama Panchayat to mark the boundary and encroachment	Revenue Department	completed	completed	completed			
E	Laying of survey station	Choondal Grama Panchayat	completed	completed	Completed			

E	Digital mapping and seminar on pollution control	Forestry College, Vellanikkara	31/05/2020	Not started	completed			
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IRRIGATION DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
1	Issues relating to E-flow, maintaining minimum environmental flow of river(by having watershed management provisions)	Irrigation Department	30-03-2022	കേച്ചേരി പുഴയുടെ പാരിസ്ഥിതിക നീരൊഴുക്ക് പഠനം (E-flow) പൂർത്തിയാക്കി റിപ്പോർട്ട് 18/05/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും, തിരുവനന്തപുരത്തിന് സമർപ്പിച്ചിട്ടു .	കേച്ചേരി പുഴയുടെ പാരിസ്ഥിതിക നീരൊഴുക്ക് പഠനം (E-flow) പൂർത്തിയാക്കി റിപ്പോർട്ട് 18/05/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും, തിരുവനന്തപുരത്തിന് സമർപ്പിച്ചിട്ടു .	കേച്ചേരി പുഴയുടെ പാരിസ്ഥിതിക നീരൊഴുക്ക് പഠനം (E-flow) പൂർത്തിയാക്കി റിപ്പോർട്ട് 18/05/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും, തിരുവനന്തപുരത്തിന് സമർപ്പിച്ചിട്ടു .		

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 December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% 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	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt		
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	Water level data collected from GWD observation wells	Water level data collected from GWD observation wells	Water level data collected from GWD observation wells		
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices			Awareness class on groundwater resource		

							conservation and management conducted for the elected representatives, officials, public and students in Erumapetty GP..		
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No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
C	Punarjani Kecherri river	Choondal Grama Panchayat	Completed					Flood Wastes from the river has been removed and made water flow easily which reduced chances of flood .

C(ii)	Surveying of river side, eviction and planting trees	Choondal Grama Panchayat						Survey completed
C	Side Protection	Choondal Grama Panchayat	Completed					
C	Bio fencing related to river bank protection – water and soil Conservation project ward 3,4,7	MGNRES	Not started					

KECHERI RIVER				
Date of sampling -15.02.2023				
SL. NO	PARAMETER	UNIT	VAD1	VAD2
1	pH	-	8.25	7.85
2	Electrical Conductivity	µs/cm	158.8	251.6
3	BOD	mg/L	2.8	2.1
4	DO	mg/L	6.34	6.21
5	COD	mg/L	8	12
6	TC	CFU/100ml	400	450
7	F C	CFU/100ml	200	250
8	FSC	CFU/100ml	NIL	NIL
VAD1 - WADAKKANCHERY PUZHA (WADAKKANCHERY BRIDGE), KECHERY				
VAD2 - WADAKKANCHERY PUZHA(CHALIPPADAM ROAD), KECHERY				

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 PUZHAKKAL, THRISSUR

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	31.12.2022	In progress
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.12.2022	In progress
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		STP completed initial PCB NOC obtained.
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		1. 360 KLD Sewage Treatment Plant for General Hospital, Thrissur Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated 01/01/2018 for Rs. 3.52Cr. TS accorded for Rs. 3.52Cr from the technical committee constituted for AMRUT sewerage projects. Work has

		<p>been awarded to M/s Green Eco Water Systems, Hyderabad. Agreement executed on 14/10/2020. Consent to establish obtained from PCB on 17/12/2020. Even after conducting several meetings with the contractor, contractor has not started the work. Hon.Council dated 29.01.2022 decided to terminate the contract under risk and cost of the contractor and also to black list the contractor. It has been also decided by the council to invite limited tender from accredited agencies as per rules. Now the schedule of rate changed from approved estimate. Corporation council dated 31.08.2022 approved the recasted estimate amounting to Rs. 4.50 cr. Revised AS obtained for Rs. 4.5 cr. vide GO(Rt) No. 3222/22/LSGD dtd:</p>
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		<p>27.12.2022. Revised technical sanction obtained for Rs. 4.50 Cr. on 18.12.2022 open technology tender invited on 21.12.2022.</p> <p>100KLD Septage Treatment Plant at Ramavarmapuram,Thrissur</p> <p>Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated 01/01/2018 for Rs. 3.50Cr.TS accorded for Rs. 3.10 Cr from the technical committee constituted for AMRUT sewerage projects. Selection memo has been issued to M/s Green Eco Water Systems, Hyderabad. Hon. Council has decided to get the consent to establish from PCB first and then to proceed for further steps of executing agreement. Consent to establish obtained from PCB on 28/05/2021.Contractors has not executed the agreement even after issuing several notices in this regard. Hon.Council dated 29.01.2022</p>
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			<p>decided to terminate the contract under risk and cost of the contractor and also to black list the contractor. It has been also decided by the council to invite limited tender from accredited agencies as per rules. Now the schedule of rate changed from approved estimate. Revised technical sanction for the recast estimate amounting to Rs. 3.5 Cr. obtained on 18.12.2022. Open technology tender invited on 21.12.2022.</p>
	<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>		
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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 PUZHAKKAL, KERALA
SHORT TERM MEASURES

