

**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 - May 2023****1. Short term plan**

No.	Activity	Implementing agency	Time line	Progress in the month of March-2023	Progress in the month of April-2023	Progress in the month of May 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 new pump Sets	Kerala Water Authority	May 2020	Thaliyil			100%	Completed



				Arannoor	97%	100%	100%	Work completed
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May 2020				100%	Work Completed on 8.8.21.
2.1.4	Installation of adequate pumps in Mudavanmughal and Enchakkal pumping stations.	Kerala Water Authority	March 2020				100%	Pump sets installation at Enchakkal and Mudavanmughal pump house completed.
2.1.5	DG sets in all lifting and pumping stations-Mudavanmughal, Arannoor, Thaliyal, Kuriyathi, Pattoor, Kannammola, Pattom, Murinjapalam and Enchakkal	Kerala Water Authority	May 2020				100%	DG sets installation in seven pumping stations completed. For Arannoor and Thaliyal, erection of diesel generator is already included in the item mentioned in 2.1.2. For Enchakkal PH ,diesel generator already exists.
2.1.6	Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchan thodu, 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	Kerala Water Authority	Dec 2020				100%	Work completed.



	main sewer line							
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	<b>Rehabilitation by laying new lines increasing size of undersized main and reconstruction by dilapidated manholes for the last 3 years</b>	Kerala Water Authority	May 2020	98%	98%	98%	98%	Works completed – 75No. (Rs. 15.41cr) AMRUT-44, State Plan-28 MLA ADF/SDF-3 In progress – 1No. (Rs. 3.cr.) AMRUT-1, State Plan-0 Expected to be completed by 30.09.2023 for one AMRUT work
	<b>Total works completed -75 no In progress - 1 no Dropped - 2 no</b>						Dropped – 2 No. (Rs. 1.52 cr.) 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		98%	98.5%	98.5%	Works completed - 24 No. (Rs. 17.21 cr.) AMRUT-12, State plan-11 MLA ADF/SDF-1
	Total no. of works -29 nos Works completed -24 nos  Work in progress(land acquisition issue)- 5 nos In progress/Ongoing (3 nos.) Land acquisition in progress -1 Work arranged (1No.)			98%		To be arranged	Land Acquisition in work progress-1Nos	Land acquisition process for three works completed and work arranged. Land acquisition in progress for one Agreement executed for one work and expected to be completed by 30.9.2023.
2.1.11	Procurement of sewer cleaning machines and equipment maintenance	Kerala Water Authority	Mar 2020	100%	100%	100%	100%	Work completed.



**2. Long Term Works**

Sl No.	Long term measures proposed	Implementing agency	Amount Required (Rs.in Crore)	Time line	Progress in the month of February	Progress in the month of March	% works completed	Details of works remaining
3.1.1	Extension of sewerage system to Block F to G coastal belt	Kerala Water Authority		Three years				<p>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. DPR preparation of sewerage system to the uncovered areas of TMC is now being carried out internally by KWA. The total wards were divided into 10 clusters. Cluster 1 comprises of 5 wards - Attukal, Kalady, Kallipankulam, Ambalathara and Kamaleswaram wards - The DPR for cluster 1 amounting to Rs 353.87 Crores was submitted to GoK on 15/10/2022 for obtaining AS. Later as per the direction from CS, the DPR of cluster 1 curtailed into 2 DPRS. DPR of cluster I Zone I&amp;II has been submitted to the Secretary of Jalshakthi for funding under NRCP on 17/02/23. Zone 1 of cluster 3 is consisting of Puthenpally and Part of Muttathara is submitted for AS on 11.01.2023.</p> <p>The DPR of Cluster 3 Zone 2 and Zone 3 is prepared and is under scrutiny/revision. The DPR for cluster 2, is prepared and kept in shelf of projects as there is no fund available.</p>
3.1.2	Extension of sewerage system to Block H to R							
3.1.3	Extension of sewerage system to newly added areas of corporation viz,							
3.1.4	Providing sewerage system in Block A to E							
3.1.5	Rehabilitation of existing Network and pump house in block A to E							
3.1.6	Procurement of equipments for maintenance of sewerage system							



3.1.7	Additional requirement	STP					The DPR for cluster 4 (Thirumala Thrikkannapuram and Punnakkamughal wards ) is under scrutiny/revision. 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 the purpose of STP is in progress. DPR of cluster X comprising of wards Shangumugham, Vettucaud, Vallakadavu, Beemapalli (part), Beemapalli East (part), Valiyathura and Kadakampally is under preparation.
	Total Amount required :		5000 Crores				



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

## National Mission for Clean Ganga

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

### **RIVER PAMBA, PATHANAMTHITTA**

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

	<ul style="list-style-type: none"> <li>Chief Secretaries may have an accountable person attached in their office for this purpose</li> </ul>		
	<ul style="list-style-type: none"> <li>Monitoring at State level must take place</li> </ul>		
6	<p>Progress report may be furnished by the State/UTs to</p> <ul style="list-style-type: none"> <li>Secretary, Ministry of Jal Shakti</li> <li>Member Secretary, CPCB</li> </ul>	<p>Monthly (preferably before 20<sup>th</sup> 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&amp;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 &amp; 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 MAR 2023	Progress in the month of APR 2023	Progress in the month of MAY 2023	% works completed	Details of works remaining
A(a)	No industries	-	-				-	-
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project	Result attached	Result attached	Result attached	100%	Nil
C(ii)	Establishment of de-centralized solid waste treatment facility	Mannar Panchayat, Panchayath	31.02.2023	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near Mannar		100%	Inauguration of functioning.

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

				<p>Karma Sena(HKS). Non-biodegradable plastic materials has bCollection, segregation and transportation of non-biodegradable plastic materials is continuing . About 9 tonnes of plastic materials</p>	<p>biodegradable plastic materials has bCollection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC ) so far. About 500 kg of plastic materials is kept ready</p>			
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				handed over to Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for transportation. Socio-Economic Unit (SEU) has been selected as implementing agency for the construction of Two mini MCFs in each	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.			
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				ward in all the 18 wards of Mannar GP. Plastic Waste management Bylaw (draft) has been passed by Mannar GP on 05/02/2021.				
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	As there is no RRF in Mavelikkara Block Panchayat in which Mannar GP belongs, nearby Chengannur		100%	

				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	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 Vridhdhasadnam owned by GP and segregated and transported			
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				Vridhdhas adanam owned by GP and segregated and transported to Clen Kerala company. Plastic Waste management Bylaw (draft) has been passed by Mannar GP on 05/02/2021.	to Clen Kerala company. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.			
C	Installing household and community level solid waste management units	Mannar Panchayat	31.02.2023	Collection, segregation and transporta	Collection of Non-biodegradable plastic		100%	Operation of Aerobic compost unit.

				tion of non-biodegradable plastic materials is continuing . About 4.5 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for trasportati	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			
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				<p>on.Socio-Economic Unit (SEU) has been selected as implementing agency for the construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP. Plastic Waste management Bylaw (draft) has been passed by Mannar GP on</p>	<p>) 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</p>			
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				05/02/2021.	Management is approved by Grama Panchayat Committee on 27/08/2021.			
C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.02.2023	Collection, segregation and transportation of non-biodegradable plastic materials is continuing . About 4.5 tonnes of plastic materials handed over to	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradabl		100%	The process has to be repeated through the year.

				Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for trasportati on.Socio-Economic Unit (SEU) has been selected as implement ing agency for the constructi on of Two mini MCFs in each ward in all the 18	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. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed.			
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				wards of Mannar GP.	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	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.	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	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/-		100%	Continuation of Green Protocol .

				<p>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</p>	<p>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</p>			
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				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.	awarded to the successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021.			
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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 been passed by the Grama panchayat Committee on 05/02/2021. Collection, segregation and	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-biodegradabl		100%	The process is to be repeated periodically.

				transportation of non-biodegradable plastic materials is continuing . About 4.5 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for	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. Socio-Economic Unit (SEU) has been selected as implementing agency for			
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				transportation. Socio-Economic Unit (SEU) has been selected as implementing agency for the construction of 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	the construction of 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			
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				<p>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</p>	<p>electrical, electronic and hazardous waste will start. Biomedical waste is being collected from source and transported for processing by IMAGE (IMA Goes + Eco-friendly), an initiative run by IMA (Indian Medical Association).</p>			
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				transported for processing by IMAGE (IMA Goes + Eco-friendly), an initiative run by IMA (Indian Medical Association).				
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## ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May 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(µS/cm)			BOD(mg/l)			TC(Nos/100ml)			FC		
	Months	MAR	APR	MAY	MAR	APR	MAY	MAR	APR	MAY	MAR	APR	MAY	MAR	APR	MAY
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	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
4	Karuvellil Thodu	7.76	7.55	7.02	42.66	42.84	140.8	1.1	0.9	4.2	4500	3000	2000	2000	1200	800
5	Nochithodu	7.37	7.4	6.74	39.61	65.98	181.6	0.9	0.3	5.4	1900	2200	3000	1000	800	1200
6	Pattaparambil Thodu	7.34	7.2	6.87	48.64	39.81	76.84	0.3	0.4	0.7	1500	300	1200	900	0	300
7	Kappiyarissery Thodu	Nil	Nil	6.99	Nil	Nil	111.1	Nil	Nil	7.5	Nil	Nil	2200	Nil	Nil	600
8	Kombankery Thodu	7.15	7.2	7.06	35.04	35.39	53.42	0.3	0.5	1.8	2400	600	700	1300	0	100
9	Perackalthodu	7.26	7.23	6.77	62.85	33.04	48.78	0.06	0.3	2.7	1900	1500	3000	800	100	1200
10	Erathodu	7.25	7.16	6.9	47.98	49.9	51.33	1.4	0.1	1.9	1200	2000	2800	700	400	1000
11	Kolarayaru	7.25	7.2	6.85	39.03	31.17	49.48	0.5	0.5	2.1	2400	500	600	1300	0	0

## National Mission for Clean Ganga

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### **RIVER MANIMALA, ALAPPUZHA**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>	22.01.2020	No industry/commercial activity
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>	22.01.2020	NIL
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>	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&amp;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 &amp; 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 May 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 March 2023	Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project	Result attached	Result attached	Result attached	100%	NIL
A(b)	Rendering Plant at Eraviperoor or Thiruvalla	Eraviperoor/ Thiruvalla local body	31.03.2021				0%	Work to be initiated
C(ii)	Fencing of bridges, desilting, dredging and protection works, surveillance cameras at vantage points	Irrigation department	31.03.2021				0%	Work to be initiated
C	Preventing illegal discharge of septage and other waste water into the river. Formation of River Protection Group	Panchayath, Police , KSPCB	31.05.2020.	NIL	NIL	NIL	0%	Work pending due to COVID pandemic
C	Greenery development Plantation on both sides of the river, setting up biodiversity parks in flood plains and removing encroachment	Irrigation department in association with panchayath	31.03.2021				0%	Yet to be initiated
C(b)(ii)	Green Protocol implementation in all offices, institution & public functions	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.03.2020				100%	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 March 2023	Progress in the month of April 2023	Progress in the month of May2023	% 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  
MAY-2023**

<b>SI NO</b>	<b>BOTTLE NO.</b>	<b>Name of Drains</b>	<b>PH</b>	<b>BOD</b>	<b>TC</b>	<b>FC</b>
1	TK1	Panayampalathodu	7.46	1.1	3600	1200
2	TK2	PadathupalamThodu	6.53	0.6	3400	1100
3	TK3	Thottappuzha	Nil	Nil	Nil	Nil
4	TK4	Kuttapuzha under Kattodubridge	6.58	5.8	900	100
5	TK5	Kadavumbara	6.83	0.3	3500	1300
6	TK6	Drain under Varappalam Bridge	Nil	Nil	Nil	Nil
7	TK7	Drain under kallupalam Bridge	6.92	0.8	0	0
8	TK8	Komalamthodu	6.93	0.7	4500	1600
9	TK9	Vennikulam Valiyathodu	7.01	0.4	3400	1200
10	TK10	Paduthodu	Nil	Nil	Nil	Nil
11	TK11	Mallappally Valiyathodu	6.52	1	1500	300

ANALYSIS RESULT OF DRAINS JOINING TO MANNAR-THAKAZHI STRETCH OF PAMBA RIVER MAY2023						
Sl.No.	NAME OF DRAIN	PARAMETERS				
		pH	Electrical Conductivity( $\mu$ S/cm)	BOD(mg/l)	TC (Nos/100 ml)	FC
1	Parumala Drain	NIL	NIL	NIL	NIL	NIL
2	Mannar Town Drain	NIL	NIL	NIL	NIL	NIL
3	Kuriyathkadavu Thodu	NIL	NIL	NIL	NIL	NIL
4	Karuvelil Thodu	7.02	140.8	4.2	2000	800
5	Nochithodu	6.74	181.6	5.4	3000	1200
6	Pattaparambil Thodu	6.87	76.84	0.7	1200	300
7	Kappiyarissery Thodu	6.99	111.1	7.5	2200	600
8	Kombankery Thodu	7.06	53.42	1.8	700	100
9	Perackal thodu	6.77	48.78	2.7	3000	1200
10	Erathodu	6.9	51.33	1.9	2800	1000
11	Kolarayaru	6.85	49.48	2.1	600	0



