

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 - July 2023

1. Short term plan

No.	Activity	Implementing agency	Time line	Progress in the month of April-2023	Progress in the month of June-2023	Progress in the month of July 2023	% works completed	Details of works remaining
2.1.1	Pumping lines from the terminal pumping stations namely Kuriyathi, Pattoor, Kannammoola and Enchakkal pumping stations are to be connected directly to STP at Muttathara	Kerala Water Authority	May 2019	-	-	-	100%	100% work of Kuriathy completed. Pumping main of Pattoor, Kannammoola and Enchakkal included in long term works
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	Kerala Water Authority	May 2020	Thaliyil	-	-	100%	a. Completed
								b. a) Providing RCC lining for the existing two wells. Lining for first well completed. 2



	new pump Sets			Arannoor-		100%	Pump sets erected in first well and commissioned. Pumping main also completed. Lining for 2 nd well partly completed. b) Diesel generator – to be supplied by contractor. Work terminated at the risk and cost of the contractor. Work 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%	Pump sets installation at Enchakkal and Mudavanmughal pump house completed.
2.1.5	DG sets in all lift and pumping stations – Mudavanmughal, Arannoor, Thaliyal, Kuriyathi, Pattoor, Kannammola, Pattom, Murinjapalam and Enchakkal	Kerala Water Authority	May 2020			100%	DG sets installation of seven pumping stations completed. Approval from Electrical inspectorate received. Work completed. Trial run also completed. For Arannoor and Thaliyal. Erection of diesel generator is already included in the item mentioned 2.1.2. For Enchakkal already exists.



2.1.6	Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchanthodu, control storm water entry into sewer to avoid overflow in Thampanoor area. Sewage generated in Rajaji Nagar shall be diverted to main sewer line. Sewage generated in Thoppil area shall be diverted main sewer line	Kerala Water Authority	Dec 2020				100%	Work completed.
2.1.7	Discharge of sewage in Parayilkadavu shall be stopped as there is overflow of sewage reaches in houses having sewerage connection and this may lead to discharge of sewage into River Karamana	Kerala Water Authority	Completed				100 % completed	Rehabilitation work of existing pipe line is included in the work State Plan -2019-20- Rehabilitation of sewer line from Sathya Nagar to Karamana BHS and allied works. Works Completed.
2.1.8	Divert the sewer line from the School compound of Government Karamana High School	Kerala Water Authority	completed				100% completed	Work mentioned is same as the above work which is completed.
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				98.5%	Works completed – 75 No. (Rs. 15.41 Cr) AMRUT-44, State plan-28 MLA ADF/SDF-3 Work in progress – 1No. (Rs. 3.0 Cr.) AMRUT-1,



								State plan-0 Expected to be completed by 30.09.2023 for one AMRUT work
	Total works in progress/completed (76No.) Works dropped (2No.)							Dropped - 2 No. (Rs. 1.52cr.) State plan-2 Two works dropped due to not getting offers on repeated tenders and expiry of AS.
2.1.10	Extension of sewer network wherever technically feasible in new areas of existing blocks	Kerala Water Authority	May 2020		0.5%	0.5%	99%	Works completed - 24 No. (Rs. 17.21 Cr.) AMRUT-12, State plan-11 MLA ADF/SDF-1
	In progress/Ongoing (24No.)							
	Tendering/ To be arranged (1No.) Land acquisition -1 In progress-3							Land acquisition process for three work completed and land handed over to KWA and AS obtained for arranging the work under State Plan 22-23 and one work arranged and one tendered. LA for one work in initial stage.(Details shown in excel sheet attached) Direction from head office to cancel one work and recast the estimate and submit for new AS. Same has been approved in State Plan 2022-23 and tendered.



								Agreement Executed.Expected date of completion 30.09.23
2.1.11	Procurement of sewercleaning machines and equipment maintenance	Kerala Water Authority	Mar 2020	-	-	-	100%	Work completed.



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

2. Long Term Works

Sl No.	Long term measures proposed	Implementing agency	Amount Required (Rs.in Crore)	Time line	Progress in the month of February	Progress in the month of March	% works completed	Details of works remaining
3.1.1	Extension of sewerage system to Block F to G coastal belt	Kerala Water Authority		Three years				Consultant appointed for preparing Detailed Project Report for uncovered wards of the Thiruvananthapuram Corporation and Rehabilitation of existing system was terminated from the contract due to breach of contract by the firm vide Proceedings No. KWA/SE/SEW/EOI/REPL/338/2020- 2021 of the Superintending Engineer, Sewerage Circle, Kerala Water Authority Thiruvananthapuram dated 31.05.2022 to arrange the balance work at their risk and cost. As discussed in the Chief Secretary, GoK' s meeting dated 21/06/2022 the work of Preparation of DPRs has to be done internally. Mean while the terminated firm M/s REPL filed a complaint against KWA in the Hon'ble High court of Kerala (WP(C) No 26031 of the year 2022) and obtained a stay against KWA at first up to 22.08.22 which is then got extended up to 14.09.22 against taking any coercive actions. As per the direction of the MD, KWA the work of DPR preparation of sewerage system to the uncovered areas of TMC is now being carried out internally by KWA. The total wards were divided in to 10 clusters. Cluster 1 comprises of 5 wards - Attukal, Kalady, Kallipankulam, Ambalathara and Kamaleswaram wards - The DPR for Cluster 1 was submitted on 13/10/2022 for obtaining AS. DPR of Cluster 1 Zone 1 & 2 for Rs 99 Crores submitted to the Secretary WRD on 17/02/23. Cluster 3 Zone 1 is consisting of Puthenpally and Part of Muttathara (until STP) was taken up on priority based on the demand of Thiruvananthapuram Corporation. DPR of Cluster 3 Zone 1, Puthanpalli ward of 1.5 MLD Sewerage network with 5 year O&M and without centage submitted to Corporation under AMRUT 2.0 on 15/1/23. The DPR of Cluster 3 Zone 2 and Zone 3 is prepared and published in the website of KWA. The DPR for cluster 2 is kept in Shelf. The DPR for cluster 4 (Thirumala Thrikkannapuram and Punnakkamughal wards) is prepared and as
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						<p>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, in the sewerage review meeting dated 23.05.2023 and vide letter from the CE Sewerage, PPD & WASCON, it was directed to change the Technology of the STP adopted from SBR to MBBR and hence the revision of the design is to be made and the DPR will 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 ministers of WRD and Port & Harbour department was necessitated and as suggested by the CE, Harbour department. 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				



National Mission for Clean Ganga

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(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)**

RIVER PAMBA, PATHANAMTHITTA

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		NA
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		NA
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		NA
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none">• Specifying accountability of nodal authorities not below the Secretary level		NA

	<ul style="list-style-type: none"> Chief Secretaries may have an accountable person attached in their office for this purpose 		
	<ul style="list-style-type: none"> Monitoring at State level must take place 		
6	<p>Progress report may be furnished by the State/UTs to</p> <ul style="list-style-type: none"> Secretary, Ministry of Jal Shakti Member Secretary, CPCB 	<p>Monthly (preferably before 20th of every month)</p>	NA

<p>6.1</p>	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p>	<p>2019-2020</p>	<p>Drains contributing to river pollution were Identified-The drains are seasonal and water quality is above the required limit, no in-situ Treatment is required</p> <p>Since the area does not contain any industry and so do not require any CETP, this action point is revised</p> <p>The adjoining local bodies are in the stage of developing and establishing adequate solid waste management facilities. Also, the solid waste dumping issues were not identified in the stretch during the field visit held during past one year.</p> <p>Water quality analysis results of April 2023 is enclosed.</p>
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	<p>(iv)<u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline</p> <p>(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi)Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p>		<p>Awareness campaign to be initiated</p> <p>No ground water pollution is noted in the area so action yet to be initiated.</p> <p>Adopted.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p>
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	<p>(vii)Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi)Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii)Setting up biodiversity parks on flood plains by removing encroachment</p>		
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ACTION PLAN FOR RIVER PAMBA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2023	Progress in the month of June 2023	Progress in the month of July 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				100%	Nil
C(ii)	Establishment of de-centralized solid waste treatment facility	Mannar Panchayat, Panchayath	31.02.2023	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near Mannar			100%	Inauguration of functioning.

				<p>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</p>				
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				27/08/2021				
C	Establishment of Material Collection Facility	Mannar Panchayat,	31.02.2023	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Non-biodegradable plastic materials has bCollection, segregation and transportation of non-biodegradabl			100%	Construction of permanent MCF building.

				<p>e 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.</p>				
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				Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.				
C	Resource Recovery Facility	Mannar Panchayat, Panchayath	31.02.2023	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			100%	

				<p>transported by Mannar GP. Mannar GP has started stockpiling of plastic waste materials collected through HKS in a hall above the Vridhdhasada nam owned by GP and segregated and transported to Clen Kerala company. Plastic Waste management Bylaw (Final) has been passed by</p>				
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				Mannar GP on 19/06/2021.				
C	Installing household and community level solid waste management units	Mannar Panchayat	31.02.2023	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			100%	Operation of Aerobic compost unit.

				<p>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</p>				
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				passed by Mannar GP on 19/06/2021. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021.				
C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.02.2023	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma			100%	The process has to be repeated throughout the year.

				<p>Sena(HKS). Collection, segregation and transportatio n of non- biodegradabl e plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for trasportation.</p>				
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				<p>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	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Parumala Town	Kadapra Panchayat	31.12.2020					
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Mannar Town	Mannar Panchayat	30.09.2020	Due to the lack of space and fund, construction of small STP is not included in the annual plan of Mannar Grama Panchayat. 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					

C	Removing light jungle and muddies from river courses	Irrigation department	31.03.2021					
C	Electrical-Light arrangements and Surveillance cameras	Irrigation department	31.03.2021					
C	Regualting activites in flood plain zone, protection and management of flood plain zone	Irrigation department	31.03.2021					
	Greenery developmentPlantation plan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment	Irrigation department	31.03.2021					
C (b) (ii)	Green Protocol implementation in all Offices institution & Public function	Mannar, Panchayat	31.01.2023	Green Protocol is strictly observed in 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			100%	Continuation of Green Protocol .

				<p>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.</p>				
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				Certificates were awarded to the successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021.				
D(a)	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department	30.11.2020					
D (b)	Irrigation practices	Irrigation department	30.04.2020					
E	Awareness programmes for sections of public	Kerala State Pollution Control Board	31.05.2020				100%	
C	Management of municipal, plastic, hazardous, biomedical and electrical waste	LSGD	31.03.2021	Draft by-law of Plastic Waste Handling has			100%	The process is to be repeated

				<p>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</p>				<p>periodically.</p>
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				<p>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</p>				
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				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				
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				for processing by IMAGE (IMA Goes + Eco-friendly), an initiative run by IMA (Indian Medical Association).				
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ACTION BY GROUND WATER DEPARTMENT

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

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	MAY	JUN	JULY	MAY	JUN	JULY	MAY	JUN	JULY	MAY	JUN	JULY	MAY	JUN	JULY
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	Nil	6.66	7.5	Nil	170.1	95.8	Nil	12.6	0.6	Nil	6000	3200	Nil	300	150
4	Karovelil Thodu	7.02	7.03	7.52	140.8	63.45	46.87	4.2	2.2	0.4	2000	7000	3200	800	350	160
5	Nochithodu	6.74	6.84	7.56	181.6	132.2	61.31	5.4	4.1	0.9	3000	4000	7000	1200	200	350
6	Pattaparambil Thodu	6.87	7.08	7.38	76.84	64.04	53.4	0.7	2.5	1.26	1200	2000	1500	300	100	50
7	Kappiyarissery Thodu	6.99	7.08	7.46	111.1	166.5	48.27	7.5	7.2	2.1	2200	12000	2000	600	600	100
8	Kombankery Thodu	7.06	6.8	7.53	53.42	66.39	63.78	1.8	2.6	1.06	700	7500	1800	100	300	150
9	Perackalthodu	6.77	6.92	7.63	48.78	88.06	50.51	2.7	3.2	0.6	3000	2500	2300	1200	150	100
10	Erathodu	6.9	7.09	7.37	51.33	60.51	47.95	1.9	0.7	0.2	2800	600	1300	1000	50	70
11	Kolarayaru	6.85	6.91	7.19	49.48	42.68	48.01	2.1	0.4	0.8	600	0	900	0	0	20

National Mission for Clean Ganga

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

RIVER MANIMALA, ALAPPUZHA

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

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

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2023	Progress in the month of June 2023	Progress in the month of July 2023	% works completed	Details of works remaining
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project	Result attached			100%	NIL
A(b)	Rendering Plant at Eraviperoor or Thiruvalla	Eraviperoor/ Thiruvalla local body	31.03.2021				0%	Work to be initiated
C(ii)	Fencing of bridges, desilting, dredging and protection works, surveillance cameras at vantage points	Irrigation department	31.03.2021				0%	Work to be initiated
C	Preventing illegal discharge of septage and other waste water into the river. Formation of River Protection Group	Panchayath, Police , KSPCB	31.05.2020.	NIL			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 Recovery 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 May2023	Progress in the month of June 2023	Progress in the month of July 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
JULY-2023**

SI NO	BOTTLE NO.	Name of Drains	PH	BOD	TC	FC
1	TK1	Panayampalathodu	6.5	1.2	3200	300
2	TK2	PadathupalamThodu	6.7	0.2	7800	700
3	TK3	Thottappuzha	6.6	0.4	6200	600
4	TK4	Kuttapuzha under Kattodubridge	6.5	0.4	1900	100
5	TK5	Kadavumbara	6.9	0.4	2200	200
6	TK6	Drain under Varappalam Bridge	Nil	Nil	Nil	Nil
7	TK7	Drain under kallupalam Bridge	6.5	3.8	2200	200
8	TK8	Komalamthodu	6.8	0.46	2400	240
9	TK9	Vennikulam Valiyathodu	6.7	0.4	3800	400
10	TK10	Paduthodu	6.8	0.3	5500	500
11	TK11	Mallappally Valiyathodu	6.11	0.46	10200	1000

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 June-2023	Progress in the month of July-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	Not submitted report	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		Inauguration of functioning.

				<p>Kadapra Panchayath has resolved to identify all polluting sources involved in pollution of river resources and initiation of penal action against them</p>	<p>Kadapra Panchayath has resolved to identify all polluting sources involved in pollution of river resources and initiation of penal action against them</p>		
				<p>Niranam Gramapanchayat is an upper Kuttanad area , so no such dry land suitable for solid waste treatment plant is available</p>	<p>Niranam Gramapanchayat is an upper Kuttanad area , so no such dry land suitable for solid waste treatment plant is available</p>		

C	Resource Recovery Facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021	Not submitted report	<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 Clen Kerala company. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.</p>	100%	Collection and transportation of Non-bio degradable Materials to RRF for processing
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				<p>Resource recovery facility is working as a centralised arrangement at BlockPanchayath level in Kadapra Grama Panchayath</p> <p>It will be suitable if RRF is established at Block level in Niranam Grama Panchayath</p>	<p>Resource recovery facility is working as a centralised arrangement at BlockPanchayath level in Kadapra Grama Panchayath</p> <p>It will be suitable if RRF is established at Block level in Niranam Grama Panchayath</p>		
C	Installing household and community level solid waste management units	Mannar Panchayat	31.03.2021	Not submitted report	<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</p>	100%	Construction and operation of Aerobic compost unit.