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
A(b)	Identification of illegal outlets into the Panchikkal thodu and subsidiary drains	Thrissur Corporation	3 months		0	0	87%	
A(b)	Stoppage of discharge of waste water from the surrounding houses and institutions to the drains which leads to Panchikkal thodu	Thrissur Corporation	6 months	3	5	15	89.5	0
A(b)	Ensure adequate treatment facility is provided for waste water and solid waste generated from Sri Dharma Sastha temple situated on the banks of the river	Adat Grama Panchayat						Instructions regarding in compliance with SWM rules 2016 has delivered to

								temple authority. Imposed a fine of 10000 rupees for improper waste water treatment.
E	Desilting of Karakattuchal	Irrigation Department	4 months	ടി പ്രവൃത്തിക്കായി 10 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് പ്രൈസ് 3 യിൽ തയ്യാറാക്കി പ്രദേശസൗകര്യങ്ങൾ സാമ്പത്തികാനുമതി	ടി പ്രവൃത്തിക്കായി 10.00 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് ജൂലൈ 3.0 ൽ തയ്യാറാക്കി 15/09/2022	ടി പ്രവൃത്തിയ്ക്കായി 10.00 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് Price 3.0 ൽ തയ്യാറാക്കി 15/09/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിന് സാമ്പത്തികാനുമതിയ്ക്കായി		

			<p>തി ലഭിക്കു ന്നതിനാ യി സുപ്ര ഷ് എഞ്ചിനീ യർ, മൈനർ ഇറിഗേഷ ൻ സെൻട്ര ൽ സർക്കി ൾ എറണാ കുളത്തി നും, സുപ്ര ഷ് എഞ്ചിനീ യർ, ഇറിഗേഷ ൻ സെൻട്ര ൽ സർക്കി ൾ, ത്യജ്ജരീന ും സമർപ്പി ച്ചിട്ടു പ്രവൃത്തി നടപ്പിലാ</p>	<p>ന് ചീഫ് എഞ്ചി നീയർ, ജല സചന വും ഭരണ വും തിരുവ നന്തപ റ്റത്തി ന് സാമ്പ ത്തികാ നുമതി യ്ക്കാ യി സമർ പ്പിച്ചിട്ട ു</p>	<p>സമർപ്പിച്ചിട്ടു് .</p>		
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				കുറന്നതി ന് ഫ ലഭ്യമായി ദില്ല.				
E	Desilting of Panchikkal thodu	Irrigation Department	4 month s	Work completed	Work completed	Work completed	100	
E	Desilting of Kurinjikkal thuruth	Irrigation Department	4 month s		Estimate submitted for fund			
E	Desilting of Muppuzha(Cleaning and deepening of feeder canal from railway bridge near Vanchikulam to diversion of Karanchira and Enamakkal feeder canal near Nedupuzhakadavu)	Irrigation Department	4 month s	Work compl eted	100% work com plete d	100% work completed	1 0 0	

E	Side protection, desilting and deepening work of vanchikulam thodu at Poothole of length about 40 km (work in progress).	Thrissur Corporation	3 months	550 meter side protection wall completed. 642 meter protection wall proposed and work in progress.	660 meter side protection wall completed. 460 meter protection wall proposed and work in progress.	995 meter side protection wall completed. 25 meter protection wall proposed and work in progress. 130 Nos. Works are proposed and work not started.		
E	Annual desilting, cleaning of main drains and canals within the corporation area (work in progress).	Thrissur Corporation	3 months	195 Nos. Works are proposed for thodu	195 Nos. Works are proposed for	195 Nos. Works are proposed and thodu cleaning works are completed.		

				cleaning works are completed	thodu cleaning works are completed			
Monitoring								
A(a)(iv)	River water quality monitoring	KSPCB	Ongoing; monthly frequency	Analysis report for the month of October submitted	Analysis report for the month of November enclosed herewith			Continuing
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Ongoing	Ongoing			Continuing
Long Term Plan								
A(b)	Ensuring installation of treatment facilities for at least 50% of the identified establishments	Thrissur Corporation	18 months					
A(b)	100% completion of treatment facilities for targeted institutions/ buildings	Thrissur Corporation	24 months					