ANALYSIS REPORT OF DRAINS OF MANIMALA BETWEEN KALLOPPARA & THONDRA						
May-23						
SI NO	NO.	Name of Drains	PH	BOD	TC	FC
1	TK1	Panayampalathodu	7.46	1.1	3600	1200
2	TK2	Padathupalam Thodu	6.53	0.6	3400	1100
3	TK3	Thottappuzha	NIL	NIL	NIL	NIL
4	TK4	Kuttapuzha under Kattodubridge	6.58	5.8	900	100
5	TK5	Kadavumbara	6.83	0.3	3500	1300
6	TK6	Drain under Varappalam Bridge	NIL	NIL	NIL	NIL
7	TK7	Drain under kallupalam Bridge	6.92	0.8	0	0
8	TK8	Komalamthodu	6.93	0.7	4500	1600
9	TK9	Vennikulam Valiyathodu	7.01	0.4	3400	1200
10	TK10	Paduthodu	NIL	NIL	NIL	NIL
11	TK11	Mallappally Valiyathodu	6.52	1	1500	300



**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**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"> <li>• Specifying accountability of nodal authorities not below the Secretary level</li> <li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li> </ul>		
	<ul style="list-style-type: none"> <li>• Monitoring at State level must take place</li> </ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"> <li>• Secretary,Ministry of Jal Shakti</li> <li>• Member Secretary,CPCB</li> </ul>		

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&amp;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 &amp; 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 April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
<b>(1) Drain joining Chithrapuzha (near Brahmapuram dumping yard) (Near FACT CD)</b>									
C (ii)	Restricting seepage of leachate of plastic dumped in the dumping yard <b>(Biomining of legacy waste is to be carried out)</b>	Kochi Corporation	3 years			Bio mining stopped due to the outbreak of fire at Bhramapuram dumping yard.	Bio mining stopped due to the outbreak of fire at Bhramapuram dumping yard.		
Aa (iv)	Effluent monitoring from FACT	KSPCB	Periodical			Progressing	Progressing		
Aa (iv)	Periodical Monitoring	KSPCB	Periodical			Progressing	Progressing		
<b>(2) Drain from Cochin Refinery area</b>									
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 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	Periodical			Progressing	Progressing		



		of Police							
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			New work proposal for the removal of water hyacinth has submitted again.	Work proposal for the removal of water hyacinth has submitted.	100%	
	Already implemented Effluent Treatment facility in Kochi Refinery and periodical monitoring are ongoing	KSPCB				Monitoring continuing	Monitoring continuing		
<b>(3)Athikkayi branch (Provided temporary bund in joining section to check salinity intrusion)</b>									
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 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			Fine of Rs 41,240/- levied. Action taken for 9 violations . Rs 14090/- levied.	Fine of Rs 41,240/- levied. Action taken for 9 violations . Rs 14090/- levied.  Collected Rs 1,17,000/- as fine in the month of April-May		

		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	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	Estimate Submitted to CE	100%	
<b>(4) Drain joining Chithrappuzha from CSEZ(Chittethukara)</b>									
No. (as per Action Plan)	Activity	Implementin g agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% Works completed	Details of works remain ing
A(b)	Ensure proper functioning of	KSPCB	Periodical			New CETP started	Monitoring progressing	Monitorin	

	ETP in CSEZ					operational. Complying standards Monitoring progressing		g progressi ng	
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 April 2023	Progress in the month of May 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			
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 leveied in which 40,000/- fine imposed for violation identified through surveillance cameras .Fine of Rs.11,020/-	Rs. 1,15,000/-collected from violators		

						collected from violators.			
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			
<b>Main Stretch (Kadambrayar-Chithrappuzha Confluence point to Irumpanam)</b>									
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works 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				Ongoing.	Ongoing.		
		Thripunithura Municipality with the help of Police	6 months			Squad inspection progressing. Surveillance reported to be continued. 5 lakhs fine levied	ngoing		

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 April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
E	Provide inspection bund for Chithrapuzha	Irrigation Department	3 years			Remind letter submitted to Thahasidar Kanayannur Thaluk regarding the survey		45%	Remaining work is Land survey.
A(b)	Additional STP requirement (if needed)	Thrikkakkara Municipality, Thripunithura Municipality	3 years			2 acres land identified.Proposed meeting in this regard			
	Restriction of illegal dumping of Septage in to the river	Police							
	Flood Plain Zone(Management and Protection) Preparation of	Irrigation Department	3 years			Detailed study and investigations has to			

Inundation maps					be done with the consultation of Hydrology Wing.			
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## LONG TERM MEASURES

### 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 April 2023	Progress in the month of May 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			Ongoing			
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps			Cleaning of wells are ongoing			
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices						

**National Mission for Clean Ganga**

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

**RIVER KADAMBRAYAR, ERNAKULAM**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		District level committee monitoring regularly.
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>		

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&amp;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 &amp; Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p>		<p>Ongoing by KSPCB and Thrikkakkara Municipality</p> <p>Submitted earlier.</p> <p>Submitted earlier.</p> <p>The Kadambayar river shares the western boundary of Kunnathunadu Grama Panchayat for a stretch of approximately 6Kms. And 90% of this stretch consists of swamps, hence direct access to the river via land is ruled out. And in the remaining stretch, i.e., in and around Manakkakadvu bridge the DTPC operates a boat club with a riverside walkway and park. Any kind of possible river polluting activities by the general public in this area is monitored by the erection of CCTV camera's provided with the CSR aid of Wonderla Amusements Park. Also the police authorities are conducting routine surveillance operation so as to</p>
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	<p>(vii)Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi)Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii)Setting up biodiversity parks on flood plains by removing encroachment</p>	<p>prevent any possible illegal activities which pollutes the river. In addition to these preventive measures, there operates a Ward Monitoring Committee under the supervision of Kunnathunadu Grama Panchayat Committee which ensures the prevention of polluting activities by the local people.</p> <p>Ground Water Department:As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Mulanthuruthiand Vadavakkodu) comes under the Kadambrayarriver basin. All the blocks in the river stretch are safe with stage of groundwater extraction ranges from25.38% to 68.01%</p> <p>Ground Water Department and Irrigation Department : : Not submitted</p>
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**ACTION PLAN FOR RIVER KADAMBAYAR, KERALA**  
**SHORT TERM MEASURES**

**Short term plan**

No. (as per Action Plan)	Activity	Implementin g agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works comple ted	Details of works remaining
	<b>(2)</b>	<b>(3)</b>	<b>(4) Manakkakkadavu</b>						
2.1.2 C(ii)	Surveillance to restrict the dumping of wastes into river and its branches	Kunnathunadu Panchayat and with the help of Police				Camera operational	Camera operational	100%	
	<b>(6)</b>	<b>(7)</b>	<b>(8) Canal joining Kadambayar near Infopark Phasell</b>						
No. (as per Action Plan)	Activity	Implementin g agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works comple ted	Details of works remaining
2.2 .1E	Cleaning of thodu	Kerala Irrigation Department  & Vadavucode –	6 months			Desilting of Padathikkara Thodu completed	Work completed	100%	

		Puthencruz Panchayat				Cleaning in previous year completed. New proposal submitted for the current year.	Cleaning in previous year completed. New proposal submitted for the current year		
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
			<b><u>Main Stream (Manakkadavu to Kadambayar-Chithrappuzha Confluence point)</u></b> <b><u>(Provided temporary bund (Kozhichira Bund) in Kadambayar-Chithrappuzha joining section to check salinity intrusion)</u></b>						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining

A(a)	Restricting seepage of leachate of plastic dumped in the dumping yard( <b>Bio-mining of legacy waste going on</b> )	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.	30%	Completion of the work of bio mining by January 2024
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A(b)	Provide proper facilities for restricting the seepage of leachate( <b>Construction of Leachate treatment Plant: Collection tank</b> )	Kochi Corporation	April 2022			Inception report prepared for the leachate treatment plant is currently under discussion.	. RFP initiated for the construction of of a new windrow compost plant of 150 T/ day capacity with a leachate treatment plant.The tender opening date is 29.04.2023		
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A(c)	Provide proper facilities for collecting and treating leachate <b>(Construction of leachate treatment plant)</b>	Kochi Corporation	April 2023			. 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	No progress	
			<b>Action plan by Gramapanchayath</b>						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 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	New proposal submitted for the current year	100%	-
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%	-
	<b>2</b>		<b>4. Long term Plan</b>						

No. (as per Action Plan)	Activity	Implementing agency	Time line		Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
4.5 C(ii)	Solid waste treatment facility at Brahmapuram <b>(Construction of waste to energy plant)</b>	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</p>	No progress reported	Not started	

						collection from residential area and also enhancing property tax 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						
	<b>6</b>	<b>8. REVISED ACTIONPLAN</b>							
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 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. New advertisement given	No further progress reported.		Action pending



3.2	Sanitation facility and treatment of waste water in the markets.  Treatment plant, Portable aerobic bins	Thrikkakkara Municipality	2020-21  2021-22	.	.	The secretary informed that they have no adequate land for construction of waste management facility in market Not attend the meeting	No progress		Action pending
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		.		Market construction completed. Facility for waste management not provided. DLTC issued directions to municipality not to start operation of market without providing waste management facilities. Not attend the meeting	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%	No progress		

						completed. 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	Fine of Rs 41,240/- levied.	Inspection progressing. Collected Rs 1,17,000/- as fine in the month of April-May	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.	No progress		

		<b>5</b>		<b>7. MONITORING</b>					
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 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		
		<b>9</b>		<b>11. LONG TERM PLAN</b>					
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
5.1	Additional requirement STP DPR Preparation in 6 months (through	Thrikkakkara Municipality	3 years			The Secretary informed action not	No progress		Action to be initiated.

	consultants) To allot land, Government Procedure are ongoing					being taken due to land constraints			
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.
			<b><u>DESILTING AND DEVELOPEMENT</u></b>						
No. (as per Action Plan)	Activity	Implementin g agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaini ng
5.3	Development package  Inspection bund for Chithrapuzhaand Kadambrayar is included in this package. For this project, preliminary	Irrigation department	3 years			1. Estimate submitted to CE (As a preliminary step Soil investigation estimate is submitted)	1. Estimate submitted to CE (As a preliminary step Soil investigation estimate is submitted)  2. A letter has submitted to Thahasildar, Kunnathunad and		

	<p>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 Kadambayar.</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>2. A letter has submitted to Thahasildar, Kunnathunad and Kanayannur Thaluk regarding demarcation.</p> <p>De-Silting and water Hayacinth removal work completed</p>	<p>Kanayannur Thaluk regarding demarcation.</p> <p>De-Silting and water Hayacinth removal work completed</p> <p>New proposal submitted for removal of water hyacinth from Kadambayar upstream ecotourism to Kozhichira bund in Ernakulam District</p>		
5.4	<p>Desilting and development</p> <p>It includes clearing and 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.</p>	Irrigation Department	1 year (periodical cleaning -4 months x3)		<p>1. Edachira thodu work, tendered for the removal of water hyacinth</p>	<p>1. Edachira thodu work, tendered for the removal of water hyacinth</p>		

5.5	sheet piling and providing fencing Fencing is provided in Sl.no 5.3	Irrigation Department	1.5years			It can be included in the estimate of construction of Inspection bund (Walk way). Now as a preliminary step Soil investigation estimate is submitted	It can be included in the estimate of construction of Inspection bund (Walk way). Now as a preliminary step Soil investigation estimate is submitted		
5.6	Development of river basin It includes cleaning and removal of water hyacinth from rivers and maintains 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 Kadambrayar	1. Work completed in 2022 by operation vahini.  2. New proposal submitted for the removal of water hyacinth from Kadambrayar.		
	1		<b>15. RECOMMENDATIONS BY KERALA STATE POLLUTION CONTROL BOARD</b>						
			<b>Activities for compliance with Solid Waste Management Rules, 2016; Bio-medical Waste Management Rules, 2016</b>						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% Works completed	Details of works remaining

6.1	Door-to-door collection and transportation of MSW  <b>100% door to door collection</b>  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	Advertisement given	Advertisement given		Actions initiated to procure land.	

				approval. Council not approved the proposal since land value is found higher, than the market value. The proposal cancelled and decided to give advert					
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				iseme nt again					
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	Advertisement given	Advertisement given		Actions initiated to procure land.	

				the propo sal since land value is found higher , than the marke t value. The propo sal cancel led and decide d to give advert iseme nt again					
6.4	Common bio-medical waste treatment facility Proposed Kerala Solid	Health Department		CBWTF started at Ambalamug	C o m	Completed		Comp leted	

	Waste Management Authority			hal, operated by KEIL	p l e t e d				
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							
			<b>7.OTHERASPECTS</b>						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
7.1	Flood plain zone management and E- flow maintaining Flood plain zone management & E-	IrrigationDept				1. Work completed in 2022 by operation vahini.  2. New proposal submitted	1. Work completed in 2022 by operation vahini.		