					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.	
C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.03.2021	Not submitted report	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.	Continuing

C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Parumala Town	Kadapra Panchayat	31.12.2020	The Panchayat is considered is sewage treatment plants is currently not need with in panchayat area around Parumala	The Panchayat is considered is sewage treatment plants is currently not need with in panchayat area around Parumala		
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Mannar Town	Mannar Panchayat	31.12.2020	Not submitted report	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 arrangementsand Surveillance cameras	Irrigation department	31.03.2021				
C	Regualting activites in flood plain zone, protection and management of flood plain zone	Irrigation department	31.03.2021			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	Not submitted report	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 .

				<p>Green protocol has been implemented in Public offices of Kadapra Gramapanchayat</p> <p>Necessary instruction are given to all offices and institution to strictly comply with the green protocol and is regularly monitored in Niranam Grama Panchayath</p>	<p>Green protocol has been implemented in Public offices of Kadapra Gramapanchayat</p> <p>Necessary instruction are given to all offices and institution to strictly comply with the green protocol and is regularly monitored in Niranam Grama Panchayath.</p>		
D(a)	Issues relating to E-flow,maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department	30.11.2020	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government		
D (b)	Irrigation practices	Irrigation department	30.04.2020				

E	Awareness programmes for sections of public	Kerala State Pollution Control Board	31.05.2020				
C	Management of municipal, plastic, hazardous, biomedical and electrical waste	LSGD	31.03.2021	Not submitted report	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 agreement with Clean Kerala Company. Collection and handing over of electrical, electronic and hazardous		

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 June ,2023	Progress in the month of July,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	1 NOC has been issued to industries for Ground Water extraction during June 2023	NOC has not been issued to industries for Ground Water extraction during July 2023	Demand based	1.As per the GEC estimation all the blocks in the District has been categorized as SAFE. 2.Provisions of GW (control & Regulation) Act 2002 is implementing strictly for regulating extraction of GW resource in the district
2	B(ii)	Ground water recharging / rain water harvesting	Artificial Recharge Structure 6 sites completed	Artificial Recharge Structure site inspection.	Demand based	All the blocks in the district is categorized as SAFE as per GEC estimation. Kadapra-Niranam Area is not feasible for Ground Water Recharge. However, GW recharging programme is taken up in some pockets in the midland area including Manimala basin. Where seasonal GW level fluctuation is noticed.

3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Groundwater sample collection during the month of April 2023 from monitoring wells (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis soon	Groundwater sample collection during the month of April 2023 from monitoring wells (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis soon.	Periodical assessment(Regular programme) Chemical analysis result ofgroundwater samples collected during November-2020 reveals that the gw quality is good and potable.	(i)Maintaining a network of observation wells in varioushydrogeomorphic units throughout the district from which water level and water samples have been collected periodically and analysed. (ii)generally groundwater quality is good and potable
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.	Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.	Continuing programme	i)Borewell/tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report of GWD ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose. iii)Awareness programmes organised to the public to adopt rainwater harvesting measures

WATER QUALITY DATA OF POLLUTED RIVER STRETCHES JULY-2023**DISTRICT OFFICE, PATHANAMTHITTA****Date of Sampling: 04.07.2023**

Sl. No	PARAMETERS	THAKZHY	EDATHUA	MANNAR
1	Temperature, °C	25	26	25
2	pH	6.8	6.3	6.9
3	Conductivity, µmhos/cm	58	58	47
4	Turbidity, NTU	1.3	2.2	1.5
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	6.4	3.2	3.2
9	TKN, mg/l	0.25	0.15	0.2
10	Ammoniacal-N, mg/l	0.136	0.202	BDL
11	Hardness, as CaCO ₃ mg/l	24	22	20
12	Calcium, as CaCO ₃ mg/l	14	12	12
13	Magnesium as CaCO ₃ , mg/l	10	10	8
14	Sulphate, mg/l	3.1	2.1	1.9
15	Sodium, mg/l	5.5	6.1	4.5
16	Total Dissolved Solids, mg/l	40	38	32
17	Total Fixed Solids, mg/l	35	34	27
18	Total Suspended Solids, mg/l	30	30	22
19	Phosphate, mg/l	BDL	BDL	BDL
20	Boron, mg/l	BDL	BDL	BDL
21	Potassium, mg/l	0.436	0.678	0.381
22	BOD, mg/l	1.4	1.2	0.6
23	Fluoride, mg/l	0.2	0.18	0.18
24	Dissolved Oxygen, mg/l	6.3	6.8	6.7
25	Nitrate-N, mg/l	0.154	0.153	0.194
26	Total Coliform, CFU/100 ml	180	330	210
27	Faecal Coliform, CFU/100 ml	60	100	70
28	SAR	0.488123	0.56544	0.43749
29	% of sodium	13.49708	15.56254	13.37823
30	Faecal Strepto Coccus, CFU/100 ml	Nil	Nil	Nil

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

STATION: MANNAR

SamplingDate: 04.07.2023

Sl.No	PARAMETERS	ITTINAYARKKADAVU BRIDGE KUTTAMPEROOR	KOTTAKAL KADAVU BRIDGE KORATTIKADAVU	PARUMALA BRIDGE	MANNAR BRIDGE
1	Temp. (°C)	25	26	26	25
2	pH	7	7.3	7.1	7
3	Conductivity (µS/cm)	49.89	42.53	54.37	39.40
4	DO (mg/L)	5.7	5.6	5.9	6.6
5	BOD (mg/L)	1.2	1.3	1.0	0.9
6	COD (mg/L)	6.4	6.4	3.2	3.2
7	TDS (mg/L)	38	30	40	28
8	TC (CFU/100ml)	600	350	510	100
9	FC (CFU/100ml)	200	120	170	30
10	FSC(CFU/100ml)	Nil	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 water 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 DTTC 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 KADAMBRAYAR, 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 Kadambrayar 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

			<p align="center"><u>Main Stream (Manakkadavu to Kadambayar-Chithrappuzha Confluence point)</u> <u>(Provided temporary bund (Kozhichira Bund) in Kadambayar-Chithrappuzha joining section to check salinity intrusion)</u></p>						
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.		

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	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 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>						

National Mission for Clean Ganga

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

RIVER PERIYAR, ERNAKULAM

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

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

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the months of JUNE2023	Progress in the months of JULY 2023	% works completed	Details of works remaining
1.A(b)	Augmentation and Revamping of existing STP at near AdwaitaAshramam and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	Dec 2019	Upgradation of existing STP at Advaita Ashram is in progress. It is decided to complete the civil, mechanical and electrical works together. Agreement status of civil works has been completed. The tender for the electrical work has not been completed. CFC fund for mechanical work will be arranged soon..	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		
2.A(b)	Augmentation and Revamping of existing ETP at Aluva Market and to increase the capacity of ETP so as to treat more sewage generated in the municipality	Aluva Municipality	2021	As the existing ETP field has become unusable during flood, renovation works are being carried out project	As the existing ETP field has become unusable during flood, renovation works are being carried out project		

3.A(b)	Discharge of sewage from Hotels to the River through drain near Periyar	Aluva Municipality	2020	Health Squad inspection in progress.	Health Squad inspection in progress.	10 0%	
4.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain and to collect fine based on polluter pay principle	Aluva Municipality, KSPCB	2020	Inspection in progress. Identified 140 households and 124 establishments discharging waste water to public drain. Outlets of 14 establishments have been closed.	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.		
5.A(a)(iv)	Periodical inspection in the Industries, Flats, hotels monitoring of STP,ETP	KSPCB	Periodical	Aluva Municipality has no industries	Aluva Municipality has no industries		
6.C(ii)	Installation of modern abattoirs	Aluva Municipality	March 2021	For installation of machines DPR is submitted include in this year's project.	DPR proposal prepared for installation of machines by IRTC (Accredited Agency) has been submitted for approval.		
7.A(b)	Procurement of sewer cleaning machines and equipment maintenance	Aluva Municipality	March 2020	Purchased sewer cleaning machines. Cleaning work in progress.	80% of drainage clearing operations have been completed. Further works is in progress Rs 5 lakh has been obtained for the same.		

8.E	Installation of cameras at the waste dumping spots	Aluva Municipality	2020	Cameras are being installed by Health wing as purchase. No need of Technical sanction. 25 Lakhs rupees have been approved by DPC. 52 points have been identified for installing camera. E-Tender has been invited.	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.		
9.A(b)	Construction of retaining wall with HDPE liner at Kalamassery dumping yard in order to prevent the leachate discharge from the yard to ThoombungalThodu	Kalamassery Municipality	Sept 2019	Completed	Completed	10 0%	
10.C(ii)	Installation of plastic shredding unit	Kalamassery Municipality	June 2019	One plant is already installed and functioning.	One plant is already installed and functioning.	10 0%	
11.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.Rs 6000 were imposed	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.		

				as fine in this month. Rs 74560/- were imposed from culprits who had thrown plastic wastes near roads..			
12.A(b)	Installation of common STP for Kalamassery Municipality and ETP at Municipal Market	Kalamassery Municipality	December 2019	75 cents land identified at North Kalamassery for sewage and septagetreatment plant. Procedures for soil testing in progress. DPR is prepared by KWA. DPR procedures in progress	ETP is working in the market. Findingthe place to set up common STP . The prepared DPR has been submitted to the Water Authority for approval.		
13.A(a)(iv)	Monitoring and surveillance of industries in Kalamassery Industrial Estate in order to prevent unauthorized discharges to Muttar River	Kalamassery Municipality	2019	Inspection conducted in 8 establishments and one unit was found having unauthorized discharge. Notice has been issued for the same.	7 outlets were found last month's inspection and they were closed.		
14.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	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		

				made to convey information regarding this from the municipal council to the government	the government		
15.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotelse tc who is discharging the sewage to the public drain	Kalamassery Municipality	2020	During the inspection conducted in August month, 54 households were found having unauthorized discharge and notice was issued. 13 units have cleared the violation.	Outlet for discharge is visible from many houses.		
16.E	Installation of cameras at the waste dumping spots	Kalamassery Municipality	2020	Cameras are currently installed. But the images obtained from them are not clear. Keltron is a company in contract for the purpose. They have been asked several times to fix the existing problem.	10 permanent cameras have been installed. Visuals from 2 Movable Cameras installed at the waste dumping premises are checked, from the people dumping waste fines are being collected.		

17.A(b)	Identification of sources of sewage discharged to drain near Pathalam bridge and action to stop the discharge which reach river Periyar from hotels, labour camps etc. In case the quantity of sewage generated is assessed to be more STP need to be installed	Eloor Municipality, KSPCB (for monitoring)	2020	Inspection in progress. Notices have been given to shops. Reply from their end has received. Unauthorized outlets are closed. Septic tank – soak pit facility is recommended for all the newly sanctioned commercial buildings.	Arrangements have been made to drain the waste water discharged from the shopping complexes, shops etc. into the sockpit. Municipality constructed soakpits for that purpose.		
18.E	Installation of cameras at the waste dumping spots.	Eloor Municipality	2020	Cameras are currently installed. But the images obtained from them are not clear. Keltron is a company in contract for the purpose. They have been asked several times to fix the existing problem.	The installation of 80 cameras has been increased to 200 cameras and a fund of rs.40 lakh has been found for the same.		
19.A(a)(iv)	Periodical inspection in the Industries, Flats, hotels for monitoring of STP,ETP located in Cochin corporation	Kochi Municipal Corporation	Periodical		.An amount of Rs. 97,85,750/- were imposed as fine from culprits.16 houses and 18 establishments were		

					identified		
20.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 from Lulu mall to Thuthiyur bridge is under completion stage.		
21.E	Issuing notice to the defaulters	Kochi Municipal Corporation	4 months	Inspection is going on. Further actions are taken.	Representative from concerned local body has not attended the meeting		
22.A(a)(iv)	Periodical inspection in the flats, hotels, shops located along the river	Kochi Municipal Corporation	Periodical	Inspection in progress			Being carried out periodically
23.A(b)	Identification of natural drains/thodu reaching river Periyar and cleaning of weeds, grasses etc.	Irrigation department	2 years	4 polluted streams have been identified. The Estimate has been submitted for restoration works. Financial sanction was not yet received. Onjithodu soil test conducted. Streams have been included in Operation Vahini.	Under the auspices of the Minor Irrigation Office, the cleaning work of 20 canals and 13 sub-canals in Eloor Municipality on the banks of Periyar in Kalamassery constituency is progressing. Also, the tender process for the cleaning of 40 canals in Karumallur, Kunnukara and Alangad village panchayats located on the banks of Periyar in Paravur constituency has been initiated by the Minor Irrigation Department. A proposal for		Detailed estimate submitted to higher authority for FS. FS not obtained .

					<p>the cleaning of Onjithod, which joins Periyar, has been submitted to the government by the Minor Irrigation Office through the Ernakulam District Collector. Permission not received. Irrigation Division, Ernakulam has submitted estimates for rehabilitation of the following streams.</p> <ol style="list-style-type: none"> 1. Kuthuthodu (IRR/IA/EST/8495/2022_5_8_7) Rs. 74.40 lakh 2. Idathodu (IRR/IA/EST/8495/2022_5_11_10) Rs. 9/- lakh <p>These works have not been approved. Cleaning of large chall canal and Erajichal Puncha canal in Eloor municipality is progressing under Minor Irrigation Office.</p>		
24.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	Operation Vahini involves cleaning and desilting of drains. As part of the Operation Vahini 2022		

				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.	project, works on some tributaries of Periyar have been completed. The cleaning works of about 17.5 km Edamul Muttar Varapuzha reaches, part of Periyar, which is part of the Vahini 2023 project, is nearing completion. Cleaning works are required in the Idayar Methanam parts. Proposals have been issued for these activities. If permission is granted, they will also be taken up.		
25.D(a)	Maintaining of Minimum flow in river during lean period and periodical operation of Regulators at River in-order to maintain minimum flow.	Irrigation department	3 years	Shutters are being operated periodically at the Pathalam lock cum regulator to maintain the flow of river	Shutters are being operated periodically at the Pathalam lock cum regulator to maintain the flow of river		
26.A(b)	Common Effluent Treatment Plant at Edayar Industrial Estate	Industries department	2022	For the establishment of CETP a government order has come sanctioning Rs. 37.5 Crore to DIC. KWA is	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		

				<p>entrusted to implement the project. DPR for the same has been submitted. The project is under Government consideration. In the approved amount operational maintenance cost and GST was not included. In the Chief Secretary's meeting held on 23.08.2022, for the revision of CETP project proposal 3 months time has been allotted.</p>	<p>submitted. Project proposal is under revision, the said project is under consideration 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.</p>		
27.A(b)	Construction of internal roads and proper drainage in Edayar industrial estate	Industries department	Work progressing	<p>The construction of roads & drains in Industrial Development Area in Edayar was not yet started. A meeting was arranged with</p>	<p>Work has started on 10 roads and ditches in Edayar Industrial Area. PWD has been given additional Rs. 6.2 Crore. Construction of new manholes has been proposed.</p>		

				P.W.D on 23.01.2023. They have intimated that the work will be started soon.			
28.A(b)	Installation of common discharge pipe line at downstream of Pathalam Regulator Bridge	Industries department, Irrigation department	3 years	It was decided to include the project of installing the common discharge pipeline in the DPR of CETP. Under this circumstance, the work comes under the responsibility of KWA.	It was decided to include the project of installing the common discharge pipeline in the DPR of CETP. Under this circumstance, the work comes under the responsibility of KWA.		
29.E	Installation of Night vision surveillance cameras at the River Bank side	KSPCB	2020	The CCTV cameras and accessories have been installed. 7 new cameras have been installed. Maintenance of two cameras in progress.	The CCTV cameras and accessories have been installed. 7 cameras have been installed. New two cameras is yet to be installed. It will be fixed soon.		
30.A(a)(iv)	Periodical Monitoring of Eloor, Edayar, Kalamassery Industrial belts	KSPCB	2020	Routine inspection is going on. Night Surveillance also carried out continuously.	Routine inspection is going on. Night Surveillance also carried out continuously.		
31.A(a)(iv)	Monitoring of quality of water at various intake point	Kerala Water Authority	2020	Status not reported	Status not reported		

32.A(a)(iv)	Installation of additional continuous online River water monitoring station	KSPCB	2022	The maintenance works of Online monitoring station in the downstream side of Pathalam Bund have been completed and is working. Online monitoring station in the upstream side has been installed. Display board work is in progress. Quality of water at upstream is satisfactory.	A new real-time water monitoring station has been installed at the top of the bund. Online data of two water monitoring station is available in the office. The quality of water in upstream is satisfactory and they are available on the display board.		
33.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Kadungallur Panchayath	2020	A total fine of Rs.2500/- will be collected against those who were spotted	Establishments are being found where the sewage is dumped.		
34.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.	Mesh is installed to prevent littering. Since the installation of the camera, there has been a reduction in littering.		
35.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc. who is discharging the sewage to the public drain	Choorikkara 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 river.		

				plates litterers cannot be identified, the litterers cannot be detected by CCTV. Arrangements will be made for installing soak pits in the houses			
36.E	Installation of cameras at the waste dumping spots	Choornikkara Panchayath	2020	Project has been postponed ,since more time is required to install more cameras.	50,00,000/- has been received for installation of surveillance cameras at dumping spots. 1,95,000/- has been collected as fine till date on plastic items.		