A(b)	Construction of a drain 40 km with covering slabs to avoid the direct disposal of waste in to the open drain	Thrissur Corporation	24 months	35.05 KM of drain work and 5.80 KM of covering slabs completed and More works proposed under annual plan and 48 numbers of work completed.	35.30 KM of drain work and 5.85 KM of covering slabs completed and More works proposed under annual plan 2022-23 and 46 numbers of work completed	37.10 KM of drain work and 6.70 KM of covering slabs completed and More works proposed under annual plan 2022-23.		
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A(b)	Construction of a drain 9000 m with covering slabs to avoid the direct disposal of waste in to the open drain	Thrissur Corporation	24 months	35.30 KM of drain work and 5.85 KM of covering slabs completed and More works proposed under annual	37.10 KM of drain work and 6.70 KM of covering slabs completed and More works proposed under annual plan 2022-23.	38 KM of drain work and 6.85 KM of covering slabs completed and More works proposed under annual plan 2022-23.		

				al plan 2022 -23 and 46 num bers of work com plete d				
A(b)	Construction of sewage treatment plant of 100 KLD and 360 KLD at Ramavarmapura m and District Hospital, Thrissur in Amrut Project	Thrissur Corporation	24 months			1) 100KLD Septage Treatment Plant at Ramavarmapuram, Thrissur Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated 01/01/2018 for Rs. 3.50Cr.TS accorded for Rs. 3.10 Cr from the technical committee constituted for AMRUT sewerage projects. Selection memo has been issued to M/s		

						<p>Green Eco Water Systems, Hyderabad. Hon. Council has decided to get the consent to establish from PCB first and then to proceed for further steps of executing agreement. Consent to establish obtained from PCB on 28/05/2021. Contractor has not executed the agreement even after issuing several notices in this regard. Hon. Council dated 29.01.2022 decided to terminate the contract under risk and cost of the contractor and also to black list the contractor. It has been also decided by the council to invite limited tender from accredited agencies as per rules. Now the schedule of rate changed from approved estimate. Recasted estimate amounting to Rs. 3.50</p>
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					<p>cr submitted to CE, LSGD for revised Technical sanction.</p> <p>2. 360 KLD Sewage Treatment Plant for General Hospital, Thrissur</p> <p>Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated 01/01/2018 for Rs. 3.52Cr.TS accorded for Rs. 3.52Cr from the technical committee constituted for AMRUT</p>
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					<p>sewerage projects. Work has been awarded to M/s Green Eco Water Systems, Hyderabad. Agreement executed on 14/10/2020. Consent to establish obtained from PCB on 17/12/2020. Even after conducting several meetings with the contractor, contractor has not started the work. Hon.Council dated 29.01.2022 decided to terminate the contract under risk and cost of the contractor and also to black list the contractor. It has been also decided by the council to invite limited</p>
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					<p>tender from accredited agencies as per rules. Now the schedule of rate changed from approved estimate. Corporation Council dtd. 31.08.2022 approved the recasted estimate amounting to Rs. 4.50 cr and the same has been submitted to CE, LSGD for revised technical sanction. SLTC dtd. 22.09.2022 recommended the revision of AS from 3.52 cr. to 4.50 cr. and SHPSC dtd. 27.10.2022 recommended for revised admistrative sanction.</p>
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A(b)	Constructing decentralised sewerage scheme at Vachikulam covering most populated 7 divisions of Thrissur Corporation and more than 10000 houses & institutions	Thrissur Corporation	24 months	Revision estimate as per structural vetting submitted for revised TS at Chief Engineers Office TVM.	Revision estimate as per structural vetting submitted for revised TS at Chief Engineers Office TVM	2.50 MLD : Corporation Council decided to cancel the project in AMR UT -1 and proposed the same in AMR UT 2.0. vid Coun		2.50 MLD : Vide GO(Rt) No. 1926 /2022/LS GD dtd. 08.08.22, the Government constituted a committee consisting of Princ
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						<p>cil resol ution 78- A1 dtd. 08.1 2.20 22. 26th SLTC of AMR UT-1 held on 20.1 2.20 22 and 24.1 2.20 22 appr oved the same and reco</p>	<p>ipal Direc tor, LSGD , Distri ct Colle ctor, Thris sur and missi on direc tor, AMR UT to reass ess the natu re of the prop osed land for</p>
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						<p>mme nded to SHPS C. Agen da for the same place d in 32nd SHPS C of AMR UT – 1 dtd. 23.0 1.20 23. Minu tes awai ted. As per the</p>		<p>the 2.50 MLD STP site insp ectio n and meet ing of the com mitt ee was held on 20.0 8.20 22. The detai ls alon g with the</p>
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						meeting decision on 21.12.2022 Corporation submitted the application for land conversion in front of LLM C.		Principal Director, LSGD's note on the matter were submitted to the Hon'ble Chief Secretary's office on 13.09.2022. Agriculture
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								e depa rtme nt GO(R t) No. 855/ 2022 /AGR /dtd. 27.0 9.20 22 rejec ted the appli catio n dtd: 25.0 9.20 22 of Secr etary , Thris sur
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								Corporation for conversion of land. Revenue Department Letter no. REV-P1/132/2022-REV dtd. 27.09.2022 rejected the application
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								n of Hon. May or for conv ersio n of land. But as per the lette r no. 115/ NCA 2/20 21/A GRI dtd. 18.1 0.20 22 the Secr etary , Agric
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								ulture e Depa rtme nt prop osed to sub mit the lan conv ersio n matt er befo re the Secr etary (Envi ron ment depa rtme nt) for
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								furth er actio n. Revis ed tech nical sanct ion for 64.2 0 cr. obtai ned on 25.1 0.20 22.
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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 December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% 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	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.		
2	B(ii)	Ground water recharging / rain water harvesting	Proposal for two artificial recharge schemes(dug well recharge) submitted for technical sanction. Two artificial recharge schemes tendered.	Three sites selected for the implementation of artificial recharge schemes.	Artificial recharge scheme completed at Civil station compound , Ayyanthole		
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.		
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	al-shakthi- Abhiyan central team visited dug well recharge		Awareness class on		