	<p>flow maintaining cleaning &amp; 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>					<p>for the removal of water hyacinth from Kadambayar</p>	<p>2. New proposal submitted for the removal of water hyacinth from Kadambayar</p>		
7.2	<p>Development of bio diversity parks in banks</p>	<p>Thrikkakkara Municipality</p>	<p>1<sup>st</sup> Phase 2020-21 2<sup>nd</sup> Phase 2021-22</p>						

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

STNCode	Sampling Date	Sampling Time	StnName	TypeWaterBody	NameOfWaterBody	RiverBasin
17	12.05.2023	10:30	Periyar at Eloor	River	Periyar River	
1338	09.05.2023	10:30	Periyar at SDP Aluva	River	Periyar River	
2334	05.05.2023	11:50	Periyar at Pathalam	River	Periyar River	
2335	05.05.2023	10:10	Periyar at Kalamassery	River	Periyar River	
3468	09.05.2023	10:50	Periyar at KWA Aluva	River	Periyar River	
2337	No Sampling		Kadambrayar At Brahmapuram	River	Kadambrayar River	
2338	03.05.2023	10:30	Kadambrayar At Manackakadavu	River	Kadambrayar River	
1573	03.05.2023	11:15	Chithrapuzha At Irumpanam	River	Chithrapuzha River	
1154	09.05.2023	12:45	Chalakudy at Pulikkakadavu	River	Chalakudy River	

Sl. No.	Parameters	Values									
		Station Code						2337	2338	1573	1154
		17	1338	2334	2335	3468					
1	Temperature, °C	28	29	28	27	29	N o S A M P L I N G	29	29	28	
2	Dissolved Oxygen, mg/l	4.8	6	7.1	5.3	7.6		1.5	6.7	6.1	
3	pH	7.3	8.6	7.8	8.2	8.4		7.6	8.9	8.6	
4	Conductivity, µmhos/cm	3525	60	3620	48	45		113	553	142	
5	BOD, mg/l	1.8	1.4	0.5	1	1.4		0.4	2.3	1	
6	Nitrate-N, mg/l	0.16	0	0.11	0	0		0	0	0	
7	Turbidity, NTU	4.8	3.2	4.3	3.5	3.2		8	4.5	2.8	
8	Total Alkalinity, as CaCO <sub>3</sub>	24	20	21	18	14		27	23	15	
9	Chloride, mg/l	980	6	1080	4	4		16	140	27	
10	COD, mg/l	8	5.6	7.2	4.8	4		5.6	8	4.8	
11	TKN, mg/l	0.11	0	0	0	0		0	0	0.15	
12	Ammoniacal-N, mg/l	0	0	0	0	0		0	0	0.1	
13	Total Hardness, as CaCO <sub>3</sub> mg/l	350	18	370	14	11		21	64	40	
14	Calcium, as CaCO <sub>3</sub> mg/l	210	12	220	8	7		17	26	31	
15	Magnesium as CaCO <sub>3</sub> , mg/l	140	6	150	6	4		4	38	9	
16	Sulphate, mg/l	117.5	0	94	0	5		0	30.4	10.7	
17	Sodium, mg/l	593	3.51	628	2.7	2.8		9	80.46	14	
18	Total Dissolved Solids, mg/l	2048	35	2010	27	26		62	320	82	
19	Total Fixed Solids, mg/l	1620	26	1600	20	18		46	250	61	
20	Total Suspended Solids, mg/l	28	14	26	12	10		18	24	16	
21	Phosphate, mg/l	0.1	0.1	0.3	0.1	0.1		0.1	1.9	0.1	
22	Boron, mg/l	0	0.05	0.1	0	0		0.02	0.06	0	
23	Potassium, mg/l	19	1.7	9	1.85	1.59		4.13	5.88	2.07	
24	Fluoride, mg/l	0.3	0.3	0.3	0.2	0.2		0.2	0.3	0.2	
25	Total Coliform, MPN/100 ml	6300	2200	7000	3100	250		6300	7900	310	
26	Feecal Coliform, MPN/100 ml	2200	1300	2400	1300	84		840	4300	100	

27	Feacal Streptococci, MPN/100ml	70	170	120	120	10		120	270	10
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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 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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>		

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&amp;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 &amp; Details of Processing Facilities</u>  Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p>		
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	<p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of flood plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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**ACTION PLAN FOR RIVER PERIYAR, KERALA  
SHORT TERM MEASURES**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the months of January 2022	Progress in the months of February 2022	% works complete d	Details of works remaining
1.A(b)	Augmentation and Revamping of existing STP at near AdwaitaAshramam and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	Dec 2019	Civil work has been tendered. Estimate for electrical work has been prepared but T.S is not yet received. Estimate for Mechanical work has been prepared by Dredger Division. Tender procedures will be started soon.	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.		
2.A(b)	Augmentation and Revamping of existing ETP at Aluva Market and to increase the capacity of ETP so as to treat more sewage generated in the municipality	Aluva Municipality	2021	There is an existing ETP project. DPR of 3 Lakhs rupees has been approved by DPC. Tender procedures in progress ETP project is under consideration. Project has been	As the existing ETP field has become unusable during flood, renovation works are being carried out.		

				move forward to prepare DPR of Rs 3 lakhs. Tender has been called for the work but no one have taken the tender. Directions has been given to accredited agency via letter to prepare estimate including DPR in the Nagarasanjiplan. The estimate is under process.			
3.A(b)	Discharge of sewage from Hotels to the River through drain near Periyar	Aluva Municipality	2020	Health Squad inspection in progress.	Special squad has been formed for inspection. Notices has been given	100%	
4.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain and to collect fine based on polluter pay principle	Aluva Municipality, KSPCB	2020	Inspection in progress. Identified 140 households and 124 establishments discharging waste water to public drain. Outlets of 14 establishments have been closed.	against 16 houses ,24 Institutions, 42Flats ,5 Hospitals and 19 educational institutions. Therefore, As part of theof notices outlets are closed.. Out of 98 institutions, notices have been given to 25 institutions for constructing STP. Perikathod, which is connected to Periyarwhich		

					COMES under Ward 23, falls under KadungallurPanchayat. A letter has been sent to the KadungallurPanchayat 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 the establishment of modern abattoirs, a structural work completed building has been identified. For the preparation of DPR, it has been put up for council approval. Establishment of abattoir will include in this year's project.	For installation of machines ,DPR submitted		
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 inprogress.		

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 37 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 Thoombungal Thodu	Kalamassery Municipality	Sept 2019	Completed	Completed	100%	
10.C(ii)	Installation of plastic shredding unit	Kalamassery Municipality	June 2019	One plant is already installed and functioning.	One plant is already installed and functioning.	100%	
11.A(a)(iv)	Constitution of squads for night surveillance for finding the unauthorized dumping of sewage at NAD wet lands Kalamassery	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.		

				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.	Out of 55 houses found in last month's inspection, 23 houses have complied with the directive		
14.C(ii)	Installation of modern abattoirs including poultry and meat rendering plants.	Kalamassery Municipality, Industries Department (for land allotment)	2021	Industries department has informed that land is not available in the industrial estate. This has	A site has been identified for setting up a modern slaughterhouse. Efforts are being made to convey information regarding this from the municipal council		

				been informed the collector via letter. It has been instructed to report the same to the Government.	to 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	Camera installed on 10 locations. 2 portable (mobile) cameras has installed for identifying waste dumping spot. RsRs 1000/- has been imposed as fine in the month of January. Total amount of Rs.31,560/- have been levied as fine..	10 permanent cameras have been established. Fines are collected from the people by checking the visuals of 2 Movable cameras installed in the waste dumping premises. 36,521 was collected underfines . More time is needed to install more cameras.		

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	The Cameras were installed in the land near HIL & Arattukadavu which was found as Dump sites. But presently those dump sites were cleared without any waste dumping. An amount of Rs.13,020/- were imposed on culprits who dumped wastes during the month of January.	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.		



19.A(a)(i) v)	Periodical inspection in the Industries, Flats, hotels for monitoring of STP,ETP located in Cochin corporation	Kochi Municipal Corporation	Periodical	<p>An amount of Rs. 8,00,000/- were imposed as fine from culprits. Total amount of Rs. 46,02,300/- was collected as fine till date. Under OA147case,it is insrtructed to monitor the wghole stretch of the canal.16 houses and 18 establishments were identified.As a result 11 flats, 4 houses and 3 hotels were closed. Collected Rs31,00,000/ as fine from 6 hotels due to unauthorized discharge.92 new establishments are also identified where notice is issued to 16 establishments and rest of them are yet to issued.</p>	Representative from concerned local body has not attended the meeting		
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20.A(a)	Inventory of sources of pollution through a rapid study/Study for identification of pollution sources at Edapallythodu	Kochi Municipal Corporation	3 months	Survey completed by HI and JHI of KMC. Location of waste disposal in TP canals and Edappallythodu was identified. Closing of outlet exposed to drains of TP canals is taken as a joint work by Engineering and Health wing of KMC. Work mainly focused on four zones. They are Central zone,Edappallyzone,Pachalam zone and Vytilla zone.	Representative from concerned local body has not attended the meeting		
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,	Irrigation department	2 years	4 polluted streams have been identified. The	4 polluted streams have been identified. The Estimate has been submitted for		Detailed estimate submitted

	grasses etc.			Estimate has been submitted for restoration works. Financial sanction was not yet received. Onjithodu soil test conducted. Streams have been included in Operation Vahini.	restoration works. Financial sanction was not yet received. Onjithodu soil test conducted. Streams have been included in Operation Vahini.		to higher authority for FS. FS not obtained.
24.C(iii)	Clearing of weeds, grasses at the river bank in order to ensure the smooth flow of water	Irrigation department	3 years	The cleaning of river tributaries and desilting is jointly implemented by Local self government department and irrigation through Operation Vahini. Once this cleaning and desilting is completed the water table will increase and which in turn reduces the pollution. Measures are being taken to ensure the natural flow of the river. Desilting work in progress. For the remaining work, request have been submitted to RRC along with the DPR. Financial sanction to be	Operation Vahini in association with panchayats is carrying out cleaning and desilting of hand drains. The activities which are a part of Operation Vahini project are in final stage. We have been given an estimate for the rest of the work. If approved, work will be completed. The construction work of surveillance road for monitoring has been put up for approval.		

				received. The DIC has informed to clear off the grasses and weeds which are obstructing the smooth flow of drains in the industrial estate. DIC has reported that they have directed Estate Manager to ensure that the units near Periyar river banks are clearing the grass in their unit premises periodically.			
25.D(a)	Maintaining of Minimum flow in river during lean period and periodical operation of Regulators at River in-order to maintain minimum flow.	Irrigation department	3 years	Shutters are being operated periodically at the Pathalam lock cum regulator to maintain the flow of river	Shutters are being operated periodically at the Pathalam lock cum regulator to maintain the flow of river		
26.A(b)	Common Effluent Treatment Plant at Edayar Industrial Estate	Industries department	2022	For the establishment of CETP a government order has come sanctioning Rs. 37.5 Crore to DIC. KWA is entrusted to	The Government has sanctioned Rs 37.5 crore to the Industries Department for setting up a Common Effluent Treatment Plant. The project is being implemented by KWA. DPR of this has been submitted. Project		

				<p>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>proposals 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>For the construction of internal roads and drainage in Edayar industrial estate, Rs. 6.54 crore has been handed over to PWD. The work</p>	<p>The construction of roads &amp; drains in Industrial Development Area in Edayar was not yet started. A meeting was arranged with P.W.D on 23.01.2023. They have intimated that the work will be started soon.</p>		

				will be starting 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	The maintenance works of Online monitoring station in the downstream side of		

				Pathalam Bund have been completed and is working. Online monitoring station in the upstream side has been installed. Connection work to display board in progress.	PathalamBundhave been completed and is working. Online monitoring station in the upstream side has been installed. Display board work is in progress. Quality of water at upstream is satisfactory.		
33.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Kadungallur Panchayath	2020	Joint inspections were done by Heath Inspector & Asha workers	Establishments were found and issued 8 notices so far.		
34.E	Installation of cameras at the waste dumping spots	Kadungallur Panchayath	2020	6 cameras have been installed near Onjithodu. Total Rs. 25000/- have been levied as fine.	A total fine of Rs.30000/- will be collected against those who were spotted through the surveillance camera but till date they have not paid it.		
35.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotelse tc. who is discharging the sewage to the public drain	Choornikkara Panchayath	2020	Inspection and monitoring is performed regularly to identify the offenders. Issual of notice to those offenders is also being done regularly. 4 flats have been identified and reported to KSPCB..	5 Flats were identified and provided instructions.By concealing the number 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	Choorikkara Panchayath	2020	12 Cameras have been already installed on waste dumping spots. One more camera installation is left. The fund for remaining camera will be arranged through sponsorship.	Project has been postponed ,since more time is required to install more cameras.		
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#### LONG TERM MEASURES

