

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 - September 2023

1. Short term plan

Maintenance and de-bottle necking of existing sewerage network

No.	Activity	Implementing agency	Time line	Progress in the month of June-2023	Progress in the month of July-2023	Progress in the month of Aug 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 Kuriyathi completed. Pumping main of Pattoor, Kannammoola and Enchakkal included in long term works
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				100%	Work completed
				Aranoor 5%			100%	Work completed.
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%	Work completed.
2.1.5	DG sets in all lift and pumping stations – Mudavanmughal, Aranoor, Thaliyal, Kuriyathi, Pattoor, Kannammoola, Pattom, Murinjapalam and Enchakkal	Kerala Water Authority	May 2020				100%	DG sets installation of seven pumping stations completed. For Aranoor and Thaliyal. Erection of diesel generator is already included in the item mentioned 2.1.2. For Enchakkal already exists.
	Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchanthodu,							



2.1.6	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 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 2020	.5	0%	0%	98.5%	Works completed – 75No. (Rs. 15.41cr) AMRUT-44, State plan-28 MLA ADF/SDF-3 completed (Rs. 3.cr.) AMRUT-1, State plan-0 AMRUT work expected to be completed by 30.10.2023.
	Total works in progress/completed (76No.) Works dropped (State plan-2No.)						Dropped – 2 No. (Rs. 1.52cr)	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. In progress/ On going (24No.) Tendering/ To be arranged (1No.) Land acquisition -1 In progress-3	Kerala Water Authority	May 2020	0.1%	0.1%		99.3%	Works completed - 24 , AMRUT-12, State plan-11 MLA ADF/SDF-1 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 in this one work arranged and one tendered. LA for one work in initial stage. Another work agreement



								Another work, agreement Executed and pipe supplied. Expected date of completion 30.11.23
2.1.11	Procurement of sewer cleaning machines and equipment maintenance	Kerala Water Authority	Mar 2020	0%	0%	0%	100%	Work completed.

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 directed in the Chief Secretary's meeting dated 21/06/2022 the work of preparation of DPRs has to be done internally. DPR preparation of sewerage system to the uncovered areas of TMC is now being carried out internally by KWA. The total wards were divided into 10 clusters. Cluster 1 comprises of 5 wards - Attukal, Kalady, Kallipankulam, Ambalathara and Kamaleswaram wards - The DPR for cluster 1 amounting to Rs 353.87 Crores was submitted to GoK on 15/10/2022 for obtaining AS. Later as per the direction from CS, the DPR of cluster 1 curtailed into 2 DPRS. DPR of cluster I Zone I&II has been submitted to the Secretary of Jalshakthi for funding under NRCP on 17/02/23. Zone 1
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 equipment for maintenance of sewerage system.							



3.1.7	Additional STP requirement	Kerala Water Authority		Three years				<p>of cluster 3 is consisting of Puthenpally and Part of Muttathara is submitted for AS on 11.01.2023. The DPR of Cluster 3 Zone 2 and Zone 3 is prepared and is under scrutiny/revision. The DPR for cluster 2, is prepared and kept in shelf of projects as there is no fund available. The DPR for cluster 4 (Thirumala Thrikkannapuram and Punnakkamughal wards) is prepared and as suggested for identifying Corporation / Govt lands for the collection well and STP proposed is being done and after obtaining sanction of the puramboke land identified there will be changes in the design network and there by changes will be made in the DPR. Since there is constraint in land availability for the Construction STP in this cluster, the Technology of the STP changed from SBR to MBBR and hence the revision of the design is to be made. DPR can be resubmitted after designing and obtaining the confirmation of land for the STP and collection well from the TVPM Corporation. DPR for Cluster IX (priority wards (Vizhinjam and Harbour area) is in progress, land for STP identified and the confirmation of the land to be transferred for which a meeting where both the Hon'ble Ministers of WRD and Port & Harbour department was necessitated and action is being taken to arrange the meeting.</p> <p>DPR of cluster X comprising of wards Shangumugham, Vettucaud, Vallakadavu, Beemapalli (part), Beemapalli East (part), Valiyathura and Kadakampally is under preparation.</p>
	Total Amount required :		5000 Crores					



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

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RIVER KARAMANA, THIRUVANANTHAPURAM

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	<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>.1 Progress Report may be comprised of details along with completion timelines on:</p> <ul style="list-style-type: none">(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline(v) Latest water quality of polluted river, its tributaries, drains with flow	
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ACTION PLAN FOR RIVER KARAMANA, KERALA

1. Short term plan

Maintenance and de-bottlenecking of existing sewerage network

No.	Activity	Implementing agency	Timeline	Progress in the month of May 2022	Progress in the month of June 2022	% 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				

	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 2020				
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May 2020				
2.1.4	Installation of adequate pumps in Mudavanmugal and Enchakkal pumping stations	Kerala Water Authority	March 2020				

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 2020				
2.1 .6	<p>Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchanthodu, control storm water entry into sewer to avoid overflow in Thampanoor area</p> <p>Sewage generated in Rajaji Nagar shall be diverted to main sewer line</p> <p>Sewage generated in Thoppil area shall be diverted main sewer line</p>	Kerala Water Authority	Dec 2020				

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				
2.1 .8	Divert the sewer line from the School compound of Government Karamana High School	Kerala Water Authority	Awarded				
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				

	Total works in progress (45No.) Works in tendering (33No.)						
2.1 .10	Extension of sewer network wherever technically feasible in new areas of existing blocks In progress (17No.) Tendering (12No.)	Kerala Water Authority	May 2020				
2.1 .11	Procurement of sewer cleaning machines and equipment maintenance	Kerala Water Authority	Mar2020				

Solid Waste Management Action Plan

Sl. No	Activity	Implementing Agency	Unit	Time for completion	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 2023	% works completed	Details of works remaining
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2.2.1	Slaughter house and poultry waste	Thiruvananthapuram Corporation	Rendering plant	Dec 2022	<p>Slaughter House- Slaughter house kunnukuzhy- Work started for construction of retaining wall, work ongoing for construction of security cabin and visitors lounge. Security cabin , roof slab casting completed, visitors lounge, structure completed, roof slab casting on progress. Work under progress. It will be completed on <i>September 2023</i></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.</p> <p>Report June 2023</p>	<p>Slaughter House- Slaughter house kunnukuzhy- Work started for construction of retaining wall, work ongoing for construction of security cabin and visitors lounge. Security cabin , roof slab casting completed, visitors lounge, structure completed, roof slab casting on progress. Work under progress. It will be completed on <i>September 2023</i></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.</p>	<p>Slaughter House- Slaughter house kunnukuzhy- Work started for construction of retaining wall, work ongoing for construction of security cabin and visitors lounge. Security cabin , roof slab casting completed, visitors lounge, structure completed, roof slab casting on progress. Work under progress. It will be completed on <i>September 2023</i></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.</p>	90	
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2.2.2	Sanitation facility and treatment of waste water in the markets of Pangode, Kumarichanda		Treatment plant Portable aerobic bins	Dec 2023	<p>Kumarichanda: Market Renovation completed. Pilot project implemented for treatment of wastewater.</p> <p>Pangode: DPR submitted by the agency .To be forwarded for getting technical sanction.</p>	<p>Kumarichanda: Market Renovation completed. Pilot project implemented for treatment of wastewater.</p> <p>Pangode: DPR submitted by the agency . Forwarded for getting technical sanction.</p>	<p>Kumarichanda: Market Renovation completed. Pilot project implemented for treatment of wastewater.</p> <p>Pangode: DPR submitted by the agency . Forwarded for getting technical sanction.</p>	100	
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2.2.3	Provide facility for the treatment of sewage, sullage and garbage generated in the Poonthura slum area between Karamana river and sea	Thiruvananthapuram Corporation	<p>Aerobins at various places(28)</p> <p>Proposed sites</p> <ol style="list-style-type: none"> 1. Moonnathumukku – Purampokku 2. Poonthura – HI Office 3. Cheriyanmuttam – Poonthura 4. Beemappally 5. Tsunami Colony 6. Mother Theresa 	March 2024	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 there is land availability- KWA	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 there is land availability- KWA	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 there is land availability- KWA	45%	
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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 Issued notices to the household Project is prepared for desilting the pond	March 2020	Meeting was conducted on 30-07-21, convened by the Public Work Standing Committee Chairperson with KWA Officials, Tvpm Corporation officials and councilors 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.	Meeting was conducted on 30-07-21, convened by the Public Work Standing Committee Chairperson with KWA Officials, Tvpm Corporation officials and councilors 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.	meeting was conducted on 30-07-21, convened by the Public Work Standing Committee Chairperson with KWA Officials, Tvpm Corporation officials and councilors 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.		
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2.2.5	Around 155 Houses 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.	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.	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.		
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		1969430 lakhs fine collected from 2019 to till date	1979440 lakhs fine collected from 2019 to till date	1979440 lakhs fine collected from 2019 to till date		

2.2. 6	Biodegradable waste	Thiruvananthapuram Corporation	Bio-Composter	Sep 2020	Installed 51,557 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 negotiation	Installed 51,557 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 negotiation	Installed 51,557 bins in total. Tender invited for installation of 50000 bio compost bins. Proposal approved by the health standing committee. Proposal placed in the health standing committee and forwarded to purchase committee for negotiation done, placed before council. Out of which 2800 bins were distributed	80%	
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2.2. 7			Thumbo ormuzhi aerobic bins	<p>Total 154 locations Completed works (Total - 159 units) Santhikavadam - 3 units, Manathala - 3 units, ITI chackai – 11 bins Kalladimukham – 32 bins Neerazhi Market, Ulloor – 6 bins Thumba station kadavu – 4 units Womens college – 4 bins completed will be handedover soon. Sanskriti College – 5 bins Near Peroorkada Market-35 Kamaleshwaram, Karamana PRS opposite, Cotton hill LPS ,Cotton hill HSS-25 Poojapura-10 Inside Pratheeksha flat- 16 Manvila Market-5</p> <p>Work in progress Kuravankonam – 4 bins</p>	<p>Total 154 locations Completed works (Total - 159 units) Santhikavadam - 3 units, Manathala - 3 units, ITI chackai – 11 bins Kalladimukha m – 32 bins Neerazhi Market, Ulloor – 6 bins Thumba station kadavu – 4 units Womens college – 4 bins completed will be handedover soon. Sanskriti College – 5 bins Near Peroorkada Market-35 Kamaleshwar am, Karamana PRS opposite, Cotton hill LPS ,Cotton hill HSS-25 Poojapura-10 Inside Pratheeksha</p>	<p>Total 154 locations Completed works (Total - 159 units) Santhikavadam - 3 units, Manathala - 3 units, ITI chackai – 11 bins Kalladimukham – 32 bins Neerazhi Market, Ulloor – 6 bins Thumba station kadavu – 4 units Womens college – 4 bins completed will be handedover soon. Sanskriti College – 5 bins Near Peroorkada Market-35 Kamaleshwaram, Karamana PRS opposite, Cotton hill LPS ,Cotton hill HSS-25 Poojapura-10 Inside Pratheeksha flat-16 Manvila Market-5</p> <p>Work in progress Kuravankonam – 4 bins</p>		
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2.2. 8			Community biogas	Total 13 locations – Institutional Level. <u>Work completed – 6locations</u> Vanitha jail and Central jail, Poojapura - 100kg/day, Govt L P S, Kanjirampara - 100kg/day and Womens College, Vazhuthacaud - 500kg/day. Work at Law collage, Palayam -500 Kg/day, University campus, Palayam - 500Kg/day and Govt. High school, Kulathoor – 100Kg/day. Ongoing Works are : Mental Hospital, Oolampara – 500 kg/day General Hospital – 500 kg/day DPI, Jagathy – 100	Total 13 locations – Institutional Level. <u>Work completed – 6locations</u> Vanitha jail and Central jail, Poojapura - 100kg/day, Govt L P S, Kanjirampara - 100kg/day and Womens College, Vazhuthacaud - 500kg/day. Work at Law collage, Palayam -500 Kg/day, University campus, Palayam - 500Kg/day and Govt. High school, Kulathoor – 100Kg/day. Ongoing Works are : Mental Hospital, Oolampara – 500 kg/day General Hospital – 500 kg/day DPI, Jagathy – 100	Total 13 locations – Institutional Level. <u>Work completed – 6locations</u> Vanitha jail and Central jail, Poojapura - 100kg/day, Govt L P S, Kanjirampara - 100kg/day and Womens College, Vazhuthacaud - 500kg/day. Work at Law collage, Palayam - 500 Kg/day, University campus, Palayam - 500Kg/day and Govt. High school, Kulathoor – 100Kg/day. Ongoing Works are : Mental Hospital, Oolampara – 500 kg/day General Hospital – 500 kg/day DPI, Jagathy – 100 kg/day.Govt Panchakarma Hospital - 100 kg/day	60%
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2.2. 9			Organic Waste Converter		Dropped	Dropped	Dropped		
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2.2.10		Thiruvananthapuram Corporation	Portable biogas		Dropped	Dropped	Dropped	
2.2.11		Thiruvananthapuram Corporation	Portable aerobic bins		28 more units installed. Total 125 units installed	Project completed	Project completed	
2.2.12		Thiruvananthapuram Corporation	Ring compost		Project implementation started. Installed 30 units. Site identified for installation of rest of 470 bins.	Project implementation started. Installed 125 units. Rest of the bins will be installed soon. Action on going	Project implementation started. Installed 350 units. Rest of the bins will be installed soon. Action on going	70%
2.2.13		Thiruvananthapuram Corporation	Segregation bins		Dropped	Dropped	Dropped	
2.2.14	Biodegradable waste	Thiruvananthapuram Corporation	RRC		Total 2 locations. (i) Work in Manacaud site completed. Tendering activities for electrification are in progress. (ii) Kalladimugham, Attukal ward - work will start soon after cutting 11 coconut trees. Council resolution took to cut down the trees.	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 will be started soon.	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.	99% Work on going, Construction under progress

2.2.15		Plastic Recycling unit		Site not yet identified	Site not yet identified. Project dropped	Site not yet identified. Project dropped	
2.2.16		Mobile MRF		Project dropped	Project dropped	Project dropped	
2.2.17		Electronic Weigh bridge		Project dropped	Project dropped	Project dropped	
2.2.18		Solar electrical cart		Work completed.	Work completed.	Work completed.	
2.2.19		Swaps shops		Work almost completed. Part bill submitted.	Work completed. Revised estimate approved by council.	Work completed. Revised estimate approved by council. Final part bill will be issued soon.	98% completed
2.2.20		PET bottle crushing		Project dropped	Project dropped	Project dropped	
2.2.21		Community level unit		During Trail run the unit is found to be incompetent	During Trail run the unit is found to be incompetent	During Trail run the unit is found to be incompetent	
		Napkin destroyer		158 Nos purchased and installed at various locations	158 Nos purchased and installed at various locations	158 Nos purchased and installed at various locations	

2.2.22	Thiruvananthapuram Corporation	Animal Crematorium at Kattela	May 2020	Project dropped	Project dropped	Project dropped	
2.2.23	Thiruvananthapuram Corporation	Urban Gardening		Project dropped	Project dropped	Project dropped	
2.2.24	Thiruvananthapuram Corporation	Upgradation of present facilities		Completed.	Completed.	Completed.	100% completed
2.2.25	Thiruvananthapuram Corporation	Capacity Building & IEC		Training for contingency workers scheduled from 06/06/2022 to 09.06/2022 and also from 10/06/2022 to 12/06/2022	Meeting conducted with participation of all thumburmuzhi workers on 31.06.2022., A training programme was conducted for HI/JHI on May6	A training programme was conducted for HI/JHI on 23,24 September	
2.2.26	Thiruvananthapuram Corporation	Viability gap Fund		Issue of Sixth phase of VGF to Haritha Karma Sena completed	Issue of Seventh phase of VGF to Haritha Karma Sena completed	Issue of Seventh phase of VGF to Haritha Karma Sena completed	

2.2. 27	Prevent entry of storm water into sewer line along with KWA	Thiruvananthapuram Corporation	KWA is authorised to prepare and implement proper sewerage lines under Amrut scheme	May 2020	Close monitoring is done by health Squad and all Health Inspectors are directed to issue notice and prosecution.	Close monitoring is done by health Squad and all Health Inspectors are directed to issue notice and prosecution.	Close monitoring is done by health Squad and all Health Inspectors are directed to issue notice and prosecution.	
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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 waste discharge	May 2020	Employees were placed at various spots during night to prevent dumping of solid waste in drains and fines are being charged. Regarding to waste throwing to public places Corporation collected an amount of Rs 1883050/- as fine from 01.01.2022.	Employees were placed at various spots during night to prevent dumping of solid waste in drains and fines are being charged. Regarding to waste throwing to public places Corporation collected an amount of Rs 1967880/- as fine from 01.01.2022.	Employees were placed at various spots during night to prevent dumping of solid waste in drains and fines are being charged. Regarding to waste throwing to public places Corporation collected an amount of Rs 2038710/- as fine from 01.01.2022.	
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Monitoring

	Activity	Implementing agency	Time line	Water quality in July/ pre-monsoon	Water quality in August/ monsoon	Water quality in post-monsoon
2.3.1	River water quality monitoring - Killiyar, Karamana, Parvathiputhanar, Akkulam-Veli lake	Kerala State Pollution Control Board	Ongoing; monthly			
2.3.2	Storm drains monitoring - Amayizhan chanthodu, Ulloorthodu, Pattomthodu, Kannamoolathodu, Thekkanakkar canal	Kerala State Pollution Control Board	Ongoing Seasonal monitoring – pre-monsoon, monsoon, post-monsoon			

3.1 .1	Extension of sewerage system to Block F to G coastal belt	Kerala Water Authority	200	Three years					
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 areas of	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						

3.1.8	Total Amount required	Kerala Water Authority	1470 Crores						
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Solid waste management

	Long term measures proposed by Thiruvananthapuram	Implementing agency	Timeline	Progress in the month of January 2022	Progress in the month of February 2022	Progress in the month of March 2022	% 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	Project Dropped				

De-silting and development

No.	Activity	Implementing agency	Timeline	Progress in the month of April 2022	Progress in the month of May 2022	Progress in the month of June 2022	% works completed	Details of works remaining
3.3.1	Development package for Parvathy Puthanar	Irrigation department Included in KIFB by KWIL includes cleaning of canal	3 years					

3.3.2	De-silting and development of AmayizhanchanThodu	Irrigation Department	1.5 years					
3.3.3	Improvements to Thekkenekara canal and de-silting-	Irrigation Department	1 year					
3.3.4	Karimadam tank improvements, de-silting sheet piling/under preparation and providing fencing	Irrigation Department	1.5 years					
3.3.5	Development of Karamana basin	Irrigation Department	1.5 years					

Date- 04/10/2023 **Secretary**

(Sd/-)

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	31.03.2025	Projects for to be taken
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.2025	„
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2025	„
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	NA	-
	<ul style="list-style-type: none">• -	NA	-
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	NA	-

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>	31.03.2024	<p>Presently no STP in the panchayat</p> <p>Presently no CETP or ETP in the panchayat</p> <p>31.03.2024 Door to door plastic waste collection, Supply of waste bins, Construction of compost pits etc.</p> <p>Not Available</p> <p>Biomedical waste disposed through IMAGE , Plastic waste collected door to door by Haritha Karma Sena</p> <p>Yes, Going On</p>
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	<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>-</p> <p>Yes, Going On</p> <p>Yes, Going On</p> <p>Yes, Going On</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 July 2023	Progress in the month of August2023	Progress in the month of September 2023	% works completed	Details of works remaining
A(a)	No industries	-	-	No industries	-		-	-
A(a)	Monitorng of river water quality	Kerala State Pollution Control Board	Continuing project	NA	NA	NA		
C(ii)	Establishment of de- centralized solid waste treatment facility	Mannar Panchayat, Panchayath	31.03.2024					
C	Establishment of Material Collection Facility	Mannar Panchayat, Panchayath	31.03.2021	Established	-	-	100%	
C	Resource Recovery Facility	Mannar Panchayat, Panchayath	31.03.2021	NA	NA	NA	-	
C	Installing household and community level solid waste management units	Mannar Panchayat	31.03.2021	Constructed Of Compost Pit	Supply Of Bio Bin	-	50%	
C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.03.2021	Plastic Waste Collction 68.8%	Plastic Waste Collction 75.45%	Plastic Waste Collction		

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	31.12.2024	Projects has to be taken	”	”	”	”
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					

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 water 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)

Sl. No	Name of Drain	Parameters														
		pH			Electrical Conductivity(μ S/cm)			BOD(mg/l)			TC(Nos/100ml)			FC		
	Months	JULY	AUG	SEP	JULY	AUG	SEP	JULY	AUG	SEP	JULY	AUG	SEP	JULY	AUG	SEP
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	7.5	Nil	6.52	95.8	Nil	107.5	0.6	Nil	1.4	3200	Nil	4000	150	Nil	800
4	Karuvellil Thodu	7.52	7.9	6.81	46.87	110.5	50.8	0.4	0.4	0.2	3200	4200	4500	160	900	900
5	Nochithodu	7.56	6.9	6.69	61.31	122.6	45.18	0.9	1.5	0.8	7000	2200	2500	350	600	600
6	Pattaparambil Thodu	7.38	6.08	6.52	53.4	109.6	67.13	1.26	1.2	1.9	1500	3500	3000	50	700	700
7	Kappiyarissery Thodu	7.46	7.8	6.91	48.27	268	50.38	2.1	8.2	0.93	2000	10800	10500	100	3000	3200
8	Kombankery Thodu	7.53	6.9	6.86	63.78	129.69	184.9	1.06	0.86	0.5	1800	3400	3200	150	1000	1200
9	Perackalthodu	7.63	6.8	6.72	50.51	81.69	46.68	0.6	1.7	1.06	2300	3300	2000	100	500	500
10	Erathodu	7.37	7.9	6.95	47.95	73.09	38.38	0.2	0.13	0.33	1300	6200	6500	70	800	900
11	Kolarayaru	7.19	7.8	6.97	48.01	141.7	40.68	0.8	0.6	0.2	900	4600	4000	20	900	700

National Mission for Clean Ganga

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

RIVER MANIMALA, ALAPPUZHA

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

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

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 2023	% works completed	Details of works remaining
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project				100%	NIL
A(b)	Rendering Plant at Eraviperoor or Thiruvalla	Eraviperoor/ Thiruvalla local body	31.03.2021				0%	Work to be initiated
C(ii)	Fencing of bridges, desilting, dredging and protection works, surveillance cameras at vantage points	Irrigation department	31.03.2021				0%	Work to be initiated
C	Preventing illegal discharge of septage and other waste water into the river. Formation of River Protection Group	Panchayath, Police , KSPCB	31.05.2020.				0%	Work pending due to COVID pandemic
C	Greenery development Plantation on both sides of the river, setting up biodiversity parks in flood plains and removing encroachment	Irrigation department in association with panchayath	31.03.2021				0%	Yet to be initiated
C(b)(ii)	Green Protocol implementation in all offices, institution & public functions	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.03.2020				100%	0

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

ACTION BY GROUND WATER DEPARTMENT

Sl. No	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Timeline	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 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					

**ANALYSIS REPORT OF DRAINS OF MANIMALA BETWEEN KALLOOPARA AND THONDRA
SEP-2023**

SI NO	BOTTLE NO.	Name of Drains	PH	BOD	TC	FC
1	TK1	Panayampalathodu	6.2	0.06	2300	400
2	TK2	PadathupalamThodu	6.5	1.3	2200	700
3	TK3	Thottappuzha	6.3	1.6	8000	700
4	TK4	Kuttapuzha under Kattodubridge	6.2	0.2	2500	600
5	TK5	Kadavumbara	6.2	2.2	200	0
6	TK6	Drain under Varappalam Bridge	NIL	NIL	NIL	NIL
7	TK7	Drain under kallupalam Bridge	6.91	0.2	2300	200
8	TK8	Komalamthodu	6.82	0.6	1000	100
9	TK9	Vennikulam Valiyathodu	6.95	1.4	1500	100
10	TK10	Paduthodu	6.93	0.8	5000	800
11	TK11	Mallappally Valiyathodu	6.01	0.86	4200	700

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 August -2023	Progress in the month of September-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 27/08/2021	NA		Inauguration of functioning.

				<p>Not submitted report</p> <p>Niranam Gramapanchayat is an upper Kuttanad area , so no such dry land suitable for solid waste treatment plant is available</p>	<p>Not submitted report</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	Resource Recovery Facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021	<p>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 Clean Kerala company. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.</p> <p>Not submitted report</p>	<p>NA</p> <p>Not submitted report</p>	100%	Collection and transportation of Non-bio degradable Materials to RRF for processing
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				It will be suitable if RRF is established at Block level in Niranam Grama Panchayath	It will be suitable if RRF is established at Block level in Niranam Grama Panchayath		
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		100%	Construction and operation of Aerobic compost unit.