LONG TERM MEASURES

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of June 2023	Progress in the month of July 2023	% works completed	Details of works remaining
1.A(b)	Construction of walkway, ring roads etc at the Periyar River bank at industrial belt.	Irrigation department	4 years	Investigation and detailed Estimate Submitted and waiting for FS	A further letter (15.07.2023) has been issued to the Tahsildar of Paravur Taluk for surveying the banks of the said river. Follow up is being done for implementation of work as soon as possible. An		FS not obtained for the work

					investigation estimate of Rs 16.20 lakh has been prepared and submitted for the construction of the dyke wall and surveillance road along the industrial belt. Financial Sanction has not been received. Sheet piling seems to be more suitable instead of making dyke wall. Sheet piling is more suitable as concrete piling is difficult in the deep part of the river. The design of the dyke wall is based only on the investigation report and space availability.		
2.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	-		
3.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.	Developments will be reported in the next meeting.		

ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of October 2022	Progress in the month of November2022	Progress in the month of December2022	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

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

Sl. No	Parameter	Unit	05.07.2023	25.07.2023
1	Temp	°C	28.1	29.1
2	pH		7.2	7.0
3	Conductivity	µS/cm	109.1	46.4
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	23.8	49.6
6	Hardness	"	17.0	20.0
7	D.O.	"	6.5	7.7
8	Calcium	"	5.6	4.0
9	Magnesium	"	0.729	2.430
10	Ammoniacal Nitrogen	"	0.419	**
11	Phosphate	"	BDL	**
12	Total alkalinity	"	40.0	22.0
13	BOD	"	1.9	2.8
14	Sulphate	"	9.108	**
15	Nitrates	"	0.856	**
16	TC	cfu/100ml	300.0	200.0
17	FC	"	NIL	NIL
18	FS	"	NIL	NIL

* TURBIDITY METER IS OUT OF ORDER

** SPECTROPHOTOMETER IS OUT OF ORDER

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

Sl. No	Parameter	Unit	05.07.2023	25.07.2023
1	Temp	°c	B	B
2	pH		U	U
3	Conductivity	µS/cm	N	N
4	Turbidity	NTU	D	D
5	Chlorides	mg/L		
6	Hardness	"	O	O
7	D.O.	"	P	P
8	Calcium	"	E	E
9	Magnesium	"	N	N
10	Ammoniacal Nitrogen	"		
11	Phosphate	"		
12	Total alkalinity	"		
13	BOD	"		
14	Sulphate	"		
15	Nitrates	"		
16	TC	cfu/100ml		
17	FC	"		
18	FS	"		

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

Sl. No	Parameter	Unit	05.07.2023	25.07.2023
1	Temp	°C	28.3	29.2
2	pH		6.9	7.0
3	Conductivity	µS/cm	134.50	68.67
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	28.8	18.9
6	Hardness	"	33.0	23.0
7	D.O.	"	4.8	6.2
8	Calcium	"	12.0	6.8
9	Magnesium	"	0.729	1.458
10	Ammoniacal Nitrogen	"	1.200	**
11	Phosphate	"	BDL	**
12	Total alkalinity	"	46.0	36.0
13	BOD	"	1.8	1.9
14	Sulphate	"	16.240	**
15	Nitrates	"	3.147	**
16	TC	cfu/100ml	400.0	1100.0
17	FC	"	NIL	100.0
18	FS	"	NIL	NIL

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**KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, FLOOR
ANALYSIS REPORT OF RIVER PERIYAR - JULY 2023
Sampling point: ALUVA - MANAPPURAM**

Sl. No	Parameter	Unit	05.07.2023	25.07.2023
1	Temp	°C	28.2	29.2
2	pH		7.0	7.1
3	Conductivity	µS/cm	44.86	51.28
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	15.9	16.9
6	Hardness	"	12.0	17.0
7	D.O.	"	6.1	7.2
8	Calcium	"	4.4	5.6
9	Magnesium	"	0.243	0.729
10	Ammoniacal Nitrogen	"	0.458	**
11	Phosphate	"	BDL	**
12	Total alkalinity	"	40.0	30.0
13	BOD	"	0.5	2.0
14	Sulphate	"	4.013	**
15	Nitrates	"	0.931	**
16	TC	cfu/100ml	700.0	600.0
17	FC	"	100.0	300.0
18	FS	"	NIL	NIL

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

Sl. No	Parameter	Unit	05.07.2023	25.07.2023
1	Temp	°C	28.1	29.1
2	pH		6.8	7.0
3	Conductivity	µS/cm	41.52	42.65
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	17.9	13.9
6	Hardness	"	15.0	16.0
7	D.O.	"	6.3	7.8
8	Calcium	"	3.2	4.4
9	Magnesium	"	1.701	1.215
10	Ammoniacal Nitrogen	"	0.379	**
11	Phosphate	"	BDL	**
12	Total alkalinity	"	46.0	30.0
13	BOD	"	1.8	2.7
14	Sulphate	"	6.433	**
15	Nitrates	"	1.011	**
16	TC	cfu/100ml	400.0	600.0
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 - JULY 2023
Sampling point: PUTHALAM KADAVU**

Sl. No	Parameter	Unit	05.07.2023	25.07.2023
1	Temp	°C	28.2	29.1
2	pH		6.6	7.0
3	Conductivity	µS/cm	72.00	62.14
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	18.9	17.9
6	Hardness	"	25.0	17.0
7	D.O.	"	5.0	6.4
8	Calcium	"	6.8	6.4
9	Magnesium	"	1.944	0.243
10	Ammoniacal Nitrogen	"	1.183	**
11	Phosphate	"	BDL	**
12	Total alkalinity	"	48.0	40.0
13	BOD	"	1.4	1.7
14	Sulphate	"	8.471	**
15	Nitrates	"	1.201	**
16	TC	cfu/100ml	400.0	800.0
17	FC	"	NIL	100.0
18	FS	"	NIL	NIL

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

Sl. No	Parameter	Unit	05.07.2023	25.07.2023
1	Temp	°C	28.1	29.1
2	pH		6.6	6.9
3	Conductivity	µS/cm	86.49	62.77
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	22.8	49.6
6	Hardness	"	26.0	20.0
7	D.O.	"	6.2	7.3
8	Calcium	"	8.8	4.0
9	Magnesium	"	0.972	2.430
10	Ammoniacal Nitrogen	"	0.268	**
11	Phosphate	"	BDL	**
12	Total alkalinity	"	34.0	30.0
13	BOD	"	2.2	1.9
14	Sulphate	"	9.618	**
15	Nitrates	"	1.180	**
16	TC	cfu/100ml	NIL	200.0
17	FC	"	100.0	NIL
18	FS	"	NIL	NIL

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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 May 2023	Progress in the month Of June 2023	Progress in the month of July 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 panch	100	0

						ayath		
E	Cleaning and desilting	Irrigation Department and Vallachira Panchayat	4months	nil	nil	nil	100	0
Neerolithodu								
E	Cleaning and desilting	Irrigation Department	4months	<p>തൃശ്ശൂർ 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>. തൃശ്ശൂർ കെ എൽ ഡി സി വിഭാഗത്തിന് റീബിൽഡ് കേരള എന്ന പദ്ധതിയിൽ ഉൾപ്പെടുത്തി പൈകിലികായൽതോടിന്റെ ഡിസിൽറ്റേഷൻ പ്രവൃത്തിക്ക് ഭരണാനുമതി ലഭ്യമായിട്ടുള്ളതും ആയതിനാൽ 2022-23 സാമ്പത്തിക വർഷത്തെ എൻ ജി ടി ആക്ഷൻ പ്ലാനിൽ പൈകിലികായൽതോടിന്റെ 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	100	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 May monthly basis	Monitoring is going on June monthly basis	Monitoring is going on monthly basis		
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Going on monthly basis.	Going on monthly basis.	Going on monthly basis		
Long Term Plan								
A(b)	Sewage treatment facilities to all house holds	Vallachira Grama Panachayat	1 yr	Nil	Nil	nil	100	0

A(b)	Construction of FSTP and STP	Irinjalakkuda Municipality	2 years	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 പ്രയോജിറ്റി 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 May 2023	Progress in the month of June 2023	Progress in the month of July 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.		
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.		
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices		Awareness class on groundwater resource conservation and management	-	-	-

				conducted for the elected representatives officials, public and students in Vellangallur Block			
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ACTION PLAN BY GRAMAPANCHAYATH

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2023	Progress in the month of June 2023	Progress in the month of July 2023	% works completed	Details of works remaining
C	MANALIPUZHA RIVER PROTECTION -Jalaraksha Jeevaraksha - Manalipuzha conservation	Vallachira Grama Panchayath	1 year	Nil	Nil	Nil	1000m	500m
C	Setting up of Nursery for Bamboo seedlings in Kadalassery	MGNREGS	31.03.2020	TS SAN CTIONED, BUT NOT PUBLIC PLACE	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	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

				ey posts have been fixed .				
C	Manalipuzha River protection	MGNREGS	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		As survey did not complete
A(b)	Protection and reconstruction and protection of Paliyekkara Kayalathod	MGNREGS	31.03.2020	COMPLETED	COMPLETED	Complete	100 %	COMPLETED

				ED		d		
A(b)	Reconstruction and protection of Paliyekkara Karama Thodu	MGNREGS	31.03.2020	COMPLETED	COMPLETED	Completed	100%	COMPLETED

KARUVANUR

Date of sampling -
04.07.2023

SL. NO	PARAMETER	UNIT	KT	MRK	KND	MDK	THR	KRV
1	PH		8.4	7.56	7.32	7.89	6.98	8.41
2	EC	μ/cm	71.7	62.12	81.62	87.14	71.01	75.23
3	BOD	mg/L	2.13	2.56	2.41	1.89	2.45	2.65
4	DO	mg/L	4.56	6.23	5.2	4.89	5.26	4.68
5	COD	mg/L	8	4	4	8	4	8
6	TC	CFU/100 ml	400	250	300	200	200	500
7	FC	CFU/100 ml	400	100	150	50	100	350

8	FSC	CFU/100 ml	NIL	NIL	NIL	NIL	NIL	NIL
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KT - KANAKKAN KADAVU, KARUVANNUR

MRK - NEEROLI THODU

KND - KANATHODU, KARUVANNUR

MDK - MUTTIKKAL DAM, KARUVANNUR

THR- THIRUKUZHY, 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 May 2023	Progress in the month of June 2023	Progress in the month of July 2023	% works complete d	Details of works remaining
WADAKKENCHERY RIVER -SHORT TERM MEASURES								
A(b)	Identification of illegal outlets from houses and shops/other establishments in town and imposing fine	Wadakkanchery Municipality, Ayyakali Urban Employment Guarantee Scheme & health squad	Completed	Polluting Sources & Illegal outlets were identified, notice issued as per Kerala Municipal Act and removed. Doing regular	Polluting Sources & Illegal outlets were identified, notice issued as per Kerala Municipal Act and removed. Doing regular	Completed		

				r inspec tion	inspecti on.			
E	Installation of CCTV s on the bank of river in town	Wadakkanchery Municipality	31.03.2022		It has been informe d that steps have been taken to obtain approv al from the councili l 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 April	Analysis report for the month of may	Analysis report for the month of June enclosed herewith		Continuing
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Ongoing	Ongoing	Ongoing		Continuing
Long Term Plan								
E	Identification and cleaning of polluted drains reaching wadakkancheri river	Irrigation Dept	30-03-2022	Estimate submitted for fund	Estimate submitted for FS.	ടി പ്രവൃത്തിയുടെ എസ്റ്റിമേറ്റ് സാമ്പത്തികാനുമതി		A.S obtained

						<p>മതി ക്കാ യി ജലം സമ നവും ദരണ വും ചിപ്പ് 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 ാ ര ു ള മു ൻ ഗ ണ ന ാ ലി സ് ത െ രി ക െ ൽ ക ു ടി 17 - 0 2 - 20 23 ന് ഇ റി ഗ ഷ ൻ ഓ ഡ് മി നി സ് ട്ര 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 mapping 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 April 2023	Progress in the month of May 2023	Progress in the month of June 2023	% works completed	Details of works remaining
1	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation Department	30-03-2022	കേച്ചേരി പുഴയുടെ പാരിസ്ഥിതിക നീരൊഴുക്ക് പഠനം (E-flow) പൂർത്തിയാക്കി റിപ്പോർട്ട് 18/05/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും, തിരുവനന്തപുരത്ത് സമർപ്പിച്ചിട്ടുണ്ട്.	കേച്ചേരി പുഴയുടെ പാരിസ്ഥിതിക നീരൊഴുക്ക് പഠനം (E-flow) പൂർത്തിയാക്കി റിപ്പോർട്ട് 18/05/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും, തിരുവനന്തപുരത്ത് സമർപ്പിച്ചിട്ടുണ്ട്.	കേച്ചേരി പുഴയുടെ പാരിസ്ഥിതിക നീരൊഴുക്ക് പഠനം (E-flow) പൂർത്തിയാക്കി റിപ്പോർട്ട് 18/05/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും, തിരുവനന്തപുരത്ത് 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 May 2023	Progress in the month of June 2023	Progress in the month of July 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 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	Water level data collected from GWD observation 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 May 2023	Progress in the month of June 2023	Progress in the month of July 2023	% works completed	Details of works remaining
C	Punarjani Kecherri river	Choondal Grama Panchayat	Completed	-	-	-		Flood Wastes from the river has been removed and made water flow easily which reduced chances of flood .
C(ii)	Surveying of river side, eviction and planting trees	Choondal Grama Panchayat		-	-	-		Survey completed
C	Side Protection	Choondal Grama Panchayat	Completed	-	-	-		
C	Bio fencing related to river bank protection –	MGNRES	Not started					

	water and soil Conservation project ward 3,4,7							
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Date of sampling -01.07.2023				
SL. NO	PARAMETER	UNIT	VAD1	VAD2
1	pH	-	8.26	8.46
2	Electrical Conductivity	µs/cm	135.2	117.7
3	BOD	mg/L	2.34	2.41
4	DO	mg/L	4.52	5.32
5	COD	mg/L	8	8
6	TC	CFU/100ml	300	250
7	F C	CFU/100ml	150	50
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 May 2023	Progress in the month of June 2023	Progress in the month of July 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 സാമ്പത്തിക	. Tendering stage for financial year 2023-24	0	