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of November2022	Progress in the month of December 2022	% works completed	Details of works remaining
1.A(b)	Construction of walkway, ring roads etc at the Periyar River bank at industrial belt.	Irrigation department	4 years	Investigation and detailed Estimate Submitted and waiting for FS	Investigation and detailed Estimate Submitted and waiting for FS		FS not obtained for the work
2.C(i)	Fencing of the river banks along the stretches of waste disposal (Edamula stretch)	Cochin Municipal Corporation	1-2 years	ppallyThodu, which is a tributary of Periyar river touches Cochin Corporation Boundary for a small stretch. The other side of this thodu is belonging to LSGs like	Representative from concerned local body has not attended the meeting		



				<p>Kalamassery, Thrikkakkara, Eloor etc. The work of rejuvenation of Edappally Thodu is included under the IURWTS project of Kochi Metro Rail Limited. The progress of the works undertaken by KMRL is reported as follows.</p> <p>a) Applied for land acquisition works for various canal, it's on processing under revenue department.</p> <p>b) As no land acquisition is needed for market canal, work of it will be carried out this year. KIIFB is the funding agency for the work. Tender process for the work is going on.</p>			
3.C(iii)	Beautification of the river stretches (Edamula stretch)	Cochin Municipal Corporation	1-2 years	Beautification work has been included in the KMRL IURWTS project. Due to the prevailing public protest, land acquisition procedure is being	Representative from concerned local body has not attended the meeting		

				delayed. DPR will be prepared by Coastal Shipping Inland Navigation. The work will be commenced as soon as T.S is obtained.			
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**ACTION BY GROUND WATER DEPARTMENT**

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

4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					
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**KERALA STATE POLLUTION CONTROL BOARD**  
**ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR**  
**ANALYSIS REPORT OF RIVER PERIYAR - MAY 2023**  
**Sampling point: VETTUKADAVU**

Sl. No	Parameter	Unit	05.05.2023	25.05.2023
1	Temp	°c	33.4	33.4
2	pH		6.7	6.9
3	Conductivity	µS/cm	4147.00	5119.00
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	2085.0	2085.0
6	Hardness	"	700.0	1100.0
7	D.O.	"	5.3	9.5
8	Calcium	"	200.0	400.0
9	Magnesium	"	48.600	24.300
10	Ammoniacal Nitrogen	"	0.770	2.037
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	44.0	46.0
13	BOD	"	2.0	5.5
14	Sulphate	"	26.430	32.290
15	Nitrates	"	BDL	5.964
16	TC	cfu/100ml	200.0	600.0
17	FC	"	NIL	100.0
18	FS	"	NIL	NIL

\* TURBIDITY METER IS OUT OF ORDER

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

Sl. No	Parameter	Unit	05.05.2023	25.05.2023
1	Temp	°C	33.4	33.3
2	pH		6.6	6.7
3	Conductivity	µS/cm	3786.0	3585.0
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	1985.8	1489.3
6	Hardness	"	700.0	700.0
7	D.O.	"	4.5	6.1
8	Calcium	"	240.0	240.0
9	Magnesium	"	24.3	24.3
10	Ammoniacal Nitrogen	"	1.1	1.1
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	58.0	60.0
13	BOD	"	0.7	3.4
14	Sulphate	"	33.180	14.080
15	Nitrates	"	BDL	2.174
16	TC	cfu/100ml	200.0	2000.0
17	FC	"	NIL	400.0
18	FS	"	NIL	NIL

\* TURBIDITY METER IS OUT OF ORDER

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

Sl. No	Parameter	Unit	05.05.2023	25.05.2023
1	Temp	°C	B	33.3
2	pH		U	6.3
3	Conductivity	µS/cm	N	213.80
4	Turbidity	NTU	D	*
5	Chlorides	mg/L		52.6
6	Hardness	"	O	31.0
7	D.O.	"	P	3.0
8	Calcium	"	E	10.8
9	Magnesium	"	N	0.972
10	Ammoniacal Nitrogen	"		1.189
11	Phosphate	"		BDL
12	Total alkalinity	"		52.0
13	BOD	"		1.0
14	Sulphate	"		2.102
15	Nitrates	"		0.540
16	TC	cfu/100ml		400.0
17	FC	"		NIL
18	FS	"		NIL

\* TURBIDITY METER IS OUT OF ORDER

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

Sl. No	Parameter	Unit	05.05.2023	25.05.2023
1	Temp	°c	33.3	33.4
2	pH		6.9	6.6
3	Conductivity	µS/cm	106.40	163.00
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	19.9	41.7
6	Hardness	"	15.0	26.0
7	D.O.	"	6.8	4.7
8	Calcium	"	5.2	7.2
9	Magnesium	"	0.486	1.944
10	Ammoniacal Nitrogen	"	0.011	0.603
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	42.0	36.0
13	BOD	"	0.7	0.6
14	Sulphate	"	1.465	2.229
15	Nitrates	"	BDL	0.725
16	TC	cfu/100ml	400.0	400.0
17	FC	"	NIL	NIL
18	FS	"	NIL	NIL

\* TURBIDITY METER IS OUT OF ORDER

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

Sl. No	Parameter	Unit	05.05.2023	25.05.2023
1	Temp	°C	33.4	33.4
2	pH		6.9	6.7
3	Conductivity	µS/cm	88.90	65.60
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	25.8	27.8
6	Hardness	"	16.0	12.0
7	D.O.	"	5.1	5.6
8	Calcium	"	5.6	4.4
9	Magnesium	"	0.486	0.243
10	Ammoniacal Nitrogen	"	0.067	0.006
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	48.0	42.0
13	BOD	"	0.6	1.6
14	Sulphate	"	3.248	0.955
15	Nitrates	"	BDL	0.236
16	TC	cfu/100ml	1200.0	1600.0
17	FC	"	400.0	300.0
18	FS	"	NIL	NIL

\* TURBIDITY METER IS OUT OF ORDER



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

Sl. No	Parameter	Unit	05.05.2023	25.05.2023
1	Temp	°c	33.2	33.4
2	pH		7.0	6.6
3	Conductivity	µS/cm	78.91	63.84
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	21.8	26.8
6	Hardness	"	13.0	12.0
7	D.O.	"	5.8	6.3
8	Calcium	"	4.8	4.4
9	Magnesium	"	0.243	0.243
10	Ammoniacal Nitrogen	"	0.061	BDL
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	48.0	32.0
13	BOD	"	1.9	1.5
14	Sulphate	"	1.210	1.210
15	Nitrates	"	BDL	0.120
16	TC	cfu/100ml	600.0	2200.0
17	FC	"	100.0	600.0
18	FS	"	NIL	NIL

\* TURBIDITY METER IS OUT OF ORDER

**National Mission for Clean Ganga**

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

**RIVER KARUVANNUR, THRISSUR**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>		

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&amp;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 &amp; 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 March 2023	Progress in the month Of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
<b>Thirukuzhy thodu</b>								
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
<b>Thodu near Kadalassery bridge</b>								
A(b)	Identification of pollution sources and surveillance to restrict dumping of wastes	Vallachira, Pudukad & Nenmanikkara Panchayats	1 month	Ongoing	Ongoing	Ongoing	100	0
E	Cleaning and desilting	Irrigation Department and Vallachira Panchayat	4months	nil	nil	nil	100	0

<b>Neerolithodu</b>									
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>					
<b>Painkilikayal thodu</b>									
E	Cleaning and desilting	Irrigation Department and Vallachira Panchayat	4months	<p>. തൃശ്ശൂർ കെ എൽ ഡി സി വിഭാഗത്തിന് റീബിൽഡ് കേരള എന്ന പദ്ധതിയിൽ ഉൾപ്പെടുത്തി പൈകിളികായൽത്തോടിന്റെ ഡിസിൽറ്റേഷൻ പ്രവൃത്തിക്ക് ഭരണാനുമതി ലഭ്യമായിട്ടുള്ളതും ആയതിനാൽ 2022- 23 സാമ്പത്തിക വർഷത്തെ എൻ ജി ടി ആക്ഷൻ പ്ലാനിൽ പൈകിളികായൽത്തോടിന്റെ ഡിസിൽറ്റേഷൻ പ്രവൃത്തി നിലവിൽ ഉൾപ്പെടുത്തേണ്ട സാഹചര്യം ഇല്ലായെന്ന് ബന്ധപ്പെട്ട എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ, എം.ഐ.ഡിവിഷൻ ഇരിങ്ങാലക്കുട റിപ്പോർട്ട് ചെയ്തിട്ടുണ്ട്.</p>					
<b>Kadathodu</b>									
A(b)	Identification of pollution sources and surveillance to restrict the dumping of wastes	Vallachira & Nenmanikkara Panchayats	1 month	Ongoing	Ongoing	Not included in the Nenmanikkara Gramma panch ayath	10 0	0	
E	Cleaning and desilting	Irrigation	4months	<p>പ്രസ്തുത പ്രവൃത്തിയ്ക്ക് 20/03/2023 തീയതിയിലെ ജലസേചനവും ഭരണവും, ചീഫ് എഞ്ചിനീയറുടെ ഉത്തരവ് നം. AS/59D/22/25940</p>					

		Department		<p>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>				
<b>Main Stream –along Karuvannur</b>								
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 un authorized outlets leading to the river.	Inspection is going on. There is no un authorized outlets leading to the river.	Inspection is going on. There is no un authorized 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 unauthoriz ed outlets in the drain leading to the river.	There is no unauthoriz ed outlets in the drain leading to the river	There is no unauthoriz ed outlets in the drain leading to the river.		
E	Boards to display slogans against littering waste in various Places other IEC Activities Like posters, notices and classes	Irinjalakkuda Municipality	6 months	Installed boards along Karuvannur river side against littering waste and animal bath. Board installation process is going on in various places of municipal area. We used tp conduct surveys, distributed	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	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.	surveys, distributed notices to all the houses near to the riverside.	notices to all the houses near to the riverside.		
<b>Monitoring</b>								
A(a)(iv)	River water quality monitoring	KSPCB	Ongoing; monthly frequency	Monitoring is going on November monthly basis	Monitoring is going on December monthly basis	Monitoring is going on monthly basis		
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Going on November monthly basis.	Going on December monthly basis.	Going on monthly basis		
<b>Long Term Plan</b>								
A(b)	Sewage treatment facilities to all house holds	Vallachira Grama Panachayat	1 yr	Nil	Nil	nil	100	0
A(b)	Construction of FSTP and STP	Irinjalakkuda Municipality	2 years	Constructio n of STP plant at General Hospital, Irinjalakuda	Constructi on of STP plant at General Hospital, Irinjalakud	Constructio n of STP plant at General Hospital, Irinjalakuda		

				- DPR approved by Suchitwa Mission	a - DPR approved by Suchitwa Mission	- DPR approved by Suchitwa Mission		
C(ii)	Setting up of a modern crematorium at Mandarakkadavu, Arattupuzha	Vallachira Grama Panachayat	2 years	No Fund	No fund	No fund		100
C(ii)	Solid waste treatment facility	Vallachira Grama Panachayat	2 years		100%		Mini MCF	
C(ii)	Construction of Windrow composting plant	Irinjalakkuda Municipality	2 years	Windrow Compost plant having 4 ton capacity. Construction has been already completed. Presently it is functioning well and producing Bio manure for sale.	Windrow Compost plant having 4 ton capacity. Construction has been already completed. Presently it is functioning well and producing Bio manure for sale.	Windrow Compost plant having 4 ton capacity. Construction has been already completed. Presently it is functioning well and producing Bio manure for sale.		
E	Rejuvenation of Kanathodu	Irrigation	1 year	ടി പ്രവൃത്തിയ്ക്കായി 10.00 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് Price 3.0 ൽ തയ്യാറാക്കി പ്രൊപ്പോസൽ സാമ്പത്തികാനുമതി ലഭിക്കുന്നതിനായി				

		Department		2022- 23 സാമ്പത്തിക വർഷത്തെ പ്രയോജിനി ലിസ്റ്റിൽ ഉൾപ്പെടുത്തി ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിന് സമർപ്പിച്ചിട്ടുണ്ട് .				
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 March 2023	Progress in the month of April 2023	Progress in the month of May 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		Awareness class on groundwater resource conservation and management conducted for the elected representatives officials, public and students in Vellangallur Block	Chennamkulam pond at Kodungallur municipality selected for rejuvenation .	-	-

**ACTION PLAN BY GRAMAPANCHAYATH**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
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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 SANCTIONED, BUT NOT PUBLIC PLACE	TS SANCTIONED, BUT NOT PUBLIC PLACE	nil	25	75
C	Side protection of Manalippuzha with organic materials available locally	MGNREGS	31.03.2020	Nil	Nil	nil	25	75
C	Side Protection of Manalippuzha with Bamboo plants	MGNREGS	31.03.2020	Nil	Nil	nil	100	0
C	Deepening & Protecting Muttikkal Thodu by Spreading Geo Textiles	MGNREGS	31.03.2020	600 m	600 m	nil	100	0
C	Cluster 2-Kurumaly puzha sub river bed -Project document preparation	Puthukkad Panchayath	1 year	Documentation completed	Documentation completed		100	Documentation completed