			scheme @ Poomala PHC & coir geo textile work at Kundanthode ,Avanur GP.		groundwater resource conservation and management conducted for the elected representatives , officials, public and students in Avanur GP.		
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ACTION PLAN BY GRAMAPANCHAYATH

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
C	Removing weeds in Puzhakkal River	Adat Gramapanchayath	31.03.2020				100 %	com plet ed
C(ii)	Removing waste from all wards through kudumbasree	KUDUMBASREE	31.03.2020				100 %	com plet ed
C	water conservation projects-- tree plantation under GA in 18 wards 100000/ each	MGNREGS	31.03.2020				79%	21
C	ward 14 pachthurthu construction	Haritha Keralam Mission	31.03.2020				100 %	com plet ed
C	side protection to water bodies coir geo textile	MGNREGS	31.03.2020				80%	20

PUZHAKKAL						
Date of sampling – 15.02.2023						
SL. NO	PARAMETER	UNIT	SBA	KTH	PTU	MP
1	PH		8.09	7.58	7.76	7.44
2	EC	µs/cm	171.6	255.4	124.4	158.8
3	BOD	mg/L	1.23	0.59	1.28	1.33
4	DO	mg/L	7.56	6.58	7.25	6.89
5	COD	mg/L	8	8	4	4
6	TC	CFU/100ml	400	600	500	500
7	F C	CFU/100ml	200	400	100	250
8	FSC	CFU/100ml	NIL	NIL	NIL	NIL
SBA - NEAR SOBHA CITY, KIZHAKKUMMURI ROAD , PUZHAKKAL KTH - KURINJAKKAL THODU, PUZHAKKAL PTU - PANCHIKKAL THODU, PUZHAKKAL MP - MUPPUZHA, PUZHAKAL						

**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 		

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>Last updated report submitted was on February 21 ,2023</p> <p>(I) Identified 3 drains on 10/12/2018 at the hajiya pally stretch.</p> <p>(ii) Malappuram municipality – 30 KLD. Consent application is submitted for the revamping activities . 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. Further steps doing for TS&E-Tender</p> <p>(v) Attached Analysis Report for the month of February 2023. 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</p>
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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>where recyclable materials are handed over to authorised recyclers and rejects, to KEIL through Clean Kerala Company.</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) NA</p>
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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	completed	completed
1.7	Identification of illegal outlets into storm water drains and fine imposed on such units.	Malappuram Municipality	ongoing	completed	completed	completed	completed	completed
1.8	Biodegradable waste Bio gas plants- 186 Bio bins – 908 Bucket compost – 1445 Tumburmuzhi Aerobic bins - 4 Submitted proposal for 8000 ring compost systems	Malappuram Municipality	In progress	In progress	In progress	In progress	completed	Completed
1.9	Non biodegradable waste MCF & Plastic shredding and Bailing Echo Kiosk	Malappuram Municipality	Completed March 2020	Completed In progress	Completed In progress	Completed 40 mini MCF project submitted to DPC	Completed In progress	Completed Waiting for approval

1.10	Identification and monitoring of illegal activities/ CC TV Network installation	Malappuram Municipality	Ongoing	In progress	In progress	In progress	In progress	In progress
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2.KERALA STATE POLLUTION CONTROL BOARD

No.	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works	Details of works remaining
2.1	River water quality Monitoring- Thirurangadi, Hattijarpally National Water Quality Programme(NWMP)	KSPCB	Ongoing; Monthly frequency	100%			Complete	