				<p>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 19/06/2021. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021.</p>			
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C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.03.2021	<p>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 19/06/2021. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021.</p>	PlasticWaste Collection		Continuing
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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	Not submitted report	Not submitted report		
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.		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 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			Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government	

	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.	100%		Continuation of Green Protocol .

				Not submitted report	Not submitted report		
				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	Draft by-law of Plastic Waste 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 Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation.Socio-Economic Unit (SEU) has been selected as implementing agency for the construction Two mini MCFs in each ward in all the 18 wards of Mannar GP.For the management of electrical, electronic and hazardous waste, the Grama Panchayat has reached in an	NA		

				<p>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 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)</p>			

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 August ,2023	Progress in the month of September,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	Not Submitted report	NOC has not been issued to industries for Ground Water extraction during September 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	Not Submitted report	Artificial Recharge Structure 10 sites feasible and estimate for 5 sites in Pandalam Thekkekkara Grama Panchayath under preparation.	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	Not Submitted report	Groundwater sample collection during the month of July 2023 monitoring wells (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis soon.	Periodical assessment(Regular programme) Chemical analysis result of groundwater 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	Not Submitted report	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

**MONTHLY ANALYSIS REPORT OF POLLUTED RIVER
STRETCHES SEPTEMBER-2023**

STATION: MANNAR

SamplingDate: 05.09.2023

Sl.No	PARAMETERS	ITTINAYARKKADAVU BRIDGE KUTTAMPEROOR	KOTTAKAL KADAVU BRIDGE KORATTIKADAVU	PARUMALA BRIDGE	MANNAR BRIDGE
1	Temp. (°C)	25	26	25	26
2	pH	6.4	6.7	6.3	6.6
3	Conductivity (µS/cm)	23.90	24.24	26.71	29.33
4	DO (mg/L)	6.3	6.6	6.5	7.7
5	BOD (mg/L)	0.9	0.7	0.8	0.4
6	COD (mg/L)	3.2	3.2	3.2	3.2
7	TDS (mg/L)	102	74	82	62
8	TC (CFU/100ml)	1100	710	580	210
9	FC (CFU/100ml)	360	230	190	70
10	FSC(CFU/100ml)	Nil	Nil	Nil	Nil

WATER QUALITY DATA OF POLLUTED RIVER STRETCHES SEPTEMBER-2023**DISTRICT OFFICE, PATHANAMTHITTA****Date of Sampling: 05.09.2023**

Sl. No	PARAMETERS	THAKZHY	EDATHUA	MANNAR
1	Temperature, °C	25	28	26
2	pH	7.1	6.2	6.7
3	Conductivity, µmhos/cm	59	58	46
4	Turbidity, NTU	1.0	2.1	1.4
5	Phenolphthalein Alkalinity, as CaCO ₃	Nil	Nil	Nil
6	Total Alkalinity, as CaCO ₃	11	12	10
7	Chloride, mg/l	10	10	8
8	COD, mg/l	3.2	3.2	3.2
9	TKN, mg/l	0.3	0.12	0.15
10	Ammoniacal-N, mg/l	0.169	0.216	0.091
11	Hardness, as CaCO ₃ mg/l	24	20	20
12	Calcium, as CaCO ₃ mg/l	14	12	12
13	Magnesium as CaCO ₃ , mg/l	10	8	8
14	Sulphate, mg/l	2.8	1.6	1.9
15	Sodium, mg/l	5.5	5.1	4.5
16	Total Dissolved Solids, mg/l	36	34	30
17	Total Fixed Solids, mg/l	30	29	24
18	Total Suspended Solids, mg/l	25	24	19
19	Phosphate, mg/l	BDL	BDL	BDL
20	Boron, mg/l	BDL	BDL	BDL
21	Potassium, mg/l	0.335	0.632	0.293
22	BOD, mg/l	0.7	1.2	0.5
23	Fluoride, mg/l	0.3	0.15	0.25
24	Dissolved Oxygen, mg/l	6.5	6.1	6.8
25	Nitrate-N, mg/l	0.166	0.142	0.197
26	Total Coliform, CFU/100 ml	180	250	200
27	Faecal Coliform, CFU/100 ml	60	80	65
28	SAR	0.48812	0.49582	0.43749
29	% of sodium	13.51677	14.83229	13.3988
30	Faecal Strepto Coccus, CFU/100 ml	Nil	Nil	Nil

**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>	<p>Thrippunithura Municipality</p>	
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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 July 2023	Progress in the month of August 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			Bio mining stopped due to the outbreak of fire at Bhramapuram dumping yard on 19.05.2023 to the contractor for termination. Special council will be scheduled to discuss the further action. The contract with M/S Zonta InfoTech terminated. Called for new tender for bio mining activity. Tender closing date on July 27.			
Aa (iv)	Effluent monitoring from FACT	KSPCB	Periodical			Progressing	Progressing		
Aa (iv)	Periodical Monitoring	KSPCB	Periodical			Progressing	Progressing		

(2) Drain from Cochin Refinery area									
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 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		
A(b)	Sanitation Survey	Vadavucode – Puthencruz Panchayat	3 months			Covered 5000 houses. DLTC directed to submit the detailed report on sanitation survey	Progressing		
E	Periodical Cleaning of Chithrapuzha	Irrigation Department	Twice in 3 years			Reach I, II & III completed through Operation Vahini in August 2022. Work completed.	New Work proposal for the removal of hyacinth submitted.	100%	
	Already implemented Effluent Treatment facility in Kochi Refinery and periodical monitoring are ongoing	KSPCB				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 July 2023	Progress in the month of August 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			76% Survey completed. 9 Notices issued. Collected Rs. 1, 17,000/- as fine in the month of April- May. Fine Rs. 57,600/- collected. Reported to be progressing.	Progressing		
		KSPCB				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. Action initiated against violators. Fine of Rs.41,240/- levied. Action taken for 9 violations . Rs 14090/- levied in May 2023. Fine of Rs 25,000/- collected. Rs 2510/- collected for the violation identified through surveillance cameras.	Progressing		
Aa(iv)	Periodical Monitoring	KSPCB	Periodical			Monthly monitoring progressing.	Monthly monitoring progressing		

A(b)	Sanitation Survey	Thrikkakara Municipality	6 months			Sanitation survey progressing. 76% completed	.		
E	Periodical Cleaning.	Irrigation Department	Once in a year			Reach I & II completed. Reach III implemented through Operation Vahini in August 2022. Estimate Submitted to CE	New work proposal Estimate Submitted to CE	100%	
(4) Drain joining Chithrappuzha from CSEZ(Chittethukara)									
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% Works completed	Details of works remaining
A(b)	Ensure proper functioning of ETP in CSEZ	KSPCB	Periodical			New CETP started operational. Complying standards Monitoring progressing	Monitoring progressing	Monitoring progressing	
A(b)	Sanitation Survey and periodical cleaning	Thrikkakara Municipality	6 months			Sanitation survey progressing. 76% completed	76% completed.		
Aa(iv)	Periodical Monitoring	KSPCB	Periodical			Ongoing	Ongoing		
(5) Vettuvelikkadavu (Konothupuzha joining Chithrappuzha)									

No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 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. Not attended meeting.			
A(b)	Sanitation Survey	Thripunithura Municipality	3 months			Reported to be completed.	Completed.		
Aa(iv)	Periodical Monitoring	KSPCB	Periodical			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			5.13Lakhs fine leveled in which 40,000/- fine imposed for violation identified through surveillance cameras. Fine of Rs.11,020/- collected from violators. Rs. 1,15,000/-collected from violators. Not attended meeting.	Action is progressing. 15 notices issued. 18 notices issued to the violators. Notices issued to 105 apartments.		
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)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% works completed	Details of works

Plan)									remaining
E	Periodic Cleaning	Irrigation Department	Once in a year			Estimate for the removal of water hyacinth has submitted again.	Estimate for the removal of water hyacinth has submitted again.	completed	
C(ii)	Surveillance to restrict the dumping of wastes into the river	Vadavucode - Puthercruz with the help of Police				Inspection progressing.	Ongoing.		
		Thripunithura Municipality with the help of Police	6 months			Squad inspection progressing. Surveillance reported to be continued. 5 lakhs fine levied	Ongoing		
Aa(iv)	River water quality monitoring	KSPCB	Ongoing			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		
C(ii)	Surveillance e of restrict dumping of waste to the river, Sanitation survey (with the help of Police)	Vadavukode Puthenkruze Panchayath	6 months			Ongoing	Ongoing		

No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% works completed	Details of works remaining
E	Provide inspection bund for Chithrapuzha	Irrigation Department	3 years			Work in progress. Letter submitted to Tahasildar Kanayannur Thaluk regarding the survey in February, didn't get any response from revenue department.	Work in progress. Letter submitted to Tahasildar Kanayannur Thaluk regarding the survey in February, didn't get any response from revenue department.	45%	Remaining work is Land survey.
A(b)	Additional STP requirement (if needed)	Thrikkakkara Municipality, Thripunithura Municipality	3 years			2 acres land identified. Proposed meeting in this regard.	No progress		
	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.			

LONG TERM MEASURES

ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para	Activity			Progress in the month	Progress in the	% works	Details of
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	item nos as per NGT Order no.673/2018 dated 20.09.2018				of July 2023	month of August 2023	completed	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			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						

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 July 2023	Progress in the month of August 2023	% works comple ted	Details of works remaining
	(2)	(3)	(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				Camera operational	Camera operational	100%	
	(6)	(7)	(8) Canal joining Kadambayar near Infopark Phasell						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% works comple ted	Details of works remaining

2.2 .1E	Cleaning of thodu	Kerala Irrigation Department & Vadavucode – Puthencruz Panchayat	6 months			Desilting of Padathikkara Thodu completed Kuzhiyanal Padam Thodu cleaning started.	Work completed Kuzhiyanal Padam Thodu cleaning started.	100% 25%	
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	2 months			Camera operational	Camera operational	100%	Work completed

			<u>Main Stream (Manakkadavu to Kadambayar-Chithrappuzha Confluence point)</u> <u>(Provided temporary bund (KozhichiraBund) inKadambayar-Chithrappuzha joining section to check salinity intrusion)</u>						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% works completed	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			Bio mining stopped due to fire at Bhramapuram dumping yard on 02.03.2023. At present, notice issued on 19.05.2023 to the contractor for termination. Special council will be scheduled to discuss the further action. The contract with M/S Zonta Infotech terminated. Called for new tender for bio mining activity. Tender closing date on July 27.	Tender opened. Submitted the details of selected companies before the Council. The council decided to inspect the site where the works are done by the selected companies. Further decision will be taken based on the site inspection.	30%	Completion of the work of bio mining by January 2024

A(b)	Provide proper facilities for restricting the seepage of leachate(Construction of Leachate treatment Plant: Collection tank)	Kochi Corporation	April 2022			Inception report prepared for the leachate treatment plant is currently under discussion. RFP initiated for the construction of a new windrow compost plant of 150 T/ day capacity with a leachate treatment plant. The tender opening date is 29.04.2023. Tender opened. Three persons participated but the participants are not qualified. Expression of interest called again.	Decided to set up new plant using BSF (Black soldier fly). Land survey progressing.	No progress	
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			Action plan by Gramapanchayath						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% works completed	Details of works remaining
E	Installation of CCTV camera at Manakkakadavu	Kunnathunadu	30.09.2019			Action Completed	Action Completed	100%	-
C(ii)	Cleaning of Thodu	Vadavukad-puthenkruze	6 months			New proposal submitted for the current year. Kuzhiyanal Padam Thodu cleaning started.	Kuzhiyanal Padam Thodu cleaning started.	25%	-
C(ii)	Surveillance to restrict dumping of waste to the river and branches (with the help of Police)	Vadavukad-puthenkruze	2 months			Action Completed	Action Completed	100%	-
2			4. Long term Plan						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 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		<p>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 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> <p>Meeting convened by Hon'ble Minister on 17.02.2022As per the decision the Corporation is tipping fee amount shall be obtained by increasing user fee collection from residential area and also enhancing property tax</p>	No progress reported	Not started	
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						by 8%.Above decision submitted for council approval Council approval pending.			
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 Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% works completed	Details of works remaining
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. Advertisement given. No further progress reported.	No progress reported		Action pending
3.2	Sanitation facility and treatment of waste water in the markets.	Thrikkakkara Municipality	2020-21			The secretary informed that they have no adequate land for construction of waste	No progress		Action pending

	Treatment plant, Portable aerobic bins		2021-22			management facility in market. Municipality informed that tender called for installing waste management facilities in market. The work awarded to M/s KEL.			
3.3	Provide facility for the treatment of sewage, sullage and garbage generated Proposed places for the installation of Aerobins (1) Municipal office compound (2) NGOquarters (3) KakkanadMarket Near Eechamukku TV-Centre Anganavadi	Thrikkakkara Municipality				Municipality informed that tender called for installing waste management facilities in market. The work awarded to M/s KEL.	No progress		
3.4	Providing facility for restricting discharge of waste water from the surrounding houses to the river	Thrikkakkara Municipality				Inspection and Survey reported to be Progressing. 1200 houses completed. Report of survey not submitted to DLTC. Survey conducted using smart garbage app. 55% completed.	No progress		

						Not attend the meeting			
3.5	Providing effluent treatment plant for industries No.of industries :75 no.s	Thrikkakkara Municipality				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	76% Survey completed. 9 Notices issued. Collected Rs. 1,17,000/- as fine in the month of April- May. Fine Rs. 57,600/- collected. Reported to be progressing.	Progressing.	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		Action initiated to issue notice to close the outlet	No progress	Land has been identified near to NGO quarters for setting up aero bins and the proposal submitted for council approval. Market construction completed. The land identified near NGO quarters found inadequate. Requested suchitwa mission to prepare DPR for the waste management in market.	Tender called for installing waste management facilities in market. The work awarded to M/s KEL.		

				t.					
	5		7. MONITORING						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% works completed	Details of works remaining
4.1	River water quality monitoring – Monitoring of water quality	Kerala State Pollution Control Board	Ongoing; Monthly frequency			monitoring progressing	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 July 2023	Progress in the month of August 2023	% works completed	Details of works remaining

5.1	Additional requirement DPR Preparation in 6 months (through consultants) To allot land, Government Procedure are ongoing	STP Thrikkakkara Municipality	3 years			The Secretary informed action not being taken due to land constraints	No progress		Action to be initiated.
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 after boundary demarcation survey.
			<u>DESILTING AND DEVELOPEMENT</u>						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% works completed	Details of works remaining
5.3	Development package Inspection bund for	Irrigation department	3 years			1. Estimate submitted to CE (As a preliminary step Soil	1. Estimate submitted to CE (As a preliminary step Soil investigation estimate is		

	<p>Chithrapuzha and Kadambrayar is included in this package. For this project, preliminary investigation of site which includes survey of land to know its availability for formation of side bund which is to be provided with tiles. The project also includes side protection work of Chitrapuzha and Kadambrayar.</p> <p>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>investigation estimate is submitted)</p> <p>2. A letter has submitted to Thahasildar, Kunnathunad and Kanayannur Thaluk regarding demarcation.</p> <p>Edachira thodu cleaning completed by Thrikkakkara Municipality.</p> <p>Manakkadakadavu to Kozhichira Bund cleaning progressing.</p> <p>Financial sanction not obtained for development package</p>	<p>submitted)</p> <p>2. A letter has submitted to Thahasildar, Kunnathunad and Kanayannur Thaluk regarding demarcation.</p> <p>De-Silting and water Hayacinth removal work completed</p>		
5.4	<p>Desilting and development</p> <p>It includes clearing and</p>	Irrigation Department	1 year (periodical cleaning)		<p>Edachira thodu cleaning completed by Thrikkakkara</p>	<p>Manakkadakadavu to Kozhichira Bund cleaning work completed</p>		

	removing water hyacinth of Kadambayar ,Chitrapuzha and Edachirathodu near Infopark phase II. This is to be done periodically (every four months), depending on availability of fund.		-4 months x3)			Municipality. Manakkadakadavu to Kozhichira Bund cleaning progressing.			
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. Financial sanction not obtained.	It can be included in the estimate of construction of Inspection bund (Walk way). Now as a preliminary step Soil investigation estimate is submitted. Financial sanction not obtained.		
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			1. Work completed in 2022 by operation vahini. 2. New proposal submitted for the removal of water hyacinth from Kadambayar.	Manakkadakadavu to Kozhichira Bund cleaning work completed		

						Financial sanction not obtained			
	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 July 2023	Progress in the month of August 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		Actions initiated to procure land.	

						land value is found higher, than the market value. The proposal cancelled and decided to give advertisement again. Advertisement given			
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 market value. The proposal cancelled and decided to give advertisement again. Advertisement given		Actions initiated to procure land.	

6.4	Common bio-medical waste treatment facility Proposed Kerala Solid Waste Management Authority	Health Department		CBWTF started at Ambalamughal, operated by KEIL		CBWTF started at Ambalamughal, operated by KEIL. 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				Site identified. Further action progressing			
			7. OTHER ASPECTS						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of July 2023	Progress in the month of August 2023	% works completed	Details of works remaining
7.1	Flood plain zone management and E- flow maintaining Flood plain	Irrigation Dept				1. Work completed in 2022 by operation vahini. 2. New proposal submitted			

	<p>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</p>					for the removal of water hyacinth from Kadambayar			
7.2	Development of bio diversity parks in banks	Thrikkakkara Municipality	<p>1st Phase 2020-21</p> <p>2nd Phase 2021-22</p>						

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

STNCode	Sampling Date	Sampling Time	StnName	Type Of Water Body	Name Of Water Body	River Basin				
17	17.09.2023	11:00	Periyar at Eloor	River	Periyar River					
1338	08.09.2023	10:05	Periyar at SDP Aluva	River	Periyar River					
2334	05.09.2023	10:20	Periyar at Pathalam	River	Periyar River					
2335	05.09.2023	11:30	Periyar at Kalamassery	River	Periyar River					
3468	08.09.2023	10:25	Periyar at KWA Aluva	River	Periyar River					
2337	02.09.2023	10:45	Kadambrayar At Brahmapuram	River	Kadambrayar River					
2338	02.09.2023	10:00	Kadambrayar At Manackakadavu	River	Kadambrayar River					
1573	02.09.2023	11:15	Chithrapuzha At Irumpanam	River	Chithrapuzha River					
1154	08.09.2023	12:50	Chalakudy at Pulikkakadavu	River	Chalakudy River					
Sl. No.	Parameters	Values								
		Station Code								
		17	1338	2334	2335	3468	2337	2338	1573	1154
1	Temperature, °C	26	25	30	30	26	29	29	29	26
2	Dissolved Oxygen, mg/l	5.6	6.4	7.6	6	6.8	5.8	5.2	6.5	6.5
3	pH	6.5	6.5	6.9	6.4	6.7	6.5	6.5	6.8	6.7
4	Conductivity, µmhos/cm	104	47	2095	49	47	1768	160	2148	91
5	BOD, mg/l	0.7	0.6	3.9	1.1	1.3	3.9	3	3.1	1
6	Nitrate-N, mg/l	0	0	0.72	0	0	7.4	0	6.09	0
7	Turbidity, NTU	3.8	3.0	4	2.3	4.6	4.8	3.3	5.8	2.8
8	Total Alkalinity, as CaCO ₃	18	16	18	18	18	70	35	50	26
9	Chloride, mg/l	16	4	600	4	7	430	30	580	13
10	COD, mg/l	1.8	1.8	12	3.2	3.2	11.2	8.8	8.8	2.4
11	TKN, mg/l	0.1	0.05	0.7	0.06	0.1	7.3	0.02	8.5	0.2
12	Ammoniacal-N, mg/l	0	0	0	0	0	8	0	9.5	0
13	Total Hardness, as CaCO ₃ mg/l	21	16	120	18	20	250	31	220	31
14	Calcium, as CaCO ₃ mg/l	12	10	60	10	6	130	26	140	24
15	Magnesium as CaCO ₃ , mg/l	9	6	60	8	14	120	5	80	7
16	Sulphate, mg/l	4.5	0	50	0	0	15	5.2	40	0
17	Sodium, mg/l	8.5	2.1	400	2.2	3.8	222	16.99	348	6.8
18	Total Dissolved Solids, mg/l	57	26	1225	28	29	995	101	1225	51
19	Total Fixed Solids, mg/l	40	16	960	18	21	760	75	980	38
20	Total Suspended Solids, mg/l	12	7	28	4	6	22	15	25	10
21	Phosphate, mg/l	0.2	0.2	0.2	0.2	0.1	17.5	0.1	20	0.1
22	Boron, mg/l	0.14	0.03	0	0.01	0.03	0.46	0	0.08	0.09
23	Potassium, mg/l	1.24	0.58	6.00	0.37	0.32	21	0.22	16	0.08
24	Fluoride, mg/l	0.1	0.4	0.4	0.3	0.2	0.9	0.2	0.9	0.2
25	Total Coliform, MPN/100 ml	3200	6300	4900	3100	4000	140000	4000	7900	2100
26	Feecal Coliform, MPN/100 ml	1000	2600	3400	540	2000	41000	430	5800	330
27	Feecal Streptococci, MPN/100ml	150	400	270	170	310	7000	400	490	17

National Mission for Clean Ganga

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

RIVER PERIYAR. ERNAKULAM

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

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p>		
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	<ul style="list-style-type: none">(viii) Adopting good irrigation practices(ix) Protection and management of food plain Zones (FPZ)(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		
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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 month of July 2023	Progress in the month of August 2023	Progress in the month of September 2023	% works comple ted	Details of works remainin g
A(b)	Augmentation and Revamping of existing STP at near Adwaita Ashramam and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	Dec 2019	Upgradation of STP Existing in Advaita Ashramis in progress. The agreement for the civil work has been completed at present. Electrical work is pending for retendering. Mechanical related work is pending for payment	Upgradation of STP Existing in Advaita Ashramis in progress. The agreement for the civil work has been completed at present. Electrical work is deferred for retendering. Funds have been invested for Mechanical work. Steps have been taken to speed up the work.	The construction work of STP at Advaita Ashram is in progress. The agreement for the civil works has been completed at present. Electrical work is reserved for retendering. Investments have been made for mechanical related work. Currently STP is working partially, therefore steps have been taken to speed up the partial functioning		

A(b)	Augmentation and Revamping of existing STP at Aluva Market and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	2021	As the existing ETP field has become unusable during flood, renovation works are being carried out project	45 Lakh project has been submitted for the renovation of existing ETP.	45 Lakh ETP project proposal has been submitted. A new slaughter house along with this is also considered. Therefore no decision has been made regarding the capacity of ETP		
A(b)	Discharge of sewage from township to the River through drain near Periyar Hotel shall be stopped.	Aluva Municipality	2020	Health Squad inspection in progress. Perikathod, which is connected to Periyar which COMES under Ward 23, falls under Kadungallur Panchayat. A letter has been sent to the Kadungallur Panchayat Secretary as part of taking action against those who discharge sewage there.				