C	Manalippuzha River Protection-Jala Raksha, Jeeva Raksha , Survey and Tree Plantation	Nenmenikkara Grama Panchayat	31.03.2020	3.5 km survey out of 7 k.m have been completed and survey posts have been fixed .	3.5 km survey out of 7 k.m. have been completed and survey posts have been fixed.	3.5 km survey out of 7 k.m. have been completed & survey posts have been fixed.	50 %	3.5 k.m. survey yet to be completed
C	Manalipuzha River protection	MGNREGS	31.03.2020	3.5 km survey out of 7 k.m have	3.5 km survey out of 7 k.m have been completed and	3.5 km survey out of 7 k.m. have been completed & survey posts have been fixed		As survey did not complete

				been completed and survey posts have been fixed.	survey posts have been fixed.			
A(b)	Protection and reconstruction and protection of Paliyekkara Kayalathod	MGNREGS	31.03.2020	COMPLETED	COMPLETED	Completed	100 %	COMPLETED
A(b)	Reconstruction and protection of Paliyekkara Karama Thodu	MGNREGS	31.03.2020	COMPLETED	COMPLETED	Completed	100 %	COMPLETED

KARUVANUR

Date of sampling

08.05.2023

SL. NO	PARAMETER	UNIT	KT	MRK	KND	MDK	THR	KRV
1	PH		7.68	7.02	8.28	7.63	7.76	7.58
2	EC	μ/cm	58.92	62.6	115.2	52.97	52.13	55.02
3	BOD	mg/L	2.29	1.23	2.8	0.16	1.07	0.96
4	DO	mg/L	4.96	5.23	5.12	3.73	7.52	5.49
5	COD	mg/L	24	4	4	12	8	4
6	TC	CFU/100 ml	900	50	100	150	100	800
7	FC	CFU/100 ml	100	NIL	50	NIL	NIL	450
8	FSC	CFU/100 ml	NIL	NIL	NIL	NIL	NIL	NIL

KT - KANAKKAN KADAVU, KARUVANNUR

MRK - NEEROLI THODU

KND - KANATHODU, KARUVANNUR

MDK - MUTTIKKAL DAM, KARUVANNUR

THR- 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**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>		

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&amp;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 &amp; 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 March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works complete d	Details of works remaining
<b>WADAKKENCHERY RIVER -SHORT TERM MEASURES</b>								
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	Installat ion 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
<b>Monitoring</b>								
A(a)(iv)	River water quality monitoring	KSPCB	Monthly Monitoring in progress	Analysis report for the month of march enclosed herewith	Analysis report for the month of April enclosed herewith	Analysis report for the month of May 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
<b>Long Term Plan</b>								
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>on NGT Ord ers” എന്ന ശീർ ഷക ത്തി ൽ ഉൾ പ്പെ ട്ടി ക്ക ാ ള മു ന് ന ാ ലി ന് ക ൾ കു ടി 17 - 0 2 - 20 23 ന് ഇ ന് ദ ന് സ ന്ദ ർ 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 <sup>3</sup> 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.			
<b>Short term plan (Kecheri river)</b>								
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
<b>Long Term Plan (Kecheri river)</b>								
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 March 2023	Progress in the month of April 2023	Progress in the month of May 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 March 2023	Progress in the month of April 2023	Progress in the month of May2023	% 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					

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April2023	Progress in the month of May2023	% 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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KECHERI RIVER				
Date of sampling -18.05.2023				
SL. NO	PARAMETER	UNIT	VAD1	VAD2
1	pH	-	7.89	
2	Electrical Conductivity	µs/cm	285.1	
3	BOD	mg/L	1.06	
4	DO	mg/L	5.33	
5	COD	mg/L	8	
6	TC	CFU/100ml	400	
7	F C	CFU/100ml	150	
8	FSC	CFU/100ml	NIL	
VAD1 - WADAKKANCHERY PUZHA (WADAKKANCHERY BRIDGE), KECHERY				
VAD2 - WADAKKANCHERY PUZHA(CHALIPPADAM ROAD), KECHERY				

**VAD2- Samples Not Collected Because The Unavailability Of Water**



**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**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>		

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&amp;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 &amp; 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 March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works complete d	Details of works remaining
<b>WADAKKENCHERY RIVER -SHORT TERM MEASURES</b>								
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	Installat ion 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
<b>Monitoring</b>								
A(a)(iv)	River water quality monitoring	KSPCB	Monthly Monitoring in progress	Analysis report for the month of march enclosed herewith	Analysis report for the month of April enclosed herewith	Analysis report for the month of May 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
<b>Long Term Plan</b>								
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 ചിപ് എ ഞ്ചിന ിയർ ക്ക് അയ ച്ചിട്ടു ണ്ട്. കൂടാ തെ ടി പ്രവൃ ത്തി “Res tori ng poll uted stre tche s of river s base</p>		
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						<p>d on NGT Ord ers” എന്ന ശീർ ഷക ത്തി ൽ ഉൾ പ്പെ ട്ടി ക്ക ാ ള മു ന് ന ാ ലി ന് ക െ ക ു 17 - 0 2 - 20 23 ന് ഇ ന് ദ ന് സ ഷ ച 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 <sup>3</sup> 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.			
<b>Short term plan (Kecheri river)</b>								
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
<b>Long Term Plan (Kecheri river)</b>								
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 March 2023	Progress in the month of April 2023	Progress in the month of May 2023	% works complete	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 March 2023	Progress in the month of April 2023	Progress in the month of May2023	% 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					

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April2023	Progress in the month of May2023	% 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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KECHERI RIVER				
Date of sampling -18.05.2023				
SL. NO	PARAMETER	UNIT	VAD1	VAD2
1	pH	-	7.89	
2	Electrical Conductivity	µs/cm	285.1	
3	BOD	mg/L	1.06	
4	DO	mg/L	5.33	
5	COD	mg/L	8	
6	TC	CFU/100ml	400	
7	F C	CFU/100ml	150	
8	FSC	CFU/100ml	NIL	
VAD1 - WADAKKANCHERY PUZHA (WADAKKANCHERY BRIDGE), KECHERY				
VAD2 - WADAKKANCHERY PUZHA(CHALIPPADAM ROAD), KECHERY				

**VAD2- Samples Not Collected Because The Unavailability Of Water**





**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 – MAY 2023**

<b>S. No</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"> <li>• Specifying accountability of nodal authorities not below the Secretary level</li> <li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li> </ul>	Applicable at State level	Not Applicable
	<ul style="list-style-type: none"> <li>• Monitoring at State level must take place</li> </ul>	Applicable at State level	Not Applicable
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"> <li>• Secretary, Ministry of Jal Shakti</li> <li>• Member Secretary, CPCB</li> </ul>	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&amp;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 &amp; 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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<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 by Irrigation Department and submitted for approval of State Government</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 by Irrigation Department and submitted for approval of State Government</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 BHARATHAPUZHA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of April 2023	Progress in the month of May 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 April 2023	Water quality monitoring in Bharathapuzha at Pattambi and two additional points were completed until May 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 MAY 2023)**

Nhangatiri Temple ( U/S of NWMP-2)

<b>Station Name</b>		RIVER BHARATHAPUZHA AT PATTAMBI (NWMP-2)									
<b>Type of Water body</b>		RIVER									
<b>Completed by</b>		DO, PALAKKAD									
<b>Agency</b>		Kerala State Pollution Control Board									
1	Station Code	2	3	3	2						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	5/4/2023									
		1	1	:	1	5					
3	Weather	Cloudy			Clear ✓			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm ✓			>100 cm		Flood	
5	Color & Intensity	Clear ✓			Turbid			Green		Brown	
		1 = Light			2 = Moderate ✓			3 = High			
6	Odour	None ✓			Fishy			H <sub>2</sub> 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	11m <sup>3</sup> /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	34
2	Dissolved Oxygen, mg/l	7.93
3	pH	8.21
4	Conductivity, µmhos/cm	225.4
5	BOD, mg/l	1.53
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	28.99
11	COD, mg/l	5.9
12	TKN, mg/l	0.004
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	80
15	Calcium as CaCO <sub>3</sub> , mg/l	54
16	Magnesium as CaCO <sub>3</sub> , mg/l	26
17	Sulphate, mg/l	0.8
18	Calcium (Ca <sup>2+</sup> ), mg/l	21.6
19	Magnesium (Mg <sup>2+</sup> ), mg/l	6.31
20	Sodium, mg/l	15
21	Total Dissolved Solids, mg/l	137
22	Total Fixed Solids, mg/l	89
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.03
25	Boron, mg/l	BDL
26	Potassium, mg/l	3
27	Fluoride, mg/l	0.261
28	Total Coliform, MPN/100 ml	600
29	Fecal Coliform, MPN/100 ml	300
30	Fecal Streptococcus, MPN/100 ml	60
31	% SODIUM	28
32	SAR	0.73



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

Veliamkallu regulator ( D/S of NWMP-2)

<b>Station Name</b>		BHARATHAPUZHA AT PATTAMBI									
<b>Type of Water body</b>		RIVER									
<b>Completed by</b>		DO, PALAKKAD									
<b>Agency</b>		Kerala State Pollution Control Board									
1	Station Code	2	3	3	2						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	5/4/2023									
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 <sub>2</sub> 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	220.8 m <sup>3</sup> /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	34
2	Dissolved Oxygen, mg/l	6.66
3	pH	7.91
4	Conductivity, µmhos/cm	279
5	BOD, mg/l	1.6
6	Nitrate-N, mg/l	0.7
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	92
10	Chloride, mg/l	26.99
11	COD, mg/l	5.3
12	TKN, mg/l	0.003
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	95
15	Calcium as CaCO <sub>3</sub> , mg/l	70
16	Magnesium as CaCO <sub>3</sub> , mg/l	25
17	Sulphate, mg/l	9.2
18	Calcium (Ca <sup>2+</sup> ), mg/l	28
19	Magnesium (Mg <sup>2+</sup> ), mg/l	6.07
20	Sodium, mg/l	20
21	Total Dissolved Solids, mg/l	160
22	Total Fixed Solids, mg/l	105
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.026
25	Boron, mg/l	BDL
26	Potassium, mg/l	5.1
27	Fluoride, mg/l	0.026
28	Total Coliform, MPN/100 ml	300
29	Fecal Coliform, MPN/100 ml	200
30	Fecal Streptococcus, MPN/100 ml	40
31	% SODIUM	29.98
32	SAR	0.89

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

<b>Station Name</b>		BHARATHAPUZHA AT PATTAMBI									
<b>Type of Water body</b>		RIVER									
<b>Completed by</b>		DO, PALAKAKD									
<b>Agency</b>		Kerala State Pollution Control Board									
1	Station Code	2	3	3	2						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	5/4/2023									
		1	1	:	0	0					
3	Weather	Cloudy			Clear ✓			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm ✓		Flood	
5	Color & Intensity	Clear ✓			Turbid			Green		Brown	
		1 = Light			2 = Moderate ✓			3 = High			
6	Odour	None ✓			Fishy			H <sub>2</sub> 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	17.15 m <sup>3</sup> /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	34
2	Dissolved Oxygen, mg/l	6.86
3	pH	7.98
4	Conductivity, µmhos/cm	251
5	BOD, mg/l	2.96
6	Nitrate-N, mg/l	0.103
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO <sub>3</sub> mg/l	BDL
9	Total Alkalinity, as CaCO <sub>3</sub> mg/l	78
10	Chloride, mg/l	30
11	COD, mg/l	8.71
12	TKN, mg/l	0.008
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO <sub>3</sub> mg/l	85
15	Calcium, as CaCO <sub>3</sub> mg/l	56
16	Magnesium as CaCO <sub>3</sub> , mg/l	29
17	Sulphate, mg/l	7.5
18	Calcium (Ca <sup>2+</sup> ), mg/l	22.4
19	Magnesium (mg <sup>2+</sup> ), mg/l	7.04
20	Sodium, mg/l	18.5
21	Total Dissolved Solids, mg/l	139
22	Total Fixed Solids, mg/l	95
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.11
25	Boron, mg/l	BDL
26	Potassium, mg/l	5.4
27	Fluoride, mg/l	0.193
28	Total Coliform, MPN/100 ml	400
29	Fecal Coliform, MPN/100 ml	200
30	Fecal streptococci , MPN/100 ml	20
31	% Sodium	30.43
32	SAR	0.87

**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- MAY 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"> <li>• Specifying accountability of nodal authorities not below the Secretary level</li> <li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li> </ul>	Applicable at State level	Not Applicable
	<ul style="list-style-type: none"> <li>• Monitoring at State level must take place</li> </ul>	Applicable at State level	Not Applicable
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"> <li>• Secretary, Ministry of Jal Shakti</li> <li>• Member Secretary, CPCB</li> </ul>	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&amp;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 &amp; 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 April 2023	Progress in the month May 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&Ranganathapuramwere	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&Chemmanur are proposed in the DPR	75%	25 %
D	Issues relating to Eflow, maintaining minimum environmental flow of river(by having watershed management provisions)	Irrigation department	2020 - 21	DPR prepared for comprehensive solution	DPR prepared for comprehensive solution	Implementation not started	Full implementation remaining
E	Information Education and Communication (IEC)	Pudur Grama Panchayath	2019 -20	Awareness programs conducted	Implemented	Implemented	Implemented
A(a)	Monitoring of river water quality by sampling	KSPCB	2019 -20	Water quality monitoring in Bhavani at Elachivazhi and three additional points were completed until April2023	Water quality monitoring in Bhavani at Elachivazhi and three additional points were completed untilMay 2023	Implemented. Will continue up to the full implementation of the action plan.	Implemented.