				എറണാകുളത്തി നഗര, സുപ്രണ്ടിൻ എഞ്ചിനീയർ, ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ, തൃശ്ശൂരിനഗര സമർപ്പിച്ചിട്ടുണ്ട്. പ്രവൃത്തി നടപ്പിലാക്കുന്നതിന് ഫണ്ട് ലഭ്യമായിട്ടില്ല.	നൂതനമായി 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. 25 meter 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 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</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 May 2023	Progress in the month of June 2023	Progress in the month of July 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.		
2	B(ii)	Ground water recharging / rain water harvesting	Proposal for two artificial recharge schemes(dug well recharge) submitted	Three artificial recharge sites selected and one	Three artificial recharge		

			for technical sanction. Two artificial recharge schemes tendered.	proposal sent for technical sanction .Two artificial recharge schemes completed.	sites selected and one proposal sent for technical sanction.		
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.		
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 March2023	Progress in the month of April 2023	Progress in the month of May 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 in18 wards 100000/ each	MGNREGS	31.03.2020				79%	21
C	ward 14 pachthurthu comstruction	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
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PUZHAKKAL						
Date of sampling – 08.06.2023						
SL. NO	PARAMETER	UNIT	SBA	KTH	PTU	MP
1	PH		7.45	7.5	7.96	8.14
2	EC	µs/cm	19.5	476.8	283.4	196.2
3	BOD	mg/L	1.96	0.58	2.2	1.97
4	DO	mg/L	3.68	5.86	5.44	3.57
5	COD	mg/L	4	4	8	8
6	TC	CFU/100ml	100	500	200	100
7	F C	CFU/100ml	50	350	50	NIL
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 – JULY 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 June 2023	Progress in the month of July 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 June 2023	Water quality monitoring in Bharathapuzha at Pattambi and two additional points were completed until July 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 JULY 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)	7/5/2023 0 2 : 0 0					
3	Weather	Cloudy		Clear ✓		Windy	Raining
4	Approximate depth of main stream	< 50 cm		50 – 100 cm ✓		>100 cm	Flood
5	Color & Intensity	Clear ✓ 1 = Light		Turbid 2 = Moderate ✓		Green 3 = High	Brown
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	
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	28
2	Dissolved Oxygen, mg/l	7.33
3	pH	7.61
4	Conductivity, µmhos/cm	163
5	BOD, mg/l	2.33
6	Nitrate-N, mg/l	0.637
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	50
10	Chloride, mg/l	23.7
11	COD, mg/l	6.98
12	TKN, mg/l	0.006
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	55
15	Calcium as CaCO ₃ , mg/l	31
16	Magnesium as CaCO ₃ , mg/l	24
17	Sulphate, mg/l	0.1
18	Calcium (Ca ²⁺), mg/l	12.4
19	Magnesium (Mg ²⁺), mg/l	5.83
20	Sodium, mg/l	11.9
21	Total Dissolved Solids, mg/l	100
22	Total Fixed Solids, mg/l	65
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.0128
25	Boron, mg/l	BDL
26	Potassium, mg/l	2.9
27	Fluoride, mg/l	0.301
28	Total Coliform, MPN/100 ml	100
29	Fecal Coliform, MPN/100 ml	ABSENT
30	Fecal Streptococcus, MPN/100 ml	ABSENT
31	% SODIUM	30.58
32	SAR	0.7

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

Veliamkallu 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)	7/5/2023											
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 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
2	Dissolved Oxygen, mg/l	7.66
3	pH	7.95
4	Conductivity, µmhos/cm	261
5	BOD, mg/l	2.56
6	Nitrate-N, mg/l	0.52
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	84
10	Chloride, mg/l	33.98
11	COD, mg/l	7.66
12	TKN, mg/l	0.008
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	90
15	Calcium as CaCO ₃ , mg/l	70
16	Magnesium as CaCO ₃ , mg/l	20
17	Sulphate, mg/l	0.001
18	Calcium (Ca ²⁺), mg/l	28
19	Magnesium (Mg ²⁺), mg/l	4.86
20	Sodium, mg/l	20
21	Total Dissolved Solids, mg/l	154
22	Total Fixed Solids, mg/l	95.48
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.032
25	Boron, mg/l	BDL
26	Potassium, mg/l	4
27	Fluoride, mg/l	0.306
28	Total Coliform, MPN/100 ml	200
29	Fecal Coliform, MPN/100 ml	100
30	Fecal Streptococcus, MPN/100 ml	ABSENT
31	% SODIUM	31.37
32	SAR	0.92

**NATIONAL WATER QUALITY MONITORING PROGRAMME
(NWMP -2 DATA- JULY 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)	7/5/2023									
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	36 m ³ /s									
12	Major polluting source	Industrial effluent			MSW ✓	PW	None	Other			
13	Uses of water in downstream	Irrigation			Drinking water source ✓			Fishing	Domestic		
		Organized water source			Cultivation	Bathing Ghat	Others				

Sl.No	Determinant	Value
1	Temperature, °C	28
2	Dissolved Oxygen, mg/l	7.66
3	pH	7.78
4	Conductivity, µmhos/cm	223.4
5	BOD, mg/l	2.86
6	Nitrate-N, mg/l	0.642
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	60
10	Chloride, mg/l	29.98
11	COD, mg/l	8.6
12	TKN, mg/l	0.008
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	72
15	Calcium, as CaCO ₃ mg/l	43
16	Magnesium as CaCO ₃ , mg/l	29
17	Sulphate, mg/l	9.18
18	Calcium (Ca ²⁺), mg/l	17.2
19	Magnesium (mg ²⁺), mg/l	7.04
20	Sodium, mg/l	17.4
21	Total Dissolved Solids, mg/l	134
22	Total Fixed Solids, mg/l	80.4
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.038
25	Boron, mg/l	BDL
26	Potassium, mg/l	3
27	Fluoride, mg/l	0.301
28	Total Coliform, MPN/100 ml	500
29	Fecal Coliform, MPN/100 ml	300
30	Fecal streptococci , MPN/100 ml	20
31	% Sodium	33.27
32	SAR	0.89

**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- JULY 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 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 June 2023	Progress in the month July 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 re proposed in the DPR	Checkdam at Boothivazhy, Anakkal&Chemmanurare 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	Implementati on not started	Full implementati on 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 June2023	Water quality monitoring in Bhavani at Elachivazhi and three additional points were completed untilJuly 2023	Implemented. Will continue up to the full implementati on of the action plan.	Implemented.

**POLLUTED RIVER STRETCH MONITORING PROGRAMME
(DATA SHEET JULY 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)	7/12/2023									
		1	1	:	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			D/s of town or			Pilgrim center/Bathing		None ✓	
11	Flow rate	12.3 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	23.5
2	Dissolved Oxygen, mg/l	7.56
3	pH	7.26
4	Conductivity, µmhos/cm	267.1
5	BOD, mg/l	0.66
6	Nitrate-N, mg/l	0.124
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	65
10	Chloride, mg/l	38.2
11	COD, mg/l	2
12	TKN, mg/l	BDL
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	78
15	Calcium as CaCO ₃ , mg/l	54
16	Magnesium as CaCO ₃ , mg/l	24
17	Sulphate, mg/l	13.1
18	Calcium (Ca ²⁺), mg/l	21.6
19	Magnesium (Mg ²⁺), mg/l	5.9
20	Sodium, mg/l	21.9
21	Total Dissolved Solids, mg/l	147
22	Total Fixed Solids, mg/l	92.61
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.102
25	Boron, mg/l	BDL
26	Potassium, mg/l	6.5
27	Fluoride, mg/l	0.296
28	Total Coliform, MPN/100 ml	300
29	Fecal Coliform, MPN/100 ml	200
30	Fecal Streptococcus, MPN/100 ml	20
31	% SODIUM	35.54
32	SAR	1.08

**POLLUTED RIVER STRETCH MONITORING PROGRAMME
(DATA SHEET JULY 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)	7/12/2023												
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	16.2 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	24
2	Dissolved Oxygen, mg/l	7.86
3	pH	7.32
4	Conductivity, µmhos/cm	216
5	BOD, mg/l	0.66
6	Nitrate-N, mg/l	0.4
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	77
10	Chloride, mg/l	26
11	COD, mg/l	2.6
12	TKN, mg/l	BDL
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	81
15	Calcium as CaCO ₃ , mg/l	65
16	Magnesium as CaCO ₃ , mg/l	16
17	Sulphate, mg/l	0.1
18	Calcium (Ca ²⁺), mg/l	26
19	Magnesium (Mg ²⁺), mg/l	3.88
20	Sodium, mg/l	13
21	Total Dissolved Solids, mg/l	120
22	Total Fixed Solids, mg/l	78
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.064
25	Boron, mg/l	BDL
26	Potassium, mg/l	2
27	Fluoride, mg/l	0.302
28	Total Coliform, MPN/100 ml	200
29	Fecal Coliform, MPN/100 ml	100
30	Fecal Streptococcus, MPN/100 ml	ABSENT
31	% SODIUM	25.27
32	SAR	0.63

**POLLUTED RIVER STRETCH MONITORING PROGRAMME
(DATA SHEET JULY 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)	7/12/2023									
		1	2	:	4	0					
3	Weather	Cloudy			Clear <input checked="" type="checkbox"/>			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm <input checked="" type="checkbox"/>		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	28.8 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 <input checked="" type="checkbox"/>	Domestic <input checked="" type="checkbox"/>		
		Organized water source			Cultivation	Bathing Ghat		Others			

Sl.No	Determinants	Values
1	Temperature, 0C	26
2	Dissolved Oxygen, mg/l	7.96
3	pH	7.68
4	Conductivity, µmhos/cm	178
5	BOD, mg/l	0.73
6	Nitrate-N, mg/l	0.115
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	78
10	Chloride, mg/l	13.6
11	COD, mg/l	2.3
12	TKN, mg/l	BDL
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	70
15	Calcium as CaCO ₃ , mg/l	43
16	Magnesium as CaCO ₃ , mg/l	27
17	Sulphate, mg/l	0.001
18	Calcium (Ca ²⁺), mg/l	17.2
19	Magnesium (Mg ²⁺), mg/l	6.56
20	Sodium, mg/l	11
21	Total Dissolved Solids, mg/l	115
22	Total Fixed Solids, mg/l	74.75
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.0384
25	Boron, mg/l	BDL
26	Potassium, mg/l	2
27	Fluoride, mg/l	0.31
28	Total Coliform, MPN/100 ml	300
29	Fecal Coliform, MPN/100 ml	200
30	Fecal Streptococcus, MPN/100 ml	20
31	% SODIUM	24.7
32	SAR	0.57

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)	7/12/2023									
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	23.76 m ³ /s									
12	Major polluting source	Industrial effluent		MSW	PW	None ✓		Other			
13	Uses of water in downstream	Irrigation ✓		Drinking water source ✓			Fishing	Domestic			
		Organized water source		Cultivation	Bathing Ghat		Others				

Sl.No	Determinant	Value
1	Temperature, °C	29
2	Dissolved Oxygen, mg/l	7.8
3	pH	7.57
4	Conductivity, µmhos/cm	216.8
5	BOD, mg/l	0.73
6	Nitrate-N, mg/l	0.38
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	88
10	Chloride, mg/l	19.99
11	COD, mg/l	3.6
12	TKN, mg/l	BDL
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	90
15	Calcium, as CaCO ₃ mg/l	55
16	Magnesium as CaCO ₃ , mg/l	35
17	Sulphate, mg/l	0.001
18	Calcium (Ca ²⁺), mg/l	22
19	Magnesium (mg ²⁺), mg/l	8.5
20	Sodium, mg/l	12
21	Total Dissolved Solids, mg/l	120
22	Total Fixed Solids, mg/l	78
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.0576
25	Boron, mg/l	BDL
26	Potassium, mg/l	2
27	Fluoride, mg/l	0.311
28	Total Coliform, MPN/100 ml	100
29	Fecal Coliform, MPN/100 ml	ABSENT
30	Fecal streptococci, MPN/100 ml	ABSENT
31	% Sodium	32.69
32	SAR	1.04

**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 July 22 ,2023</p> <p>(I) Identified 3 drains on 10/12/2018 at the hajiyyar 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. 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 July 2023. More activities are progressing under the “ Thelineer Ozhukum Navakeralam “scheme</p> <p>(vi) Actions being initiated to prevent illegal waste dumping. Bio-Medical Waste collecting through IMAGE .Municipality has one MRF and 3 MCF’s. Dry Waste</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>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 may 2023	Progress in the month of june2023	Progress in the month of July2023	% works Complete	Details of works remaining
2.1	River water quality Monitoring- Thirurangadi, Hajarjipally 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 Municipal area	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 may 2023	Progress in the month of june 2023	Progress in the month of July 2023	% works completed	Details of works remaining
3.1.	Ground Water resources and regulation of	Ground water Department		No action included in the approved plan to	No action included in the approved action plan to	No action included in the approved		

	<p>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>			<p>performed by Ground Water Department</p>	<p>be performed by Ground Water Department</p>	<p>action plan to be performed by Ground Water Department</p>		
3.2	<p>Ground water recharging / rain water harvesting</p>	<p>Ground water Department</p>		<p>No action included in the approved action plan to be performed by</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.)			Ground Water Department				
3.3	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or handpumps (Earlier status : Groundwater Department has 6 observation dug wells and 14 bore wells in the river stretch. (report attached) (Map No: 7 attached))	Ground water Department		No action included in the approved action plan to be performed by Ground Water Department				
3.4	For regulating use of ground water for irrigation purpose,	Ground water Department		No action included in the approved action plan to be performed by Ground Water Department				

adopting good irrigation practices (Earlier status : The total irrigation draft in the area ranges from 979.683 - 1857.49 ha.m.)							
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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 July 22</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- All equipments are installed and three phase electrical connection obtained.Sewer line work and road work under progressing.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 July 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 may2023	Progress during month of June 2023	Progress during month of July2023	% works completed	Details of works remaining
1.1.1	Strengthening the right side bund of Tirur- Ponnani Puzha at Porur, ward no. 1 Tirur Municipality	Irrigation Department	6 Months	. TS Accord ed. Work Tender ed	Tender process	Agreement Executed. Site handed over.	In progress	
1.1.2	Cleaning and development of old Ponnani Thodu at Thazhepalam	Irrigation Department	6 Months			Nil		
1.1.3	Repair and Rehabilitation of Koottayi Regulator cum Bridge across Tirur Ponnani Puzha in Mangalam Grama Panchayath in Malappuram Dist	Irrigation Department	18 Months	Civil work 5% Mechanical works 90%	Investigation work on going	Investigation work completed. report not submitted	In progress	Ring bund formation, Bailing out of water, Apron Extension, Cut off wall formation. Erection of shutters and other