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	100%					
2.3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc. in Malappuram Municipalarea	KSPCB	Ongoing; Interval; Red – 1 month, Orange- 3 months, Green- 6 months	100%					
3.GROUND WATER DEPARTMENT									
No.	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining	

3.1.	<p>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, 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>	Ground water Department		<p>No action included in the approved action plan to be performed by Ground Water Department</p>	<p>No action included in the approved action plan to be performed by Ground Water Department</p>	<p>No action included in the approved action plan to be performed by Ground Water Department</p>		
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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 of roof top rain water recharging through recharge pit schemes in Vengarablock.)</p>	Ground water Department		<p>No action included in the approved action plan to be performed by Ground Water Department</p>				
3.3	<p>Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or handpumps</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		<p>No action included in the approved action plan to be performed by Ground Water Department</p>				

3.4	For regulating use of ground water for irrigation purpose, adopting good irrigation practices (Earlier status : The total irrigation draft in the area ranges from 979.683 - 1857.49 ha.m.)	Ground water Department		No action included in the approved action plan to be performed by Ground Water Department				
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**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		
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> <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 Infra structure, Gap Analysis, Proposed along with completion timeline 		<p>Last updated report submitted was on February 21, 2023</p> <ul style="list-style-type: none"> (i) Identified 17 drains out of which 9 were additionally identified on 11.07.2019 (ii) <u>Tirur Fish Market STP</u>– 45 KLD- Not working condition. . Accordingly conducted site inspection by Board on 19.10.2022 to evaluate progress, No progress found. Since about 3 years repeated directions are being issued for time bound renovation of fish market STP. A project implementation handed over to IRTC. An estimate amount 4433000 received. The work will be awarded after getting TS from State Suchitwa Mission. (ii) <u>Tirur municipal Bus Stand STP</u>-50 KLD –Present status- All equipments are installed and three phase electrical connection obtained. Sewer line work and road work under progressing. Trial run will be conducted at the end of this month iii) NIL
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<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>(iv) De centralised treatment facilities, Disposal using sanitary landfills, composting operations, MRF, MCF etc. Slaughter house- completed civil work. Electrical installation works started.</p> <p>(v) Attached as Annexure II-Analysis report during the month of February 2023</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>
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- (x) Rain water harvesting,
- (xi) Maintaining minimum Environmental flow of river
- (xii) Plantation on both sides of the river
- (xiii) Setting up biodiversity parks on flood plains by removing encroachment

(xiii) Reported that encroachment survey is completed and now the process of laying survey stones is in progress.

ACTION PLAN FOR RIVER TIRUR, KERALA

1. IRRIGATION DEPARTMENT								
1.								
No.	Activity	Implementing agency	Time line	Progress during month of December 2022	Progress during month of January 2023	Progress during month of February 2023	% works completed	Details of works remaining
1.1.1	Strengthening the right side bund of Tirur- Ponnani Puzha at Porur, ward no. I Tirur Municipality	Irrigation Department	6 Months		No progress	Nil		These two works are combined and estimate submitted for an amount of Rs 28.6Lakhs. No sanctions are approved till date..(price id-2021/4249/IA). Presently the estimate prepared in Price new Version and the estimate amounts to Rs 30.10 Lakhs and submitted in the Priority list.(GENERAL-National Green Tribunal-Rejuvenation of polluted rivers-

							Tirur-Ponnanippuzha- General Civi work,Price Id :IRR/1A/EST/4907/ 2022_5_1_1).	
1.1. 2	Cleaning and development of old Ponnani Thodu at Thazhepalam	Irrigation Department	6 Months			Nil		
1.1. 3	Repair and Rehabilitation of Koottayi Regulator cum Bridge across Tirur Ponnani Puzha in Mangalam Grama Panchayath in Malappuram Dist	Irrigation Department	18 Months	Civil work 0% and mechanica l works 10%	Civil work 5% Mechani cal works 90%	No progress	8%	Completion of Ring bund,Bailing out of water,Apron Extension and repair ,Cut off wall formation. Installation of new shutters with hoisting arrangements and related mechanical works.
2.TIRUR MUNICIPALITY								
No.	Activity	Implementing agency	Time line	Progress during month of December 2022	Progress during month of January 2023	Progress during month of February2023	% works completed	Details of works remaining

2.1	Provide septic tank for nearest houses	Tirur Municipality	Dec 2019	completed	completed	completed	100	NIL
2.2	Establishment of Solid waste Treatment Plant Thumboor Muzhi Model Aerobic Bin	Tirur Municipality	March 2020	completed	completed	completed	100	NIL
2.3	Establishment of Non Degradable waste treatment Plant, Resource Recovery facility, Plastic Shredding Unit Segregation shed	Tirur Municipality	March 2020	completed	completed	Completed	100	NIL
2.4	Slaughter House	Tirur Municipality	December 2020	Civil work and mechanical work on going	In progress	Civil work and mechanical work on going	90%	In progress
2.5	Fencing on Bridgeside Thalakkadathur Bridge	Tirur Municipality	December 2020	completed	completed	completed	100	NIL
2.6	Installation of CCTV Camera near the river Bank Thalakkadathur Bridge	Tirur Municipality	May 2020	Completed	completed	completed	100	NIL
2.7	Planting of Bamboo seedlings on the river bank (Thazhepalam)	Tirur Municipality	June 2020	Completed	completed	completed	100	NIL