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		In association with Periyar, 14 inspections were conducted. In which 12 cases were related to waste management and collected Rs. 1,20,000 as a fine. Also initiated measures to control unauthorized outlets to the river. Similarly, Rs 5000 was collected from two cases related to plastic seizing.	The outlets of establishments discharging sewage into public drains have been closed and instructed to build treatment facilities . The inspection information of September regarding the name of the establishment, the fine imposed and the action taken will be sent as a report		
A(a)(iv)	Periodical inspection in the Industries, Flats, hotels monitoring of STP,ETP	KSPCB	Periodical	Aluva Municipality has no industries				
C(ii)	Installation of modern abattoirs	Aluva Municipality	March 2021	DPR proposal prepared for installation of machines has been submitted for approval.	DPR proposal prepared for installation of machines has been submitted for approval.	DPR proposal prepared by IRTC (Accredited Agency) for the installation of machines has been submitted for the approval		
A(b)	Procurement of sewer cleaning machines	Aluva Municipality	March 2020	80% of drainage clearing operations	The drainage clearing operations has been	Drainage cleaning activities are done		

	and equipment maintenance	ty		have been completed. Further works is in progress.	completed.	everyday. JCBs are also used for carry out the waste. The excavated waste is then disposed in Thumboormuzhi compost.		
E	Installation of cameras at the waste dumping spots	Aluva Municipality	2020	As part of monitoring of dumping sites. 53 cameras are to be installed, where 47 cameras are currently operational. The installation of rest of the cameras are in progress.	For monitoring the dumping sites, 25 lakh rupee-worth of cameras have been established. But the NVR has been ceased by the police in connection with a criminal case in Aluva. So currently, they don't work.	For monitoring the dumping sites, 25 lakh rupee-worth of cameras have been established. But the NVR has been ceased by the police in connection with a criminal case in Aluva. Therefore it is currently not working Night surveillance squad operation is still ongoing.		
A(b)	Construction of retaining wall with HDPE liner at Kalamassery dumping yard in order to prevent the leachate discharge from the yard to Thoombungal	Kalamassery Municipality	Sept 2019	Completed	NA	NA	1 0 0	

	Thodu							
C(ii)	Installation of plastic shredding unit	Kalamassery Municipality	June 2019	One plant is already installed and functioning.	NA	NA	100	
A(a)(iv)	Constitution of squads for night surveillance for finding the unauthorized dumping of sewage at NAD wet lands Kalamassery	Kalamassery Municipality, Police department	2020	Culprits who were dumping wastes were identified using the cameras installed by municipality. 14,34,301/- has been collected till date as fine. 2,25,500/- collected so far in the month of June.	NAD not provided CCTV. Night squad fine Rs.1768380	NAD not provided CCTV. Night squad fine Rs.1825440		
A(b)	Installation of common STP for Kalamassery Municipality and ETP at Municipal Market	Kalamassery Municipality	December 2019	ETP is working in the market. Finding the place to set up common STP . The prepared DPR has been submitted to the Water Authority for approval.	75 cent land identified at North Kalamassery for sewage and septage treatment plant violations. Second notice issued due to 2 persons and rectified the defect. Inspection conducted on 28.07.2022, fresh notice	75 cent land identified at North Kalamassery for sewage and septage treatment plant violations. Second notice issued due to 2 persons and rectified the defect. Inspection conducted on 28.07.2022, fresh notice		

					issued to 5 persons, 1 person cleared violation. Inspection conducted on 15.09.2022, fresh notice to 1 person. Inspection conducted on 29.12.2022, 5 persons cleared violation. Inspection conducted on 16.02.2023, 1 person fresh notice issued. 7 outlet of houses, 3 outlet of establishment in may 2023	issued to 5 persons, 1 person cleared violation. Inspection conducted on 15.09.2022, fresh notice to 1 person. Inspection conducted on 29.12.2022, 5 persons cleared violation. Inspection conducted on 16.02.2023, 1 person fresh notice issued. 7 outlet of houses, 3 outlet of establishment in may 2023		
A(a)(iv)	Monitoring and surveillance of industries in Kalamassery Industrial Estate in order to prevent unauthorized discharges to Muttar River	KSPCB	2019	7 outlets were found last month's inspection and they were closed.		6 outlets were found out by the inspection conducted on last month and they were closed. Information will be sent		

C(ii)	Installation of modern abattoirs including poultry and meat rendering plants.	Kalamassery Municipality, Industries Department (for land allotment)	2021	A site has been identified for setting up a modern slaughterhouse. Efforts are being made to convey information regarding this from the municipal council to the government		A letter dated 03.10.22 has forwarded to the govt. for allotment of land for the construction of modern abattoirs		
A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Kalamassery Municipality	2020	Outlet for discharge is visible from many houses.	Inspection conducted on 24/09/2020, 22/07/2021, 13/08/2021, 01/01/2022, 10/01/2022, 11/01/2022, 12/01/2022 & notice issued to 49 persons. 12 persons cleared	Inspection conducted on 24/09/2020, 22/07/2021, 13/08/2021, 01/01/2022, 10/01/2022, 11/01/2022, 12/01/2022 & notice issued to 49 persons. 12 persons cleared violations. Second notice issued to 2 persons and rectified the defect. Inspection conducted on 28.07.2022, fresh notice issued to 5 persons, 1 person cleared violation. Inspection conducted on 15.09.2022, fresh notice issued to 1 person. Inspection conducted		

						on 29.12.2022, 5 persons cleared violation . Inspection conducted on 16.02.2023, 1 person fresh notice issued. 7 outlet of houses, 3 outlet of establishment in may 2023		
E	Installation of cameras at the waste dumping spots	Kalamassery Municipality	2020	The installation of 80 cameras has been increased to 200 cameras and a fund of rs.40 lakh has been found for the same.	Camera installed on 10 locations. 2 portable (mobile) camera has installed for identifying waste dumping spot. Rs 36560/- levied till date.	Camera installed on 10 locations. 2 portable (mobile) camera has installed for identifying waste dumping spot. Rs 36560/- levied till date.		
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	Arrangements have been made to drain the waste water discharged from the shopping complexes, shops etc. into the soakpit. Municipality constructed soakpits for that purpose.	Arrangements have been made to drain the waste water discharged from the shopping complexes, shops etc. into the soakpit and solved the problem	Inspections are done time to time. No waste discharge was found during inspection time.		

E	Installation of cameras at the waste dumping spots	Eloor Municipality	2020	The installation of 80 cameras has been increased to 200 cameras and a fund of rs.40 lakh has been found for the same.	Keltron cameras are established in aerobic bins near HIM company and nearby the bins in Manjummel Arattukadavu. Cameras often not working due to software issues therefore officers from Keltron frequently conduct the inspection by the intervention of municipality and they ensure to solve the problems. Camera specification related problems are completely resolved.	Keltron cameras have been installed in the vicinity of the aerobic bins near HIL company and in Manjummel Arattukadavu. Also in the 2023-24 project amount has been allocated for the installation of cameras in different areas of the municipality and according to this 44,00,000 rupees tender procedures are being taken for 3 projects.		
A(a)(iv)	Periodical inspection in the Industries, Flats, hotels for monitoring of STP,ETP located in Cochin corporation	KSPCB	periodical	An amount of Rs. 97,85,750/- were imposed as fine from culprits.16 houses and 18 establishments were identified				

A(a)	Inventory of sources of pollution through a rapid study/Study for identification of pollution sources at Edapally thodu	Kochi Municipal Corporation	3 months	42 Lakhs has been found for removal of algae . As part of desilting works feom Lulu mall to Thuthiyur bridge is under completion stage.	42 Lakhs has been found for removal of algae . As part of desilting works feom Lulu mall to Thuthiyur bridge has been completed	To find the source of discharge, a squad was formed under Engineering and health and regular inspections are carried out. Identified sources will be informed. Desilting works have been completed		
E	issuing notice to the defaulters	Kochi Municipal Corporation	4 months	(Representative from concerned local body has not attended the meeting)				
A(a)(iv)	Periodical inspection in the flats, hotels, shops located along the river	Kochi Municipal Corporation	periodical	Inspection in progress	A thorough inspection was carried out in the establishments near the river. Notices were issued against those found violating the law.	A thorough inspection was carried out in the establishments near the river. Notices were issued against those found violating the law. Notice was sent by the Health Department.		

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.	Cleaning of 20 canals and 13 sub canals under Eloor municipality on the banks of Periyar in Kalamassery constituency and 40 canals under Paravur constituency situated on the banks of Periyar in Karumallor, Kunnukara and Alangad Panchayath , which comes under the auspices of minor irrigation office are under progress. The proposal for the cleaning of the Onithod which connected from Periyar has been submitted to the government by the Ernakulum district collector from minor		
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irrigation office.
Permission not
received. Irrigation
Division has
submitted estimates
for rehabilitation of
the following streams
under Ernakulam.

1. Kuthuthodu

(IRR/IA/EST/8495/2022_5_8_7

) Rs. 74.40 lakh

2.Edathodu

(IRR/IA/EST/8495/2022_5_11_10

) Rs. 9/- lakh

These works have not been
approved.The cleaning of
Vliyachal canal and
Erazhichal in Eloor
municipality is in progress

						under Minor irrigation department.		
C(iii)	Clearing of weeds, grasses at the river bank in order to ensure the smooth flow of water	Irrigation department	3 years	Operation Vahini in association with panchayatsis carrying out cleaning and desilting of hand drains. The activities which are a part of Operation Vahini project are in final stage. We have been given an estimate for the rest of the work. If approved, work will be completed. The construction work of surveillance road for monitoring has been put up for approval.	Operation Vahini 2022 has been completed. A proposal has been made for sanitation activities in Methanam areas. Permission not received	The project Operation Vahini 2022 is carried out to clean and desilt drains and hand drains. As part of this project, works on some tributaries of Periyar have been completed and also the cleaning of 17.5km of Edamula-Muttar-Varapuzha reach which is a part of Periyar is under completion. Proposals have been issued for cleaning activities Edayar and		

						Methanam. If permission is granted, they will also be taken up		
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	The shutters are opened and operated at regular intervals.	The shutters are opened and operated at regular intervals.		
A(b)	Common Effluent Treatment Plant at Edayar Industrial Estate	Industries department	2022	The Government has sanctioned Rs 37.5 crore to the Industries Department for setting up a Common Effluent Treatment Plant. The project is being implemented by KWA. DPR of this has been submitted. Project proposal is under revision, the said project is under consideration	The project proposal for the establishment of common effluent plant is under revision and didn't receive any reply from government regarding the revised amount. Environmental Engineer explained more details about this subject. On 09/02/2023 during RRC chaired by Chief Secretary discussed OA673/2018 with other related departments and taken a	The project proposal for the establishment of common effluent plant is under revision and didn't receive any reply from government regarding the revised amount. Environmental Engineer explained more details about this subject. On 09/02/2023 during RRC chaired by Chief Secretary discussed OA673/2018 with other related departments and taken a		

				of Govt. There was no first approval for amount of operational maintenance and GST. In the Chief Secretary's meeting held on 23.08.2022, three months time has been allotted for revising the CETP Project Proposal.	decision that, all the industries in Edayar may have their own ETP so in that case CETP project can be abandoned. Therefore, Environmental Engineer suggested to exclude this agenda from further discussions.(including the minutes of the referred meeting)	decision that, all the industries in Edayar may have their own ETP so in that case CETP project can be abandoned. Therefore, Environmental Engineer suggested to exclude this agenda from further discussions.(including the minutes of the referred meeting)		
A(b)	Construction of internal roads and proper drainage in Edayar industrial estate	Industries department		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 intimated that the work will be started soon.	Completed construction of 13 roads and drainages.	(1)MSECDP work completed, including completion of 13 Nos internal road and 11Nos of drainage. (2) Rs.6.2 crore released to EE, PWD for maintenance and repair of internal road (3) Rs.34 lakhs released to EE,PWD for drainage works		

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. Currently CETP project has discontinued and the plan does not exist.	It was decided to include the project of installing the common discharge pipeline in the DPR of CETP. Currently CETP project has discontinued and the plan does not exist.		
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. 7 cameras have been installed. New two cameras is yet to be installed. It will be fixed soon.	The CCTV cameras and accessories have been installed. 9 cameras have been installed.		
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.	Routine inspection is going on. Night Surveillance also carried out continuously.		
A(a)(iv)	Monitoring of quality of water at various intake point	Kerala Water Authority	2020	Status not reported	Status not reported			
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	The maintenance works of Online monitoring station in the downstream side of	The maintenance works of Online monitoring station in the downstream side of		

				completed and is working. Online monitoring station in the upstream side has been installed. Connection work to display board in progress.	PathalamBundhave been completed and is working. Online monitoring station in the upstream side has been installed. Display board work is in progress. Quality of water at upstream is satisfactory.	PathalamBundhave been completed and is working. Online monitoring station in the upstream side has been installed. Display board work is in progress. Quality of water at upstream is satisfactory.		
A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Kadungallur Panchayath	2020	A total fine of Rs.2500/- will be collected against those who were spotted	Representative from concerned local body has not attended the meeting	Inspection Ongoing		
E	Installation of cameras at the waste dumping spots	Kadungallur Panchayath	2020	A total fine of Rs.36521/- will be collected against those who were spotted through the surveillance camera but till date they have not paid it.		Project Ongoing		
A(b)	Identification of the establishments/commercial complexes/flats/houses	Choornikkar Panchayath	2020	5 Flats were identified and provided instructions. By concealing the number	150 soak pits have been constructed to prevent dumping of sewage from houses into the	150 soak pits have been constructed to		

	/hote ls etc who is discharging the sewage to the public drain			plates litterers cannot be identified, the litterers cannot be detected by CCTV. Arrangements will be made for installing soak pits in the houses	river, and no other problems exist.	prevent dumping of sewage from houses into the river. An inspection was conducted and a notice was issued to an establishment.		
E	Installation of cameras at the waste dumping spots	Choornikkar a Panchayath	2020	Project has been postponed ,since more time is required to install more cameras.	For the monitoring of sumping spots, 50 lakh rupees project is submitted for installing camera. Out of which 25 lakhs should be collected in the form of donation and Rs.2,06,000/- is already collected.	Rs.50,00,000/- has been earmarked for installation of surveillance cameras at dumping spots. Out of which 25 lakhs should be collected as donations. 50 lakhs to be amended to 30 lakhs is under consideration. 2.11 lakh was received as a contribution towards CSR. It was decided to negotiate with the companies for the remaining amount. The contribution amount revision into 5		

						lakhs is also under consideration. 6 cameras were installed last year		
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LONG TERM MEASURES

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 2023	% works completed	Details of works remaining
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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	A letter (15.07.2023) has been issued by Tahsirdar of Paravur Taluk for surveying the banks of the river. Immediate actions will be followed up. An investigation estimate of Rs.8 lakhs has been prepared and submitted for construction of road and dykewall near industrial belt. Financial sanction of 5.9 lakhs has been received, sent for administrative sanction. The design of the dykewall can be completed only after considering the investigation report and the availability of		
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						space		
C(i)	Fencing of the river banks along the stretches of waste disposal (Edamula stretch)	Cochin Municipal Corporation	1-2 years	Representative from concerned local body has not attended the meeting		NA		
C(iii)	Beautification of the river stretches (Edamula stretch)	Cochin Municipal Corporation	1-2 years	.Representative from concerned local body has not attended the meeting	2018-2019 original report will be given in the next meeting.will be checked and the reply	NA		

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 July 2023	Progress in the month of August2023	Progress in the month of September 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					
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					

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, FLOOR
ANALYSIS REPORT OF RIVER PERIYAR - SEPTEMBER 2023
Sampling point: VETTUKADAVU

Sl. No	Parameter	Unit	05.09.2023	25.09.2023
1	Temp	°C	28.5	27.6
2	pH		6.9	6.8
3	Conductivity	µS/cm	4232.00	54.36
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	1052.5	14.9
6	Hardness	"	460.0	17.0
7	D.O.	"	7.4	7.7
8	Calcium	"	136.0	4.0
9	Magnesium	"	29.160	1.701
10	Ammoniacal Nitrogen	"	**	**
11	Phosphate	"	**	**
12	Total alkalinity	"	36.0	18.0
13	BOD	"	3.0	1.8
14	Sulphate	"	**	**
15	Nitrates	"	**	**
16	TC	cfu/100ml	400.0	700.0
17	FC	"	NIL	100.0
18	FS	"	NIL	NIL

* TURBIDITY METER IS OUT OF ORDER

** SPECTROPHOTOMETER IS OUT OF ORDER

**KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, FLOOR
ANALYSIS REPORT OF RIVER PERIYAR - SEPTEMBER 2023
Sampling point: PATHALAM BRIDGE**

Sl. No	Parameter	Unit	05.09.2023	25.09.2023
1	Temp	°C	28.5	27.5
2	pH		7.1	6.6
3	Conductivity	µS/cm	66.85	76.67
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	12.9	13.9
6	Hardness	"	14.0	26.0
7	D.O.	"	5.8	6.5
8	Calcium	"	4.4	8.0
9	Magnesium	"	0.729	1.458
10	Ammoniacal Nitrogen	"	**	**
11	Phosphate	"	**	**
12	Total alkalinity	"	18.0	30.0
13	BOD	"	3.9	0.9
14	Sulphate	"	**	**
15	Nitrates	"	**	**
16	TC	cfu/100ml	200.0	500.0
17	FC	"	NIL	NIL
18	FS	"	NIL	NIL

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KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR - SEPTEMBER 2023
Sampling point: PUTHALAM KADAVU

Sl. No	Parameter	Unit	05.09.2023	25.09.2023
1	Temp	°C	28.5	27.6
2	pH		7.0	6.5
3	Conductivity	µS/cm	46.30	77.90
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	10.9	16.9
6	Hardness	"	11.0	24.0
7	D.O.	"	5.3	5.5
8	Calcium	"	3.6	6.8
9	Magnesium	"	0.486	1.701
10	Ammoniacal Nitrogen	"	**	**
11	Phosphate	"	**	**
12	Total alkalinity	"	18.0	26.0
13	BOD	"	1.5	1.1
14	Sulphate	"	**	**
15	Nitrates	"	**	**
16	TC	cfu/100ml	1100.0	600.0
17	FC	"	200.0	NIL
18	FS	"	NIL	NIL

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KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, FLOOR
ANALYSIS REPORT OF RIVER PERIYAR - SEPTEMBER 2023
Sampling point: PATHALAM BUND U/S

Sl. No	Parameter	Unit	05.09.2023	25.09.2023
1	Temp	°C	28.4	B
2	pH		6.9	U
3	Conductivity	µS/cm	149.30	N
4	Turbidity	NTU	*	D
5	Chlorides	mg/L	29.8	
6	Hardness	"	35.0	O
7	D.O.	"	3.9	P
8	Calcium	"	9.6	E
9	Magnesium	"	2.673	N
10	Ammoniacal Nitrogen	"	**	
11	Phosphate	"	**	
12	Total alkalinity	"	24.0	
13	BOD	"	2.5	
14	Sulphate	"	**	
15	Nitrates	"	**	
16	TC	cfu/100ml	300.0	
17	FC	"	NIL	
18	FS	"	NIL	

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**KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR - SEPTEMBER 2023
Sampling point: PATHALAM BUND D/S**

Sl. No	Parameter	Unit	05.09.2023	25.09.2023
1	Temp	°C	28.5	27.6
2	pH		6.7	6.6
3	Conductivity	µS/cm	5140.0	332.0
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	1261.0	91.3
6	Hardness	"	550.0	123.0
7	D.O.	"	2.4	6.8
8	Calcium	"	104.0	20.8
9	Magnesium	"	70.470	17.253
10	Ammoniacal Nitrogen	"	**	**
11	Phosphate	"	**	**
12	Total alkalinity	"	36.0	18.0
13	BOD	"	1.6	3.5
14	Sulphate	"	**	**
15	Nitrates	"	**	**
16	TC	cfu/100ml	200.0	600.0
17	FC	"	NIL	NIL
18	FS	"	NIL	NIL

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** SPECTROPHOTOMETER IS OUT OF ORDER

**KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, FLOOR
ANALYSIS REPORT OF RIVER PERIYAR - SEPTEMBER 2023
Sampling point: MANJUMMAL BUND**

Sl. No	Parameter	Unit	05.09.2023	25.09.2023
1	Temp	°C	28.4	27.7
2	pH		6.7	6.6
3	Conductivity	µS/cm	116.80	83.07
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	17.9	13.9
6	Hardness	"	27.0	22.0
7	D.O.	"	3.1	5.1
8	Calcium	"	6.4	7.2
9	Magnesium	"	2.673	0.972
10	Ammoniacal Nitrogen	"	**	**
11	Phosphate	"	**	**
12	Total alkalinity	"	28.0	24.0
13	BOD	"	2.0	1.3
14	Sulphate	"	**	**
15	Nitrates	"	**	**
16	TC	cfu/100ml	900.0	500.0
17	FC	"	200.0	NIL
18	FS	"	NIL	NIL

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** SPECTROPHOTOMETER IS OUT OF ORDER

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 July 2023	Progress in the month Of August 2023	Progress in the month of September 2023	% works completed	Details of works remaining
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			-	100	nil
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	Not included in the Nenmanikkara Gramma	100	0

						panch ayath		
E	Cleaning and desilting	Irrigation Department and Vallachira Panchayat	4months	nil	nil	nil	10 0	0
Neerolithodu								
E	Cleaning and desilting	Irrigation Department	4months	<p>തുശ്ശൂർ കെ എൽ ഡി സി വിഭാഗത്തിന് റീബിൽഡ് കേരള എന്ന പദ്ധതിയിൽ ഉൾപ്പെടുത്തി നീരോലിതോടിന്റെ ഡിസിൽറ്റേഷൻ പ്രവൃത്തിക്ക് ഭരണാനുമതി ലഭ്യമായിട്ടുള്ളതും ആയതിനാൽ 2022- 23 സാമ്പത്തിക വർഷത്തെ എൻ ജി ടി ആക്ഷൻ പ്ലാനിൽ നീരോലിതോടിന്റെ ഡിസിൽറ്റേഷൻ പ്രവൃത്തി നിലവിൽ ഉൾപ്പെടുത്തേണ്ട സാഹചര്യം ഇല്ലായെന്ന് ബന്ധപ്പെട്ട എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ, എം.ഐ.ഡിവിഷൻ ഇരിങ്ങാലക്കുട റിപ്പോർട്ട് ചെയ്തിട്ടുണ്ട്.</p>				
Painkilkayal thodu								
E	Cleaning and desilting	Irrigation Department and Vallachira Panchayat	4months	<p>. തുശ്ശൂർ കെ എൽ ഡി സി വിഭാഗത്തിന് റീബിൽഡ് കേരള എന്ന പദ്ധതിയിൽ ഉൾപ്പെടുത്തി പൈകിളികായൽതോടിന്റെ ഡിസിൽറ്റേഷൻ പ്രവൃത്തിക്ക് ഭരണാനുമതി ലഭ്യമായിട്ടുള്ളതും ആയതിനാൽ 2022- 23 സാമ്പത്തിക വർഷത്തെ എൻ ജി ടി ആക്ഷൻ പ്ലാനിൽ പൈകിളികായൽതോടിന്റെ ഡിസിൽറ്റേഷൻ പ്രവൃത്തി നിലവിൽ ഉൾപ്പെടുത്തേണ്ട സാഹചര്യം ഇല്ലായെന്ന് ബന്ധപ്പെട്ട എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ, എം.ഐ.ഡിവിഷൻ ഇരിങ്ങാലക്കുട റിപ്പോർട്ട് ചെയ്തിട്ടുണ്ട്.</p>				
Kadathodu								
A(b)	Identification of pollution sources and surveillance to restrict the dumping of wastes	Vallachira & Nenmanikkara	1 month	Ongoing	Ongoing	Not included in	10 0	0

		Panchayats				the Nenmanikkara Gramma panch ayath		
E	Cleaning and desilting	Irrigation Department	4months	<p>പ്രസ്തുത പ്രവൃത്തിയ്ക്ക് 20/03/2023 തീയതിയിലെ ജലസേചനവും ഭരണവും, ചീഫ് എഞ്ചിനീയറുടെ ഉത്തരവ് നം. AS/59D/22/25940 പ്രകാരം 9.5 ലക്ഷം രൂപയ്ക്ക് 2702-01-800-86-00-00-00-P-V എന്ന ഹെഡിൽ ഭരണാനുമതി ലഭിച്ചിട്ടുണ്ട്. പ്രസ്തുത തോട് വല്ലൂരി പഞ്ചായത്തിന്റെ അധീനതയിൽ ആയതിനാൽ പ്രവൃത്തിക്ക് സാങ്കേതികാനുമതി നൽകുന്നതിന് പഞ്ചായത്തിന്റെ resolution ആവശ്യമാണ്. പ്രസ്തുത resolution ലഭ്യമാകുന്നതിനായി പഞ്ചായത്ത് സെക്രട്ടറിയുടെ കത്ത് സമർപ്പിച്ചിട്ടുണ്ട്</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	Installed boards along Karuvannur river side against littering waste and animal bath. Board installation process is	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.	going on in various places of municipal area. We used tp conduct surveys, distributed notices to all the houses near to the riverside.	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 Julymonthly basis	Monitoring is going on August monthly basis	Monitoring is going on September monthly basis		
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Going on monthly basis.	Going on monthlybasis.	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	Construction of STP plant at General Hospital, Irinjalakuda – DPR approved by Suchitwa Mission	Construction of STP plant at General Hospital, Irinjalakuda – DPR approved by Suchitwa Mission	Construction 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	Windrow Compost plant having 4 ton capacity. Construction has been already completed. Presently it is functioning	Windrow Compost plant having 4 ton capacity. Construction has been already completed. Presently it is functioning well and producing Bio		

				producing Bio manure for sale.	well and producing Bio manure for sale.	manure for sale.		
E	Rejuvenation of Kanathodu	Irrigation Department	1 year	<p>ടി പ്രവൃത്തിയ്ക്കായി 10.00 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് Price 3.0 ൽ തയ്യാറാക്കി പ്രൊപ്പോസൽ സാമ്പത്തികാനുമതി ലഭിക്കുന്നതിനായി 2022-23 സാമ്പത്തിക വർഷത്തെ പ്രയോജിനി ലിസ്റ്റിൽ ഉൾപ്പെടുത്തി ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിന് സമർപ്പിച്ചിട്ടുണ്ട് .</p>				
E	Installation of CCTV for Surveillance to prevent the dumping of waste in to the river	Irinjalakkuda Municipality	2 years	Police Department installed CCTV and currently functioning Near Karuvannur Bridge	Police Department installed CCTV and currently functioning Near Karuvannur Bridge	Police Department installed CCTV and currently functioning Near Karuvannur Bridge		

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 July 2023	Progress in the month of August 2023	Progress in the month of September 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 GRAMAPANCHAYATH