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 Thalakadathur 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	No progress. As State suchitwa mission does not give sanction for new DPR of the STP plant. Hence join meeting is proposed for preparing the technical report of the status of existing STP units with IRTC members.	AMC again directly awarded the work for repair to IRTC to submit revised estimate. The estimate submitted was same as that submitted earlier. Therefore decided to invite open tender for repair and 5 year operation and maintains and project is included in 2023-2024 annual plan.	Therefore decided to invite open tender for repair and 5 year operation and maintains and project is included in 2023- 2024 annual plan.	Renovation work under process	(See minutes)
2.9	Setting up of STP at Private Bus stand	Tirur Municipality	June 2020	In progress. Trial run will be conducted on May 15 of this month	Final installation of machinery	Pipeline work going on		Preparing for trail run. (See minutes)

2.10	Setting up of a new drain after demolishing the old one. The old one was the hub of the waste water outlet of the shops and other establishments. The proposed drain is constructing in the middle of the road so as to avoid intrusion of pipes from outside	Tirur Municipality	June 2020	Completed	Completed	Completed	100	Completed
2.11	Identification of illegal outlets in to storm water drain sand fine shall be imposed on such units	Tirur Municipality					Fine imposing mechanism going on	NIL
3.KERALA STATE POLLUTION CONTROL BOARD								

No.	Activity	Implementing agency	Time line	Progress in the month of may 2023	Progress in the month of june2023	Progress in the month of July2023	% 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, VETOM, MANGALAM, CHERIAMUNDAM								
No.	Activity	Implementing agency	Time line	Progress in the month of May 2023	Progress in the month of june2023	Progress in the month of July2023	% 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

5.GROUND WATER DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of may2023	Progress in the month of june 2023	Progress in the month of July2023	% 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 NO ACTION INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	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 river stretches)			NA		NA	NA
5.4	For regulating use of ground water for irrigation purpose, adopting good irrigation practices (Earlier status: The total irrigation draft in the area ranges from 49.14 - 870.97 ha.m.)	Ground water Department No Data Available. No Updation after GEC 2017. (Report not published)			NO ACTION 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	march 2023	Progress june2023	Progress July2023	% works completed	Details of works remaining
6.1	Survey of boundaries of river side	Revenue department		Completed	Completed	Completed	100%	Encroachment survey completed.

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Kerala State Pollution Control Board, District Office, Kozhikode NATIONAL MISSION FOR CLEAN GANGA

**Format for submission of monthly progress report by
state/UTs (Hon'ble NGT in the matter of OA.No.673/2018 dated 6/12/2018)**

For the month of JULY 2023 – Kuttiady polluted river stretch

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-compliance status
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1	Ensure 100% treatment of sewage at least in-situ remediation	<p>12/2022</p> <p>03/21</p> <p>31.05.2024</p> <p>03/2022</p>	<p><u>Kuttyadi Grama Panchayath</u> Massive awareness program and survey conducted. Community</p> <p>Toilet and household latrine schemes implemented MRF and MCF. Work in good condition. Project for household compost bin is completed and carried out drainage work.</p> <p><u>Chakkittapara Panchayath</u> Massive awareness program conducted. Community toilet and household latrine schemes implemented MRF and MCF. Working in good condition. Project for household compost bin in progress and carried out drainage repair work</p> <p><u>Payyoli Municipality</u> 1. Action plan prepared under SBM 2.0 2. Action plan prepared under Amrut Scheme</p> <p><u>Thurayur Grama Panchayat</u> <u>h</u> Ward wise awareness programme conducted. Community toilet 'Take a Break' started and household latrine schemes</p>
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			implemented.MCF started.Project for house hold bucketcompost completed.
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	12/2022 03/21 31.05.2024	<u>Kuttyadi Grama Panchayath</u> Committed to implement major scheme next year <u>Chakkittapara Panchayath</u> <u>h</u> Committed to implement major scheme next year <u>Payyoli Municipality</u> 1. Action plan prepared under SBM 2.0 2. Action plan prepared under Amrut Scheme <u>Thurayur Grama Panchayath</u> Major scheme will be implemented only by the availability of funds
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	01/2023 03/21 31.12.2024	<u>Kuttyadi Grama Panchayath</u> Attached separate report <u>Chakkittapara Panchayath</u> River origin areas are in Chakkittapara, No industrial units, ODF Project implemented <u>Payyoli Municipality</u> 1. Action plan prepared under SBM 2.0 2. Action plan prepared under Amrut Scheme <u>Thurayur Grama Panchayath</u> <u>h</u> No industrial unit in thurayur gramapanchayath ODF project implemented

4	Chief secretaries may set up appropriate monitoring mechanisms at state level <ul style="list-style-type: none">• Specifying a countability of nodal authorities not		Not applicable
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	<p>below the secretary level</p> <ul style="list-style-type: none"> • Chief secretaries may have an accountable person attached in their office for this purpose • Monitoring at state level must take place 		
5	<p>Progress report may be furnished by the state/UTs to</p> <ul style="list-style-type: none"> • Secretary, Ministry of Jal Shakti • Member Secretary, CPCB 	<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>Primary STP (Oil and Grease trap with grit chamber)</p> <p>Will be implemented by 31/3/2021</p>	<p>Drains identified. Pollution load calculated. Action plan prepared. Notices issued by concerned Panchayath Secretaries to individual units.</p> <p>Action under progress by individual units.</p>

Monthly progress report
ofKuttiady,Maruthomkara,Cher
uvannur,Changaroth,Perambra,
Kavilumpara,VelomPanchayath
s,Chakittapara,Payyoli,Thurayo
or,Irrigation department,
WaterAuthority, Shuchitwa
missionforthemonthofAugust20
22is
attachedas**Annexure3**.

	12/2022	<u>Kuttyadi Grama Panchayat</u> urvey will be
(ii) <u>status of STPs, I&D and sewerage networks</u> Details of existing infrastructure, proposed along with completion timeline	3/2021	conducted <u>Chakkittapara Panchayat</u> River originate from Chakkittapara Grama Panchayat.
	03/2022	Polluting sources are not identified.
	3/21	<u>Thurayur Grama Panchayat</u> <u>h</u> Polluted area in river are not identified.
	31.05.2024	Mostly rural area. No common STP proposed. 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. <u>Chakkittapara Panchayat</u> : Nil <u>Payyoli municipality</u> Action plan prepared under SBM 2.0
	3/21	<u>Thurayur Grama Panchayat</u> <u>h</u> Nil
(iii) <u>status of CETPs</u> Detail of existing CETP and ETP infrastructure, Gap analysis, proposed along with complying status	31.12.2024	<u>Payyoli municipality</u> ✓ No CETPs proposed ✓ Action plan prepared under SBM 2.0
	03/2022	<u>Thurayur Grama Panchayat</u> <u>h</u> No industry in the locality <u>Kuttyadi Grama Panchayat</u> No industry in the locality <u>Chakkittapara Panchayat</u> No industry in the locality

<p>(iv) <u>status of solid wastemanagement& details ofprocessingfacilities</u></p> <p>Details of existinginfrastructure,Gapa nalysis,proposed along withcompletiontimeline</p>	31/03/2021	Constructionstartedforblo ck level MRF for7panchayathintheKutti yadyblock.
	Completed andfunctioni ng	MCFofKuttiyadiPancha yathsetup with shredding unit-work completed andfunctioning.
	Completed andfunctioni ng	Mini MCF set up in allwards ofKuttiyadiPanchayath.
	Completedand functioning	<u>Kavilumparapanchayat h</u> 3 MCFsarefunctioning.
	Completedand functioning	<u>MaruthomkaraPanchay ath</u> MRF completedandfunctionin g.Biogasplantworkcompl eted.
	31/103/2021	<u>VelomPanchayath</u> Comm unitylevel – Biogasplant.Workunderco nstruction(80% workcompleted). 50 nos ofBiogas plant for household- Completed andfunctioning 50 nos ofBiogas plant for household- Completed andfunctioning
	31/10/2021	<u>PerambraPanchayath</u> MCF- Tendering inprogress Mini MCF –workcompleted.
		<u>ChangarothPanchayathP</u> roject for setting upMCF approved. Site to beidentified soon. Biogasplant and Ring compostforhousehold proposed. Plastic shredding unitproposed.

03/2021

Chakkittapara Panchayath

Household plastic waste collected as per the guidelines of Suchithwa Mission.

Payyoli Municipality

31/10/2024

One temporary MCF exist & 18 mini MCF under construction. Construction of permanent MCF going on. To be complete by September 2022

Thurayur Grama Panchayath

Household plastic waste collected as per the guideline of Suchitwa mission

Kuttyadi Grama Panchayath

Report attached

Water quality monitoring result for the month of August 2022 is attached as **Annexure-4**

Chakkittapara Panchayath

No details available

(v) latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river

(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.

Same as Item no. 5.1(v) Biomedical waste from Hospital, labs, clinics collected through management, plastic waste disposal through recyclers. Individual solid waste processing facilities like bio gas plant, biobins in high

		<p>rise building, hotelsetc.Fencing proposed byirrigationdepartment.<u>C</u> <u>hakkittaparaPanchayat</u> <u>h</u> Nowastedumping <u>ThurayurGramaPanc</u> <u>hayath</u> Nowastedumping <u>KuttyadiGramaPanchay</u> <u>ath</u> Nowastedumping <u>ChakkittaparaPanchaya</u> <u>th</u> Ground water regulationandactiontaken <u>ThurayurGramaPanc</u> <u>hayath</u> Ground water regulation0and action taken<u>KuttyadiGramaPa</u> <u>nchayath</u> Actiontaken</p>
	03/2021	
(vii)groundwaterregulation	31/10/2023	<p><u>ThurayurGramaPanc</u> <u>hayath</u> AsperthedirectionofGo vernment,actionwillbet aken <u>ChakkittaparaPanchaya</u> <u>th</u> As per the direction ofGovernment,actionwill be taken<u>KuttyadiGramaPa</u> <u>nchayath</u> AsperthedirectionofGo vernment, actionwillbetaken</p>
(viii)adopting goodirrigationprac tices	31/10/2024	

<p>(ix) protection and management of floodplain zones (FPZ),</p>	<p>31/10/2024</p>	<p>NIL</p>
<p>(x) Rainwater harvesting</p>	<p>Working in progress</p> <p>31/10/2024</p> <p>03/2021</p>	<p><u>Velompanchayath</u> 22527 rain water pit, well recharge – 1500 houses <u>Kavilumparapanchayath</u> well recharge – 160 houses <u>Maruhtonkarapanchayath</u> Well recharge-work completed <u>Cheruvanoorpanchayath</u> Well Recharge – Project in progress <u>Thurayur Grama Panchayath</u> Project for well water and well recharge is in progress as per the action plan of MGN REGS <u>Chakkittapara Panchayath</u> Project for well water pit and well recharge adopted <u>Kuttyadi Grama Panchayath</u> Project for rain water pit and well recharge adopted</p>
<p>(xi) Maintaining minimum environmental flow of river</p>	<p>31/10/2024</p>	<p><u>Kavilumparapanchayath</u> Adopted step store to remove sands and rock dumped during flood <u>Maruhtonkarapanchayath</u></p>

	03/2021	<p>74 works ongoing under MGNREGS (RWH, soil Conservation).</p> <p><u>Kavilumparapanchayath</u></p> <p>5 works ongoing under MGNREGS for protection of river sides.</p> <p><u>ChakkittaparaPanchayath</u></p> <p>River Originating area, Noticed environment low.</p> <p><u>Payyoli Municipality</u></p> <p>Rejuvenation/cleaning of Naivaranithoduby removing slit and other solid wastes - Work in Progress.</p> <p><u>Thurayur Grama Panchayath</u></p> <p>River originating area, Noticed environmental.</p> <p><u>Kuttiyadi Grama Panchayath</u></p> <p>Rainwater storage pits provided to house.</p>
(xii) Plantation on both sides of the river	03/2021	<p><u>Chakkittapara Panchayat</u></p> <p><u>h</u></p> <p>Bamboo planting will be done in MGNREGS.</p> <p><u>Thurayur Grama Panchayath</u></p> <p>Bamboo planting will be done only by the direction of governing council.</p> <p><u>Kuttiyadi Grama Panchayath</u></p> <p>Bamboo and Ramacham planted on the banks of Kuttiadi river.</p>

<p>(xiii) Setting up biodiversity parks on floodplains by removing encroachment</p>	<p>31.05.2024</p>	<p><u>Chakkittapara Panchayat</u> <u>h</u> Action will be taken depending upon availability of fund <u>Thurayur Grama Panchayat</u> <u>hayath</u> Action will be taken depending upon availability of fund <u>Kuttivadi Grama Panchayat</u> <u>chayath</u> Action will be taken depending upon availability of fund. Projects for Bamboo park and social forestry works adopted.</p>
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(Hon'ble NGT in the matter of O.A.No.673/2018 dated 06.12.2019)

ACTION PLAN FOR RIVER KUTTIYADI, KERALA

Kuttyadi Grama Panchayath									
No.(as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month JUNE 2023	Progress in the month JULY of 2023	% works completed	Details of works remaining
D	Geotextiles at river bed	MGNREGS	31.03.2018	100%	100%	100%	100%	100%	Completed
E	Haritha Sahayastapa agreement	Kuttyadi Grama Panchayath	31.03.2020	Completed	Completed	Completed	Completed	100%	Agreement signed with south side Resource Management
C(ii)	Removal of Non biodegradable waste	Kuttyadi Grama Panchayath	31.03.2020	Completed	Completed	100%	100%	100%	Completed
C(ii)	Clean green kuttyadi	Kuttyadi Grama Panchayath	31.03.2020	100%	100%	100%	100%	100%	Plastic collection from home Completed
A(b)	Community toilet	Suchitwa mission	31.03.2020					100%	Completed

C(ii)	MRF	Blockpanchayath	31.03.2020	Nil	Nil	Nil	Nil	Nil	Completed
C(ii)	MCF	KuttyadiGramapanchayath	31.03.2019			Extending of MCF		100%	McfREPAIR IN GONGOING
A(b)	Sanitarylatrine	KuttyadiGramapanchayath	31.03.2019	50%	50%	99%		99%	1%
B(ii)	Wellrecharging	MGNREG	31.03.2019	Nil	Nil	Nil	Nil	Nil	Nil
E	Camerasurveillance	KuttyadiGramapanchayath	completed					100%	completed
E	Rejuvenation ofKuttyadiriver	MGNREGS	31.03.2020	50%	50%	100%	100%	100%	completed
C(ii)	Disposal of nondegradablebiowaste	KuttyadiGramapanchayath	31.03.2020	99%	99%	100%	100%	100%	completed
E	CleanVillage	KuttyadiGramapanchayath	31.03.2020	99%	99%	100%	100%	100%	completed
C(ii)	MRF	BlockPanchayat	31.03.2020	Na	Na	Na	Na	100%	completed
C(ii)	MCF	KuttyadiGramapanchayath	31.03.2020	100%	100%	100%	100%	100%	completed