2.8	Renovation of Effluent treatment plant at fish Market. AMC Granted ETP with Aerobic System	Tirur Municipality	June 2019	Aproject implementation handed over to IRTC.An estimate amount 45lakh 33 thousand received.The work will be awarded after getting TS from State Suchitwa Mission.	Technical sanction has not been received from suchitwa mission	No progress. As State suchitwa mission does not give sanction for new DPR of the STP plant. Hence join meeting is proposed for preparing the technical report of the status of existing STP units with IRTC members.	No progress	(See minutes)
2.9	Setting up of STP at Private Bus stand	Tirur Municipality	June 2020	All the equipments installed and three phase electric connection obtained.Sewer line work and road work under progress.Trial run will be conducted in the end of this month.	In progress. Trail run will be conducted 31 th of this month	In progress	95%	In progress (See minutes)

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	Completed
2.11	Identification of illegal outlets in to storm water drain sand fine shall be imposed on such units	Tirur Municipality						Fine imposing mechanism going on NIL

3.KERALA STATE POLLUTION CONTROL BOARD

No.	Activity	Implementing agency	Time line	Progress in the month of Decembe2022	Progress in the month of January 2023	Progress in the month of February2023	% works completed	Details of works remaining
3.1	River water quality Monitoring- Thalakadathur National Water Quality Programme(NWMP)	KSPCB	Ongoing; Monthly frequency					Ongoing monthly frequency
3.2	River water quality Monitoring State Water monitoring programme (SWMP)	KSPCB	Ongoing; Seasonal					Ongoing seasonal

3.3	Inspection and effluent quality monitoring of the flats, Industrial units, Service stations, hospitals, auditorium, hotels in Municipal area		Ongoing; Interval; Red - 1 months				Ongoing
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4. ACTION PLAN BY VARIOUS GRAMA PANCHAYATHS- THALAKKAD, VETTOM, MANGALAM, CHERIAMUNDAM

No.	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
4.1	Protection of Tirur Ponnani River	Thalakkad Grama Panchayath handover fund to District Panchayath	31.03.2020	Completed	Completed	Completed	100	NIL
4.2	Installation of CC TV camera on YetterikadavuKunjulikkadavuMangattiri Bridge, Aikkanchiri Bridge, Paravanna Bridge	Vettom - KS SECURITY SYSTEM	Spill over due to lack of fund	completed	completed	completed	100	NIL
4.3	Installation of CC TV camera	Mangalam Grama Panchayath Win Plus Agency, Kondotty	Completed	completed	completed	completed	100	NIL
4.4	Haritha KeralamThirur-Ponnanipuzha protection	Mangalam Grama Panchayath Nirmithi Kendra, Kozhikode	31.03.2020	No progress	No progress	No progress	70% protection of wall completed	Nearing completion Landscaping work remainig as per estimate
4.5	Fencing on bridge side Thalakkadathur	Cheriyamundam Grama Panchayath	March 2020	completed	completed	completed	100	NIL

5.GROUND WATER DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
5.1.	<p>Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks</p> <p>(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%)</p>	<p>Ground water Department</p> <p>Therefore, to regulate ground water resources in this area, no permission is granted for packaged drinking water industries or any other water induced industries</p>	NA	No permits issued	No permits issued	No permits issued	NA	NA
5.2	<p>Ground water recharging / rain water harvesting</p> <p>(Earlier status: The average pre -monsoon groundwater level ranges from 6.14mbgl - 8.49 mbgl.)</p>	NA	NA		NO ACTION INCLUDED UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NA	NA
5.3	<p>Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps</p>	<p>Ground water Department</p> <p>No observation well along the river stretches)</p>			NA		NA	NA

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.)	Ground water Department No Data Available. No Updation after GEC 2017. (Report not published)			NO ACTION INCLUDED UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NA	NA
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6.REVENUE DEPARTMENT

No	Activity	Implementing agency	Timeline	Progress December 2022	Progress January 2023	Progress February 2023	% works completed	Details of works remaining
6.1	Survey of boundaries of river side	Revenue department		Completed	Completed	Completed	100%	Encroachment survey completed.