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 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 SANC TION ED, BUT NOT PUBL IC PLAC E	TS SANCTI ONED, BUT NOT PUBLIC PLACE	nil	25	75
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 and survey posts have been fixed	3.5 km survey out of 7 k.m. have been completed and survey posts have been fixed.	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
C	Manalipuzha River protection	MGNREGS	31.03.2020	3.5 km survey	3.5 km survey out of 7	3.5 km survey out of 7 k.m. have been		As survey did

				y out of 7 k.m have been completed and survey posts have been fixed	k.m have been completed and survey posts have been fixed.	completed & survey posts have been fixed		not complete
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-09-08-23								
SL. NO	PARAMETER	UNIT	KT	MRK	KND	MDK	THR	KRV
1	PH		7.15	6.29	6.88	4.96	6.02	4.98
2	EC	µs/cm	104.4	143.5	95.9	192.5	82.6	186
3	BOD	mg/L	0.742	1.4	1.9	1.16	1.6	1.1
4	DO	mg/L	3.4	1.7	3.4	2.06	6.3	2.1
5	COD	mg/L	28	20	28	4	20	4
6	TC	CFU/100ml	750	400	300	100	200	800
7	FC	CFU/100ml	150	100	NIL	NIL	NIL	NIL
8	FSC	CFU/100ml	NIL	NIL	NIL	NIL	NIL	NIL
KT - KANAKKAN KADAVU, KARUVANNUR MRK - NEEROLI THODU, KARUVANNUR KND - KANATHODU, KARUVANNUR MDK - MUTTIKKAL DAM, KARUVANNUR THR- THIRUKUZHI, 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 July 2023	Progress in the month of August 2023	Progress in the month of September 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.	Polluting Sources & Illegal outlets were identified, notice issued as per Kerala Municipal Act and removed.	Completed		

				Doing regular inspection	Doing 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 June	Analysis report for the month of July	Analysis report for the month of August 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								
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 സാമ്പത്തികമാനു		A.S obtained

						<p>മതി ക്കാ യി ജലം സമ നവും ദരണ വും ചിപ് എ ഞ്ചിന ിയർ ക്ക് അയ ച്ചിട്ടു ണ്ട്. കൂടാ തെ ടി പ്രവൃ ത്തി “Res tori ng poll uted stre tche s of river s base</p>		
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						<p>d on NGT Ord ers” എന്ന ശീർ ഷക ത്തി ൽ ഉൾ പ്പെ ട്ടി നെ ക്ക ാ ള മു ൻ ഗ ണ ന ാ ലി സ് ത െ രി ക െ ൽ ക ു ടി 17 - 0 2 - 20 23 ന് ഇ റി ഘ ന ഃ അ യ് മി നി സ് ത്ര ഷ ൻ ചി ഫ് എ</p>		
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						ബിന യർ ക്ക് സമർ പ്പിച്ചി ട്ടു്.		
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	Topographical survey completed . Site identified and report submitted before Hon. District Collector 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 completed	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			

				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	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.			
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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 maping and seminar on pollution control	Forestry College, Vellanikkara	31/05/2020		completed			
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IRRIGATION DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of July2023	Progress in the month of August 2023	Progress in the month of September 2023	% works complete d	Details of works remainin g
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 സമർപ്പിച്ചിട്ടുണ്ട്.	കേച്ചേരി പുഴയുടെ പാരിസ്ഥിതിക നീരൊഴുക്ക് പഠനം (E-flow) പൂർത്തിയാക്കി റിപ്പോർട്ട് 18/05/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും, തിരുവനന്തപുരത്തിന് സമർപ്പിച്ചിട്ടുണ്ട്.	കേച്ചേരി പുഴയുടെ പാരിസ്ഥിതിക നീരൊഴുക്ക് പഠനം (E-flow) പൂർത്തിയാക്കി റിപ്പോർട്ട് 18/05/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും, തിരുവനന്തപുരത്തിന് സമർപ്പിച്ചിട്ടുണ്ട്.		

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 July 2023	Progress in the month of August2023	Progress in the month of September 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	Water level data collected from GWD observation wells	Water level data collected from GWD observation wells		

			wells				
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of June 2023	Progress in the month of July2023	Progress in the month of August2023	% works completed	Details of works remaining
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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-01-08-23				
SL. NO	PARAMETER	UNIT	VAD1	VAD2
1	pH	-	6.52	6.1
2	Electrical Conductivity	µs/cm	100.9	102.1
3	BOD	mg/L	2.86	2.42
4	DO	mg/L	6.9	7.7
5	COD	mg/L	16	16
6	TC	CFU/100ml	850	700
7	F C	CFU/100ml	300	100
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	31.05.2023	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	31.05.2023	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</p> <p>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. Agreement executed on 28.03.2023 with M/s Green Method. Work in progress.,50 % completed</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. Contractor has not executed the agreement even after</p>
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			<p>issuing several notices in this regard.</p> <p>Hon.Council dated 29.01.2022 decided to terminate the contract under risk and cost of the contractor and also</p> <p>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. Single tender received and hence retendered. Single tender received again, quotation invited. 3 bids received, technical bid evaluation is in progress.</p>
	<ul style="list-style-type: none"> Monitoring at State level must take place 		NA
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		
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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	Implementin g agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 2023	% wor ks com plet ed	Details of works remaining
A(b)	Identification of illegal outlets into the Panchikkal thodu and subsidiary drains	Thrissur Corporation	3 month s			0	8 7 %	
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 month s	15	12	8	9 0 %	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						Instruction has been provide to temple authorities for construction of waste disposal facilities accordance

								with swm2016
E	Desilting of Karakattuchal near Green field to Puzhakkal (Green field)	Irrigation Department	4 months	ടി പ്രവൃത്തിക്കായി 10 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് പ്രൈസ് 3 യിൽ തയ്യാറാക്കി പ്രദേശ സാമ്പത്തികാനുമതി ലഭിക്കുന്നതിനായി സൂപ്രണ്ട് എഞ്ചിനീയർ, മൈനർ ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ	ടി പ്രവൃത്തിയ്ക്കായി 10.00 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് ജ്യൂരൽ 3.0 ത് തയ്യാറാക്കി 15/09/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിൽ സാമ്പത്തികാ	. Tendering stage for financial year 2023-24	0	

				എറണാകുളത്തി നഗര, സുപ്രണ്ടിൻ എഞ്ചിനീയർ, ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ, തൃശ്ശൂരിനഗര സമർപ്പിച്ചിട്ടുണ്ട്. പ്രവൃത്തി നടപ്പിലാക്കുന്നതിന് ഫണ്ട് ലഭ്യമായിട്ടില്ല.	നുമതിയ്ക്കായി സമർപ്പിച്ചിട്ടുണ്ട്			
E	Desilting of Panchikkal thodu	Irrigation Department	4 months	Work completed	Work completed	Work completed	100	
E	Desilting of Kurinjikkal thuruth	Irrigation Department	4 months		Estimate submitted for fund			AS OBTAINED

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 months	Work completed	100% work completed	100% work completed	100	
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. 25meter protection wall proposed and work in progress. 130 Nos. Works are proposed and work not started.		

					ess.			
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 cleaning works are completed	195 Nos. Works are proposed for thodu cleaning works are completed	186 Nos. Works are proposed in 23-24 annual plan and 181 works completed	97%	
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 May is 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 coveri ng slabs comp leted and More works propo	35.30 KM of drain work and 5.85 KM of coveri ng slabs compl eted and More works	38.5 KM of drain work and 7.10 KM of covering slabs completed and More works proposed under annual plan 2023- 24.		

				sed under annual plan and 48 numbers of work completed.	proposed under annual plan 2022-23 and 46 numbers of work completed			
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	37.10 KM of drain work and 6.70 KM of covering	38.5 KM of drain work and 7.10 KM of covering slabs completed and		

				cover ing slabs com plete d and More work s prop osed unde r annu al plan 2022 -23 and 46 num bers of work com plete d	slabs compl eted and More works propo sed under annua l plan 2022- 23.	More works proposed under annual plan 2023-24.		
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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			<p>1) 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. 3.5Cr.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. Contractor has not executed the agreement even after issuing several notices</p>
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						<p>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. 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. Single tender received and hence retendered. Single tender received again, quotation invited. 3 bids received, technical bid evaluation is in progress.</p>
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						<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 sewerage projects. Work has been awarded toM/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</p>
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						<p>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 dtd. 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: 27.12.2022. Revised technical sanction obtained for Rs. 4.50 Cr. on 18.12.2022 open technology tender invited</p>
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						on 21.12.2022. Agreement executed on 28.03.2023 with M/s Green Method. Work in progress.		
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	Project cancelled in AMR UT-1 and proposed in AMR UT 2.0				2.50 MLD MLD : Corporation Council decided to cancel the project in AMRUT -1 and proposed the same in AMRUT 2.0. vid Council resolution 78-A1 dtd. 08.12.2022. 26 th SLTC of AMRUT-1

								held on 20.12.202 2 and 24.12.202 2 approved the same and recomme nded to SHPSC. 32 nd SHPSC dated 23.01.202 3 approved the same. The same was approved by G.O (Rt) No. 660/2023 /LSG dtd: 20.03.202 3. Corporati on
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								submitted the application for land conversion in LLMC held on 20.02.2023 and 21.03.2023, but clearance is yet to be obtained. Honble Mayor has sent letter on 28.04.2023 to Agricultural Officer for producing proof for inclusion of the proposed
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								land in RAMSAR site. Reminder letter sent on 08.05.202 3.
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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 July2023	Progress in the month of August2023	Progress in the month of September 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	Three artificial recharge sites	Three artificial		

			schemes (dug well recharge) submitted for technical sanction. Two artificial recharge schemes tendered.	selected and one proposal sent for technical sanction. Two artificial recharge schemes completed.	recharge sites selected and one proposal sent for technical sanction.		
3	B(iii)	Periodic ground water 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.		
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

ACTION PLAN BY GRAMAPANCHAYATH

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 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-11-08-2023**

SL. NO	PARAMETER	UNIT	SBA	KTH	PTU	MP
1	PH		6.84	7.5	6.93	7.19
2	EC	µs/cm	58.2	213.1	190.9	166.2
3	BOD	mg/L	0.3	3.6	1.3	2.75
4	DO	mg/L	1.3	3.8	2.4	4.98
5	COD	mg/L	8	8	8	8
6	TC	CFU/100ml	100	100	300	200
7	F C	CFU/100ml	100	100	NIL	150
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 BHARATHAPUZHA, PALAKKAD – SEPTEMBER 2023

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	March 2021	Field Survey was completed and the location was identified for STP. Kerala Water Authority is preparing a DPR for sewerage network and STP for Pattambi Municipality.
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	Not proposed	Not Applicable
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	March 2021 (Primary STP and Septage Treatment Plant proposed, not STP)	Kerala Water Authority is preparing a DPR for sewerage network and STP.
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 	Applicable at State level	Not Applicable
	<ul style="list-style-type: none"> • Monitoring at State level must take place 	Applicable at State level	Not Applicable
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 	Applicable at State level	Not Applicable

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>Primary STP (oil and grease trap with grit chamber)- March 2021</p> <p>Not Proposed</p> <p>Not proposed</p> <p>MSW treatment Plant – March 2021</p> <p>March 2021</p> <p>Implemented by January 2020</p> <p>No specific proposal</p>	<p>Kerala Water Authority is preparing a DPR for sewerage network and STP.</p> <p>Not Applicable</p> <p>Not Applicable</p> <p>Implemented</p> <p>Water quality monitoring of polluted river stretch and two additional points were completed until JANUARY 2022. Results are complying with outdoor bathing standards.</p> <p>Management of dry wastes were achieved through the MCF and RCF facilities, BMW by CBWTF, E-Waste by authorised collection agencies.</p> <p>Not Applicable</p>
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(viii) Adopting good irrigation practices	No specific proposal	Not Applicable
(ix) Protection and management of food plain Zones (FPZ)	March 2021	A more comprehensive DPR by Irrigation Department and submitted for approval of State Government
(x) Rain water harvesting	No specific proposal	Not Applicable
(xi) Maintaining minimum Environmental flow of river	March 2021	A more comprehensive DPR by Irrigation Department and submitted for approval of State Government
(xii) Plantation on both sides of the river	No specific proposal	Not applicable
(xiii) Setting up biodiversity parks on flood plains by removing encroachment	No specific proposal	Not applicable

ACTION PLAN FOR RIVER BHARATHAPUZHA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	% works completed	Details of works remaining
1	Establishment and Modernisation of MSW treatment Plant (Solid Waste Management)	Pattambi Municipality	March 2021	Implemented	Implemented	100% work completed	Nil
2	Material collection Facility (Solid Waste Management)	Pattambi Municipality	Implemented by January 2020	Implemented	Implemented	100% implemented	Nil
3	Resource recovery facility (Solid Waste Management)	Pattambi Municipality	Implemented by January 2020	Implemented	Implemented	100% implemented	Nil
4	Installing house hold and community level solid waste management units	Pattambi Municipality	March 2021	Household level project Technical Sanction approved	Tendering work is in progress	79% implemented	21% implementation remaining
5	Door to Door Collection and Transportation of MSW	Pattambi Municipality	December 2020	Implemented	Implemented	Implemented	Nil
6	Regulating activities in flood plain zone protection and management of flood plain zone including side bank protection and greenery development	Irrigation department	March 2021	A more comprehensive DPR by Irrigation Department and submitted for approval of State Government	A more comprehensive DPR by Irrigation Department and submitted for approval of State Government. Planning Board	Implementation not started	Full implementation remaining

					approved budget of 500 Crore for NGT related projects. That fund may be utilised for the implementation of DPR.		
7	Issues relating to E-flow, maintaining minimum environmental flow of river(by having watershed management provisions) including removal of light jungles and muddies from river courses	Irrigation department	March 2021	A more comprehensive DPR by Irrigation Department and submitted for approval of State Government	A more comprehensive DPR by Irrigation Department and submitted for approval of State Government	Implementation not started	Full implementation remaining
8	Management of Municipal plastics, hazardous, biomedical and electrical and electronic wastes	Panchayath Municipality	Implemented by January 2020	Implemented	Implemented	100% Implemented	Nil
9	Awareness programmes for sections of public	KSPCB	March 2021	Implemented	Implemented	100% Implemented	Nil
10	Monitoring of river water quality by sampling	KSPCB	2020-2021	Water quality monitoring in Bharathapuzha at Pattambi and two additional points were completed until August 2023	Water quality monitoring in Bharathapuzha at Pattambi and two additional points were completed until September 2023	Implemented.	Implemented. Will continue up to the full implementation of the action plan. Consistently achieving

							bathing standards
11	Primary Sewage Treatment Plant and Septage Treatment plant	Pattambi Municipality	March 2021	KWA has proposed a plan to construct a STP	Field Survey was completed and the location was identified for STP. Kerala Water Authority is preparing a DPR for sewerage network and STP for Pattambi Municipality.	20% implemented	80% remaining
12	Installation of Modern Slaughter House and Rendering Plant	Pattambi Municipality	March 2021	Project submitted before DPC for purchasing land for slaughter house	Project submitted before DPC for purchasing land for slaughter house.	10% implemented	90% remaining
13	Construction of Sanitary Complex in Public Place	Pattambi Municipality	March 2021	DPR preparation on the renovation of two sanitary complexes and four new sanitary complexes at Pattambi Municipality is in progress.	DPR preparation on the renovation of two sanitary complexes and four new sanitary complexes at Pattambi Municipality is in progress.	15% implemented	85% remaining
14	Green Protocol implementation in all offices institution & public function	Pattambi Municipality	March 2021	Implemented	Implemented	100% Implemented	Nil

**POLLUTED RIVER STRETCH MONITORING PROGRAMME
(DATA SHEET SEPTEMBER 2023)**

Nhangatiri Temple (U/S of NWMP-2)

Station Name		RIVER BHARATHAPUZHA AT PATTAMBI (NWMP-2)									
Type of Water body		RIVER									
Completed by		DO, PALAKKAD									
Agency		Kerala State Pollution Control Board									
1	Station Code	2	3	3	2						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	9/8/2023									
		1	0	:	5	0					
3	Weather	Cloudy			Clear ✓			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm ✓			>100 cm		Flood	
5	Color & Intensity	Clear ✓			Turbid			Green		Brown	
		1 = Light			2 = Moderate ✓			3 = High			
6	Odour	None ✓			Fishy			H ₂ S		Other	
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease		Water Hyacinth	
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓			
9	Human activities around the station	Cattle wading			Tourism spot			Fishing	Bathing ✓		Other
10	Location details	U/s of town or industrial area ✓			D/s of town or industrial area			Pilgrim center/Bathing Ghat/Water intake		None	
11	Flow rate	27.44 m ³ /s									
12	Major polluting source	Industrial effluent			MSW	PW	None ✓		Other		
		Irrigation			Drinking water source ✓			Fishing		Domestic	
13	Uses of water in downstream	Organized water source			Cultivation			Bathing Ghat		Others	

Sl.No	Determinants	Values
1	Temperature, 0C	29.5
2	Dissolved Oxygen, mg/l	7.06
3	pH	7.8
4	BOD, mg/l	2.4
5	Total Coliform, MPN/100 ml	300
6	Fecal Coliform, MPN/100 ml	200
7	Fecal Streptococcus, MPN/100 ml	20

**POLLUTED RIVER STRETCH MONITORING PROGRAMME
(DATA SHEET SEPTEMBER 2023)**

Veliampallu regulator (D/S of NWMP-2)

Station Name		BHARATHAPUZHA AT PATTAMBI									
Type of Water body		RIVER									
Completed by		DO, PALAKKAD									
Agency		Kerala State Pollution Control Board									
1	Station Code	2	3	3	2						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	9/8/2023									
		1	1	:	3	0					
3	Weather	Cloudy			Clear ✓			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm ✓		Flood	
5	Color & Intensity	Clear ✓			Turbid			Green		Brown	
		1 = Light			2 = Moderate ✓			3 = High			
6	Odour	None ✓			Fishy			H ₂ S		Other	
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease		Water Hyacinth	
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓			
9	Human activities around the station	Cattle wading			Tourism spot			Fishing	Bathing ✓		Other
10	Location details	U/s of town or industrial area			D/s of town or industrial area ✓			Pilgrim center/Bathing Ghat/Water intake		None	

11	Flow rate	278 m ³ /s				
12	Major polluting source	Industrial effluent	MSW	PW	None ✓	Other
13	Uses of water in downstream	Irrigation	Drinking water source ✓		Fishing	Domestic
		Organized water source	Cultivation	Bathing Ghat	Others	

Sl.No	Determinants	Values
1	Temperature, 0C	29.5
2	Dissolved Oxygen, mg/l	7.2
3	pH	7.82
4	BOD, mg/l	2.4
5	Total Coliform, MPN/100 ml	200
6	Fecal Coliform, MPN/100 ml	100
7	Fecal Streptococcus, MPN/100 ml	ABSENT

**NATIONAL WATER QUALITY MONITORING PROGRAMME
(NWMP -2 DATA- SEPTEMBER 2023)**

Station Name		BHARATHAPUZHA AT PATTAMBI				
Type of Water body		RIVER				
Completed by		DO, PALAKAKD				
Agency		Kerala State Pollution Control Board				
1	Station Code	2	3	3	2	
2	Date and time of sample taken (DD/MM/YY, HH/MM)	9/8/2023				
		1	0	:	3	5
3	Weather	Cloudy	Clear ✓	Windy	Raining	
4	Approximate depth of main stream	< 50 cm	50 – 100 cm	>100 cm ✓	Flood	
5	Color & Intensity	Clear ✓	Turbid	Green	Brown	
		1 = Light	2 = Moderate ✓	3 = High		
6	Odour	None ✓	Fishy	H ₂ S	Other	
7	Floating Matter	Floating Algae	Floating sludge	Oil & Grease	Water Hyacinth	
8	Visible effluent discharges in proximity	Industrial	Municipal sewage ✓	None		
9	Human activities around the station	Cattle wading	Tourism spot	Fishing	Bathing ✓	Other
10	Location details	U/s of town or	D/s of town or	Pilgrim center/Bathing	None	
11	Flow rate	40 m ³ /s				
12	Major polluting source	Industrial effluent	MSW ✓	PW	None	Other
13	Uses of water in downstream	Irrigation	Drinking water source ✓		Fishing	Domestic
		Organized water source	Cultivation	Bathing Ghat	Others	

Sl.No	Determinants	Values
1	Temperature, 0C	30
2	Dissolved Oxygen, mg/l	7.9
3	pH	7.93
4	BOD, mg/l	2.6
5	Total Coliform, MPN/100 ml	100
6	Fecal Coliform, MPN/100 ml	ABSENT
7	Fecal Streptococcus, MPN/100 ml	ABSENT

**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 BHAVANI, PALAKKAD- SEPTEMBER2023

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	March 2020. Target achieved	Action plan completed. Septic tank systems are adopted for entire sewage treatment
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	Not proposed	Not Applicable
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	STP not Proposed	Septic tank systems are adopted for entire sewage treatment
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 	Applicable at State level	Not Applicable
	<ul style="list-style-type: none"> • Monitoring at State level must take place 	Applicable at State level	Not Applicable
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 	Applicable at State level	Not Applicable

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>Drains contributing pollution to the River were not identified</p> <p>Not Proposed</p> <p>Not proposed</p> <p>Dec 2020</p>	<p>Not Applicable</p> <p>Not Applicable</p> <p>Not Applicable</p> <p>Dry waste- Implemented. Material Collection Facility and 80% of work completed for MSW treatment plant. Wet waste- 100% Managed at source level</p>
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<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>March 2021</p>	<p>Water quality monitoring of polluted river stretch and three additional points were completed until JANUARY 2022</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>Implemented by January 2020</p>	<p>Not applicable</p>
<p>(vii) Ground water regulation</p>	<p>No specific proposal</p>	<p>Not applicable</p>
<p>(viii) Adopting good irrigation practices</p>	<p>No specific proposal</p>	<p>Not applicable</p>
<p>(ix) Protection and management of food plain Zones (FPZ)</p>	<p>March 2021</p>	<p>A more comprehensive DPR prepared and submitted for approval by Irrigation Department -Check dams at Bhoothivazhi, Anakkal and Chemmanur are proposed in the DPR.</p>
<p>(x) Rain water harvesting</p>	<p>No specific proposal</p>	<p>Not applicable</p>

	<p>(xi) Maintaining minimum Environmental flow of river</p>	<p>March 2021</p>	<p>A more comprehensive DPR prepared and submitted for approval by Irrigation Department</p>
	<p>(xii) Plantation on both sides of the river</p>	<p>No specific proposal</p>	<p>Not applicable</p>
	<p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>	<p>No specific proposal</p>	<p>Not applicable</p>

ACTION PLAN FOR RIVER BHAVANI, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month August 2023	% works completed	Details of works remaining
C(ii)	Establishment of MSW treatment Plant (Solid Waste Management)	Pudur Grama Panchayath	2019-2020	Own fund position insufficient for doing the project	Own fund position insufficient for completing the project	80% implemented	20% - installation of treatment equipment/ facilities are remaining
C(ii)	Material collection Facility (Solid Waste Management)	Pudur Grama Panchayath	2019-2020	Implemented	Implemented	100% Implemented	Nil
C(ii)	Construction of Compound wall Material collection Facility Plant	Pudur Grama Panchayath	2019-2020	Implemented	Implemented	Implemented	Nil
C(ii)	Installing of waste Bin in Colonies	Pudur Grama Panchayath	2019-2020	Minis MCF in the colonies of Pudur Panchayath were started as an alternative of installation of waste bin in the colonies. Mini MCF facility were installed in the four	Minis MCF in the colonies of Pudur Panchayath were started as an alternative of installation of waste bin in the colonies. Mini MCF facility were	62% implemented	38 % implementation remaining

				wards and its coverage will be extend over all the 13 wards	installed in the 8 wards and its coverage will be extend over all the 13 wards		
C(ii)	Preliminary expenses met for "harithakarmasena"	Pudur Grama Panchayath	2019-2020	Implemented	Implemented	100% implemented	Nil
A(b)	Construction of Community Toilets	Pudur Grama Panchayath	2019-2020	Construction of sanitary complex at Chavadiyururu under the "Take a Break Project" was completed	Construction of sanitary complex at Chavadiyururu under the "Take a Break Project" was completed	100 %	The community toilet underway is over and above action plan
A(b)	Repair of Community toilets	Pudur Grama Panchayath	2019-2020	Not Applicable	Not Applicable	Nil	Nil
C(i)	Construction of Protection wall with fencing	Irrigation department	2020-21	River side protection of Thekkuvattathode(stream) was completed. Agreement executed for a new work on River Bhavani at Thekkuvatta LIS.	Side protection work near to Thekkuvatta LIS to be started	85%	15 %
C(i)	Seasonal clearance of jungle and muddies from river courses	Irrigation department	2020 - 21	Work in this season at two locations at Pampanthode & Ranganathapuram were	Implemented	100	NIL

				completed			
D	Construction of Check dams at the identified locations	Irrigation department	2020 - 21	Checkdam at Boothivazhy, Anakkal&Chemmannura are proposed in the DPR	Checkdam at Boothivazhy, Anakkal&Chemmannur are proposed in the DPR	75%	25 %
D	Issues relating to Eflow, maintaining minimum environmental flow of river(by having watershed management provisions)	Irrigation department	2020 - 21	DPR prepared for comprehensive solution	DPR prepared for comprehensive solution	Implementation not started	Full implementation remaining
E	Information Education and Communication (IEC)	Pudur Grama Panchayath	2019 -20	Awareness programs conducted	Implemented	Implemented	Implemented
A(a)	Monitoring of river water quality by sampling	KSPCB	2019 -20	Water quality monitoring in Bhavani at Elachivazhi and three additional points were completed until August2023	Water quality monitoring in Bhavani at Elachivazhi and three additional points were completed untilSeptember 2023	Implemented. Will continue up to the full implementation of the action plan.	Implemented.