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

Cheerakuzhi (U/S of NWMP-6)

<b>Station Name</b>		RIVER BHAVANI AT ELACHIVAZHI									
<b>Type of Water body</b>		RIVER									
<b>Completed by</b>		DO, PALAKKAD									
<b>Agency</b>		Kerala State Pollution Control Board									
1	Station Code	1	2	0	8						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	5/5/2023									
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 <sub>2</sub> 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	06.02 m <sup>3</sup> /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	6.6
3	pH	7.9
4	Conductivity, µmhos/cm	144
5	BOD, mg/l	1.26
6	Nitrate-N, mg/l	0.046
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	50
10	Chloride, mg/l	15.99
11	COD, mg/l	5.2
12	TKN, mg/l	0.003
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	55
15	Calcium as CaCO <sub>3</sub> , mg/l	48
16	Magnesium as CaCO <sub>3</sub> , mg/l	7
17	Sulphate, mg/l	1.3
18	Calcium (Ca <sup>2+</sup> ), mg/l	19.2
19	Magnesium (Mg <sup>2+</sup> ), mg/l	1.701
20	Sodium, mg/l	8
21	Total Dissolved Solids, mg/l	61
22	Total Fixed Solids, mg/l	40
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.077
25	Boron, mg/l	BDL
26	Potassium, mg/l	3.5
27	Fluoride, mg/l	0.323
28	Total Coliform, MPN/100 ml	400
29	Fecal Coliform, MPN/100 ml	200
30	Fecal Streptococcus, MPN/100 ml	30
31	% SODIUM	22.62
32	SAR	0.47

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

Chalatur Uru (U/S of NWMP-6)

<b>Station Name</b>		RIVER BHAVANI AT ELACHIVAZHI									
<b>Type of Water body</b>		RIVER									
<b>Completed by</b>		DO, PALAKKAD									
<b>Agency</b>		Kerala State Pollution Control Board									
1	Station Code	1	2	0	8						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	5/5/2023									
3	Weather	Cloudy			Clear <input checked="" type="checkbox"/>			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm <input checked="" type="checkbox"/>			>100 cm		Flood	
5	Color & Intensity	Clear <input checked="" type="checkbox"/>			Turbid			Green		Brown	
		1 = Light <input checked="" type="checkbox"/>			2 = Moderate			3 = High			
6	Odour	None <input checked="" type="checkbox"/>			Fishy			H <sub>2</sub> 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	9.45m <sup>3</sup> /s									
12	Major polluting source	Industrial effluent			MSW		PW		None <input checked="" type="checkbox"/>		Other
13	Uses of water in downstream	Irrigation <input checked="" type="checkbox"/>			Drinking water source <input checked="" type="checkbox"/>			Fishing		Domestic <input checked="" type="checkbox"/>	
		Organized water source			Cultivation		Bathing Ghat		Others		

Sl.No	Determinants	Values
1	Temperature, 0C	29
2	Dissolved Oxygen, mg/l	7.8
3	pH	7.91
4	Conductivity, µmhos/cm	146.6
5	BOD, mg/l	2
6	Nitrate-N, mg/l	0.07
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	64
10	Chloride, mg/l	9.99
11	COD, mg/l	5.9
12	TKN, mg/l	0.004
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	59
15	Calcium as CaCO <sub>3</sub> , mg/l	36
16	Magnesium as CaCO <sub>3</sub> , mg/l	23
17	Sulphate, mg/l	2.11
18	Calcium (Ca <sup>2+</sup> ), mg/l	14.4
19	Magnesium (Mg <sup>2+</sup> ), mg/l	5.589
20	Sodium, mg/l	7
21	Total Dissolved Solids, mg/l	94
22	Total Fixed Solids, mg/l	62
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.14
25	Boron, mg/l	BDL
26	Potassium, mg/l	3
27	Fluoride, mg/l	0.236
28	Total Coliform, MPN/100 ml	500
29	Fecal Coliform, MPN/100 ml	300
30	Fecal Streptococcus, MPN/100 ml	30
31	% SODIUM	19.49
32	SAR	0.4

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

Karathur (D/S of NWMP-6)

<b>Station Name</b>		RIVER BHAVANI AT ELACHIVAZHI										
<b>Type of Water body</b>		RIVER										
<b>Completed by</b>		DO, PALAKKAD										
<b>Agency</b>		Kerala State Pollution Control Board										
1	Station Code	1	2	0	8							
2	Date and time of sample taken (DD/MM/YY, HH/MM)	5/5/2023										
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 <sub>2</sub> 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"/>		
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing		None <input checked="" type="checkbox"/>		
11	Flow rate	21 m <sup>3</sup> /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	29
2	Dissolved Oxygen, mg/l	6.8
3	pH	8.09
4	Conductivity, µmhos/cm	190
5	BOD, mg/l	1.26
6	Nitrate-N, mg/l	0.055
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	79
10	Chloride, mg/l	13.99
11	COD, mg/l	5.3
12	TKN, mg/l	0.002
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	70
15	Calcium as CaCO <sub>3</sub> , mg/l	42
16	Magnesium as CaCO <sub>3</sub> , mg/l	28
17	Sulphate, mg/l	2.74
18	Calcium (Ca <sup>2+</sup> ), mg/l	16.8
19	Magnesium (Mg <sup>2+</sup> ), mg/l	6.804
20	Sodium, mg/l	11
21	Total Dissolved Solids, mg/l	126
22	Total Fixed Solids, mg/l	85
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.07
25	Boron, mg/l	BDL
26	Potassium, mg/l	6
27	Fluoride, mg/l	0.324
28	Total Coliform, MPN/100 ml	200
29	Fecal Coliform, MPN/100 ml	100
30	Fecal Streptococcus, MPN/100 ml	20
31	% SODIUM	23.53
32	SAR	0.57

<b>Station Name</b>		RIVER BHAVANI AT ELACHIVAZHI									
<b>Type of Water body</b>		RIVER									
<b>Completed by</b>		DO, PALAKKAD									
<b>Agency</b>		Kerala State Pollution Control Board									
1	Station Code	1	2	0	8						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	5/5/2023									
		0	2	:	2	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 <sub>2</sub> 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	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	12.8m <sup>3</sup> /s									
12	Major polluting source	Industrial effluent			MSW	PW	None <input checked="" type="checkbox"/>		Other		
13	Uses of water in downstream	Irrigation <input checked="" type="checkbox"/>			Drinking water source <input checked="" type="checkbox"/>			Fishing	Domestic		
		Organized water source			Cultivation	Bathing Ghat		Others			

Sl.No	Determinant	Value
1	Temperature, °C	29
2	Dissolved Oxygen, mg/l	7.06
3	pH	8.05
4	Conductivity, µmhos/cm	221
5	BOD, mg/l	1.4
6	Nitrate-N, mg/l	0.049
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO <sub>3</sub> mg/l	BDL
9	Total Alkalinity, as CaCO <sub>3</sub> mg/l	85
10	Chloride, mg/l	17
11	COD, mg/l	4
12	TKN, mg/l	0.003
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO <sub>3</sub> mg/l	87
15	Calcium, as CaCO <sub>3</sub> mg/l	66
16	Magnesium as CaCO <sub>3</sub> , mg/l	21
17	Sulphate, mg/l	6
18	Calcium (Ca <sup>2+</sup> ), mg/l	26.4
19	Magnesium (Mg <sup>2+</sup> ), mg/l	5.1
20	Sodium, mg/l	11.3
21	Total Dissolved Solids, mg/l	133
22	Total Fixed Solids, mg/l	90
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.102
25	Boron, mg/l	BDL
26	Potassium, mg/l	4.4
27	Fluoride, mg/l	0.175
28	Total Coliform, MPN/100 ml	300
29	Fecal Coliform, MPN/100 ml	100
30	Fecal streptococci, MPN/100 ml	20
31	% Sodium	20.96
32	SAR	0.53

**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**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by state/UT-Compliance status</b>
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"> <li>• Specifying accountability of nodal authorities not below the Secretary level</li> <li>• Chief Secretaries may have an accountable person attached in their office for this purpose.</li> </ul>		
	<ul style="list-style-type: none"> <li>• Monitoring at State level must take place</li> </ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"> <li>• Secretary, Ministry of Jal Shakti</li> <li>• Member Secretary, CPCB</li> </ul>		

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&amp;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 &amp; 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 May 12 ,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 &amp; drainage of cleaning doing.</p> <p>(ii) Malappuram municipality – 30 KLD. Consent application is submitted for the revamping activities, now the application has been resubmitted . 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 May 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</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>.Municipality has one MRF and 3 MCF's. Dry Waste Collecting through HKS and stored in these facilities from where recyclable materials are handed over to authorised recyclers and rejects, to KEIL through Clean Kerala Company.</p> <p>(vii) NA</p> <p>(viii) Complying</p> <p>(ix) NA</p> <p>(x) Complying</p> <p>(xi) Complying</p> <p>(xii) NA</p> <p>(xiii) NA</p>
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1.6	The discharge of waste water from the surrounding houses to the Valiyathodu - Blocking of discharge of liquid waste	Malappuram Municipality	completed	completed	completed	completed	completed	completed
1.7	Identification of illegal outlets into storm water drains and fine imposed on such units.	Malappuram Municipality	ongoing	completed	completed	completed	completed	completed
1.8	Biodegradable waste  Bio gas plants- 186  Bio bins – 908  Bucket compost – 1445  Tumburmuzhi Aerobic bins - 4  Submitted proposal for 8000 ring compost systems	Malappuram Municipality	In progress	In progress	In progress	In progress	completed	Completed
1.9	Non biodegradable waste  MCF &  Plastic shredding and Bailing  Echo Kiosk	Malappuram Municipality	Completed   March 2020	Completed   In progress	Completed   In progress	Completed   40 mini MCF project submitted to DPC	Completed   DPR on progressing	Completed   Waiting for approval

1.10	Identification and monitoring of illegal activities/ CC TV Network installation	Malappuram Municipality	Ongoing	In progress	In progress	In progress	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 March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
2.1	River water quality Monitoring- Thirurangadi, Hajaripally National Water Quality Programme(NWMP)	KSPCB	Ongoing; Monthly frequency	100%				

2.2	River water quality Monitoring - Thirurangadi, Kooriyad, Manikut, Hajiyarpally, Anakkayam, Oravambrum - State Water monitoring programme (SWMP)	KSPCB	Ongoing; Seasonal -  Pre - monsoon, monsoon, post - monsoon	100%				
2.3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc. in Malappuram 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 March 2023	Progress in the month of April 2023	Progress in the month of May2023	% 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.)			<b>Ground Water Department</b>				
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		<b>No action included in the approved action plan to be performed by Ground Water Department</b>				
3.4	For regulating use of ground water for irrigation purpose,	Ground water Department		<b>No action included in the approved action plan to be performed by Ground Water Department</b>				

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**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by state/UT-Compliance status</b>
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"> <li>• Specifying accountability of nodal authorities not below the Secretary level</li> <li>• Chief Secretaries may have an accountable person attached in their office for this purpose.</li> </ul>		
	<ul style="list-style-type: none"> <li>• Monitoring at State level must take place</li> </ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"> <li>• Secretary, Ministry of Jal Shakti</li> <li>• Member Secretary,CPCB</li> </ul>		



6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <ul style="list-style-type: none"> <li>(i) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</li> <li>(ii) <u>Status of STPs, I&amp;D and sewerage networks</u> Details of Existing Infra structure, Gap Analysis, Proposed along with completion timeline</li> </ul>	<p>Last updated report submitted was on ,2023 May 12</p> <p>(i)Identified 17 drains out of which 9 were additionally identified on 11.07.2019</p> <p>(ii)<u>Tirur Fish Market STP</u>– 45 KLD- Not working condition. . Accordingly conducted site inspection by Board on 19.10.2022 to evaluate progress, No progress found. Since about 3 years repeated directions are being issued for time bound renovation of fish market STP.</p> <p>(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 trail run.</p> <p>iii)NIL</p> <p>(iv)De centralised treatment facilities, Disposal using sanitary landfills, composting operations, MRF, MCF etc. Slaughter house- completed civil work. Electrical installation works started.</p> <p>(v)Attached as Annexure II-Analysis report during the</p>
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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 &amp; 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 May 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

<b>1. IRRIGATION DEPARTMENT</b>								
<b>1.</b>								
No.	Activity	Implementing agency	Time line	Progress during month of march 2023	Progress during month of April 2023	Progress during month of May 2023	% 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	AS Accorded	. TS Accorded. Work Tendered	Tender process.	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 0% and mechanical works 10%	Civil work 5% Mechanical works 90%	Investigation work on going	8%	Ring bund formation, Bailing out of water, Apron Extension, Cut off wall formation. Erection of shutters and other mechanical parts.