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 MOGRAL, 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 MOGRAL, KASARAGOD DISTRICT, KERALA
MONTHLY PROGRESS REPORT FOR THE MONTH OF FEBRUARY 2023

RIVER MOGRAL, KASARGOD

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
C	Material collection facility	Mogral Puthur Grama Panchayath	March 2020	Completed	Completed	Report not submitted	100 %	NA
C	Waste collection including vehicle hire charge to collect waste.	Mogral Puthur Grama Panchayath	March 2020	NIL	NIL	Report not submitted	0 %	
E	Installation of camera	Mogral Puthur Grama Panchayath	June 2020	NA	NA	Report not submitted	0%	
A (b)	Drainage Cleaning at Ballor, Kottakkunnu, Majal, Neerchal, Blarkode, Goovathadka, Pernadka, Shankra, Eriyal, KK Puram Arjal Vishnu Temple	Mogral Puthur Grama Panchayath	2019	Completed	Completed	Report not submitted	100 %	NA

C(ii)	Haritha Karmasena Activity/ Collecting Non Bio degradable materials including Plastics from households	Mogral Puthur Grama Panchayath	On-going	Started	Started	Report not submitted	75%	
C(iii)	Bamboo Capital Bamboo Planting- aiming water conservation and raising water levels thus preventing solid erosion, waste dumping in public places	Mogral Puthur Grama Panchayath	On-going	Completed	Completed	Report not submitted	100 %	NA
E	River cleaning	Mogral Puthur Grama Panchayath	2019	Completed	Completed	Report not submitted	100 %	NA
C(iii)	Bamboo Plantation of Madhur	Madhur grama Panchayath	2019	18500 being maintained by NREGA	18500 being maintained by NREGA	Report not submitted	100 %	NIL
C(ii)	Viability Gap Funding for Haritha Karmasena	Madhur grama Panchayath	2019	Total Amount Rs 250000/- Expenditure RS 75000/-	Total Amount Rs 250000/- Expenditure RS 75000	Report not submitted	72.9%	NIL
C(ii)	Material recovery facility centre	Madhur grama	2019	Completed	Completed	Report not	100%	Completed

		Panchayath				submitted		
C(ii)	Construction of Plastic Shredding Machine building	Madhur grama Panchayath	2019	Completed	Completed	Report not submitted	100 %	Completed
C(ii)	Purchase of Plastic shredding machine	Madhur grama Panchayath	2019	-----	-----	Report not submitted	-	Yet to float tender
C	Tying of net on both sides of the bridge	Irrigation Department	2019-2020	DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. You are hereby informed that as the proposed NH upgrade works are going on and these works are to be carried out along with the bridges, which are part of the NH, it would not be desirable to carry to these works now. it is hereby notified	DPR submitted to Chief Engineer (Price ID:2019/10715/IA) for approval.	Work still under process.

						that NH department itself undertakes and executes the said works in connection with the upgradation of NH 66		
A(a)	Water quality monitoring	KSPCB	Being done regularly					

Sd/-

Environmental Engineer

MOGRAL RIVER - MOGRAL BRIDGE (Existing NWMP Station)			
Sampling Point		Mogral Bridge	
NWMP Station Code		2304	
Latitude		12°33'36.5"N	
Longitude		74°57'21.0"E	
Date of Sampling		14.02.2023	
Nature and flow of the river		Medium flow, water level decreased	
Sl.No	Parameters	Unit	Mogral Bridge
1	Temperature	°C	29
2	pH	-	7.35
3	Conductivity	µmhos/cm	34630
4	Turbidity	NTU	0.8
5	BOD	mg/l	1.5
6	Dissolved Oxygen	mg/l	5.3
7	Total Coliforms	cfu/100ml	680
8	Feacal Coliforms	cfu/100ml	110
9	Feacal Streptococcus	cfu/100ml	80
10	Chlorides	mg/l	12000
11	Total Alkalinity	mg/l	118
12	Total Hardness	mg/l	5300
13	Calcium Hardness	mg/l	4900
14	Magnesium Hardness	mg/l	400
15	Calcium	mg/l	1960
16	Magnesium	mg/l	97.2
17	Total Dissolved Solids	mg/l	21400
18	Sodium	mg/l	6210
19	Potassium	mg/l	154

MOGRAL RIVER - PUZHAKKARA (Proposed NWMP Station)			
Sampling Point		Puzhakkara	
Distance from existing NWMP Station		3.25 km	
Latitude		12°33'58.1"N	
Longitude		74°58'43.7"E	
Date of Sampling		14.02.2023	
Nature and flow of the river		Water level decreased, Medium flow	
Sl.No	Parameters	Unit	Puzhakkara
1	Temperature	°C	29
2	pH	-	7.49
3	Conductivity	µmhos/cm	3699
4	Turbidity	NTU	1
5	BOD	mg/l	2.0
6	Dissolved Oxygen	mg/l	6.8
7	Total Coliforms	cfu/100ml	540
8	Feacal Coliforms	cfu/100ml	164
9	Feacal Streptococcus	cfu/100ml	70
10	Chlorides	mg/l	1100
11	Total Alkalinity	mg/l	55
12	Total Hardness	mg/l	710
13	Calcium Hardness	mg/l	580
14	Magnesium Hardness	mg/l	130
15	Calcium	mg/l	232
16	Magnesium	mg/l	31.59
17	Total Dissolved Solids	mg/l	2150
18	Sodium	mg/l	570
19	Potassium	mg/l	31