**POLLUTED RIVER STRETCH MONITORING PROGRAMME
(DATA SHEET SEPTEMBER 2023)**

Cheerakuzhi (U/S of NWMP-6)

Station Name		RIVER BHAVANI AT ELACHIVAZHI									
Type of Water body		RIVER									
Completed by		DO, PALAKKAD									
Agency		Kerala State Pollution Control Board									
1	Station Code	1	2	0	8						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	9/11/2023									
		1	2	:	2	0					
3	Weather	Cloudy			Clear <input checked="" type="checkbox"/>			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm <input checked="" type="checkbox"/>			>100 cm		Flood	
5	Color & Intensity	Clear <input checked="" type="checkbox"/>			Turbid			Green		Brown	
		1 = Light <input checked="" type="checkbox"/>			2 = Moderate			3 = High			
6	Odour	None <input checked="" type="checkbox"/>			Fishy			H ₂ S		Other	
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease		Water Hyacinth	
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None <input checked="" type="checkbox"/>			
9	Human activities around the station	Cattle wading <input checked="" type="checkbox"/>			Tourism spot			Fishing	Bathing <input checked="" type="checkbox"/>		Other
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing		None <input checked="" type="checkbox"/>	
11	Flow rate	15.75 m ³ /s									
12	Major polluting source	Industrial effluent			MSW	PW	None <input checked="" type="checkbox"/>		Other		
13	Uses of water in downstream	Irrigation <input checked="" type="checkbox"/>			Drinking water source <input checked="" type="checkbox"/>			Fishing	Domestic <input checked="" type="checkbox"/>		
		Organized water source			Cultivation	Bathing Ghat		Others			

Sl.No	Determinants	Values
1	Temperature, 0C	24
2	Dissolved Oxygen, mg/l	7.1
3	pH	7.69
4	BOD, mg/l	1.5
5	Total Coliform, MPN/100 ml	400
6	Fecal Coliform, MPN/100 ml	200
7	Fecal Streptococcus, MPN/100 ml	20

**POLLUTED RIVER STRETCH MONITORING PROGRAMME
(DATA SHEET SEPTEMBER 2023)**

Chalayur Uru (U/S of NWMP-6)

Station Name		RIVER BHAVANI AT ELACHIVAZHI									
Type of Water body		RIVER									
Completed by		DO, PALAKKAD									
Agency		Kerala State Pollution Control Board									
1	Station Code	1	2	0	8						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	9/11/2023									
		1	2	:	4	5					
3	Weather	Cloudy			Clear <input checked="" type="checkbox"/>			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm <input checked="" type="checkbox"/>			>100 cm		Flood	
5	Color & Intensity	Clear <input checked="" type="checkbox"/>			Turbid			Green		Brown	
		1 = Light <input checked="" type="checkbox"/>			2 = Moderate			3 = High			
6	Odour	None <input checked="" type="checkbox"/>			Fishy			H ₂ S		Other	
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease		Water Hyacinth	
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None <input checked="" type="checkbox"/>			
9	Human activities around the station	Cattle wading <input checked="" type="checkbox"/>			Tourism spot			Fishing	Bathing <input checked="" type="checkbox"/>		Other
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing		None <input checked="" type="checkbox"/>	
11	Flow rate	19.98 m ³ /s									
12	Major polluting source	Industrial effluent			MSW	PW	None <input checked="" type="checkbox"/>		Other		
13	Uses of water in downstream	Irrigation <input checked="" type="checkbox"/>			Drinking water source <input checked="" type="checkbox"/>			Fishing	Domestic <input checked="" type="checkbox"/>		
		Organized water source			Cultivation	Bathing Ghat		Others			

Sl.No	Determinants	Values
1	Temperature, 0C	24.5
2	Dissolved Oxygen, mg/l	7.86
3	pH	7.84
4	BOD, mg/l	1.26
5	Total Coliform, MPN/100 ml	200
6	Fecal Coliform, MPN/100 ml	100
7	Fecal Streptococcus, MPN/100 ml	ABSENT

POLLUTED RIVER STRETCH MONITORING PROGRAMME (DATA SHEET SEPTEMBER 2023)													
Karathur (D/S of NWMP-6)													
Station Name			RIVER BHAVANI AT ELACHIVAZHI										
Type of Water body			RIVER										
Completed by			DO, PALAKKAD										
Agency			Kerala State Pollution Control Board										
1	Station Code	1	2	0	8								
2	Date and time of sample taken (DD/MM/YY, HH/MM)	9/11/2023											
3	Weather	Cloudy			Clear ✓			Windy			Raining		
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm ✓			Flood		
5	Color & Intensity	Clear ✓			Turbid			Green			Brown		
		1 = Light ✓			2 = Moderate			3 = High					
6	Odour	None ✓			Fishy			H ₂ S			Other		
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease			Water Hyacinth		
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓					
9	Human activities around the station	Cattle wading ✓			Tourism spot			Fishing	Bathing ✓		Other		
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing		None ✓			
11	Flow rate	33.3 m ³ /s											
12	Major polluting source	Industrial effluent			MSW		PW		None ✓		Other		
13	Uses of water in downstream	Irrigation ✓			Drinking water source ✓				Fishing ✓		Domestic ✓		
		Organized water source			Cultivation		Bathing Ghat		Others				

Sl.No	Determinants	Values
1	Temperature, 0C	25.5
2	Dissolved Oxygen, mg/l	7.46
3	pH	7.92
4	BOD, mg/l	1.53
5	Total Coliform, MPN/100 ml	300
6	Fecal Coliform, MPN/100 ml	200
7	Fecal Streptococcus, MPN/100 ml	20

NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP -6 DATA- SEPTEMBER- 2023)													
Station Name			RIVER BHAVANI AT ELACHIVAZHI										
Type of Water body			RIVER										
Completed by			DO, PALAKKAD										
Agency			Kerala State Pollution Control Board										
1	Station Code	1	2	0	8								
2	Date and time of sample taken (DD/MM/YY, HH/MM)	9/11/2023											
3	Weather	Cloudy			Clear ✓			Windy			Raining		
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm ✓			Flood		
5	Color & Intensity	Clear ✓			Turbid			Green			Brown		
		1 = Light ✓			2 = Moderate			3 = High					
6	Odour	None ✓			Fishy			H ₂ S			Other		
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease			Water Hyacinth		

8	Visible effluent discharges in proximity	Industrial	Municipal sewage	None ✓		
9	Human activities around the station	Cattle wading ✓	Tourism spot	Fishing	Bathing	Other
10	Location details	U/s of town or	D/s of town or	Pilgrim center/Bathing		None ✓
11	Flow rate	25.2 m ³ /s				
12	Major polluting source	Industrial effluent	MSW	PW	None ✓	Other
13	Uses of water in downstream	Irrigation ✓	Drinking water source ✓		Fishing	Domestic
		Organized water source	Cultivation	Bathing Ghat	Others	

Sl.No	Determinants	Values
1	Temperature, 0C	25
2	Dissolved Oxygen, mg/l	7.6
3	pH	7.85
4	BOD, mg/l	1.67
5	Total Coliform, MPN/100 ml	200
6	Fecal Coliform, MPN/100 ml	100
7	Fecal Streptococcus, MPN/100 ml	ABSENT

**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 September 21 ,2023</p> <p>(I) Identified 3 drains on 10/12/2018 at the Hajiya pally stretch. Already Screen Net installed to both side of the bridge and periodic inspection & drainage of cleaning doing.</p> <p>(ii) Malappuram municipality – 30 KLD. Consent application is submitted for the revamping activities. Application has been returned for clarification. Action plan prepared through KWA</p> <p>(iii) NIL</p> <p>(iv) Activities progressing with decentralised source level treatment method and 2506 devices are distributed. New Project approved for 6000 Ring compost unit. Project Approved .Got T.S.E.Tender.</p> <p>(v) Attached Analysis Report for the month of September 2023. More activities are progressing under the “ Thelineer Ozhukum Navakeralam “scheme</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>(vi) Actions being initiated to prevent illegal waste dumping. Bio-Medical Waste collecting through IMAGE .Municipality has one MRF and 3 MCF's. Dry Waste Collecting through HKS and stored in these facilities from where recyclable materials are handed over to authorised recyclers and rejects, to KEIL through Clean Kerala Company.</p> <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	Completed	Completed	Completed	Completed	Completed
			March 2020	In progress	In progress	40 mini MCF has been approved	completed	Completed

1.10	Identification and monitoring of illegal activities/ CC TV Network installation	Malappuram Municipality	Ongoing	In progress	In progress	In progress	No progress	No progress
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2.KERALA STATE POLLUTION CONTROL BOARD

No.	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 2023	% works Completed	Details of works remaining
2.1	River water quality Monitoring- Thirurangadi, Hajaripally National Water Quality Programme(NWMP)	KSPCB	Ongoing; Monthly frequency	100%				

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 July 2023	Progress in the month of August2023	Progress in the month of September 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	<p>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.)</p>	<p>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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**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 ,2023 september 21</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 10.08.2023 to evaluate progress, No progress found. Since about 3 years repeated directions are being issued for time bound renovation of fish market STP. (ii)<u>Tirur municipal Bus Stand STP</u>-50 KLD –Present status-work completed ,send letter to suchitwa mission for technical evaluation and approvals. preparing for trial run. iii)NIL (iv)De centralised treatment facilities, Disposal using sanitary landfills, composting operations, MRF, MCF etc. Slaughter house- completed civil work. Electrical installation works started. (v)Attached as Annexure II-Analysis report during the
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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>month of September 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> <p>(xiii) Reported that encroachment survey is completed and now the process of laying survey stones is in progress.</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 TIRUR, KERALA

1. IRRIGATION DEPARTMENT								
1.								
No.	Activity	Implementing agency	Time line	Progress during month of July 2023	Progress during month of August 2023	Progress during month of September 2023	% works completed	Details of works remaining
			31.03.2020					
1.1.1	Strengthening the right side bund of Tirur- Ponnani Puzha at Porur, ward no. 1 Tirur Municipality	Irrigation Department	6 Months	Agreement Executed. Site Handed over.	In progress	In progress	28%	
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	Investigation work completed. report not submitted	No progress	No progress	No progress	Ring bund formation, Bailing out of water, Apron Extension, Cut off wall formation. Erection of

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	Therefore decided to invite open tender for repair and 5 year operation and maintains and project is included in 2023-2024 annual plan.	Decided to invite Re –e Tender	Re tender completed, 2 age ncies participated, file submitted to council for approval and negotiation.	Renovation work under process	(See minutes)
2.9	Setting up of STP at Private Bus stand	Tirur Municipality	June 2020	Pipeline work going on.	Pipeline work completed. Trial run going on.	STP work completed, send letter to suchitwa mission For technical evaluation and approvals.	progressing	(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	20 Notice.	

3.KERALA STATE POLLUTION CONTROL BOARD

No.	Activity	Implementing agency	Time line	Progress in the month of july2023	Progress in the month of august2023	Progress in the month of september 2023	% 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

4. ACTION PLAN BY VARIOUS GRAMA PANCHAYATHS- THALAKKAD, VETTOM, MANGALAM, CHERIAMUNDAM

No.	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 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 Due to audit objection.	70% protection of wall completed	Landscaping work remainig as per estimate

4.5	Fencing on bridge side Thalakkadathur	Cheriyamundam Grama Panchayath	March 2020	complete d	completed	completed	100	NIL
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5.GROUND WATER DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of July2023	Progress in the month of August 2023	Progress in the month of September2023	% works completed	Details of works remaining
5.1.	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier status: As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Tirur and Kuttippuram) comes under the Tirur river basin. These two blocks are semi-critical blocks and the stage of groundwater extraction ranges from 77.75 % to 77.92%)	Ground water Department Therefore, to regulate ground water resources in this area, no permission is granted for packaged drinking water industries or any other water induced industries	NA	No permits issued	No permits issued	No permits issued	NA	NA
5.2	Ground water recharging / rain water harvesting (Earlier status: The average pre -monsoon groundwater level ranges from 6.14mbgl - 8.49 mbgl.)	NA	NA		NO ACTION INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NO ACTION INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NA	NA
5.3	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Ground water Department No observation well along the			NA		NA	NA

		river stretches)						
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 INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NO ACTION INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NA	NA

6.REVENUE DEPARTMENT

No	Activity	Implementing agency	Timeline	july 2023	Progress august2023	Progress September2023	% works completed	Details of works remaining
6.1	Survey of boundaries of river side	Revenue department		Completed	Completed	Completed	100%	Encroachment survey completed.

**ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN TIRUR RIVER
SEPTEMBER 2023**

SI NO	Name of point	PARAMETERS				
		p ^H	DO (mg/l)	BOD (mg/l)	COD (mg/l)	FC(cfu/100ml)
1	Drain near Tirur Railway station	6.5	6.5	1.5	7	100
2	Thazhepalam drain	7.4	5.1	1.7	6.8	130
3	Naduvilangadi drain (old ponnani thodu)	Dried				
4	Annassery drain	7.5	6.9	2.3	9	100
5	Canal at CV Land	Dried				
6	Canal at Mangalam thuruth	7.5	7.3	2	8	50
7	Canal at Pullooni	7.0	4.5	3.0	9	200
8	Drain near Mangattiri bridge	Dried				
9	Drain near Ettirikkadavu bridge	7.0	4.3	2.3	10	100
10	Epothingal	6.8	5	1.6	7	100
11	Asarikkadav	7.2	4.3	3	10	100
12	Kandanath kadav	7.6	5	1.6	7	80
13	Pancharamoola	6.5	2.0	1.2	5	180
14	Kakadav	6.6	4.3	1.8	7	100
15	Kanathkadav	6.5	3.7	1.3	5	110
16	Drain near tirur railway station	Dried				
17	Payyanangadi(kadayithodu)	6.6	2.3	2	8	50

**ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN
KADALUNDY RIVER SEPTEMBER 2023 ALONG HAJIYARPALLY**

Sl.No	Name of point	PARAMETERS				
		pH	DO (mg/l)	BOD(mg/l)	COD (mg/l)	FC (cfu/100 ml)
1	Valiyangadi drain	7.4	5.6	1.8	8	35
2	Valiyangadi bypass drain	Dried				
3	Valiyathod drain	7.5	5.8	1.0	3	30
4	Hajiyarpally	7.0	6.1	1.8	6	60

KeralaStatePollutionControlBoard,DistrictOffice,Kozhikode**NATIONAL**

MISSION FOR CLEAN GANGA

Format for submission of monthly progress report by state/UTs

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

the month of SEPTEMBER 2023– Kallayi polluted river stretch

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-compliance status
1	Ensure 100% treatment of sewage atleast in-situ remediation		
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STP must be ensured.	30.09.2022	Construction of 2 MLD and 1 MLD STP plant of Calicut medical college started
3	Timeline for completing all steps of action plans including completion of setting up STP and their commissioning	Work under progress	Proposal for 13 MLD STP (6 MLD STP plant proposed at Kothi, 7 MLD STP plant proposed at Avikkal)– Kothi work started at Avikkal waiting for judgement
4	Chief secretaries may set up appropriate monitoring mechanisms at the state level <ul style="list-style-type: none">• Specifying accountability of nodal authorities not below the secretary level• Chief secretaries may have an accountable Person attached in their office for this purpose		NIL
	<ul style="list-style-type: none">• Monitoring at the state level must take place	Fortnightly commencing 21.12.2019	NIL

5	<p>Progress report may be furnished by the state/UTs to</p> <ul style="list-style-type: none"> • Secretary ,ministry of Jal Shakti • Member secretary, CPCB 	<p>Monthly (preferably before 20th Of every month)</p>	<p>NIL</p>
5.1	<p>Progress report may be comprised of details along with completion timeline on:</p> <p>(i) Identification of polluting source including drains contributing to river pollution and action as per NGT order on in situ treatment.</p> <p>(ii) <u>status of STPs, I&D and sewage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p>	<p>Action continuing</p> <p>31.03.2021</p> <p>31.07.2019</p> <p>work in progress</p>	<p>Drains identified .Pollution load calculated. Action plan prepared. Joint squad of PCB and Corporation inspection in action. Issued notice to 92 units. 30 units installed treatment facilities. During Jan-Mar 2020 joint squad of PCB and corporation inspected 82 units. Issued notice to 56 units. In 16 units installation of treatment units Effluent treatment facilities are under progress. Issued notice to 36 units and a fine of Rs.18500/- was imposed for the month of September 2020.. Monthly progress report submitted by Kozhikode corporation attached as Annexure 1</p> <p>Dredging of Kallayi river from Kaduppini to Kothi -DPR submitted to SE, INC, KK Don 16.10.2019 for Rs 773.05 lakhs (7.30 crores for desilting of river and 43.05 lakhs for fencing of 5 bridges) under action plan of Kallayi river and fencing of sides of the river. Work entrusted to KWIL -Dredging ,Desilting and removal of weeds from EK canal-11.2 Km Submitted by Irrigation department</p> <p>(i) Construction of 2 MLD, 1 MLD STP plant of Calicut medical college started. -10% work completed</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>work in progress</p> <p>No specific proposal</p> <p>Functioning</p> <p>Work in progress</p> <p>Functioning</p> <p>Work in progress</p>	<p>(ii) Proposal for 13 MLD STP (6 MLD STP plant proposed at Kothi, 7 MLD STP plant proposed at Avikkal) – Tendering in progress.</p> <p>(iii) STP of 13 MLD proposed at Kotooli. About 12% of sewer lines were laid by KWA – Hon’ble NGT stayed the project (O.Ano.215/2016).</p> <p>(iv) Individual septic tank and soak pit system provided for house hold, units like bakery, cool bars small restaurants with less seating capacity. Individual STPs for high rise building, hotels, Restaurants, Commercial buildings.</p> <p>No CETP proposed</p> <p><u>Kozhikode Corporation</u></p> <p>(i) Existing centralized waste disposal facility of 100 MT/DAY at Njeliyanparamba (windrow composting)</p> <p>(ii) Proposal of 450 TPD waste to energy plant at Njeliyanparamba implementation in progress. Capping work started.</p> <p>(iii) Chicken waste rendering plant of 40 TPD functioning in Thamarassery – 170 chicken stalls of Kozhikode corporation are disposing off the waste through this rendering plant. Rendering plant construction for chicken stall waste – Perumanna Peruvayal</p>
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		Functioning. And workprogressing	(iv) 3 MRFacilitiesexisting(At Njeliyamparamba (Super MRF)3TPD- with plastic shredding unit,west hill industrial estate -2TPD --with plastic shreddingunit, NearJayanthinagarcolony)- 70%completed
		Functioning	(v) 24 units of aerobic compostfacilitiesexisting(Tagore hall,SK Pottakkad hall, Jubileehall,Mofusil bus stand,T.B.Clinic,Circleoffice).
		Functioning	(vi) 350 ring compost and150Biogas plants installed inhouseholds- kkdCorporation 26 biogas plant complete – peruvayal190ringcompostcomplete– mavor
		Functioning	(vii) Community level biogas plant- 3nos(Mental Hospital 1TPD, ITIMalikadav -1TPD, Juvine home-1TPD)
		Functioning	(viii) 3 Biogas plants in market(Centralmarket 2TPD,Vegetable market2TPD,Newbusstand,2TP D)
		30/03/2021	
		31/12/2022	(ix) TreatmentfacilityforwasteinC entralMarket– TenderinginProgress
		31.03.2021	(x) Establishmentofslaughter house-
		31.03.2021	<u>MavorPanchayath</u> MCF 1 nos,ringcompost,compost pit- Completed andfunctioning <u>PerumannaPanchayat</u> <u>at</u> Compost pit and MCF with balingmachine (1 nos) -Work in progresscompleted withintwomonths. <u>PeruvavalPanchavat</u> Compost pit,mini MCF 2

			nos,biogasplant- WorkinprogressMCF- 1nostemporarly functioning OlavannaPanchayat MCF-1 completedMiniMCF- 3Workin progressMRF-1Inblock
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<p>(v) latest water quality of pollutedriver, its tributaries, drains withflow detailsandgroundwaterqualityinthe catchment ofpollutedriver;</p>		<p>AnalysisreportofKallayiriverstretchfor the month of AUGUST2022Attachedas Annexure2</p>
<p>(vi) preventing dumping ofwaste and scientific wastemanagementincludi ngbio-medical waste plasticwaste and decentralizingwaste processing,includngwast egeneratedfromhotels,ash rams, etc.</p>		<p>SameasItemno.5.1(v) Fine of 32 Lakhs imposed for illegaldumping of solid wastes into riversand public places. Installation ofCCTV. Biomedical waste fromHospital, labs ,clinicscollectedthroughimage, plastic waste disposal throughrecyclers. Individual solid wasteprocessingfacilitieslikebiogaspl ant,bio bins in high rise building, hotels,restaurants etc.Fencing proposed byirrigationdepartment.</p>
<p>(vii)ground waterregulati on</p>		<p>NIL</p>
<p>(viii) adopting goodirrigation practices</p>		<p>NIL</p>
<p>(ix) protection andmanagement of floodplainzones(FPZ),</p>		<p>Flood prone mapping- Proposed byirrigationdepartment</p>
<p>(x)Rainwaterharvesting</p>	<p>31/03/2021</p>	<p><u>MavoorPanchayat</u> Wellrecharging- Estimateunderpreparation</p>

		31/03/2021	<u>PeruvavalPanchayat</u> Wellrecharging-Work inprogress
		31/03/2021	<u>OlavannaPanchayat</u> Wellrecharging- Workinprogressandcompletedbytheendofmarch2023
(xi)Maintainingminimum environmentalflowof river		31/03/2021	<u>PerumannaPanchayat</u> CleaningofMampuzha river-Workin Progress
		31/03/2021	<u>PerumannaPanchayat</u> CleaningofMampuzha river-Ongoing
		Completed	<u>OlavannaPanchayat</u> CleaningofMampuzhariver- Completed
(xii)Plantationonbothsides oftheriver		Completed	<u>MavoorPanchayat</u> 3500unitscompleted
(xiii) Settingup biodiversityparks on flood plains byremovingencroachment			Bio park in Kozhikode district- Proposedbyirrigationdepartment

(Hon'bleNGTinthematterofOANo.673/2018dated 06.12.2019)

ACTION PLAN FOR RIVER KALLAYI, KERALA

Kozhikode Corporation									
No.	Activity	Implementing agency	Time line	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	Progress in the month of AUGUST 2023	Progress in the month of SEPTEMBER 2023	% works completed	Details of works remaining
1	Identification of illegal outlets into storm water drain and issue Notice to such units	Kozhikode Corporation	30.12.2020	6 notices issued	2 notices issued	2 notices issued	2 notices issued	On going work	ongoing
2	Waste to energy project proposed at Njeliyamparamba	KSIDC	30.06.2021	Ongoing	Ongoing	ongoing	ongoing	60%	40%
3	Establishment of Aerobic compost units 24 units established in 6 sites	Kozhikode Corporation	Completed and functioning	Completed and functioning	Completed and functioning	Completed and functioning	Completed and functioning	completed 100%	

4	Segregation of solid waste at source level and treatment of household wastes 300 ring compost and 150 biogas plants installed	Kozhikode Corporation	30.06.2019	Work Completed	Work Completed	Work Completed	Work Completed	Work completed	
5	Setting up of rendering treatment plant for chicken stall wastes. Installed in Thamarasery panchayath. Now waste is collected from 170 units	Fresh cut agency	on trial run	Ongoing	Ongoing	ongoing	ongoing	100% Coverage	
6	Implementation of Green protocol unit	Kozhikode Corporation	30.06.19	Completed	Completed	completed	completed	100%	
7	Setting up of common STP of (13MLD) 7.1 At Kothibridge - 6MLD plant proposed 7.2 At Avikkal - 7MLD plant proposed	Kozhikode Corporation	31.03.2020	7MLD-The case in the munsiff court, the hearing was completed the final judgment was pronounced	7MLD-The case in the munsiff court, the hearing was completed the final judgment was pronounced	7MLD-The case in the munsiff court, the hearing was completed the final judgment was	7MLD-The case in the munsiff court, the hearing was completed the final judgment was	6MLD- Total station survey completed, construction of Fencing is	Construction of 6 & 7MLT STPs and 98KMS sewerline.