2.5	Fencing on Bridgeside  Thalakkadathur Bridge	Tirur Municipality	December 2020	completed	completed	completed	100	NIL
2.6	Installation of CCTV Camera near the river Bank Thalakkadathur Bridge	Tirur Municipality	May 2020	Completed	completed	completed	100	NIL
2.7	Planting of Bamboo seedlings on the river bank (Thazhepalam)	Tirur Municipality	June 2020	Completed	completed	completed	100	NIL
2.8	Renovation of Effluent treatment plant at fish Market. AMC Granted ETP with Aerobic System	Tirur Municipality	June 2019	Technical sanction has not been received from suchitwa mission	No progress. As State suchitwa mission does not give sanction for new DPR of the STP plant. Hence join meeting is proposed for preparing the technical report of the status of existing STP units with IRTC members.	AMC again directly awarded the wok 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.	Renovation work under process	(See minutes)
2.9	Setting up of STP at Private Bus stand	Tirur Municipality	June 2020	In progress. Trail run will be conducted 31 <sup>th</sup> of this month	In progress. Trial run will be conducted on May	Final installation of machinery	99.9%	Preparing for trail run. (See minutes)

					15 of this month.			
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
<b>3.KERALA STATE POLLUTION CONTROL BOARD</b>								

No.	Activity	Implementing agency	Time line	Progress in the month of march 2023	Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
3.1	River water quality Monitoring- Thalakadathur National Water Quality Programme(NWMP)	KSPCB	Ongoing; Monthly frequency					Ongoing monthly frequency
3.2	River water quality Monitoring State Water monitoring programme (SWMP)	KSPCB	Ongoing; Seasonal					Ongoing seasonal
3.3	Inspection and effluent quality monitoring of the flats, Industrial units, Service stations, hospitals, auditorium, hotels in Municipal area		Ongoing; Interval; Red - 1 months					Ongoing
<b>4. ACTION PLAN BY VARIOUS GRAMA PANCHAYATHS- THALAKKAD, VETOM, MANGALAM, CHERIAMUNDAM</b>								
No.	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
4.1	Protection of Tirur Ponnani River	Thalakkad Grama Panchayath handover fund to District Panchayath	31.03.2020	Completed	Completed	Completed	100	NIL
4.2	Installation of CC TV camera on YetterikadavuKunjulikkadavuMangattiri Bridge, Aikkanchiri Bridge, Paravanna Bridge	Vettom - KS SECURITY SYSTEM	Spill over due to lack of fund	Completed	Completed	Completed	100	NIL



4.3	Installation of CC TV camera	Mangalam Grama Panchayath Win Plus Agency, Kondotty	Completed	completed	completed	completed	100	NIL
4.4	Haritha KeralamThirur-Ponnanipuzha protection	Mangalam Grama Panchayath Nirmithi Kendra, Kozhikode	31.03.2020	No progress	No progress	No progress	70% protection of wall completed	Nearing completion Landscaping work remainig as per estimate
4.5	Fencing on bridge side Thalakkadathur	Cheriyamundam Grama Panchayath	March 2020	complete d	completed	completed	100	NIL

### 5.GROUND WATER DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of march2023	Progress in the month of April2023	Progress in the month of may2023	% 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	NA	No permits issued	No permits issued	No permits issued  NO ACTION INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NA	NA

		induced industries							
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 april2023	Progress May2023	% works completed	Details of works remaining
6.1	Survey of boundaries of river side	Revenue department		Completed	Completed	Completed	100%	Encroachment survey completed.

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

SI NO	Name of point	PARAMETERS				
		P <sup>H</sup>	DO (mg/l)	BOD (mg/l)	COD (mg/l)	FC (cfu/100ml)
1	Drain near Tirur Railway station	Dried				
2	Thazhepalam drain	7.8	4.1	1.9	7.6	70
3	Naduvilangadi drain (old ponnani thodu)	Dried				
4	Annassery drain	Dried				
5	Canal at CV Land	Dried				
6	Canal at Mangalam thuruth	7.4	8	1.3	5.2	120
7	Canal at Pullooni	7.7	6.6	1.2	4.8	30
8	Drain near Mangattiri bridge	Dried				
9	Drain near Ettirikkadavu bridge	7.6	3.4	1.4	5.6	60
10	Epothingal	7.6	2.7	1.3	5.2	160
11	Asarikkadav	Dried				
12	Kandanath kadav	7.5	2.5	1.8	7.2	190
13	Pancharamoola	Dried				
14	Kakadav	7.6	2.3	1.0	4	150
15	Kanathkadav	7.6	3.4	1.8	7.2	200
16	Drain near tirur railway station	7.8	4.1	1.8	7	180
17	Payyanangadi(kadayithodu)	Dried				

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

Sl .No	Name of point	PARAMETERS				
		P <sup>H</sup>	DO (mg/l)	BOD(mg/l)	COD (mg/l)	FC (cfu/100ml)
1	Valiyangadi drain	Dried				
2	Valiyangadi bypass drain	Dried				
3	Valiyathod drain	Dried				
4	Hajiyarpally	7.5	9	3	9	180

**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) Forth**

**e month of MAY 2023 – Kallai polluted river stretch**

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STP must be ensured.	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 STPs 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"><li>• Specifying accountability of nodal authorities not below the secretary level</li><li>• Chief secretaries may have an accountable person attached in their office for this purpose</li></ul>		NIL
	<ul style="list-style-type: none"><li>• Monitoring at the state level must take place</li></ul>	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"> <li>Secretary, ministry of Jal Shakti</li> <li>Member Secretary, CPCB</li> </ul>	<p>Monthly (preferably before 20<sup>th</sup> 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&amp;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>working 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 <b>Annexure 1</b></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 <b>Submitted by Irrigation department</b></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 wastemanagement &amp; 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 – Honble 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><b><u>Kozhikode corporation</u></b></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 work progressing	(iv) 3 MRF facilities existing (At Njelijam paramba (Super MRF) 3 TPD - with plastic shredding unit, west hill industrial estate - 2 TPD -- with plastic shredding unit, Near Jayanthinagar colony) - 70% completed
		Functioning	(v) 24 units of aerobic compost facilities existing (Tagore hall, SK Pottakkad hall, Jubilee hall, Mofusil bus stand, T.B. Clinic, Circle office).
		Functioning	(vi) 350 ring compost and 150 Biogas plants installed in households - kkd Corporation 26 biogas plant complete – peruvayal 190 ring compost complete – mavoor
		Functioning	(vii) Community level biogas plant - 3 nos (Mental Hospital 1 TPD, ITI Malikadav - 1 TPD, Juvine home - 1 TPD)
		Functioning	(viii) 3 Biogas plants in market (Central market 2 TPD, Vegetable market 2 TPD, New bus stand, 2 TPD)
		30/03/2021	(ix) Treatment facility for waste in Central Market – Tendering in Progress
		31/12/2022	(x) Establishment of slaughter house -
	31.03.2021		<b><u>Mavoor Panchayath</u></b> MCF 1 nos, ring compost, compost pit - Completed and functioning <b><u>Perumanna Panchayat</u></b>
	31.03.2021		Compost pit and MCF with baling machine (1 nos) - Work in progress completed within two months. <b><u>Peruvaval Panchayat</u></b> Compost pit, mini MCF 2 nos, biogas plant -



Working progress MCF-1  
not temporarily  
functioning **Olavanna Panchavat**  
MCF-1  
completed Mini MCF-3  
Working progress MRF-1  
In block

<p>(v) latest water quality of pollutedriver, its tributaries, drains withflow detailsandgroundwaterqualityinthe catchment ofpollutedriver;</p> <p>(vi) preventing dumping ofwaste and scientific wastemanagementincludi ngbio-medical waste plasticwaste and decentralizingwaste processing,includngwast egeneratedfromhotels,ash rams,etc.</p> <p>(vii)ground waterregulati on</p> <p>(viii) adopting goodirrigationpra ctices</p> <p>(ix) protection andmanagement of floodplainzones(FPZ ),</p>	<p>31/03/2021</p>	<p>AnalysisreportofKallayiriverstretchfor the month of AUGUST2022Attachedas <b>Annexure2</b></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,clinicscollectedthro ughimage, plastic waste disposal throughrecyclers. Individual solid wasteprocessingfacilitieslikebiogaspla nt,bio bins in high rise building, hotels,restaurantsetc.Fencing proposed byirrigationdepartment.</p> <p>NIL</p> <p>NIL</p> <p>Flood prone mapping- Proposed byirrigationdepartment</p>
<p>(x)Rainwaterharvesting</p>		<p><b><u>MavoorPanchayat</u></b> Wellrecharging- Estimateunderpreparation</p>

		31/03/2021	<b><u>PeruvavalPanchayat</u></b> Wellrecharging-Work inprogress
		31/03/2021	<b><u>OlavannaPanchayat</u></b> Wellrecharging- Workinprogressandcompletedbytheendofmarch2023
(xi)Maintainingminimum environmentalflowof river		31/03/2021	<b><u>PerumannaPanchayat</u></b> CleaningofMampuzhariver-Workin Progress
		31/03/2021	<b><u>PerumannaPanchayat</u></b> CleaningofMampuzhariver-Ongoing
		Completed	<b><u>OlavannaPanchayat</u></b> CleaningofMampuzhariver- Completed
(xii)Plantationonbothsides oftheriver		Completed	<b><u>MavoorPanchayat</u></b> 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**

<b>Kozhikode Corporation</b>									
No.	Activity	Implementing agency	Time line	Progress in the month of FEBRUARY 2023	Progress in the month of MARCH 2022	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% works completed	Details of works remaining
1	Identification of illegal outlets in storm water drain and issue Notice to such units	Kozhikode Corporation	30.12.2020	5 notices issued	6 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	Fresh cut agency	on trial run	Completed	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	Due to public protest, the work has been temporarily stopped on 28.04.2022	7MLD - The case in the munsiff court, the hearing was completed the final judgment was pronounced	7MLD - The case in the munsiff court, the hearing was completed the final judgment was pronounced	7MLD - The case in the munsiff court, the hearing was completed the final judgment was	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.	pronounced 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	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	7 Issued notices	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	1200m pipelaying completed and construction of the collection tank at 2MLD site has been completed	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.RCAyyankar colony	Kozhikode Corporation	31.03.2020	Work has been stopped. Contractor asked high rate for the items which exceed more than 25% than the tendered quantity. Details have been submitted to Kozhikode Council for approval. Same has been approved and forwarded to AMRUT SLTC for final approval. Next SLTC	Estimate scrutiny in progress at CELSGD's office for TS approval	Estimate scrutiny in progress at CELSGD's office for TS approval	Estimate scrutiny in progress at CELSGD's office for TS approval	60%	963m drainage construction remaining
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				meeting is scheduled on 20/06/2022					
16	Implementation of STP at 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%	COMPLETE ON 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%	70%	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		
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	Ongoing process	Complete process	Completed	Completed	

# Perumanna Grama Panchayath

No	Activity	Implementing agency	Time line	Progress in the month of FEBRUARY 2023	Progress in the month of MARCH 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 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			Inspection conducted regularly	
2	Establishment of six aerobic compost units in panchayat	Perumanna GP Kozhikode through MGNREGS	Dec-21	Completed	Completed	100%	100%	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% work completed	
4	Setting up of residential treatment plant for chicken stall waste	Perumanna GP	Continues process	Resolution passed by Panchayat board to execute agreement with Freshcut, thamarassery, kkd	Resolution passed by Panchayat board to execute agreement with Freshcut, thamarassery, kkd	Resolution passed by Panchayat board to execute agreement with Freshcut, thamarassery, kkd	Resolution passed by Panchayat board to execute 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	Workisong oingbydist rictpancha yat ,kozhikode

9	Establishment of 18nosofminiMCFin differentwardsincluding payyadimetal wheretheriverisflowing	PerumannaGP MGNREGS	Dec-21	11Nosco mpleted	11Nosco mpleted	11Nosco mpleted	11Nosco mpleted	11Nos 100%	7unitsnots tarted
10	Collectionofplastic wastefromtheriver	PerumannaGP	Continuous process	Threetimes completed	Threetimescom pleted	Threetimescom pleted	Threetimescom pleted	N A	Processwill be doneevery year