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 waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</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>		
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ACTION PLAN FOR RIVER UPPALA, KASARAGOD DISTRICT, KERALA
MONTHLY PROGRESS REPORT FOR THE MONTH OF FEBRUARY 2023
RIVER UPPALA, KASARGOD

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December2022	Progress in the month of January 2023	Progress in the month of February 2023	% works completed	Details of works remaining
C(ii)	Material collection facility. Operation	Mangalpady Grama Panchayath	2019	Not submitted the report	Not submitted the report	NIL	50%	After monsoon work will complete
C	Waste management including purchase of vehicle to collect waste.	Mangalpady Grama Panchayath/ Green Space Private company	2019- 2020	Not submitted the report	Not submitted the report	Project taken for promoting Haritha karma sena activities	-	New projects will plan for the protection of river Uppala.
E	Installation of camera	Mangalpady Grama Panchayath	March 2020	Not submitted the report	Not submitted the report	Project got wetting Survey done by Keltron, Work order sent to Keltron		Project will be completed within 31.03.2023
C	Electrification of material collection facility	Manjeshwaram Grama Panchayat	2019-2020	Electrified	Not submitted the report	Electrified	100%	Completed
C	Transportation of collected waste	Manjeshwaram Grama Panchayat	March 2020	948 kg plastic waste transported	Not submitted the report	waste transported		Work yet to be completed.

E	Installation of camera	Manjeshwaram Grama Panchayat	March 2020	New Project formulated to Install 25 CC Cameras, project forwarded to PWD Electrical Wing, permission not yet received	Not submitted the report	New Project formulated to Install 6 CC Cameras, project amount deposited to Keltron and work started by Keltron		Tendered
C	Tying of net on both sides of the bridge	Irrigation Department	2019-2020	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval. You are here by informed that as the proposed NH upgrade works are going on and these works are to be carried out along with the bridges, which are part of the NH, it would not be desirable to carry to these works now. it is hereby notified that NH department itself undertakes and executes the said works in connection with the upgradation of		Work still under process.

						NH 66		
E	Continuous vigil on waste dumping on roads	Police Department	100% Completed					
A(a)	Water quality monitoring	KSPCB	Being done regularly					

Sd/-

Environmental Engineer

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		14.02.2023	
Nature and flow of the river		Moderate flow, water level decreased	
Sl.No	Parameters	Unit	Uppala Bridge
1	Temperature	° C	29
2	pH	-	7.64
3	Conductivity	µmhos/cm	33130
4	Turbidity	NTU	0.7
5	BOD	mg/l	1
6	Dissolved Oxygen	mg/l	5.1
7	Total Coliforms	cfu/100ml	590
8	Feacal Coliforms	cfu/100ml	107
9	Feacal Streptococcus	cfu/100ml	70
10	Chlorides	mg/l	12000
11	Total Alkalinity	mg/l	119
12	Total Hardness	mg/l	4500
13	Calcium Hardness	mg/l	4000
14	Magnesium Hardness	mg/l	500
15	Calcium	mg/l	1600
16	Magnesium	mg/l	121.5
17	Total Dissolved Solids	mg/l	20710
18	Sodium	mg/l	6230
19	Potassium	mg/l	135

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		14.02.2023	
Nature and flow of the river		Water level decreased, moderate flow	
Sl.No	Parameters	Unit	Uppala River Near Bhagavathi Temple (Bhagavathi Gate)
1	Temperature	° C	29
2	pH	-	7.5
3	Conductivity	µmhos/cm	11550
4	Turbidity	NTU	1.1
5	BOD	mg/l	1.0
6	Dissolved Oxygen	mg/l	5.7
7	Total Coliforms	cfu/100ml	570
8	Feacal Coliforms	cfu/100ml	196
9	Feacal Streptococcus	cfu/100ml	90
10	Chlorides	mg/l	4400
11	Total Alkalinity	mg/l	52
12	Total Hardness	mg/l	1200
13	Calcium Hardness	mg/l	1000
14	Magnesium Hardness	mg/l	200
15	Calcium	mg/l	400
16	Magnesium	mg/l	48.6
17	Total Dissolved Solids	mg/l	7350
18	Sodium	mg/l	2300
19	Potassium	mg/l	67

Sd/-
Assistant Scientist