				in favour of the protestors .hence the work can be restarted after resolving the court case.	in favour of the protestors .hence the work can be restarted after resolving the court case.	in favour of the protestors .hence the work can be restarted after resolving the court case.	in favour of the protestors .hence the work can be restarted after resolving the court case.	completed.	
8	Cleaning of Canolicanal	Kozhikode Corporation	20.07.2019	completed	completed	completed	completed	100%	Completed
9	Purchasing of Solar Boat for Canolicanal cleaning	Kozhikode Corporation	31.03.2020	Project dropped	Project dropped	Project dropped	Project dropped		
10	Installation of CCTV Camera for the Identification and monitoring of illegal activities	Kozhikode Corporation	31.03.2020	Project dropped	Project dropped	Project dropped	Project dropped		
11	Establishment of Mobile Septage Units	Kozhikode Corporation	31.03.2020	Project Dropped	Project Dropped	Project dropped	Project dropped		

12	Action taken against dumping of wastes into river and public places	Kozhikode Corporation	Continuing	2 notices issued	2 notices issued	2 notices issued	notices issued	Ongoing work	
13	Cleaning of B.K canal	Kozhikode Corporation	31.03.2020	completed	completed	completed	completed	100%	N.A
14	Establishment of treatment plant at Medical college (3MLD plant) Tender over 14.1-2MLD plant proposed 14.2-1MLD plant proposed	Kozhikode Corporation	31.03.2020	construction of 1MLD STP and network laying works started at site . 2MLD network laying is almost completed and 1MLD construction in progress	construction of 1MLD STP and network laying works started at site . 2MLD network laying is almost completed and 1MLD construction in progress	construction of 1MLD STP and network laying works started at site . 2MLD network laying is almost completed and 1MLD construction in progress	construction of 1MLD STP and network laying works started at site . 2MLD network laying is almost completed and 1MLD construction in progress	40%	900ms pipelaying and Construction of 1MLD STP is pending

15	Construction of drains at Y.M.RCAyyanka colony	Kozhikode Corporation	31.03.2020	Estimates scrutiny in progress at CELSGD's office for TS approval	Estimates scrutiny in progress at CELSGD's office for TS approval	Estimates scrutiny in progress at CELSGD's office for TS approval	Estimates scrutiny in progress at CELSGD's office for TS approval	60%	963m drainage construction remaining
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16	Implementation of ST Pat Kottooli(13.5MLD)	Kozhikode Corporation		Now stay order has been lifted. Additional fund is required					
17	Treatment facility for waste water in Central market	Kozhikode Corporation	EOI Process Ongoing						
18	Establishment of comfort stations	Kozhikode Corporation		50%	50%	50%	50%	50%	COMPLETION MARCH 2023
19	Provide facility for MRF, RRF, Super MRF 3 units existing 19.1 Njeliyanparamb 19.2 Industrial estate 19.3 Mayor bhavanjanthinar colony	Suchitwa Mission	Project in progress	30%	30%	30%	30%	30%	70%

20	Identification of illegal outlets from house to storm water drain and issue Notice to such Houses	Kozhikode Corporation	Ongoing process	4 notices	4 notices	4 notices	4 notices		
21	Establishment of Plastic shredding unit	Kozhikode Corporation	Ongoing process					100%	
22	Establishment of slaughtering unit	Kozhikode Corporation	Submitted to Impact Kerala for KIFB Aid - Got Initial Approval. Final Document Preparation ongoing						
23	Cleaning of drains in Kozhikode Town	Kozhikode Corporation	Ongoing process	Complete process	Completed	Completed	Completed		

Perumanna Grama Panchayath

No	Activity	Implementing agency	Time line	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	Progress in the month of AUGUST 2023	Progress in the month Of SEPTEMBER 2023	% works completed	Details of works remaining
1	Outlets into storm water drain and issue notice	Perumanna GP, kozhikode	Continues process	7 notices issued	Non notices issued	Non notices issued	7 notices issued	Inspection Conducted regularly	
2	Establishment of six aerobic compost units in panchayat	Perumanna GP Kozhikode through MGNREGS	Dec-21	Completed	Completed	100%	Work started 1	100% work completed	5 units will be started if public place is available
3	Collection and segregation of solid waste in the river	Perumanna GP	Continues process in every year	74%	74%		74%	74% work completed	
4	Setting up of residential treatment plant for chicken stall waste	Perumanna GP	Continues process	Resolution passed by Panchayat board to execute an agreement with Freshcut, thamarassery, kkd	Resolution passed by Panchayat board to execute an agreement with Freshcut, thamarassery, kkd	Resolution passed by Panchayat board to execute an agreement with Freshcut, thamarassery, kkd	Resolution passed by Panchayat board to execute an agreement with Freshcut, thamarassery, kkd	91%	

5	Setting up of 360 soakpit plant in all housesnear the river area andpanchayat	PerumannaG PMGNREGS	Dec-21	119nos ompleted	119nosco mpleted	119noscom pleted	119noscomplete d	Remaini ngwork has beensus pendeda slackofp ersonald aysforc urrent year	
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6	implimentationof360c ompostunitnearthirversi de andpanchayat	PerumannaGP MGNREGS	Dec-21	126nosco mpleted	126nosco mpleted	126nosco mpleted	126nosco mpleted	Remainin gworkhas beensuspe ndedaslac kofperson aldaysfor current year	
7	Implementation ofwater flow project(aluvangalthaz hamperumbattaelama napadam, valiyapada m.mampuzhthodenav eekaranaprojectno260 /2021projectcost16.6 7lakhs).itisajointvent ureprojectbygrama,bl ock and jillapanchayat	Perumanna G P,Kozhikode blockpanchayat, Kozhikode jillapanchayat	Dec-21	Completed	Completed	Completed	Completed	Technical sanctiono btained .tenderpro cedureco mpleted .including in2021- 22planass pilloverpr oject.	Tender hasbeendon e
8	Cleaningofmam puzha river(projectna me :mampuzha waterflowrestoration, projectno 01/2018-19	Distric panchayatKozhik ode	2018-19	Completed bypanchay at	Completed bypanchay at	Completed bypanchay at	Completed bypanchay at	25 lakhstransf erredto districtpan chayat	Workhas been complete bydistrictp anchayat ,kozhikode

9	Establishment of 18nosofminiMCFin differentwardsincluding payyadimetal wheretheriverisflowing	PerumannaGP MGNREGS	Dec-21	11Noscompleted	11Noscompleted	11Noscompleted	11Noscompleted	11Nos 100%	7unitsnotstarted
10	Collectionofplastic wastefromtheriver	PerumannaGP	Continuous process	Threetimescompleted	Threetimescompleted	Threetimescompleted	Threetimescompleted	N A	Processwill be doneevery year

Peruvayal Grama Panchayath

No	Activity	Implementing agency	Time line	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	Progress in the month of AUGUST 2023	Progress in the month of SEPTEMBER 2023	% works completed	Details ofworks remaining
1	Outlet in storm water drain and issued notice	Peruvayal G P	Continuous process	5notice issued	5notice issued	5notice issued	Notice issued	Ongoing	
2	Establishmentof5units anaerobic composed unit in panchayat.	Peruvayal GP through MGNREGS	4/2021TO 03/2021	work will commence on thirdweek of november 2022	work will commence on thirdweek of novemb er2022			NA	

3	Setting up of reentering plant for chicken solid waste	PeruvayalG P	Continuous process	Started soon	Started soon	Started soon	Started soon	100%	
4	Setting up of 379 soakpitplantinallhouses	PeruvayalG P	04/2020to 03/2021	Ongoing	Ongoing	ongoing	ongoing	Nil	170 will be finished within march 2021
5	Cleaning of mambuzha river (project name mambuzha renovation) project no :190/2017-18	District panchayat Kozhikode	2017-18	Completed by Panchayath	Completed by Panchayth	Completed by panchayath	Completed by panchayath	25 lakhs transferred to district panchayat	Ongoing
6	Establishment of 8 numbers of mini MCF	PeruvayalG P through MGNREGS	4/2020 TO 2021	6 mini MCF completed	6 mini MCF Completed	6 mini MCF Completed	6 mini MCF Completed	80%	4 will start immediately
7	Collection of plastic waste from the river	PeruvayalG P	Continuous process	3 times collected	3 times collected	3 times collected	3 times collected	100%	Continuous process
8	Collection and segregation of solid waste in the river	PeruvayalG P	Continuous process	3 times collected	3 times collected	3 times collected	3 times collected		Continuous process
9	Establishment of Biogas plant	PeruvayalG P	2020-21	26 numbers completed	26 numbers completed	26 numbers completed	26 numbers completed	70%	Work will be completed by the end of february 2023

10	Wellrecharge	PeruvayalGp through MGN REGS	2020-21	78 numbers completed	78 number completed	78 number completed	78 number completed	82%	Work will be completed by the end of february 2023
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Mavoor Grama Panchayat

No	Activity	Implementing agency	Time line	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	Progress in the month of AUGUST 2023	Progress in the month of SEPTEMBER 2023	% Work completed	Details of work remaining
1	MCF	Mavoor Gp	31.03.2019	Completed and functioning	Completed and functioning	Completed and functioning	Completed and functioning	100%	Nil
2	Fish market construction	Mavoor Gp	31.03.2019	Completed and functioning	Completed and functioning	Completed and functioning	Completed and functioning	100%	Nil
3	Ring compost	Mavoor Gp	31.03.2019	Completed and functioning	Completed and functioning	Completed and functioning	Completed and functioning	100%	NIL(190 units)
4	Tree plantation in riverside	MGNREGS	Completed	Completed	Completed	Completed	Completed	100%	NIL(3500 units)
5	Compost pit	MGNREGS	Completed	Completed	Completed	completed	completed	100%	NIL(1000 units)
6	Well recharge	MGNREGS	31.03.21	Estimate prepared	TENDER PROCESS	TENDER PROCESS	TENDER PROCESS		2 units (Budsschool, Ayurveda dispensary)
7	Bucket compost	Mavoor Gp	31.03.21	completed	completed	completed	completed	100%	502 units

8	Collection of nonbiodegradable waste	MavoorGp	Through out the year	Ongoing	Ongoing	Ongoing	Ongoing		
9	Transportation of waste material to refinement unit	Konnari Advanced Polymers Limited	2022-23	Completed	Completed	Completed	Completed	100%	
10	Cleaning of Cherupuzha (Kuniyakadav to Thenghilakadav)	MavoorGP	2022-23	Completed	Completed	Completed	Completed	100%	1500 Meter
11	Valayannor Thodu Cleaning	MGNREGS	2022-23	Completed	Completed	Completed	Completed	100%	115 meter
12	Aryankode Kalchira Thodu Cleaning	MGNREGS	2022-23	Ongoing	Ongoing	Ongoing	Ongoing		115 meter
13	Puthiyottil thazham Elaram athodu	MGNREGS	2023-24	Ongoing	Ongoing	Ongoing	Ongoing		
13	Chalippadam Punchappadam thodu	MGNREGS	2023-24	Ongoing	Ongoing	Ongoing	Ongoing		160m
13	Kadayan thodu	MGNREGS	2023-24	Ongoing	Ongoing	Ongoing	Ongoing		160 m
14	Vellaramkandi Chirakkal thazham thodu	MavoorGP	2023-24	Ongoing	Ongoing	Ongoing	Ongoing		
14	Ring compost	MavoorGP	2022-23	Ongoing	Ongoing	Ongoing	Ongoing		

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OLAVANNAGRAMAPANCHAYAT

No	ACTIVITY	IMPLIMENTING AGENCY	TIMELINE	PROGRESS IN THE MONTH OF JUNE 2023	PROGRESS IN THE MONTH OF JULY 2023	PROGRESS IN THE MONTH OF AUGUST 2023	PROGRESS IN THE MONTH OF SEPTEMBER 2023	%WORK SCOPLETED	DETAILS OF REMAINING WORK
1	Collection of plastic waste from the river	Olavanna gramapanchayat	Continuous process	4 times collected	4 times collected	4 times collected	4 times collected	96%	Process continuing
2	Collection of segregation of solid waste in the river	Olavanna gramapanchayat	Continuous process	5 times collected	5 times collected	5 times collected	5 times collected	97%	Process continuing
3	Establishment of Mini MCF in all wards	Olavanna gramapanchayat through MGNREGS	4/2020 To 3/2021	2 Mini MCF Completed	2 Mini MCF Completed	4 Mini MCF Completed	4 Mini MCF ONGOING		Remaining will start immediately
4	Cleaning of Mam buzhariver	Olavanna gramapanchayat	Continuous process					93%	Process continuing
5	Well recharge	Olavanna gramapanchayat through MGNREGS	4/2023 To 3/2024	1 No's	1 No's	1 No's	1 No's	1 No's	Work will be completed by the end of March 2024
6	Setting up of soak pit in houses	Olavanna gramapanchayat through MGNREGS	4/2022 To 3/2024	14 No's	14 No's	14 No's	14 No's	14 No's	Work will be completed by the end of March 2024

7	Action taken against dumping of waste in river	Olavanna gramapanchayat	Continuous process					93%	Continuing
8	Collection of non-biodegradable waste	Harith karmasena	Throughout the year						Continuing

Irrigation Department

No.(as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of JULY 2023	Progress in the month of AUGUST 2023	Progress in the month of SEPTEMBER 2023	% works completed	Details of works remaining
1	Desilting of Kallayi river from Kaduppinito Kothin Kozhikode Corporation	Irrigation department	31.03.21	DPR was submitted to SE, INC, KK Don 16.10.2019 for Rs.773.05 lakhs and 43.05 for 5 bridges) under action plan of Kallayi river under urban agglomeration on 06.03.2021. The work is under tender process.				
2	Provide fencing on the sides of the Bridge	Irrigation department	31.03.21	DPR was submitted to SE, INC, KK Don 16.10.2019 for Rs.773.05 lakhs and 43.05 for fencing of 5 bridges, revised DPR submitted				

				toSuperintendingEngineerforRs.47.2lakhs vide letter number D1/GL/NGT/2019 dated28.01.2023		
3	Dredging,Desilting &removalofweedsfromEK Canal(11.2km)	Irrigationd epartment	31.07.19	WorkentrustedtoKeralawater ways&infrastructure Ltd(KWIL)		
4	BioParkinKozhikodeD istrict	Irrigationd epartment		Landforthe proposed biopark isto bedemarcatedbytheRevenueAuthoritiesafter necessary boundary survey and subsequentbiocoverworksaretobedone bySocial ForestryDepartment		
5	FloodProneMappinginK ozhikodeDistrict	Irrigationd epartment		Actontobetakenbythehydrologywingof irrigation department as this needs datacollection,scientificanalysisandmodeli ng		

Kerala State Pollution Control Board

No.(as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of JULY 2023	Progress in the month of AUGUST 2023	Progress in the month of SEPTEMBER 2023	% works completed	Details of works remaining
1	River water quality monitoring- Kallayi river National Water Quality Monitoring Programme (NWMP)	KSPCB	Ongoing; monthly frequency					
2	River water quality monitoring- Kallayi rivers State Water Monitoring Programme, KSPCB fund (SWMP)	KSPCB	Ongoing. Seasonal monitoring- pre-monsoon, monsoon, post-monsoon					
3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, Hotel etc .in Malappuram Municipal area	KSPCB	Ongoing Interval: Red-					

			1month. Orange – 3months. Green – 6months.					
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Suchitwa Mission								
No.(as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of JULY 2023	Progress in the month of AUGUST 2023	Progress in the month of SEPTEMBER 2023	% works completed	Details of works remaining
1	Board displaying messages against dumping to be placed in river banks	Suchitwa Mission	15.07.19					

Action Plan by Ground Water Department

No.(as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of JULY 2023	Progress in the month of AUGUST 2023	Progress in the month of SEPTEMBER 2023	% works completed	Details of works remaining
B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier status: As per Ground water resources of Kerala, 2017 estimate, Kozhikode Block comes under the Kallai river basin and the block is safe with stage of groundwater Extraction 68.49%)	Ground Water Department		Nil	Nil	Nil		
B(ii)	Ground water recharging/rain water harvesting (Earlier status: The average pre-monsoon groundwater level is 7.23 mbgl. Ground Water Department has implemented 3 no of dug well recharge schemes at Kozhikode block)	Ground Water Department		Nil	Nil	Nil		
B(iii)	Periodic ground water quality assessment and remedial actions in case of contaminated ground water tubewells/borewells or hand	Ground Water Department		Nil	Nil	Nil		

	pumps (Earlier status- Groundwater Department has 1 observation piezometer (BW) in the river stretch.)							
B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices (Earlier status- The total irrigation draft in the Block area is 488.76 ha.m.)	Ground Water Depart ment		Nil	Nil	Nil		

Action plan by Irrigation Department

No.(as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of JULY 2023	Progress in the month of AUGUST 2023	Progress in the month of SEPTEMBER 2023	% work completed	Details of work remaining
E	Dredging and desilting	Irrigation Dept.	3 years	DP Rs. 790 lakhs deposited by KOZHICODE corporation for desilting of Kallayi river under urban agglomeration on 06.03.2021. The work is under tender process.				
E	E-flow (by micro watershed management)	Irrigation Dept.	3 years	Action to be taken by Hydrology Wing of Irrigation Department as this needs data collection, scientific analysis and modelling skills. The matter has been communicated to the Hydrology wing Assistant Engineer at Kozhikode.				

E	Floodplainzone(protectionandmanagement)	IrrigationDept.	3years	Action to be taken byHydrology Wing of Irrigation Department. The matter has been communicated to the Hydrology Wing.		
E	Greenery development (plant in trees onthe banks)	IrrigationDept.	3years			



KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

കോഴിക്കോട് റീജിയണൽ ഓഫീസ്
REGIONAL OFFICE, KOZHIKODE



Phone: 0495-2300744 Mail: pcbrokdd@gmail.com Website: kspcb.kerala.gov.in

3rd FLOOR, ZAMORIN'S SQUARE, LINK ROAD, KOZHIKODE - 673 002

Office of the Environmental Engineer
CALICUT
Date: 07/09/2023
Kerala State Pollution Control Board

ANALYSIS REPORT OF RIVER WATER

Report No.	K R O R 4 7 7 1 / 1 to 5	Date:	0 5 0 9 2 0 2 3
Date of Sample Collection	1 0 0 8 2 0 2 3	Date of receipt of the sample	1 0 0 8 2 0 2 3
		Time	Hours: 1 0 : 0 0
Sampled by:	RL ,KKD	Sample ID	KL1, KL2, KL3, KL5,& KL6
Sampling Method	APHA1060B,a	Sample Lab Code	KROS 4771/1-5
Sample container	PC 2.5 L	Ref.letter No.	PCB/KKD/DO/ Polluted River Stretch/2018 Vol. IV. Dated :18.05.2023
Source:	KALLAI RIVER WATER	Received from:	EE,DO,KKD
		Period of analysis:	10.08.2023-26.08.2023
Specific sampling location:	GIVEN BELOW	No. of samples	5
		Analysed by:	BRS/CVR/CNR
Sample preservation:	Ice box	Method:Standard Methods for the examination of Water and Wastewater, APHA AWWA WEF (22 nd Ed.)	

Sl no	Parameters	unit	Method No.	SAMPLE ID				
				KL 1	KL 2	KL 3	KL 5	KL 6
1	pH	-	APHA 4500-H+,B	6.71	6.84	6.92	7.32	7.68
2	CONDUCTIVITY	µmhos /cm	APHA 2510B	2105	3430	4750	23240	29980
3	BOD	mg/L	IS3025 (Part 44)	2.4	2.5	2	2.4	2
4	DISSOLVED OXYGEN	mg/L	APHA 4500-O,C	4.3	4.7	5.1	4.4	7
5	TOTAL COLIFORM,	CFU/100ml	APHA 9222B	22000	78000	81000	470000	500000
6	FECAL COLIFORM	CFU/100ml	APHA 9222D	17000	65000	71000	350000	390000
7	FECAL STREPTOCOCCUS	CFU/100ml	APHA 9230 C	700	1400	1500	2000	2000
8	TEMPERATURE	°C	APHA 2550B	27	27	27	28	29

Test method variation: None

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

KL1-KALLAI RIVER AT PALATHUMKANDI BRIDGE,POKKUNNU,KL2-KALLAI RIVER AT KADUPPINI BRIDGE, KL3- KALLAI RIVER AT MANKAVU BRIDGE, KL5- KALLAI RIVER AT KALLAI BRIDGE & KL6- KALLAI RIVER AT KOTHI BRIDGE, THEKKEPURAM .

OA 673
AE 1

Akhis
5/9/2023
Scientist in charge

201
7/9/23

2678
9/9/23

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 KAVVAYI, KANNUR

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		All houses and establishments have their own disposal 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		No STP proposal
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2022	Some of the works in action plan is completed already and some are ongoing as informed by local bodies
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		

	<ul style="list-style-type: none">• Member Secretary,CPCB		
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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</u></p>	<p><u>RAMANTHALI</u> There are 5 natural drains meeting the river, all cleaned.</p> <p>RRF at block level</p> <p>Lab analysis reported by KSPCB is attached</p>
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	<p><u>Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		<p>Implementing in all households as per KPBR rules</p>
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ACTION PLAN FOR RIVER KAVVAI, KERALA

Action Plan of Local Body								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2020	Progress in the month of August 2021	Progress in the month of September 2023	% works completed	Details of works remaining
A (b)	Sanitation Facility Septage treatment facility shall be provided by Local Bodies in various places.	Payyannurmunicipality		NIL	NIL	NIL	NIL	Sewage Treatment Plant –DPR Prepared. Waiting for the approval of Suchitwa mission
C(ii)	Biodegradable waste disposal Bio bins (2061) Pit Compost (10992) Bio gas Plant (687)	PayyannurMunicipality	2022	0	0	0	100%	Project implementation in progress
A(b)	Non-biodegradable Waste Disposal MCF and RRF	PayyannurMunicipality	2022					MCF and RRF in action

E	Awareness Youth, Asha workers and other stake holders and HarithasahayaSamithi	PayyannurMunicipality	Ongoing project					Ongoing
E	Installation of CCTV cameras at major points	Kankol	2019	Got 1 CCTV By sponsorship and installation in progress	Not reported	CCTV Not installed		
C(ii)	Biodegradable waste disposal Bio bins, Pit Compost, Bio gas Plant(2460 Nos)	Kankol	Ongoing	completed	completed			
A(b)	Non-biodegradable Waste Disposal MCF	Kankol	Ongoing project	completed	completed			
E	Awareness Youth, Asha workers and other stake holders	Kankol	Once in a month	completed	completed			
A (b)	Sanitation Facility in markets	Ramanthali GP	2020	Available	Available	Available	100%	

A(b)	Non-Biodegradable waste disposal MCF	Ramanthali GP	2020	No	No	Yes	100%	On 09/2020 onwards waste collecting and transferred to MCF
A (b)	Drain Cleaning and side protection	Ramanthali GP	2022	Done	Done	Done	100%	There are 5 natural drains meeting the river, all cleaned
E	Renovation of Ponds & Construction of Platform to openwell (Implementation of Map of Kavvayi Wetland system of Northern Kerala)	Thrikkaripur - CWRDM	2019					
Action Plan by Irrigation Department								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2022	Progress in the month of June 2022	Progress in the month of September 2023	% works completed	Details of works remaining
E	Desilting and rejuvenation of NarangaThodu in	Irrigation Department	2020		DPR submitted for FS approval (Amount 5.40 Lakhs)			

	Payyannur Municipality				
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1. Proper awareness among the inhabitants in the area is to be given for protecting the water bodies. Basic training for the people at the grass root level is to be provided for river management. All efforts for maintaining the quality of water bodies may be done by the Panchayat/Municipal authorities only with people's participation.
2. The nearby gramapanchayath and municipalities are mainly responsible for not providing municipal waste collection and treatment facilities in the locality. So they must be instructed to provide the required facility for scientific disposal of municipal solid waste as per the MSW rules 2016. The citizens as well as the municipal/gramapanchayath authorities need to be aware of the importance of scientific disposal of waste generated. Their attitude towards handling waste has to be changed. Reducing waste, recovering recyclable materials, return of nutrients to the eco system as well as generation of energy from waste are to be practiced. There has to be a valid scheme for collection, segregation, transportation, processing and safe disposal of waste by the authorities. For this affordable and viable waste to energy conversion technologies apart from conventional composting is to be implemented by the municipalities seeking technical expertise.
3. Propagation of vegetative cover in water shed will reduce soil erosion and enhance percolation of rain water into the sub surface. In downstream stretches where the river is saline, propagation of mangroves are essential.
4. Strict monitoring from the part of implementing as well as monitoring agencies is required for effective functioning of waste treatment facilities in waste generating units.
5. The practice of waste dumping into the river is to be prevented legally and strict action against this practice is to be adopted at panchayath and municipality level.