C(ii)	Retrofitting	KuttyadiGramaPanc hayath	31.03.202 0	100%	100%	100%	100%	100%	Nil
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Velom Grama Panchayath

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% works completed	Details of works remaining
C(ii)	Govardhan Biogas plant	Velam GP	31.03.2020	100	100	100	COMPLETED	100	completed
C(ii)	MCF	Suchitwamission	31.03.2020	100	100	100	COMPLETED	100	completed
C(ii)	Biogas plant 50 No.s	Suchitwamission	31.03.2020						
B(ii)	Well recharge 1500 houses	MGNREGS	31.03.2020	50	50	50	50	50	Nil
	Installation of Biogas plant for individual beneficiaries	Socio Economic unit Foundation	31.12.2019	5 nos	5 nos	5 nos	5 nos		0
C(ii)	Installation of Ring compost	Socio Economic unit Foundation	31.12.2019	14	14	14	221		0
C(ii)	Making compost pit	MGNREGS	31.0.2020	5	19	19	25		20

Maruthomkara GramaPanchayath

No.(as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% works completed	Details of works remaining
C(ii)	MRF	Block panchayath	2019-2020	Completed	Completed	Completed	Completed	100%	Completed
C(ii)	Biogas plant	Maruthomkara GP	2019-2020	completed	Completed	Completed	Completed	100%	Completed
B(ii)	Well recharge	Maruthomkara GP	2019-2020	completed	Completed	Completed	Completed	100%	Completed
A(b)	Sanitary complex	Maruthomkara GP	2019-2020	completed	Completed	Completed	Completed	100%	Concrete Completed
E	Harithasahayathapana agreement	Maruthomkara GP	2019-2020	completed	Completed	Completed	Completed	100%	Completed
	Biobin for home	Maruthomkara GP	2021-2022	Completed	Completed	Completed	Completed	100%	
	Nidival River Cleaning	Maruthomkara GP	2021-2022	Completed	Completed	Completed	Completed	100%	
C(ii)	Biogas plant	Maruthomkara GP	31.03.2020			28 completed	28 completed		
A(b)	Sanitary Complex	Maruthomkara GP	31.03.2020						

Perambra Grama Panchayat

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% work completed	Details of work remaining
E	Harithasahas thapana agreement	Perambra gramapanchayat	31.03.2020	HSS identified	HSS identified	HSS identified	HSS identified		
C(ii)	Solid waste removal	Perambra gramapanchayat	31.03.2020	completed	completed	completed	completed	completed	Fortnight collection of non-biodegradable waste from houses is being continued
C(ii)	Zero waste Perambra	Perambra gramapanchayat	31.03.2020	Completed	Completed	Completed	Completed	100%	
A(b)	Public toilet	Perambra gramapanchayat	31.07.2019	Commissioned	Commissioned	Commissioned	Commissioned	100%	
C(ii)	MCF	Perambra gramapanchayat	31.10.2019	Commissioned	Commissioned	Commissioned	Commissioned	95%	Electrification tender

Kavilumpara GramaPanchayath

No. (as per Action Plan).	Activity	Implementing agency	Timeline	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% works completed	Details of work remaining
E	Harithasahayasthapan agreement	Kavilumpara GP	30.03.2023	Completed	Completed	Completed	completed	100% Completed	NA
C(ii)	Collection of non-biodegradable waste	Kavilumpara GP	30.03.2023	Collected	Collected	Collected	Collected	100% Completed	
C(ii)	MCF	Kavilumpara GP	30.03.2023	Completed	Completed	Completed	Completed	100% Completed	NA
B(ii)	Well recharge	MGNREGS	30.03.2023	RECEIVED 5 APPLICATIONS ACCORDED	nil	nil	nil	NIL	Work Started
D	River cleaning	Kavilumpara GP	30.03.2023	NA	NA	NA	NA	100%	

Chakkittapara GramaPanchayath

No.(as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% work completed	Details of work remaining
D	Removal of pebbles dumped in any	MGNREGS	31.03.2020	Nil	Nil	Nil	Nil		Nil
E	Haritha Sahayasthapan agreement	Chakkittapara Grama Panchayath	31.03.2020	Completed	Completed	Completed	Completed	100%	Nil
C(ii)	Removal of Non-bio degradable waste	Chakkittapara Grama Panchayath	31.03.2020	Completed	Completed	Completed	Completed	100%	Nil
A(b)	Community toilet	Suchitwa mission	31.03.2020	Completed	Completed	Completed	Completed	100%	Nil
C(ii)	MCF	Chakkittapara Grama Panchayath	31.03.2020	Completed	Completed	Completed	Completed	100%	Nil
A(b)	Sanitary latrine	Chakkittapara Grama Panchayath	31.03.2020	86.6%	86.6%	86.6%	92.1%	92.1%	Project going on
B(ii)	Well recharging	MGNREG	31.03.2020	38.4%	38.4%	38.4%	38.4%	38.4%	No applications

E	Rejuvenation of Kuttiyadi Puzha	MGNREGS	31.03.2020	Nil	Nil	Nil	Nil	Nil	Nil
C(ii)	Disposal of nondegradable bio waste	Chakkittapara Grama Panchayath	31.03.2020	82.4%	82.4%	88.4%	90.4%	90.4%	Collection from MCF
E	Clean Village	Chakkittapara Grama Panchayath	31.03.2020	35%	45%	50%	70%	70%	
C(ii)	MCF	Chakkittapara Grama Panchayath	31.03.2020					100%	Nil

Cheruvannur Grama Panchayath

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% works completed	Details of works remaining
E	Haritha Sahaya Sthapana agreement	Cheruvannur GP	31.03.2020	Completed	Completed	Completed	100%	Nil
C(ii)	Collection of plastic waste	Cheruvannur GP	31.03.2019	Completed	Completed	Completed	100%	Nil
A(b)	Repairing of household toilets	Cheruvannur GP	31.03.2020	Completed	Completed	Completed	100%	Nil

A(b)	Construction of Community toilet at Nirappam Stadium	CheruvannurGP	31.03.2020	Completed	Completed	Completed	100%	Nil
B(ii)	Well recharging	Gramapanchayath & MGNREGS	31.03.2019	Completed	Completed	Completed	100%	Nil
A(b)	Latrine Construction	Gramapanchayath & MGNREGS	31.03.2019	Completed	Completed	Completed	100%	Nil
new	Take a break toilet cum relaxation centre	CheruvannurGP	31.03.2022	Work Completed	Finishing work ongoing	Finishing work ongoing	95%	Nil
new	Thumbur moozhi Aerobic bin compost	CheruvannurGP	31.03.2021		Project dropped	Project dropped	0	nil

Koorachund Grama Panchayat

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% works completed	Details of works remaining
	Setting up of MCF	Koorachund GP	31/06/2022	ongoing	Ongoing	Ongoing	Ongoing	95%	Ongoing
	Collection of non degradable waste	Koorachund GP arithakarmasena	Throughout the year	collected	collected	collected	collected	100%	Ongoing
	Transportation of waste material	Greenworms	Throughout the year	ongoing	ongoing	ongoing	ongoing	90%	Ongoing
896	Renewal/ construction of public toilet Take a Break	Koorachund GP GNREGS	31/09/2022	ongoing	ongoing	ongoing	ongoing	90%	Ongoing
859	Brook cleaning	Koorachund GP GNREGS	31/05/2022	ongoing	ongoing	ongoing	ongoing	80%	Ongoing
1211	Setting up of mini MCF	Koorachund GP GNREGS	31/09/2022	ongoing	ongoing	ongoing	ongoing	65%	Ongoing
199	Well recharge	Koorachund GP GNREGS	Throughout the year					65%	Ongoing
	Cleaning of Athiyodithodu The lineerozhukum Nava keralam	Koorachund GP GNREGS	31/05/2022	ongoing	Ongoing	Ongoing	Ongoing	100%	completed

Thiruvallur Grama Panchayat

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% work scope completed	Details of work remaining
1	drainage cleaning	Thiruvallur GP	2020-21	Completed	Completed	Completed	Completed	100%	Nil
2	haritha Sahayasthaba Naagreement	Thiruvallur GP	2020-21	Completed	Completed	Completed	Completed	100%	Nil
3	Removal of non-biodegradable waste	Thiruvallur GP	2020-21	Completed	Completed	Completed	Completed	100%	Nil
4	Community toilet	Suchitwa Mission	2020-21	nil	Nil	Nil	Nil		
5	MCF	Thiruvallur GP	2020-21	started	Started	Started	Started		Due to social assault work temporarily stopped. MCF functioning in a rented building

6	non recyclable inorganic waste handover to local Kerala company	Thiruvallur GP	2020-21	Nil	Nil	Nil	Nil		Negotiation on progress
7	Waste management project over veterinary hospital	Thiruvallur GP	2020-21	nil	Nil	Nil	Nil		Letter send to AE, LSGD for preparing deep burial pit
8	Renovation of various canals	Thiruvallur GP	2020-21	Completed	Completed	Completed	Completed	100%	Nil
9	Toilet to schools, anganwadies and bus stand	Thiruvallur GP	2020-21	Started.	Started.	Started	Started		Work completed up to lintel level bus stand building construction project started

Thurayur Grama Panchayat

No.(as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% works completed	Details of works remaining
	Removal of pebbles dumped in any	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	Haritha Sahayasthabana agreement	Thurayur GP	31.03.2020	Completed	Completed	Completed	Completed	100%	Nil
	Removal of non-biodegradable waste	Thurayur GP	31.03.2020	Completed	Completed	Completed	Completed	100%	Nil
	Community toilet	SUCHITWA MISSION	31.03.2020	Nil	Completed	Completed	Completed	100%	Nil
	MCF	Thurayur GP	31.03.2020	Completed	Completed	Completed	Completed	100%	Nil
(b)	Sanitary latrine	Thurayur GP	31.03.2020	Nil	Nil	Nil	Nil	Nil	
(i)	Well recharge	MGNREGS	31.03.2020	Nil	Nil	Nil	Nil	Nil	
	Rejuvenation of kuttidiviver	MGNREGS	31.03.2020	Nil	Nil	Nil	Nil	Nil	
	Disposal of non-degradable biowaste	Thurayur GP	31.03.2020	80%	90%	90%		90%	Collection directly from houses
	Clean village	Thurayur GP	31.03.2020	Nil	Nil	Nil	Nil		
(i)	MCF	Thurayur GP	31.03.2021					partial	Basement completed

Maniyur Grama Panchayat

No. (asper Action Plan)	Activity	Implementing agency	Time line	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% works completed	Details of works remaining
15	innovation of canals	MGNREGS	2020-21	15 canals innovation completed	15 canals innovation completed	15 canals innovation completed	15 canals innovation completed	100%	Nil
68	innovation of streams	MGNREGS	2020-21	17 streams innovation completed	17 streams innovation completed	17 streams innovation completed	17 streams innovation completed	100%	51
2	innovation of streams	Maniyur GP	2020-21	2 streams innovation completed	2 streams innovation completed	2 streams innovation completed	2 streams innovation completed	100%	Nil
21	building up of mini MCF	MGNREGS	2020-21	Work of 9 mini MCF completed	Work of 9 mini MCF completed	Work of 9 mini MCF completed	Work of 9 mini MCF completed	43%	12
21 wards	collection of non-bio degradable waste	Haritha Karma Sena Maniyur GP	2022-23	Plastic waste in five wards was removed in April month 2022	Plastic waste in five wards was removed in April month 2022	Plastic waste in five wards was removed in April month 2022	Plastic waste in five wards was removed in April month 2022	38%	Plastic waste in 16 wards
	Well recharge	MGNREGS	2020-21					86%	24%

220	Construction of soakpit	MGNREGS	2021-2022		10 Soakpits construction completed	10 Soakpits construction completed	10 Soakpits construction completed	2%	NIL
36	Innovation of Streams	MGNREGS	2021-2022		36 Streams Innovation completed	36 Streams Innovation completed	36 Streams Innovation completed	100%	NIL
22	Construction of MiniMCF	MGNREGS	2020-21 2021-22		Works of 22 mini MCF completed	Works of 22 mini MCF completed	Works of 22 mini MCF completed	96%	NIL

CHANGAROTHGRAM PANCHAYATH

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% Works completed	Details of works remaining
C(ii)	Setting up of MCF	Changaroth GP	Sep-19	Project taken 2023-24 plan	Project taken 2023-24 plan	Project taken 2023-24 plan	Project taken 2023-24 plan	Not Started	Nil
C(ii)	Collection of non-biodegradable waste	Haritha Karmasana	throughout the year	Waste collected from 60% houses April 23-10 ton	Waste collected from 60% houses May 23-10 ton	Waste collected from 60% houses June 23-1 ton	Waste collected from 60% houses July 23-8 ton	60%	Under progress

C(ii)	Biogasplantsforhousehold	ChangarohtGP	Nov-19	Completed on 2021-22 year	Completed on 2021-22 year	Completed on 2021-22 year	Completed on 2021-22 year	100%	Na
C(ii)	Ringcompostunit	ChangarohtGP	Dec-19	Completed on 2021-22 financial year	Completed on 2021-22 financial year	Completed on 2021-22 financial year	Completed on 2021-22 financial year	100%	Project upto 22-23 financial year completed
C(ii)	Plasticshreddingunit	ChangarohtGP	Mar-20	Nil	Nil	Nil	Nil	Nil	Nil
A(b)	Householdsanitaryunits	ChangarohtGP	Jan-20	Project taken 2023-24 plan	Project taken 2023-24 plan	Project taken 2023-24 plan	Project taken 2023-24 plan	Not started	Na
C(ii)	Transportation ofwaste material torefinementunit	ChangarohtGP	Sep-19	Project continuing	Under progress	Under progress	Under progress	90%	10% under progress
C(iii)	BambooCultivationriverbanks	MGNREGS	31.03.2020	Project taken 2023-24 plan	Project taken 2023-24 plan	Project taken 2023-24 plan	Project taken 2023-24 plan	Not started	Na

PAYYOLI MUNICIPALITY

No.(as perActionPlan)	Activity	Implementing agency	Time line	Progress inthemothofAPRIL2023	Progress inthemothofMAY2023	Progress inthemothofJUNE 2023	Progress inthemothofJULY 2023	% workscompleted	Detailsof worksremaining
	Includedinthewater shedarea based developmentmaster	Payyolimunicipality Irrigation department	31.12.2021	Preparingthe estimate	Preparing the estimate	Preparing the estimate	Preparing theestimate	NA	Workin progress

	plan.Amunicipallevel committeefor monitoring								
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	Establishment of 2000 units of fringing compost	Payyolimunicipality	31.03.2021	NA	NA	NA	NA	NA	Work in progress
	Establishment of 500 units of biogas plant	31.03.2021	NA	NA	NA	NA	NA	NA	Work in progress
	Establishment of 5000 units of biobin	Payyolimunicipality	31.03.2021	NA	NA	NA	NA	NA	Work in progress
	A contract agreement has been signed between municipality and fresh cut organic pvt ltd, are entering plant functioning at Ambayathode, Thamarasery for the scientific treatment of chicken stall waste generated	Fresh cut organic pvt ltd	04.09.2020	100% chicken waste collected	100% chicken waste collected	100% chicken waste collected	100% chicken waste collected	100%	Completed
	Implementation of green protocol	Payyolimunicipality	30.06.2020	Completed	Completed	Completed	Completed	100%	Completed
	Rejuvenation/cleaning of Nairavanithodu by removing litter and other solid wastes	Payyolimunicipality	31.3.2021						Work in progress
	Collection of plastic/non bio degradable household waste	Harithakarmasena	Ongoing	Collection started in 13 wards	Collection started in 13 wards	Collection started in 13 wards	Collection started in 13 wards	25%	NA
	Action taken against littering in public places	Payyolimunicipality	Continuing	20 notices issued. Fined -Rs.30190/-					NA