6. Re-survey of the river boundaries throughout the entire stretch is to be done urgently so as to prevent encroachment of the river.
7. The municipalities as well as the panchayaths are to be directed to provide proper waste management facilities of their own. All towns and cities must have Sewage Treatment Plants (STPs) that clean up the sewage. Facility for collection, segregation, transport, processing and scientific disposal of waste generated are to be provided by the local authorities in strict adherence to the Municipal Solid Waste Management Rules, 2016. For this, affordable and viable waste to energy conservation technologies apart from conventional composting is to be implemented seeking technical expertise.
8. Strict monitoring from the part of implementing as well as monitoring agencies is required for effective functioning of waste treatment facilities in waste generating units. The riverine stretches are to be monitored periodically at identified locations for water quality assessment.
9. Modern agricultural practices and technologies introduce the use of inorganic fertilizers with Nitrogen, Phosphorous, Potash and inorganic pesticides in farm lands and play important role in the river pollution. These may concentrate into the water body through run off causing algal blooms by which whole stretch of water become choked. Fertilizers and chemicals application in agricultural lands are to be strictly under technical expertise.
10. Rain water recharging measures must be adopted.
11. Eco tourism and water tourism projects are to be designed giving due importance for protecting the environment. The activities are to be organized in such ways which do not induce any types of pollution to the water body. Strict monitoring from the concerned authorities are recommended in functioning of the tourism projects.
12. Implement Green Protocol effectively in local self-governments. Prohibit littering of plastics in the area. Plastic

wastes shall be handled as per the provisions of Plastic Waste (Management and Handling) Rules,2018.

13. The existing waste water treatment facilities of Taliparamba Municipality shall be augmented in such a way so as to operate round theyear.

14. Actions shall be taken by the local bodies to clean the storm water drains. Rejuvenation of small streams, creeks leading into the river is to bedone.

15. Round the clock patrolling shall be provided so as to prevent waste dumping on public places.

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 KUPPAM, KANNUR

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		Almost all residence and commercial establishments have their own insitu sewage 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		A common STP is at Taliparamba
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2021	
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	Monthly before 20 th of every month	

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><u>MADAYI</u> 16 soak pit completed</p> <p><u>UDAYAGIRI</u> Identified drains already cleaned before commencement of monsoon by harithakarmasena in local bodies</p> <p><u>MADAYI</u> 100 ring compost Unit supplied, placed order for 96 units of Ring Compost (for bio degradable waste disposal) Non bio degradable waste is collecting through Haritha Karma sena and handed over to RRF</p> <p><u>Udayagiri</u> Compost pit -105 completed Biogas -39 completed Soak pit -18 completed</p> <p><u>PATTUVAM</u> Ring compost -150</p>
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<p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>	<p>Pipe compost-600 Biogas plant-25 Compost pit -100 Thumboor muzhi-1</p> <p>Lab report is attached</p> <p><u>MADAYI</u> ONGOING <u>Udayagiri</u> Door to door collection of biodegradable waste is collected by local body and measures for disposing biodegradable waste is practising. All existing HCF are disposing their bmw through CBMWTF</p> <p><u>Pattuvam</u> Door to door collection of biodegradable waste is collected by local body and measures for disposing biodegradable waste is practising. All existing HCF are disposing their bmw through CBMWTF</p>
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ACTION PLAN FOR RIVER KUPPAM, KERALA

Ref para no:48 as per NGT order 673/2018 dated:20.09.2018	Activity	Implementing Agency	Time of Completion	Progress in the month of December 2020	Progress in the month of August 2021	Progress in the month of September 2023	% works completed	Details of works remaining
Udayagiri GP								
A (b)	Sanitation Facility	Udaya giri GP	03/2020			Completed		
C (ii)	Biodegradable waste disposal	Udaya giri GP	Ongoing project					
C (ii)	Non bio degradable Waste Disposal	Clean kerala Company	Ongoing project					
E	Awareness	Youth, Asha workers and other stake holders	Ongoing project					
Chapparappadavu GP								
A (b)	Sanitation Facility	Chapparappadavu GP	06/2019		Not reported	Not reported		
C (ii)	Biodegradable waste disposal	Ward Sanitation Committee of Local Body	12/2019					
C (ii)	Non bio degradable Waste Disposal	Local body (Haritha Karma Sena)	03/2020					

E	Awareness	Youth, Asha workers and other stakeholders	03/2020 (Will extend if necessary)					
		Pariyaram Panchayat						
A (b)	Sanitation Facility	Pariyaram Panchayat	03/2020	298 ring compost installation going to start	Not reported	Not reported		
C (ii)	Biodegradable waste disposal		03/2022	ongoing				
C (ii)	Non bio degradable Waste Disposal	Pariyaram Panchayat	On going project					
E	Awareness	Youth, Asha workers and other stakeholders	Whenever necessary					
A (b)	Identification of illegal outlets in drains and stoppage of the same	Pariyaram Panchayat	09/2019					
		Madayi GP						
A (b)	Sanitation Facility	Local Body	2022					
		Ward Sanitation	Bio bins, pit compost -2022		100 Ring compost	Order placed		

C (ii)	Biodegradable waste disposal	Committee of Local body			unit supplied	for another 96 units		
			Thumpoormuzhi = 2020			Tender approved and gave supply order		
C (ii)	Non bio degradable Waste Disposal	Haritha Karma sena	Ongoing project			ONGOI NG		
E	Awareness	Youth, Asha workers and other stakeholders	Ongoing project			ONGOI NG		
A (b)	Identification of illegal outlets in to drains and stoppage of the same	Local Body	2022					
Thalipparamba Municipality								
A (b)	Sanitation Facility	Municipality				Not reported		
C (ii)	Biodegradable waste disposal							
C (ii)	Non bio degradable Waste Disposal	Haritha Karma sena						
E	Awareness	Youth, Asha workers and other stakeholders	Once in a month					

		holders						
Pattuvam GP								
E	Awareness	Youth, Asha workers and other stake holders	Whenever necessary					
C (ii)	Removal of plastic wastes from the river bank							

Action Plan by Irrigation Department

Sl no	Activity	Implementing Agency	Time for completion	Progress in the month of May 2022	Progress in the month of June 2022	Progress in the month of September 2023	% works completed	Details of works remaining
1	Providing fencing on Kuppam bridge (NH) across Kuppam river at Thalipparamba in Thalipparamba Municipality	Irrigation department	2021					Initially the DPR submitted for 45lakhs. But as per the letter No.752755/C1/16/WRD Thiruvananthapuram dtd 30/09/2020 of the Additional Chief Secretary to Government, the estimate was recasted with items in DSR instead of observed data items. So the new estimate amount was 43 lakhs only. Now the DPR is resubmitted for FS Rs.56 lakhs as per DSR 2018.
2	Rejuvenation of Kuppam River - Flood plain Zone management : Construction of Marginal Earthen Bund at peringeel In Ezhome Grama Panchayath (PRICE ID : 2019/10484/IA)	Irrigation Department	2021					This work shall not be considered until adequate technical study is conducted (Vide letter No.752755/C1/16/WRD Thiruvananthapuram dtd 30/09/2020 of the Additional Chief Secretary to Government

3	Greenery development- Plantation plan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment	Irrigation Department	3 years	In order to identify the land for plantation on both sides of the river, the boundary of government land should be fixed by the Revenue Department. Eviction of encroachment should be done. For the same, District collector Kannur has already been addressed from this office and subsequent bio cover works and planting trees have to be done by social forestry department	
4	Rejuvenation of Kuppam River - Maintaining E-Flow : Desilting of Kuppam river in Various Stretches in Chapparapadavu Grama Panchayath (PRICE ID : 2019/10517/IA)	Irrigation Department	3 years	<p>Initially the DPR was submitted for 30 lakhs. But as per the letter No.752755/C1/16/WRD Thiruvananthapuram dtd 30/09/2020 of the Additional Chief Secretary to Government, the estimate was recasted for an amount of 10.40 lakhs as per DSR 2016 by assessing the quantity of silt by scientific method. Since DSR 2018 was introduced, DPR was resubmitted for an amount of Rs. 12.80 lakhs for FS . The work includes desilting from Kooverikkadavu and Kattamballikkadavu.</p> <p>The “Room for River” campaign was launched to remove silt from all 44 rivers in Kerala in 2022. The work, Rejuvenation of Kuppam River - Maintaining E-Flow is coming under Rejuvenation of Kuppam river under Room for River programme. The Executive Engineer , Inland Navigation Division, Kannur was in charge of the Kuppam River.</p> <p>The work of silt removal from Kooverikkadavu is completed and was executed by the Assistant Engineer, Inland Navigation Section, Kannur. Since sand deposit was identified at Kattampallikkadavu, it was not removed under “Room for River” campaign . It should be done after sand audit and the procedure should be followed and it cannot be executed as a work by tender method. So this work may be treated as completed.</p>	

Combined Action Plan

	Proposed action	Agency	Timeline	Progress in the month of December 2020	Progress in the month of January 2021	Progress in the month of January 2023	% works completed	Details of works remaining
1	Providetoilets to residences with treatment and disposal system for sewage and sullage	Local Body						
2	Construction of new community toilets with treatment system	All local bodies SuchitwaMission, Revenue department	Proposed Construction Of new community Toilet at satellite points on the bank ofriver					
3	Entry of rain water and rain water recharging to all channels and drain	All local bodies , Kerala Water Authority	Drains are inspected before rain and all channels and stream are cleaned once in a year					
4	Sanitary facility in hotels (around 7) one hospital,Establishments situated in the ward for the segregation, treatment and disposal of solid wastes as per SolidWastesManagementRules,2016	Pollution Control Board ,Health department	Check they have board consent and sanitation facility is provided					
5	Adequate number of kitchen bins shall beprovided	Municipalities and local bodies	One project year					
6	Providing proper waste handling facility. For wastewater and solid wastes	Local body	One project year					

7	Rendering plant for poultry wastes	Local body	As per their project and fund availability					
8	Slaughter house waste disposal facility	Local body	One common slaughter house for 3 to 4 local body					
9	Strict monitoring of disposal of waste(sewage, sullage, degradable waste, non-biodegradable waste) surveyed area and also in the catchment of theriveri)Verify Whether consent to operate of the Board exists	Pollution Control Board	Six months					
10	Sanitation survey is to be conducted for 100m on either sides of the other parts of polluted stretch if any located nearby	Pollution Control Board	Six months					
11	Awareness for residence association:	Suchitwamission/L SGD/Corporation	Once in a month					

Action Plan by Ground WaterDepartment

Sl.No	Ref para no:48 as per NGT order 673/2018 dated:20.09.2018	Activity	Progress in the month of December 2020	Progress in the month of January 2021	Progress in the month of January 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					

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					

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 PERUVAMBA, KANNUR

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		All houses and establishments have their own disposal 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		No STP Proposal
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2022	Some of the works in action plan is completed already and some are ongoing as informed by local bodies.
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none">• Specifying accountability of nodal authorities not below the Secretary level• Chief Secretaries may have an accountable person attached in their office for this purpose		
	<ul style="list-style-type: none">• Monitoring at State level must take place		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none">• Secretary, Ministry of Jal Shakti• Member Secretary, CPCB		

<p>6.1 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</p>	<p><u>RAMANTHALLI</u></p> <p>There are 5 natural drains meeting the river, of which 3 drains cleaned.</p> <ol style="list-style-type: none"> 1. Parappa Thodu (Ward 6)- 1 Km. 2. Chennakki Thodu (Ward 8) – 1.3 Km. 3. Kallayi Thodu (Ward 3&4) – 1 Km. <p>Two are partly cleaned and the cleaning work is in progress.</p> <ol style="list-style-type: none"> 1. Manthan Thodu (Ward 6) -1 Km 2. Ambachikundu Thodu (Ward 15) – 500 M (The work is slowly ongoing due to the higher level of water in stream, 40% Completed)
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	<p>the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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ACTION PLAN FOR RIVER PERUVAMBA, KERALA

Action Plan of LocalBody								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2020	Progress in the month of August 2021	Progress in the month of September 2023	% works completed	Details of works remaining
A(b)	Sanitation Facility STP proposed at market place	PayyannurMunicipality	2021	nil	nil	nil	nil	Sewage Treatment Plant –DPR Prepared. Waiting for the approval of Suchitwa mission
C(ii)	Biodegradable waste disposal Bio bins (2061) Pit Compost (10992) Bio gas Plant (687)	PayyannurMunicipality	2020	0	0	0	80%	Project implementation in progress
C(ii)	Non biodegradable Waste Disposal MCF and RRF	PayyannurMunicipality	Ongoing				1	MCF & RRF in function
E	Awareness Youth, Asha workers and other stake holders and	PayyannurMunicipality	Ongoingproject	90%	100%	100%	ongoing	Completed

	HarithasahayaSamithi							
A(b)	Sanitation Facility Scientific Septic Tank and Soak pit	Kunhimangalam Panchayath	2019		Not reported	-		
C(ii)	Biodegradable waste disposal Bio bins, Pit Compost, Bio gas Plant	Kunhimangalam Panchayath	Every year project					
C(ii)	Non biodegradable Waste Disposal MCF	Kunhimangalam Panchayath	Ongoing project					
E	Awareness Youth, Asha workers and other stake holders	Kunhimangalam Panchayath	Once in a month					
E	Side wall protection of drains	Kunhimangalam Panchayath	12/2019					
E	Installation of CCTV camerasat major points	Kankol – Alappadamba GP	2019					
C(ii)	Biodegradable waste disposal Bio bins, Pit Compost, Bio gas Plant (2460 Nos)	Kankol – Alappadamba GP	Ongoing					
C(ii)	Non Biodegradable waste disposal MCF	Kankol – Alappadamba GP	Ongoing					
E	Awareness Youth, Asha workers and other	Kankol – Alappadamba GP	Once in a month					

	stake holders							
A(b)	Sanitation Facility No markets and houses on the bank	Ramanthali GP		Available	Available	Available	80%	
C(ii)	Non Biodegradable waste disposal MCF and sending to RRF	Ramanthali GP	2020	no	Yes	yes	100%	
E	Drain Cleaning and Side protection	Ramanthali GP	2022	Done	Done	Done	100%	
E	Awareness Youth, Asha workers and other stake holders	Ramanthali GP	2022	Done	Done	Done	100%	
C(ii)	Bio degradable waste disposal Ring Compost – 1000 Nos Compost Pit – 2000 Nos Biogas Plant – 100 Nos	Ramanthali GP	2022	Ring Compost-100 Compost Pit –15 Biogas Plant-10	Ring Compost-100 Compost Pit – 0 Biogas Plant – 0	Ring Compost-290 Compost Pit – 0 Biogas Plant – 0	100%	
Action Plan by Irrigation Department								

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2022	Progress in the month of June2022	Progress in the month of September 2023	% works completed	Details of works remaining
E	Providing fencing on Perumbabridge (NH) across Perumbariver at Payyannur in Payyannur Municipality	Irrigation department	2021					Initially the DPR submitted for 22lakhs. But as per the letter No.752755/C1/16/WRD Thiruvananthapuram dtd 30/09/2020 of the Additional Chief Secretary to Government, the estimate was recasted with items in DSR instead of observed data items. So the estimate prepared as per DSR 2016 and DPR submitted for FS for an amount of 20.5 Lakhs. Now the new estimate prepared as per DSR 2018 and DPR submitted for FS Rs.26.20 lakh
E	Desilting and reconstruction of salt water exclusion cross bar across perumbathodu in Payyannur Municipality MI Class II Plan fund	Irrigation Department	2021					The flow in the perumbathodu is contaminated with the waste frompayyanur market and its surroundings .If the existing SWECB was reconstructed and its shutters were closed , the polluted water will stagnated at the upstream side and serious environmental problems will be created. Hence at present reconstruction of SWECB is not environmentally feasible. If treatment facility is provided by local government and only fresh water releases to thodu the SWECB can be reconstructed. Hence now only desilting the thodu is included in this estimate and submitted for FS. Hence DPR submitted for FS Rs.4.10 lakh only
E	Desilting and repair of salt water exclusion cross bar across Koykottuvayalthodu inKunhimanngalam Panchayath	Irrigation Department	2020					Work completed under SDRF scheme by MI Division Kannur.

	State Disaster Response Fund			
E	Regulating activities in flood plain zone, protection and management of flood plain zone Protection and management of flood plain zone for a period of 3 years with a fund of 0.50 crores	Irrigation Department		As per the observation forwarded from the government on submitted DPR vide No.757555/C1/16/WRD, dated 30.09.2020, This work shall not be considered until adequate study is conducted.
E	Greenery development-Plantation plan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment Planting trees on the bank of the river will be completed within 3 years from the commencement of works with a fund of 0.40 crores	Irrigation Department	3 years	To ascertain the encroachment if any and Purambokk along the polluted river stretch for the proposed work, land to be demarcated by the Revenue authorities after necessary boundary survey. For the same, District collector Kannur has already been addressed from this office and subsequent bio cover works and planting trees have to be done by social forestry department.
E	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions) By Micro watershed management for a period of 2 years with a fund of 0.25 Crores	Irrigation Department	2 years	Initially the DPR submitted for 25 lakhs. But as per the letter No.752755/C1/16/WRD Thiruvananthapuram dtd 30/09/2020 of the Additional Chief Secretary to Government and as per the present site condition of the proposed stretch, the estimate was recasted and renamed accordingly. The quantity of silt is assessed by scientific method. So the estimate prepared as per DSR 16 DPR submitted

	from the available fund			for FS for an amount of 10.70 lakhs.Now the new estimate prepared as per DSR 18 and DPR submitted for FS for 13.60 lakhs.				
Combined Action by KSPCB								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2020	Progress in the month of January 2021	Progress in the month of January 2023	% works completed	Details of works remaining
1	Sanitation Providing of toilets to residences With treatment and disposal system for sewage and sullage	Local body						
2	Community Toilet Proposed construction of newcommunity Toilet at satellite points on the bank of river	All local bodies, SuchitwaMissi on, Revenue department						
3	Rain water recharge Entry of rain water and rain water recharging to all thodu and drain	All local bodies, Kerala Water Authority,						

4	Solid waste management Check they have Board's consent and sanitation facility is provided.	Pollution Control Board, Health authority						
5	Household waste Adequate number of Kitchen bins shall be provided	Municipalities and local bodies						
6	Market Providing proper waste handling facility for wastewater And solid wastes		Six months 30					
7	Rendering plant Rendering plant for poultry wastes	Local body	Six months					
8	Slaughter house Slaughter house waste disposal facility	Local body						
9	Establishment like service station and workshops Strict monitoring of disposal of waste (sewage, sullage, degradable waste, non-biodegradable waste) surveyed area and also in the catchment of the river i) Verify whether consent	Pollution Control Board	Six months					

	to operate of the Board exists							
10	Sanitation survey should be done Sanitation survey is to be conducted for 100m on either sides of the other parts of polluted stretch if any located nearby	Pollution Control Board	Six months					
11	Awareness for residence association	Suchitwa Mission/LSGD/Corporation	Once in a month					

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 2020	Progress in the month of January 2021	Progress in the month of January 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 (Earlier Status : As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Neeleswaram and Payyannur) comes under the Peruvamba river basin. All the blocks					

		in the river stretch are safe with stage of groundwater extraction ranges from 34.85% to 69.52%)					
2	B(ii)	Ground water recharging / rain water harvesting (Earlier Status :The average pre -monsoon groundwater level ranges from7.97mbgl - 8.81 mbgl. Department has implemented 5 no of bore well recharge structures and 3 dug well recharge at Cheemeni open prison in Neeleswaram block)					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps (Earlier Status :Groundwater Department has 1 observation dug well and 1 piezometer for routine studies in the river stretch.)					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices (Earlier status :The total irrigation draft in the area ranges from 695.64 - 1326.85 ha.m.)					

Other than these following are some more suggestions from the part of pollution controlBoard.

1. Proper awareness among the inhabitants in the area is to be given for protecting the water bodies. Basic training for the people at the grass root level is to be provided for river management. All efforts for maintaining the quality of water bodies may be done by the Panchayat/Municipal authorities only with people's participation.
2. The nearby gramapanchayath and municipalities are mainly responsible for not providing municipal waste collection and treatment facilities in the locality. So they must be instructed to provide the required facility for scientific disposal of municipal solid waste as per the MSW rules 2016. The citizens as well as the municipal/gramapanchayath authorities need to be aware of the importance of scientific

disposal of waste generated. Their attitude towards handling waste has to be changed. Reducing waste, recovering recyclable materials, return of nutrients to the eco system as well as generation of energy from waste are to be practised. There has to be a valid scheme for collection, segregation, transportation, processing and safe disposal of waste by the authorities. For this affordable and viable waste to energy conversion technologies apart from conventional composting is to be implemented by the municipalities seeking technical expertise.

3. Propagation of vegetative cover in water shed will reduce soil erosion and enhance percolation of rain water into the sub surface. In downstream stretches where the river is saline, propagation of mangroves are essential.
4. Strict monitoring from the part of implementing as well as monitoring agencies is required for effective functioning of waste treatment facilities in waste generating units.
5. The practice of waste dumping into the river is to be prevented legally and strict action against this practice is to be adopted at panchayath and municipality level.
6. Re-survey of the river boundaries throughout the entire stretch is to be done urgently so as to prevent encroachment of the river.
7. The municipalities as well as the panchayaths are to be directed to provide proper waste management facilities of their own. All towns and cities must have Sewage Treatment Plants (STPs) that clean up the sewage. Facility for collection, segregation, transport, processing and scientific disposal of waste generated are to be provided by the local authorities in strict adherence to the Municipal Solid Waste Management Rules, 2016. For this, affordable and viable waste to energy conservation technologies apart from conventional composting is to be implemented seeking technical expertise.
8. Strict monitoring from the part of implementing as well as monitoring agencies is required for effective functioning of waste treatment facilities in waste generating units. The riverine stretches are to be monitored periodically at identified locations for water quality assessment.
9. Modern agricultural practices and technologies introduce the use of inorganic fertilizers with Nitrogen, Phosphorous, Potash and inorganic pesticides in farm lands and play important role in the river pollution. These may concentrate into the water body through runoff causing algal blooms by which whole stretch of water become choked. Fertilizers and chemicals application in agricultural lands are to be strictly under technical expertise.
10. Rain water recharging measures must be adopted.
11. Eco tourism and water tourism projects are to be designed giving due importance for protecting the environment. The activities are to

be organized in such ways which do not induce any types of pollution to the water body. Strict monitoring from the concerned authorities are recommended in functioning of the tourism projects.

12. Implement Green Protocol effectively in local self governments. Prohibit littering of plastics in the area. Plastic wastes shall be handled as per the provisions of Plastic Waste (Management and Handling) Rules, 2018.
13. The existing waste water treatment facilities of Taliparamba Municipality shall be augmented in such a way so as to operate round the year.
14. Actions shall be taken by the local bodies to clean the storm water drains. Rejuvenation of small streams, creeks leading into the river is to be done.
15. Round the clock patrolling shall be provided so as to prevent waste dumping on public places.
16. CCTV can be installed at suitable points in order to identify the persons/ establishments dumping waste in to river. All the local bodies must establish slaughter houses with modern facilities and unauthorized slaughter houses shall be strictly enforced.
17. Strict action shall be taken against non-violating person/ agency by the authorities when noticed. Plantation of trees and plants on the bank will be highly effective in controlling the waste disposal.

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 RAMAPURAM, KANNUR

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		<u>MADAYI</u> 16 soak pit,6 numbers of compost pits were completed. Supply order given for 10 MCF, out of this 5 numbers were supplied
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.20 22	NIL
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.20 22	NIL
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		

waste generated from hotels, Ashrams, etc.