Irrigation Department

No.(as perAct ion Plan)	Activity	Implementinga gency	Timeline	Progress inthemonth ofMAY 2023	Progress inthemontho fJUNE2023	Progress inthemontho f JULY2023	% worksco mpleted	Details ofworks remaining
E	SaltwaterExtrusion- ConstructionofRCBupstreamof Perincherikadavu acrossKuttiady river (Gulikapuzha) in KozhikodeDistrict	IrrigationDept	July31 2022			Work under KIIFB funding,exec uted by SPV,KIIDC.		
C(ii)	FencingthesidesofBridgestopreventdu mpingof wastes-5no's	IrrigationDept	July31 2022			DPR submitted to SE,INC,KK D on 16.10.2019 for Rs. 76 lakhs Revised DPR for Rs.103.5 lakhs submitted vide letter No. D2- 1857/2019 dtd 28.01.2023		

Kerala State Pollution Control Board

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% works completed	Details of works remaining
1	River water quality monitoring - KUTTIYADI River National Water Quality Monitoring Programme (NWMP)	KSPCB	Ongoing; monthly frequency		ongoing	Ongoing;		
2	River water quality monitoring - Kuttiyadi rivers State Water Monitoring Programme, KSPCB fund (SWMP)	KSPCB	Ongoing. Seasonal monitoring - pre-monsoon, monsoon, post-monsoon		ongoing	ONGOING		
3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc. in KUTTIYADI area	KSPCB	Ongoing Interval: Red - 1 month. Orange - 3 months. Green - 6 months.		Inspection conducted pig farm	Inspection conducted pig farm		

Note - As per analysis report the fecal coliform high and it is observed that it is due to the illegal outlets. Inspection was conducted in the pig farm situated in Chakkittapara gramapanchayath and it is found that from the unit there is one pipe is connected to river side. Show cause notice was issued to the unit. Necessary follow up will be done from this office. The inspection conducted on 14/12/2022 by Board officials found

The solid waste as well as C and D waste could be seen near sampling point puzhayoram, A drain with water flow could be found at the upstream sampling point G ulikapuzha. Wastewater from a residential building named Rifa apartment near sampling point 8 (KSRTC) mixing with river water at upstream



KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

കോഴിക്കോട് റീജ്യണൽ ഓഫീസ്
REGIONAL OFFICE, KOZHIKODE



Phone: 0495-2300744 Mail: pcbrokkd@gmail.com Website: kspcb.kerala.gov.in
3rd FLOOR, ZAMORIN'S SQUARE, LINKROAD, KOZHIKODE - 673 002

ANALYSIS REPORT OF RIVER WATER

Report No.	K	R	O	R	4	7	3	2	/	1 to 5	Date:	0	5	0	8	2	0	2	3										
Date of Sample Collection	1	1	0	7	2	0	2	3			Date of receipt of the sample	1	1	0	7	2	0	2	3										
Sampled by:	RL ,KKD										Time	Hours: 1 0 : 0 0																	
Sampling Method	APHA1060B,a										Sample ID	KL1, KL2, KL3, KL5,& KL6																	
Sample container	PC 2.5 L										Sample Lab Code	KROS 4732/1-5																	
Source:	KALLAI RIVER WATER										Ref.letter No.	PCB/KKD/DO/ Polluted River Stretch/2018 Vol. IV. Dated :12.07.2023																	
Specific sampling location:	GIVEN BELOW										Received from:	EE,DO,KKD																	
Sample preservation:	Ice box										Period of analysis:	11.07.2023-31.07.2023																	
											No. of samples	5																	
											Analysed by:	BRS/CVR/CNR																	
											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	6.61	6.67	6.63	6.56	6.67																					
2	CONDUCTIVITY	µmhos/cm	APHA 2510B	315	360	395	580.4	522.5																					
3	BOD	mg/L	IS3025 (Part 44)	3.28	2	3.08	3.28	2																					
4	DISSOLVED OXYGEN	mg/L	APHA 4500-O,C	2.2	2.5	3.1	1.9	1.1																					
5	TOTAL COLIFORM,	CFU/100ml	APHA 9222B	12000	10000	29000	92000	122000																					
6	FECAL COLIFORM	CFU/100ml	APHA 9222D	4900	5800	15000	58000	90000																					
7	FECAL STREPTOCOCCUS	CFU/100ml	APHA 9230 C	280	340	800	1060	1520																					
8	TEMPERATURE	°C	APHA 2550B	29	29	29	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 .

Aditi
22/8
Scientist in charge

Kerala State Pollution Control Board, District Office, Kozhikode NATIONAL

MISSION FOR CLEAN GANGA

Format for submission of monthly progress report by state/UTs

(Hon'ble NGT in the matter of OA.

No.673/2018 dated 6/12/2018) For the month of JULY 2023-

Kallayipolluted river stretch

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STP must be ensured.	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/UT 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 drain 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 Kallayir 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 Kallayir 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 APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 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	Ongoing 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	Freshcut 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 judgement was pronounced	7MLD-The case in the munsiff court, the hearing was completed the final judgement was pronounced	7MLD-The case in the munsiff court, the hearing was completed the final judgement was	7MLD-The case in the munsiff court, the hearing was completed the final judgement 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 rcolony	Kozhikode Corporation	31.03.2020	Estimatescrutiny inprogress atCELSGD's officeforTS approval	Estimatescrutiny inprogress atCELSGD's officeforTS approval	Estimatescrutiny inprogress atCELSGD's office forTS approval	Estimatescrutiny inprogress atCELSGD's office forTS approval	60%	963m drainagec onstructio nremainin g
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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 APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% work completed	Details of work remaining
1	Outlets into storm water drain and issuance of notice	Perumanna GP, Kozhikode	Continues process	7 notices issued	No notices issued	No 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 houses near the river area and panchayat	Perumanna GP MGNREGS	Dec-21	119 nos completed	119 nos completed	119 nos completed	119 nos completed	Remainig work has been suspended as lack of person all days for current year	

6	implimentationof360c ompostunitnearthiversi 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	Progression the month of APRIL 2023	Progression the month of MAY 2023	Progress in the month of JUNE 2023	Progression the month of JULY 2023	% work completed	Details of work remaining
1	Outlet in storm water drain and issued notice	Peruvayal GP	Continuous process	5notice issued	5notice issued	5notice issued	notice issued	Ongoing	
2	Establishment of 5 units anaerobic composed unit in panchayat.	Peruvayal GP through MGNREGS	4/2021 TO 03/2021	work will commence on third week of november 2022	work will commence on third week of november 2022			NA	

3	Setting up of rearing plant for chicken solid waste	Peruvayal G P	Continuous process	Started soon	Started soon	Started soon	Started soon	100%	
4	Setting up of 379 soak pit plants in all houses	Peruvayal G P	04/2020 to 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 Panchayat	Completed by Panchayat	completed by panchayat	completed by panchayat	25 lakh transferred to district panchayat	Ongoing
6	Establishment of 8 numbers of mini MCF	Peruvayal G P through MGN REGS	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	Peruvayal G 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	Peruvayal G P	Continuous process	3 times collected	3 times collected	3 times collected	3 times collected		Continuous process
9	Establishment of Biogas plant	Peruvayal G 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 APRIL 2023	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 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	Cleaner company	2022-23	Ongoing	Ongoing	Ongoing	Ongoing		
10	Cleaning of Cherupuzha (Kuniyadav to Thenghilakadav)	MavoorGP	2022-23	Completed	Completed	Completed	Completed	100%	1500 Meter
11	Valayannor Thodu Cleaning	MGNREGS	2022-23	Estimate under preparation	TENDER PROCESS	TENDER PROCESS	TENDER PROCESS		115 meter
12	Aryankode Kalchira Thodu Cleaning	MGNREGS	2022-23	Estimate under preparation	TENDER PROCESS	TENDER PROCESS	TENDER PROCESS		115 meter
13	Drainage cleaning in Mavoor Town	MavoorGP	2022-23	Estimate under preparation	TENDER PROCESS	PROJECT DROPPED	PROJECT DROPPED		
14	Ring compost	MavoorGP	2022-23	Project approved	Project approved	Project approved	Project approved		

OLAVANNAGRAM PANCHAYAT

No	ACTIVITY	IMPLIMENTING AGENCY	TIMELINE	PROGRESS IN THE MONTH OF APRIL 2023	PROGRESS IN THE MONTH OF MAY 2023	PROGRESS IN THE MONTH OF JUNE 2023	PROGRESS IN THE MONTH OF JULY 2023	% WORK COMPLETED	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	Ongoing	80%	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	Ongoing	100%	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 buzhar river	Olavanna gramapanchayat	Continuous process					81%	Process continuing
5	Well recharge	Olavanna gramapanchayat through MGNREGS	4/2022 To 3/2023	8 No's completed	8 No's completed	8 No's completed	8 No's completed		Work will be completed by the end of March 2023
6	Setting up of compost pits in houses	Olavanna gramapanchayat through MGNREGS	4/2022 To 3/2023	48 No's completed	48 No's completed	48 No's completed	48 No's completed	15%	Work will be completed by the end of March 2024

7	Action taken against dumping of waste in river	Olavanna gramapanchayat	Continuous process				Not reported	84%	Continuing
8	Collection of non-biodegradable waste	Harith karmasena	Throughout the year				Not reported		Continuing

Irrigation Department

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 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 MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 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 MAY 2023	Progress in the month of JUN 2023	Progress in the month of JULY 2023	% work completed	Details of work 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 MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 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)	Groundwater recharging/rainwater harvesting (Earlier status: The average pre-monsoon groundwater level is 7.23 mbgl. Groundwater 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	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 MAY 2023	Progress in the month of JUNE 2023	Progress in the month of JULY 2023	% works completed	Details of works 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 റീജ്യണൽ ഓഫീസ്
REGIONAL OFFICE, KOZHIKODE



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

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

ANALYSIS REPORT OF RIVER WATER

Report No.	K	R	O	S	4	7	4	8	/	1 to 8	Date:	0	1	0	8	2	0	2	3
Date of Sample Collection	2	2	0	7	2	0	2	3			Date of receipt of the sample	2	2	0	7	2	0	2	3
Sampled by:	RL ,KKD										Time	Hours: 1 6 : 3 0							
Sampling Method	APHA1060B,a										Sample ID	DS1,DS2,DS3,DS4,DS5,DS6,DS7 & DS8							
Sample container	PC 2.5 L										Sample Lab Code	KROS:4748/1-8							
Source:	KUTTYADI RIVER WATER										Ref.letter No.	PCB/KKD/DO /Gen/Polluted River stretch/2018 , Dated :24.07.2023							
Specific sampling location:	GIVEN BELOW										Received from:	EE,DO,KKD							
Sample preservation:	Ice box										Period of analysis:	22.07.2023-31.07.2023							
											No. of samples	8							
											Analysed by:	BRS/CVR/CNR							
											Method:Standard Methods for the examination of Water and Wastewater, APHA AWWA WEF (22 nd Ed.)								
sl no	Parameters	unit	Method No.	SAMPLE ID															
				DS1	DS2	DS3	DS4	DS5	DS6	DS7	DS8								
1	pH	-	APHA 4500-H+,B	6.93	6.7	6.59	6.72	6.67	6.7	6.41	6.66								
2	CONDUCTIVITY	µmhos /cm	APHA 2510B	31	29.5	28.9	32.5	33.8	46.7	38.21	50.66								
3	BOD	mg/L	IS3025 (Part 44)	0.3	0.4	0.2	0.3	0.4	0.9	0.3	0.5								
4	DISSOLVED OXYGEN	mg/L	APHA 4500-O,C	7.6	7.9	7.9	7.9	8.1	7.7	6.7	7.9								
5	TOTAL COLIFORM,	CFU/100ml	APHA 9222B	7400	6800	7900	500	5400	7800	8500	5600								
6	FECAL COLIFORM	CFU/100ml	APHA 9222D	5900	4700	6200	200	3500	5600	6500	3000								
7	FECAL STREPTOCOCCUS	CFU/100ml	APHA 9230 C	480	520	460	4	400	520	640	420								
8	TEMPERATURE	°C	APHA 2550B	28	27	27	27	28	28	27	27								

Test method variation: None

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

DS1-KUTTYADI RIVER NEAR MARUTHOMKARA-DRAINAGE MOUTH, DS2-KUTTYADI RIVER AT PUZHAYORAM HOTEL, DS3-KUTTYADI RIVER NEAR PARK RESIDENCY HOTEL, DS4-KUTTYADI RIVER AT JANAKI FOREST, DS5-KUTTYADI RIVER NEAR PERUVANNAMUZZHI DAM,DS6-KUTTYADI RIVER AT GULIKAPUZZHA DRAIN MOUTH,DS7-KUTTYADI RIVER AT KADIYANGAD RIVER & DS8-KUTTYADI RIVER BEHIND KSRTCDEPOT, THOTTILPALAM

Adithyan
22/8
Scientist in charge

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• Member Secretary, CPCB		

<p>6.1</p>	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of</u></p>	<p><u>RAMANTHALI</u></p> <p>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 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>		<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 July 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 July 2023	% works completed	Details of works remaining
E	Desilting and rejuvenation of NarangaThodu in Payyannur Municipality	Irrigation Department	2020			DPR submitted for FS approval (Amount 5.40 Lakhs)		

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 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.

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	

<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 July 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 stake holders	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 stake holders	Whenever necessary					
A (b)	Identification of illegal outlets in to 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 July 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 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 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					

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		

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><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>(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 July 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 cameras at 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 June 2022	Progress in the month of July 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 from payyanur market and its surroundings .If the existing SWECEB 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 SWECEB is not environmentally feasible. If treatment facility is provided by local government and only fresh water releases to thodu the SWECEB 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 in Kunhimagalam 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 Crore from the available fund	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 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, SuchitwaMission, 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 facilityisprovided.	PollutionControlBoard, 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					
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 to operate of the Board exists	Pollution Control Board	Six months					

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 July 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 July 2023	% works completed	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 Thiruvanamthapuram dtd 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 department	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					

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 JULY 2023

RIVER MOGRAL, KASARGOD

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2023	Progress in the month of June 2023	Progress in the month of July 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%	
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	18500 being maintained by NREGA	18500 being maintained by NREGA	Not submitted the report	100 %	NIL	
C(ii)	Viability Gap Funding for Haritha Karmasena	Madhur grama Panchayath	2019	Total Amount Rs 250000/- Expenditure RS 75000/-	Total Amount Rs 250000/- Expenditure RS 249965/-	Not submitted the report	72.9%	NIL	
C(ii)	Material recovery facility centre	Madhur grama	2019	Completed	Completed	Not submitted	100%	Completed	

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

				department itself undertakes and executes the said works in connection with the upgradation of NH 66.	works now. it is hereby notified that NH department itself undertakes and executes the said works in connection with the upgradation of NH 66	that NH department itself undertakes and executes the said works in connection 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		11.07.2023	
Nature and flow of the river		Medium flow, water level decreased	
Sl.No	Parameters	Unit	Mogral Bridge
1	Temperature	°C	27
2	pH	-	6.64
3	Conductivity	µmhos/cm	371
4	Turbidity	NTU	1.6
5	BOD	mg/l	1.9
6	Dissolved Oxygen	mg/l	6.5
7	Total Coliforms	cfu/100ml	650
8	Feacal Coliforms	cfu/100ml	172
9	Feacal Streptococcus	cfu/100ml	50
10	Chlorides	mg/l	83
11	Total Alkalinity	mg/l	39
12	Total Hardness	mg/l	61
13	Calcium Hardness	mg/l	40
14	Magnesium Hardness	mg/l	21
15	Calcium	mg/l	16
16	Magnesium	mg/l	5.103
17	Total Dissolved Solids	mg/l	222
18	Sodium	mg/l	45.3
19	Potassium	mg/l	12.5

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		11.07.2023	
Nature and flow of the river		Water level decreased, Medium flow	
Sl.No	Parameters	Unit	Puzhakkara
1	Temperature	°C	27
2	pH	-	7.13
3	Conductivity	µmhos/cm	128.2
4	Turbidity	NTU	0.2
5	BOD	mg/l	0.8
6	Dissolved Oxygen	mg/l	6.7
7	Total Coliforms	cfu/100ml	810
8	Feacal Coliforms	cfu/100ml	136
9	Feacal Streptococcus	cfu/100ml	30
10	Chlorides	mg/l	24
11	Total Alkalinity	mg/l	26
12	Total Hardness	mg/l	27
13	Calcium Hardness	mg/l	15
14	Magnesium Hardness	mg/l	12
15	Calcium	mg/l	6
16	Magnesium	mg/l	2.916
17	Total Dissolved Solids	mg/l	74
18	Sodium	mg/l	14.05
19	Potassium	mg/l	1.47

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 JULY 2023
RIVER UPPALA, KASARGOD

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2023	Progress in the month of June 2023	Progress in the month of July 2023	% works completed	Details of works remaining
C(ii)	Material collection facility. Operation	Mangalpady Grama Panchayath	2019	Not submitted the report	Partially completed	Partially completed	50%	After monsoon work will complete
C	Waste management including purchase of vehicle to collect waste.	Mangalpady Grama Panchayath/ Green Space Private company	2019- 2020	Not submitted the report	Project taken to purchase a vehicle for Harithakarmasena, Rented Vehicle	Rented Vehicle	-	New projects will plan for the protection of river Uppala.
E	Installation of camera	Mangalpady Grama Panchayath	March 2020	Not submitted the report	Installed at Uppala Junction, Kaikamba, Bandiyod Junction	Installed		Project will be completed within 31.03.2023
C	Electrification of material collection facility	Manjeshwaram Grama Panchayat	2019-2020	Not submitted the report	Electrified	Electrified	100%	Completed
C	Transportation of collected waste	Manjeshwaram Grama Panchayat	March 2020	Not submitted the report	Tender called for waste management agency accepted and agreement signed	Tender called for waste management, agency accepted and agreement signed		Work yet to be completed.
E	Installation of camera	Manjeshwaram Grama Panchayat	March 2020	Not submitted the report	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		Tendered

C	Tying of net on both sides of the bridge	Irrigation Department	2019-2020	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval. You are hereby informed that as the proposed NH upgrade works are going on and these works are to be carried out along with the bridges which are part of the NH ,it would not be desirable to Carry to these works now. It is hereby notified 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.You are here by informed that as the proposed NH upgrade works are going on and these works are to be carried out along with the bridges, which are part of the NH, it would not be desirable to carry to these works now. it is hereby notified that NH department itself undertakes and executes the said works in connection with the upgradation of NH 66.	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval.You are here by informed that as the proposed NH upgrade works are going on and these works are to be carried out along with the bridges, which are part of the NH, it would not be desirable to carry to these works now. it is hereby notified that NH department itself undertakes and executes the said works in connection with the upgradation of NH 66.		Work still under process.
E	Continuous vigil on waste dumping on roads	Police Department	100% Completed					
A(a)	Water quality monitoring	KSPCB	Being done regularly					

Sd/-

Environmental Engineer

UPPALA RIVER - UPPALA BRIDGE (Existing NWMP Station)			
Sampling Point		Uppala Bridge	
NWMP Station Code		2306	
Latitude		12°41'41.7"N	
Longitude		74°54'16.9"E	
Date of Sampling		11.07.2023	
Nature and flow of the river		Moderate flow, water level decreased	
Sl.No	Parameters	Unit	Uppala Bridge
1	Temperature	° C	27
2	pH	-	7.7
3	Conductivity	µmhos/cm	238
4	Turbidity	NTU	2.9
5	BOD	mg/l	1.3
6	Dissolved Oxygen	mg/l	7.7
7	Total Coliforms	cfu/100ml	780
8	Feecal Coliforms	cfu/100ml	128
9	Feecal Streptococcus	cfu/100ml	30
10	Chlorides	mg/l	53
11	Total Alkalinity	mg/l	27
12	Total Hardness	mg/l	50
13	Calcium Hardness	mg/l	30
14	Magnesium Hardness	mg/l	20
15	Calcium	mg/l	12
16	Magnesium	mg/l	4.9
17	Total Dissolved Solids	mg/l	140
18	Sodium	mg/l	29.5
19	Potassium	mg/l	3.5

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		11.07.2023	
Nature and flow of the river		Water level decreased, moderate flow	
Sl.No	Parameters	Unit	Uppala River Near Bhagavathi Temple
1	Temperature	° C	27
2	pH	-	6.35
3	Conductivity	µmhos/cm	266
4	Turbidity	NTU	3.6
5	BOD	mg/l	0.9
6	Dissolved Oxygen	mg/l	5.5
7	Total Coliforms	cfu/100ml	680
8	Feecal Coliforms	cfu/100ml	88
9	Feecal Streptococcus	cfu/100ml	20
10	Chlorides	mg/l	56
11	Total Alkalinity	mg/l	35
12	Total Hardness	mg/l	46
13	Calcium Hardness	mg/l	30
14	Magnesium Hardness	mg/l	16
15	Calcium	mg/l	12
16	Magnesium	mg/l	3.880
17	Total Dissolved Solids	mg/l	161
18	Sodium	mg/l	31
19	Potassium	mg/l	5.34

Sd/-
Assistant Scientist

POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME JULY 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		31-07-2023	31-07-2023	31-07-2023	20-07-2023
Sl.No	Determinants	Kankol	Karikuzhithodu	Thattarakadavu Bridge	Kuttyol palam
1	Temperature, 0C	28	29	30	29
2	Dissolved Oxygen, mg/l	6.08	6.6	5.8	7.3
3	pH	6.48	6.22	5.8	6
4	Conductivity, µmhos/cm	78.6	128.3	200	135.5
5	BOD, mg/l	1	0.32	1.2	1.03
6	Turbidity, NTU	3.4	0.6	1.1	2.8
7	Total Alkalinity, mg/l	16	2	16	21
8	Chloride, mg/l	17	6	13	28
9	Ammoniacal-N, mg/l	BDL	BDL	BDL	BDL
10	Hardness as CaCO ₃ , mg/l	12	9	135	26
11	Calcium as CaCO ₃ , mg/l	5	7	86	14
12	Magnesium as CaCO ₃ , mg/l	7	3	49	12
13	Sulphate, mg/l	BDL	BDL	BDL	BDL
14	Phosphate, mg/l	BDL	BDL	BDL	BDL
15	Fluoride, mg/l	0	BDL	BDL	BDL
16	Total Coliform, MPN/100 ml	300	260	480	400
17	Fecal Coliform, MPN/100 ml	150	80	160	200

Arneeshakar
Arneeshakar

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

POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME JULY 2023

Station Name	PERUMBA RIVER				
Type of Water body	RIVER				
Completed by	JSA1,JSA2,PGSA				
Agency	KERALA STATE POLLUTION CONTROL BOARD KANNUR				
Date of sample taken	27-07-2023	27-07-2023	20-07-2023	31-07-2023	
S.N	Determinants	KACHERIKADVU	MATAHAMAGAL AM	CHANDAPURA	KANDAKALI
1	Temperature, 0C	28	28	28	30
2	Dissolved Oxygen, mg/l	6.22	6.81	7.67	5.32
3	pH	7.14	6.66	6.4	7.67
4	Conductivity, µmhos/cm	174.4	169.3	140.4	901.2
5	BOD, mg/l	0.74	0.62	1	1.12
6	Turbidity, NTU	1	0.1	5.6	1.8
7	Total Alkalinity, mg/l	3	3	17	20
8	Chloride, mg/l	17	25	24	38
9	Ammoniacal-N, mg/l	BDL	BDL	BDL	BDL
10	Hardness as CaCO ₃ , mg/l	9	12	24	90
11	Calcium as CaCO ₃ , mg/l	5	10	14	50
12	Magnesium as CaCO ₃ , mg/l	4	2	10	40
13	Sulphate, mg/l	BDL	BDL	12	101
14	Phosphate, mg/l	BDL	BDL	BDL	BDL
15	Fluoride, mg/l	BDL	BDL	0.0061	BDL
16	Total Coliform, MPN/100 ml	480	260	400	620
17	Fecal Coliform, MPN/100 ml	210	100	200	380

Handwritten signature

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

POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME JULY 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		21-07-2023	21-07-2023	21-07-2023	31-07-2023
Sl.No	Determinants	KAPUGAL	ATHIYADAM	RAMAPURAM	VAYALAPRA
1	Temperature, 0C	27	28	28	30
2	Dissolved Oxygen, mg/l	6.8	7.2	8.4	6.2
3	pH	5.75	6.37	5.2	5.73
4	Conductivity, μ mhos/cm	110	154.2	560	685
5	BOD, mg/l	1	0.92	1.3	2.2
6	Turbidity, NTU	4.2	1.4	1.3	3
7	Total Alkalinity, mg/l	23	6	16	16
8	Chloride, mg/l	15	16	141	252
9	Ammoniacal-N, mg/l	BDL	BDL	0.0342	BDL
10	Hardness as CaCO ₃ , mg/l	20	20	50	110
11	Calcium as CaCO ₃ , mg/l	10	7	35	82
12	Magnesium as CaCO ₃ , mg/l	10	13	15	28
13	Sulphate, mg/l	BDL	BDL	14.2	100.2
14	Phosphate, mg/l	BDL	BDL	BDL	BDL
15	Fluoride, mg/l	BDL	BDL	BDL	BDL
16	Total Coliform, MPN/100 ml	200	240	400	480
17	Fecal Coliform, MPN/100 ml	100	100	200	220

[Signature]
Raveesh K.K

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

POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME JULY 2023

KUPPAM RIVER

RIVER

JSA1, JSA2, PGSA

KERALA STATE POLLUTION CONTROL BOARD KANNUR


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	21-07-2023	21-07-2023	20-07-2023	21-07-2023	21-07-2023	21-07-2023
Sl.No	Determinants					
1	Temperature, 0C	29	29	28	29	29
2	Dissolved Oxygen, mg/l	6.2	5.6	8.93	6.8	6.02
3	pH	7.04	5.58	6	6.54	5.76
4	Conductivity, µmhos/cm	742	412	233	272	237
5	BOD, mg/l	2.2	1.8	1	2.2	1.1
6	Turbidity, NTU	1.6	3	2.4	3.2	2.6
7	Total Alkalinity, mg/l	10	8	18	8	4
8	Chloride, mg/l	270	212	48	103	86
9	Ammoniacal-N, mg/l	BDL	BDL	0.0052	BDL	BDL
10	Hardness as CaCO ₃ , mg/l	53	33	26	20	26
11	Calcium as CaCO ₃ , mg/l	25	30	16	15	14
12	Magnesium as CaCO ₃ , mg/l	28	3	10	5	12
13	Sulphate, mg/l	BDL	BDL	21.3	BDL	BDL
14	Phosphate, mg/l	BDL	BDL	BDL	BDL	BDL
15	Fluoride, mg/l	BDL	BDL	BDL	BDL	BDL
16	Total Coliform, MPN/100 ml	520	600	400	680	520
17	Fecal Coliform, MPN/100 ml	200	420	200	260	300

Assistant Scientist
 Kerala State Pollution Control Board
 District Office, Kannur-670002
 Assistant Scientist
 K. K. V.

1.Kavvayi

Sl.no	Drain	BOD on JULY 2023	Remarks
1	Kotti thodu	2.22	
2	School ground thodu	1.6	
3	Kalikadapuram thodu	1.2	
4	Koorikadavu	2.1	
5	Uliyathu kadavu	2.8	
6	Kallatu kadavu	2	
7	Muttathu kadavu	2	Plastic waste seen.
8	Vadipram thodu	1.62	One side is full of plastic

2.Peruvamba


	Drain	BOD on JULY 2023	Remarks
1	Naranga thodu	2	High amount of Plastic waste 
2	Perumba thodu	1.06	Plastic waste was noticed, nearby shopping complex shops are dumping waste.
3	Valliohmthodu	1.22	Water with Plastic waste.
4	Panapuzha thodu	0.32	
5	Poomkottu Chal	0.38	Plastic waste seen side wise road.
6	Manjangottu Thode	0.66	
7	Kannelamthodu	1.1	
8	Appithodu	1.02	
9	Mavullapoyil thodu	1.62	Plastic waste,
10	Kollali thodu	0.68	
11	Kannada thodu	0.66	
12	Koyakkotu thodu Thokadu	0.38	

13	Cherottuvayal thodu	2.8	
14	Kayyil arakulam thodu Kunjimagalam puzha	2.1	
15	Tattanvayal thodu	0.28	

3. Ramapuram thodu

Sl.no	Drain	BOD on JULY 2023	Remark
1	Kapugal thodu	0.66	
2	Chembali kundu	0.84	
3	Kulapram kundam thodu Kavilavalapu thodu	1.1	
4	Aduthila thodu	0.28	
5	Ottayi thodu	1.62	
6	Moolakadavu	1.1	

4.Kuppam

Sl.no	Drain	BOD on JULY 2023	Remarks
1	Karuvanchal	0.68	Full bags of dumped plastic wastes 
2	Karthikapuram	0.38	Plastic waste was noticed
3	Near Udayagiri Bridge	1	
4	Mukkada Thodu	0.32	
5	Moonamkunnu Thodu	0.88	
6	Kuttaparamba-Neduvodu Thodu	0.96	
7	D/S of Alakode Hospital	0.36	
8	Pathayachira	2.2	Turbid water present with high Plastic waste.
9	Near the houses on bank of main River (@ Pariyaram GP)	1.32	

10	Near House Boat @ Pariyaram GP	1.38	
11	Kavinmunabu	2.86	
12	Manja Thodu	1.1	
13	Sulthan Thodu	2.8	Floating waste is seen, plastic and intestinal waste of animals is floating.
14	Cheru thodu	1.2	Full of Black sludge, and plastic and dry log ,highly polluted thodu