(vii) Ground water regulation

(viii) Adopting good irrigation practices

(ix) Protection and management of flood plain Zones (FPZ)

(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 RAMAPURAM, KERALA

Ref para no:48 as per NGT order 673/2018 dated:20.09.2018	Activity	Implementing Agency	Time of Completion	Progress in the month of December 2020	Progress in the month of August 2021	Progress in the month of September 2023	% works completed	Details of works remaining
A (b)	Sanitation Facility	Pariyaram GP	03/2020	100%	Not reported	Not reported		
C (ii)	Biodegradable waste disposal	Pariyaram GP	03/2022					
C (ii)	Non bio degradable Waste Disposal	Pariyaram GP	Ongoing project			Waste disposed through clean Kerala Company		
E	Awareness	Youth, Asha workers and other stakeholders	Whenever necessary		ongoing	Ongoing		
A (b)	Identification of illegal outlets in to drains and stoppage of the same	Madayi GP	09/2019	completed	completed	completed		
A (b)	Sanitation Facility	Madayi GP	2022		100 Ring compost unit supplied	Order placed for		

						another 96 units		
C (ii)	Biodegradable waste disposal	Ward Sanitation Committee of Local Body	2022		100 Ring compost unit supplied	Order placed for another 96 units		
E	Awareness	Youth, Asha workers and other stake holders	On going		Completed			

Action plan of Local body

1. **Public Toilet:** Construct public toilets using available funds on the bank of river near Tourist places, Fishing spots etc.
2. **Mini MCF:** Construct material collection facility in miniature form at suitable intervals on the bank of the river in order to prevent dumping of wastes in to water.
3. **Toilet at houses:** Construct toilets with scientific septic tank and Soak pit
4. **Retro Fitting:** Maintenance work of existing toilets of residences near the bank of river using performance incentive grant.
5. **Bio degradable waste Disposal:** Distribution of Bio gas Plant, Composting facility to residences near river for bio degradable waste disposal.
6. **Common Waste disposal facility:** For the disposal of bio degradable waste disposal at market places, provide community level bio gas plants, Thumboormozhi etc. Using suitable funds
7. **Common Sewage treatment facility:** Provide common sewage treatment facility for waste water generating from market places and disposing in to public drains.
8. **Septage treatment facility :** Construct septage treatment facility

In addition to above, CCTV can be installed at suitable points in order to identify the persons/ establishments dumping waste in

to river. All the local bodies must establish slaughter houses with modern facilities and unauthorized slaughter houses shall be strictly enforced.

Strict action shall be taken against non-violating person/ agency by the authorities when noticed. Plantation of trees and plants on the bank will be highly effective in controlling the wastedisposal.

Action Plan by Irrigation Department

Ref para no:48 as per NGT order 673/18 dated: 20. 9.18	Activity	Implementing Agency	Time for completion	Progress in the month of May 2022	Progress in the month June 2022	Progress in the month September 2023	% works complete	Details of works remaining
C (ii)	Providing fencing on Ramapurambridge across Ramapuramriver at Madayi GP	Irrigation department	2021	Initially the DPR submitted for 12 lakhs. But as per the letter No.752755/C1/16/WRD Thiruvanamthapuramdtd 30/09/2020 of the Additional Chief Secretary to Government and the present site condition, the estimate was recasted with items in DSR instead of observed data items. So the estimate prepared and DPR submitted for an amount of 14.5lakhs as per DSR 2016.Now the new estimate prepared as per DSR 2018 and DPR submitted for FS for an amount of Rs.18.60 lakh.				
E	Desilting and repair of salt water exclusion cross bar at Ramapuram in cheruthazham GP	Irrigation Department	2020	An estimate for desiltation work on the u/s of Vayalpra SWECB has already been submitted. Now the desiltation work has been completed including the work under the scheme removal of excess sedimentation due to flood (Room for river). It was observed recently, while taking the bed levels of Ramapuram river for desilting work, that the bed levels of Ramapuram SWECB and Vayalpra RCB that is 1.65 km d/s are exactly same. Hence there will be overlapping of storage area if Ramapuram SWECB is restored. Hence the work is not technically feasible and has to be dropped.				
E	Rejuvenation of Ramapuram River - Flood plain zone management: Protection of flood plain zone near Ramapuram bridge in Cheruthazham Panchayath. (PRICE ID : 2019/10481/IA)	Irrigation Department		As per the observation forwarded from the government on submitted DPR vide No.757555/C1/16/WRD Dated 30.09.2020,This work shall not be considered until adequate study is conducted. To envisage the same purpose, LSGD has constructed a bund road with side protection in the same reach where irrigation department proposed a flood bank in Ramapuram action plan. Hence this may be removed from the action plan.				

E	Greenery development- Plantation plan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment	Irrigation Department	2 years	To ascertain the encroachment if any and Purambokk along the polluted river stretch for the proposed work, land to be demarcated by the Revenue authorities after necessary boundary survey. For the same, District collector Kannur has already been addressed from this office and subsequent bio cover works and planting trees have to be done by social forestry department.
E	Issues relating to E-flow, maintaining minimum environmental flow of river(by having watershed management provisions)	Irrigation Department	2 years	DPR was submitted for the work previously and it was directed to find the desilting quantity based on level calculations. Hence the estimate have been submitted for FS after incorporating required corrections. DPR submitted for F.S (Rs.45.50 lakh)

Combined ActionPlan

	Proposed action	Agency	Timeline	Progress in the month of December 2020	Progress in the month of January 2021	Progress in the month of January 2023	% works completed	Details of works remainin g
A (b)	Providetoilets to residences with treatment and disposal system for sewage and sullage	Local Body	As there are residences with single pit toilet					
A (b)	Construction of new community toilets with treatment system	All local bodies SuchitwaMission, Revenue department	Proposed Construction Of new community Toilet at satellite points on the bank ofriver					
B (ii)	Entry of rain water and rain water recharging to all channels and drain	All local bodies , Kerala Water Authority,	Drains are inspected before rain and all channels and stream are cleaned once in a year					
C (ii)	Sanitary waste in hostels, establishments should be segregated, treated and disposed as per Solid Wastes Management Rules,2016 intheir respective wards.Aerocomposting and Material Collection Facility should be given in all wards near the river bank.	Pollution Control Board ,Health departmen t	Check they have board consent and sanitation facility is provided					
C (ii)	Adequate number of kitchen bins shall beprovided	Municipalities and local bodies	Six months					

C (ii)	Providing proper waste handling facility. For wastewater and solid wastes		Six months				
C (ii)	Rendering plant for poultry wastes	Local body	Six months				
C (ii)	Slaughter house waste disposal facility	Local body					
A (iv)	Strict monitoring of disposal of waste(sewage, sullage, degradable waste, non-biodegradable waste) surveyed area and also in the catchment of theriveri)Verify Whether consent to operate of the Board exists	Pollution Control Board	Six months				
A (b)	Sanitation survey is to be conducted for 100m on either sides of the other parts of polluted stretch if any located nearby	Pollution Control Board	Six months				
E	Awareness for residence association:	Suchitwamission/L SGD/Corporation	Once in a month				


Action Plan by Ground Water Department

Sl.No	Ref para no:48 as per NGT order 673/2018 dated:20.09.2018	Activity	Progress in the month of December 2020	Progress in the month of January 2021	Progress in the month of January 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					
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					

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POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME SEPTEMBER 2023

Station Name		KAVVAYI RIVER			
Type of Water body		RIVER			
Completed by		JSA1,JSA2,PGSA			
Agency		KERALA STATE POLLUTION CONTROL BOARD			
Date and time of sample taken		23-09-2023	23-09-2023	25-09-2023	25-09-2023
Sl.No	Determinants	Kankol	Karikuzhithodu	Thattarakadavu Bridge	Kuttiyol palam
1	Temperature, 0C	28	28	28	28
2	Dissolved Oxygen, mg/l	6.7	7.34	6.87	7.3
3	pH	6.37	7.1	5.9	6
4	Conductivity, µmhos/cm	90	135	235	140
5	BOD, mg/l	0.6	0.88	1.81	2.24
6	Turbidity, NTU	3.1	0.2	1.1	2.1
7	Total Alkalinity, mg/l	12	14	28	5
8	Chloride, mg/l	44	9	20	38
9	Ammoniacal-N, mg/l	0	0	0	0
10	Hardness as CaCO3, mg/l	10	21	102	13
11	Calcium as CaCO3, mg/l	7	10	93	5
12	Magnesium as CaCO3, mg/l	3	11	9	8
13	Sulphate, mg/l	0	0	0	0
14	Phosphate, mg/l	0	0	0	0
15	Fluoride, mg/l	0	0	0	0
16	Total Coliform, MPN/100 ml	400	350	450	500
17	Fecal Coliform, MPN/100 ml	200	150	190	200


 DEEPAK.P.P
 Assistant Scientist
 Kerala State Pollution Control Board
 District Office, Kammur-670002

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POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME SEPTEMBER 2023

Station Name		PERUVAMBA RIVER					
Type of Water body		RIVER					
Completed by		JSA1,JSA2,PGSA					
Agency		KERALA STATE POLLUTION CONTROL BOARD KANNUR					
Date of sample taken		26-09-2023	26-09-2023	23-09-2023	26-09-2023	26-09-2023	
Sl.No	Determinants	MATHAMANGALAM	KACHERIKADVU	CHANDAPURA	KANDAKALI		
1	Temperature, 0C	29	29	27	28		
2	Dissolved Oxygen, mg/l	7.2	9.2	7.06	5.06		
3	pH	7	7.3	6.45	8		
4	Conductivity, µmhos/cm	188	283	138.3	945		
5	BOD, mg/l	1.2	1.2	0.76	0.27		
6	Turbidity, NTU	0.4	0.9	4.9	2.1		
7	Total Alkalinity, mg/l	8	8.2	12	5		
8	Chloride, mg/l	28	23	26	38		
9	Ammoniacal-N, mg/l	BDL	0	0	0		
10	Hardness as CaCO ₃ , mg/l	16	12.5	16	92		
11	Calcium as CaCO ₃ , mg/l	13	8	11	62		
12	Magnesium as CaCO ₃ , mg/l	3	4.5	5	30		
13	Sulphate, mg/l	BDL	0	9.8	95		
14	Phosphate, mg/l	BDL	0	0	0		
15	Fluoride, mg/l	BDL	0	0.2	0		
16	Total Coliform, MPN/100 ml	350	550	300	650		
17	Fecal Coliform, MPN/100 ml	210	250	200	360		

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DEEPAK.P.P.

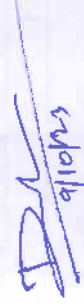
Assistant Scientist

Kerala State Pollution Control Board

District Office, Kannur-670002

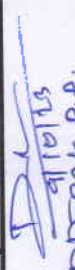
POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME SEPTEMBER 2023

Station Name		RAMAPURAM RIVER						
Type of Water body		RIVER						
Completed by		JSA1,JSA2,PGSA						
Agency		KERALA STATE POLLUTION CONTROL BOARD KANNUR						
Date of sample		20-09-2023	21-09-2023	20-09-2023	21-09-2023	20-09-2023	21-09-2023	26-09-2023
Sl.No	Determinants	KAPPUGAL	ATHIYADAM	RAMAPURAM	VAYALAPRA	RAMAPURAM	VAYALAPRA	KACHERIKADAVU
1	Temperature, 0C	28	28	27	28	27	28	28
2	Dissolved Oxygen, mg/l	8.4	6.06	4.1	6.3	4.1	6.3	9.2
3	pH	6.03	6.6	6.13	6.3	6.13	6.3	6.2
4	Conductivity, µmhos/cm	130	170	270	702	270	702	62.3
5	BOD, mg/l	3	1.56	1.57	1.63	1.57	1.63	1.2
6	Turbidity, NTU	3.8	1.4	2	2.9	2	2.9	1
7	Total Alkalinity, mg/l	9	7.1	6	20	6	20	11
8	Chloride, mg/l	30	21	98	305	98	305	1
9	Ammoniacal-N, mg/l	0	0	0.018	0	0.018	0	BDL
10	Hardness as CaCO ₃ , mg/l	19	27	29	148	29	148	14
11	Calcium as CaCO ₃ , mg/l	12	10	21	95	21	95	7
12	Magnesium as CaCO ₃ , mg/l	7	17	8	53	8	53	7
13	Sulphate, mg/l	1.9	0	13.9	118	13.9	118	BDL
14	Phosphate, mg/l	0	0	0	0	0	0	BDL
15	Fluoride, mg/l	0	0	0	0	0	0	BDL
16	Total Coliform, MPN/100 ml	300	320	400	480	400	480	460
17	Fecal Coliform, MPN/100 ml	200	140	100	230	100	230	250


 DEEPAK.P.P.
Assistant Scientist
 Kerala State Pollution Control Board
 District Office, Kannur-670002


POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME SEPTEMBER 2023

Station Name		KUPPAM RIVER						
Type of Water body		RIVER						
Completed by		JSA1, JSA2, PGSA						
Agency		KERALA STATE POLLUTION CONTROL BOARD KANNUR						
Date of sample taken		21-09-2023	23-09-2023	21-09-2023	21-09-2023	21-09-2023	21-09-2023	21-09-2023
Sl.No	Determinants	MANGALASS ERRY	KUPPAM BRIDGE	VARIANKOT TAM	VELLAVU	KUTTIYERIKADAVU	VELLICHAKKEEL	
1	Temperature, 0C	28	28	28	28	28	28	29
2	Dissolved Oxygen, mg/l	6.3	9	8.13	8.33	9.47	6.5	6.5
3	pH	6.7	6.28	6.9	6.8	6.9	7.8	7.8
4	Conductivity, µmhos/cm	515	200	360	340	201	956	956
5	BOD, mg/l	0.13	2.4	2.07	0.14	2.6	2.3	2.3
6	Turbidity, NTU	3	0.08	3.1	2.1	1.5	1.7	1.7
7	Total Alkalinity, mg/l	15	8	11	12	12	12	12
8	Chloride, mg/l	305	41	115	101	50	290	290
9	Ammoniacal-N, mg/l	0	0.001	0	0	0	BDL	BDL
10	Hardness as CaCO ₃ , mg/l	48	18	35	41	30	49	49
11	Calcium as CaCO ₃ , mg/l	35	7	18	25	14	22	22
12	Magnesium as CaCO ₃ , mg/l	13	11	17	16	16	27	27
13	Sulphate, mg/l	0	22	0	0	0	BDL	BDL
14	Phosphate, mg/l	0	0	0	0	0	BDL	BDL
15	Fluoride, mg/l	0	0	0	0	0	BDL	BDL
16	Total Coliform, MPN/100 ml	650	300	650	550	650	620	620
17	Fecal Coliform, MPN/100 ml	320	200	380	350	300	340	340


 DEEPAK.P.P.
 Assistant Scientist
 Kerala State Pollution Control Board
 District Office, Kannur-670002

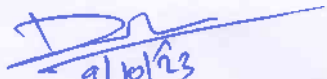
1.Kavvayi

Sl.no	Drain	BOD on SEPTEMBER 2023	Remarks
1	Kotti thodu	0.72	
2	School ground thodu	1.33	
3	Kalikadapuram thodu	1.3	
4	Koorikadavu	2.1	
5	Ulliyathu kadavu	0.8	
6	Kallatu kadavu	2.1	
7	Muttathu kadavu	2.3	Plastic waste seen.
8	Vadipram thodu	1.5	Plastic waste seen.


9/10/23
DEEPAK.P.P.
Assistant Scientist
Kerala State Pollution Control Board
District Office, Kannur-670002

2.Peruvamba

Sl.no	Drain	BOD on SEPTEMBER 2023	Remarks
1	Naranga thodu	2.3	High amount of Plastic waste
2	Mathuvayal	2.3	
3	Perumba thodu	2.1	Plastic waste was noticed
4	Valliohmthodu	2.3	Water with Plastic waste.
5	Panapuzha thodu	1.1	
6	Poomkottu Chal	1.6	Plastic waste seen.
7	Manjangottu Thode	1	
8	Kannelamthodu	1	
9	Appithodu	1.1	
10	Mavullapoyil thodu	1.6	Plastic waste
11	Kollali thodu	1	
12	Kannada thodu	0.9	
13	Koyakkotu thodu Thokadu	0.8	
14	Cherottuvayal thodu	2.6	
15	Kayyil arakulam thodu Kunjimagalam puzha	2.4	
16	Tattanvayal thodu	0.4	


9/10/23
DEEPAK.A.P.
Assistant Scientist
Kerala State Pollution Control Board
District Office, Kannur-670002

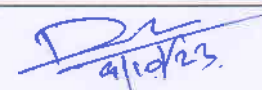
3. Ramapuram thodu

Sl.no	Drain	BOD on SEPTEMBER 2023	Remark
1	Kapugal thodu	1	
2	Chembali kundu	1.2	
3	Kulapram kundan thodu Kavilavalapu thodu	2.3	
4	Aduthila thodu	0.7	
5	Ottayi thodu	2	
6	Moolakadav	1.7	

DL
9/10/23
DEEPA K. P. P.
Assistant Scientist
Kerala State Pollution Control Board
District Office, Kannur-670002

4.Kuppam

Sl.no	Drain	BOD on SEPTEMBER 2023	Remarks
1	Karuvanchal	2	Plastic waste was noticed
2	Karthikapuram	2.4	Plastic waste was noticed
3	Near Udayagiri Bridge	1.5	
4	Mukkada Thodu	1.2	
5	Moonamkunnu Thodu	1.6	
6	Kuttaparamba-Neduvodu Thodu	0.2	
7	D/S of Alakode Hospital	0.3	
8	Pathayachira	1.5	Plastic waste was noticed.
9	Near the houses on bank of main River (@ Pariyaram GP)	2.5	
10	Near House Boat @ Pariyaram GP	1.7	
11	Kavinmunabu	1.6	
12	Manja Thodu	0.66	
13	Sulthan Thodu	2.8	Plastic waste was noticed.
14	Cheru thodu	1.8	Plastic waste was noticed.


9/10/23.
DEEPAK. P.P.
Assistant Scientist
Kerala State Pollution Control Board
District Office, Kannur-570002

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 SEPTEMBER 2023
RIVER MOGRAL, KASARGOD

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 2023	% works completed	Details of works remaining
C	Material collection facility	Mogral Puthur Grama Panchayath	March 2020	Completed	Completed	Completed	100 %	NA
C	Waste collection including vehicle hire charge to collect waste.	Mogral Puthur Grama Panchayath	March 2020	NIL	NIL	NIL	0 %	
E	Installation of camera	Mogral Puthur Grama Panchayath	June 2020	NA	NA	NA	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	Completed	100 %	NA

C(ii)	Haritha Karmasena Activity/ Collecting Non Bio degradable materials including Plastics from households	Mogral Puthur Grama Panchayath	On-going		Started	Started	Started	75%	NA
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	Completed	100 %	NA
E	River cleaning	Mogral Puthur Grama Panchayath	2019		Completed	Completed	Completed	100 %	NA
C(iii)	Bamboo Plantation of Madhur	Madhur grama Panchayath	2019		completed	completed	completed	100 %	Bamboo plantation done in 2019 (replantation needed)
C(ii)	Viability Gap Funding for Haritha Karmasena	Madhur grama Panchayath	2019		completed	completed	Completed	100%	

C(ii)	Material recovery facility centre	Madhur grama Panchayath	2019	Completed	Completed		100%	Completed. Non Biowaste collected at MCF handed over to Thirivonam Agency Completed
C(ii)	Construction of Plastic Shredding Machine building	Madhur grama Panchayath	2019	Completed	Completed	Completed.	100 %	Completed. Non Biowaste collected at MCF handed over to Thirivonam Agency Completed
C(ii)	Purchase of Plastic shredding machine	Madhur grama Panchayath	2019	Completed	Completed	Completed.	-	Completed. Non Biowaste collected at MCF handed over to Thirivonam Agency

C	Tying of net on both sides of the bridge	Irrigation Department	2019-2020	<p>DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. 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 NH 66.</p>	<p>DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. 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</p>	<p>DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. 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 NH 66</p>	<p>DPR submitted to Chief Engineer (Price ID:2019/10715/IA) for approval.</p>	Work still under process.
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					with the upgradation of NH 66			
A(a)	Water monitoring	quality	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		10.09.2023	
Nature and flow of the river		Medium flow, water level decreased	
Sl.No	Parameters	Unit	Mogral Bridge
1	Temperature	°C	29.9
2	pH	-	7.34
3	Conductivity	µmhos/cm	798
4	Turbidity	NTU	BDL
5	BOD	mg/l	1.2
6	Dissolved Oxygen	mg/l	5.5
7	Total Coliforms	cfu/100ml	640
8	Feacal Coliforms	cfu/100ml	200
9	Feacal Streptococcus	cfu/100ml	10
10	Chlorides	mg/l	230
11	Total Alkalinity	mg/l	34
12	Total Hardness	mg/l	80
13	Calcium Hardness	mg/l	30
14	Magnesium Hardness	mg/l	50
15	Calcium	mg/l	12
16	Magnesium	mg/l	12.150
17	Total Dissolved Solids	mg/l	482
18	Sodium	mg/l	50.35
19	Potassium	mg/l	85.2

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		10.09.2023	
Nature and flow of the river		Water level decreased, Medium flow	
Sl.No	Parameters	Unit	Puzhakkara
1	Temperature	°C	30
2	pH	-	7.49
3	Conductivity	µmhos/cm	109.4
4	Turbidity	NTU	0.7
5	BOD	mg/l	2.0
6	Dissolved Oxygen	mg/l	7.0
7	Total Coliforms	cfu/100ml	560
8	Feacal Coliforms	cfu/100ml	108
9	Feacal Streptococcus	cfu/100ml	20
10	Chlorides	mg/l	22
11	Total Alkalinity	mg/l	17
12	Total Hardness	mg/l	22
13	Calcium Hardness	mg/l	12
14	Magnesium Hardness	mg/l	10
15	Calcium	mg/l	5.6
16	Magnesium	mg/l	2.673
17	Total Dissolved Solids	mg/l	60
18	Sodium	mg/l	12.01
19	Potassium	mg/l	2.00

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 September 2023
RIVER UPPALA, KASARGOD

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of July 2023	Progress in the month of August 2023	Progress in the month of September 2023	% works completed	Details of works remaining
C(ii)	Material collection facility. Operation	Mangalpady Grama Panchayath	2019	NA	NA	NA	NA	Completed kubanoor plant is working
C	Waste management including purchase of vehicle to collect waste.	Mangalpady Grama Panchayath/ Green Space Private company	2019- 2020	NA	NA	NA	NA-	Approval for purchase of vehicle not sanctioned
E	Installation of camera	Mangalpady Grama Panchayath	March 2020	NA	NA	NA	NA	NA
C	Electrification of material collection facility	Manjeshwaram Grama Panchayat	2019-2020	Electrified	Electrified	Electrified	100%	Completed
C	Transportation of collected waste	Manjeshwaram Grama Panchayat	March 2020	Tender called for waste management, agency accepted and agreement signed	Tender called for waste management agency accepted and agreement signed	Tender called for waste management, agency accepted and agreement signed	100%	Completed.
E	Installation of camera	Manjeshwaram Grama Panchayat	March 2020	CC TV installed at 4 places by Keltron, connected to Police Station and Panchayath Office	CC TV installed at 4 places by Keltron, connected to Police Station and Panchayath Office	CC TV installed at 4 places by Keltron, connected to Police Station and Panchayath Office	100%	completed

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. 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 NH 66.	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval.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 NH 66.	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval.I 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 NH 66.		Work still under process.
E	Continuous vigil on waste dumping on roads	Police Department	NA					
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		10.09.2023	
Nature and flow of the river		Moderate flow, water level decreased	
Sl.No	Parameters	Unit	Uppala Bridge
1	Temperature	° C	29.9
2	pH	-	7.06
3	Conductivity	µmhos/cm	113.4
4	Turbidity	NTU	4.1
5	BOD	mg/l	0.7
6	Dissolved Oxygen	mg/l	7
7	Total Coliforms	cfu/100ml	540
8	Feecal Coliforms	cfu/100ml	140
9	Feecal Streptococcus	cfu/100ml	20
10	Chlorides	mg/l	17
11	Total Alkalinity	mg/l	20
12	Total Hardness	mg/l	23
13	Calcium Hardness	mg/l	15
14	Magnesium Hardness	mg/l	8
15	Calcium	mg/l	6
16	Magnesium	mg/l	1.9
17	Total Dissolved Solids	mg/l	65
18	Sodium	mg/l	40.6
19	Potassium	mg/l	20.6

UPPALA RIVER - UPPALA RIVER NEAR BHAGAVATHI TEMPLE (Bhagavathi Gate) - (Proposed NWMP Station)			
Sampling Point		Uppala River Near Bhagavathi Temple (Bhagavathi Gate)	
Distance from existing NWMP Station		878.66 m	
Latitude		12°41'20.1"N	
Longitude		74°54'34.0"E	
Date of Sampling		10.09.2023	
Nature and flow of the river		Water level decreased, moderate flow	
Sl.No	Parameters	Unit	Uppala River Near Bhagavathi Temple
1	Temperature	° C	30.5
2	pH	-	7.31
3	Conductivity	µmhos/cm	126.5
4	Turbidity	NTU	0.8
5	BOD	mg/l	2.1
6	Dissolved Oxygen	mg/l	3.5
7	Total Coliforms	cfu/100ml	480
8	Feecal Coliforms	cfu/100ml	200
9	Feecal Streptococcus	cfu/100ml	25
10	Chlorides	mg/l	25
11	Total Alkalinity	mg/l	17
12	Total Hardness	mg/l	23
13	Calcium Hardness	mg/l	17
14	Magnesium Hardness	mg/l	6
15	Calcium	mg/l	6.8
16	Magnesium	mg/l	1.458
17	Total Dissolved Solids	mg/l	80
18	Sodium	mg/l	12
19	Potassium	mg/l	2.1

Sd/-
Assistant Scientist