## PeruvayalGramaPanchayath

No	Activity	Implementing agency	Time line	Progressi n themonth ofFEBR UARY 2023	Progressi n themonth ofMARC H2023	Progress inthe monthofA PRIL2023	Progressi n themont h ofMAY 2023	%worksc ompleted	Details ofworksre maining
1	Outlet in storm waterdrainandissued notice	PeruvayalG P	Continuous process	5notice issued	5notice issued	5notice issued	notice issued	Ongoing	
2	Establishmentof5bu nits anaerobiccomposed unitinpanchayat.	PeruvayalG Pt hroughMGN REGS	4/2021TO 03/2021	work willcomm enceon thirdweek ofnovemb er2022	work willcomm enceon thirdweek ofnovemb er2022			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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<b>MavoorGp</b>									
No	Activity	Implementing agency	Time line	Progress in the month of FEBRUARY 2023	Progress in the month of MARCH 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% Work completed	Details of work remaining
1	MCF	MavoorGp	31.03.2019	Completed and functioning	Completed and functioning	Completed and functioning	Completed and functioning	100%	Nil
2	Fish market construction	MavoorGp	31.03.2019	Completed and functioning	Completed and functioning	Completed and functioning	Completed and functioning	100%	Nil
3	Ring compost	MavoorGp	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	MavoorGp	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 (Kuniyakadav 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



<b>No</b>	<b>ACTIVITY</b>	<b>IMPLIMENTING AGENCY</b>	<b>TIMELINE</b>	<b>PROGRESS IN THE MONTH OF FEBRUARY 2023</b>	<b>PROGRESS IN THE MONTH OF MARCH 2023</b>	<b>PROGRESS IN THE MONTH OF APRIL 2023</b>	<b>PROGRESS IN THE MONTH OF MAY 2023</b>	<b>% WORK COMPLETED</b>	<b>DETAILS OF REMAINING WORK</b>
1	Collection of plastic waste from the river	Olavannagrama panchayat	Continous process	4 times collected	4 times collected	4 times collected	Ongoing	80%	Process continuing
2	Collection of segregation of solid waste in the river	Olavannagrama panchayat	Continous process	5 times collected	5 times collected	5 times collected	Ongoing	100%	Process continuing
3	Establishment of Mini MCF in all wards	Olavannagrama panchayat 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 started immediately
4	Cleaning of Mam buzhariver	Olavannagrama panchayat	Continous process					81%	Process continuing
5	Well recharge	Olavannagrama panchayat 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	Olavannagrama panchayat 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	Olavannagrama panchayat	Continuous process				Not reported	84%	Continuing
8	Collection of nonbiodegradable waste	Haritharmasena	Throughout the year				Not reported		Continuing

## Irrigation Department

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% works completed	Details of works remaining
1	Desilting of Kallayi river from Kaduppinito Kothin Kozhikode Corporation	Irrigation department	31.03.21	Tender for desilting of Kallai submitted to Govt .for approval				
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				

				toSuperintendingEngineerforrs47.2lakhs 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 March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% works completed	Details of works remaining
1	River water quality monitoring- Kallayiriver National Water Quality Monitoring Programme (NWMP)	KSPCB	Ongoing; monthly frequency					
2	River water quality monitoring- Kallayirivers 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 setc .in Malappuram Municipal area	KSPCB	Ongoing Interval: Red-					

			1month. Orange – 3months. Green – 6months.					
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<b>SuchitwaMission</b>								
No.(as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 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 March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 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, Kozhikkode 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 Kozhikkode 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 March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% work completed	Details of work remaining
E	Dredging and desilting	Irrigation Dept	3 years			Submitted Govt for approval		
E	E-flow (by micro watershed management)	Irrigation Dept	3 years			Action to be taken by Hydrology wing		



E	Floodplainzone(protectionandmanagement)	IrrigationDept	3years			Act iont obe tak enb yH ydr olo gy win g		
E	Greenery development (plant in trees onthebanks)	IrrigationDept	3years					

**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 MAY 2023 – Kuttiady polluted river stretch**

S N o	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><b><u>Kuttyadi Grama Panchayath</u></b>  Massive awareness program and survey conducted. Community 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><b><u>Chakkittapara Panchayath</u></b>  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><b><u>Payyoli Municipality</u></b>  1. Action plan prepared under SBM 2.0  2. Action plan prepared under Amrut Scheme</p> <p><b><u>Thurayur Grama Panchayat</u></b>  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	<b><u>Kuttyadi Grama Panchayath</u></b> Committed to implement major scheme next year <b><u>Chakkittapara Panchayath</u></b> <b><u>h</u></b> Committed to implement major scheme next year <b><u>Payyolimunicipality</u></b> 1. Action plan prepared under SBM2.0 2. Action plan prepared under Amrut Scheme <b><u>Thurayur Grama Panchayath</u></b> 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	<b><u>Kuttyadi Grama Panchayath</u></b> Attached separate report <b><u>Chakkittapara Panchayath</u></b> River origin areas are in Chakkittapara, No industrial units, ODF Project implemented <b><u>Payyolimunicipality</u></b> 1. Action plan prepared under SBM2.0 2. Action plan prepared under Amrut Scheme <b><u>Thurayur Grama Panchayath</u></b> <b><u>h</u></b> No industrial unit in thurayur gramapanchayath ODF project implemented

4	Chief secretaries may set up appropriate monitoring mechanisms at state level • 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"> <li>• Chief secretaries may have an accountable person attached in their office for this purpose</li> <li>• Monitoring at state level must take place</li> </ul>		
5	<p>Progress report may be furnished by the state/UTs to</p> <ul style="list-style-type: none"> <li>• Secretary, Ministry of Jal Shakti</li> <li>• Member Secretary, CPCB</li> </ul>	<p>Monthly (preferably before 20<sup>th</sup> 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  
of Kuttiady, Maruthomkara, Cher  
uvannur, Changaroth, Perambra,  
Kavilumpara, Velom Panchayath  
s, Chakittapara, Payyoli, Thurayo  
or, Irrigation department,  
Water Authority, Shuchitwa  
mission for the month of August 20  
22 is  
attached as **Annexure 3**.

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



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



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

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

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

<p>(xiii) Setting up biodiversity parks on floodplains by removing encroachment</p>	<p>31.05.2024</p>	<p><b><u>Chakkittapara Panchayat</u></b>  <b><u>h</u></b>  Action will be taken depending upon availability of fund  <b><u>Thurayur Grama Panchayat</u></b>  <b><u>hayath</u></b>  Action will be taken depending upon availability of fund  <b><u>Kuttivadi Grama Panchayat</u></b>  <b><u>chayath</u></b>  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 FEBRUARY 2023	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% works completed	Details of works remaining
D	Geotextiles at river bed	MGNREGS	31.03.2018	100%	100%	100%	100%	100%	Completed
E	Haritha Sahayasthana 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	Ni	Ni	Nil	Completed
C(ii)	MCF	KuttyadiGramapanchayath	31.03.2019			ExtendingofMCF		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 ofKuttiyadiriver	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	KuttyadiGramapanchayath	31.03.2020	100%	100%	100%	100%	100%	Nil



## Velam Grama Panchayath

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

## Maruthomkara Grama Panchayath

No.(as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of FEBRUARY 2023	Progress in the month of MARCH 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 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 FEBRUARY 2023	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% works completed	Details of works 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 Grama Panchayath

No. (as per Action Plan).	Activity	Implementing agency	Timeline	Progress in the month of FEBRUARY 2023	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% works completed	Details of works 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 Grama Panchayath

No.(as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of FEBRUARY 2023	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% work completed	Details of work remaining
D	Removal of pebbles dumped in fany	MGNREGS	31.03.2020	Nil	Nil	Nil	Nil		Nil
E	Haritha Sahayastapan 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					100%	Nil
C(ii)	MCF	Chakkittapara Grama Panchayath	31.03.2020					100%	Nil
A(b)	Sanitary latrine	Chakkittapara Grama Panchayath	31.03.2020	86.6%	86.6%	86.6%	86.6%	86.6%	
B(ii)	Well recharging	MGNREG	31.03.2020	38.4%	38.6%	50%	50%	38.6%	

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%	82.4%	82.4%	82.4%	Collection from MCF
E	Clean Village	Chakkittapara Grama Panchayath	31.03.2020	35%	35%	35%	35%	35%	
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 March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 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)	Wellrecharging	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 FEBRUARY 2023	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 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	Green worms	Throughout the year	ongoing	ongoing	ongoing	ongoing	90%	Ongoing
896	Renewal/ construction of public toilet Take a Break	Koorachund GPM GNREGS	31/09/2022	ongoing	ongoing	ongoing	ongoing	90%	Ongoing
859	Brook cleaning	Koorachund GP MGNREGS	31/05/2022	ongoing	ongoing	ongoing	ongoing	80%	Ongoing
1211	Setting up of mini MCF	Koorachund GPM GNREGS	31/09/2022	ongoing	ongoing	ongoing	ongoing	65%	Ongoing
199	Well recharge	Koorachund GPM GNREGS	Throughout the year					65%	Ongoing
	Cleaning of Athiyodithodu Thelineerzhukum Nava keralam	Koorachund GPM 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 FEBRUARY 2023	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% work completed	Details of work remaining
1	drainage cleaning	Thiruvallur GP	2020-21	Completed	Completed	Completed	Completed	100%	Nil
2	haritha Sahayasthaba Naagam	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 FEBRUARY 2023	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% works completed	Details of works remaining
	Removal of pebbles dumped in any	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	Harithasahayasthabana 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 kuttiadriver	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 FEBRUARY 2023	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 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 FEBRUARY 2023	Progress in the month of March 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 2023	% Works completed	Details of works remaining
C(ii)	Setting up of MCF	Changaroth GP	Sep-19	Completed	Started procedure acquire land from irrigation department	Started procedure acquire land from irrigation department	Started procedure acquire land from irrigation department	Completed	Completed
C(ii)	Collection of non-biodegradable waste	Haritha Karmasena	throughout the year	275kg	275kg	275kg	275kg	-	-

C(ii)	Biogasplantsforhousehold	ChangarotheG P	Nov-19	Completed	Completed	100%	100%	100%	Completed
C(ii)	Ringcompostunit	ChangarotheG P	Dec-19	Completed	Completed	Completed	Completed	100%	Completed
C(ii)	Plasticshreddingunit	ChangarotheG P	Mar-20	Dropped	Dropped	Dropped	Dropped	Dropped-	Dropped
A(b)	Householdsanitaryunits	ChangarotheG P	Jan-20	99%	99%	99%v	99%v	-	ongoing
C(ii)	Transportationofwaste material torefinementunit	ChangarotheG P	Sep-19	Completed	Completed	Completed	Completed	Completed	ongoing
C(iii)	BambooCultivationriverbanks	MGNREGS	31.03.2020	Noprogress	Noprogress	Noprogress	Noprogress	canceled	Unavailability ofbamboo plants

## PAYYOLI MUNICIPALITY

No.(as perActionPlan)	Activity	Implementing agency	Time line	Progress inthefEBRUARY 2023	Progress inthefMARCH 2023	Progress inthefAPRIL 2023	ProgressinthefMAY 2023	% workscompleted	Detailsof worksremaining
	Includedinthewater shedarea based developmentmaster plan.Amunicipallevel committeeformedfor monitoring	Payyolimunicipality,Irrigation department	31.12.2021	Preparingthe estimate	Preparing the estimate	Preparing the estimate	Preparing the estimate	NA	Working progress



	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	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 of March 2023	Progress inthemontho fAPRIL202 3	Progress inthemontho fMAY 2023	% worksco mpleted	Details ofworks remaining
E	SaltwaterExtrusion- ConstructionofRCBupstreamof Perincherikadavu acrossKuttiady river (Gulikapuzha) in KozhikodeDistrict	IrrigationDept	July31 2022					
C(ii)	FencingthesidesofBridgestopreventdu mpingof wastes-5no's	IrrigationDept	July31 2022					



## Kerala State Pollution Control Board

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of MARCH 2023	Progress in the month of APRIL 2023	Progress in the month of MAY 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

**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**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>		

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&amp;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 &amp; Details of</u></p>	<p><b><u>RAMANTHALI</u></b></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  (viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		<p>Implementing in all households as per KPBR rules</p>
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## ACTION PLAN FOR RIVER KAVVAI, KERALA

<b>Action Plan of Local Body</b>								
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 May 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					
<b>Action Plan by Irrigation Department</b>								
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 May 2023	% works complete	Details of works remaining
E	Desilting and rejuvenation of NarangaThodu in Payyannur	Irrigation Department	2020		DPR submitted for FS approval (Amount 5.40 Lakhs)			

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

6. Re-survey of the river boundaries throughout the entire stretch is to be done urgently so as to prevent encroachment of the river.
7. The municipalities as well as the panchayaths are to be directed to provide proper waste management facilities of their own. All towns and cities must have Sewage Treatment Plants (STPs) that clean up the sewage. Facility for collection, segregation, transport, processing and scientific disposal of waste generated are to be provided by the local authorities in strict adherence to the Municipal Solid Waste Management Rules, 2016. For this, affordable and viable waste to energy conservation technologies apart from conventional composting is to be implemented seeking technical expertise.
8. Strict monitoring from the part of implementing as well as monitoring agencies is required for effective functioning of waste treatment facilities in waste generating units. The riverine stretches are to be monitored periodically at identified locations for water quality assessment.
9. Modern agricultural practices and technologies introduce the use of inorganic fertilizers with Nitrogen, Phosphorous, Potash and inorganic pesticides in farm lands and play important role in the river pollution. These may concentrate into the water body through run off causing algal blooms by which whole stretch of water become choked. Fertilizers and chemicals application in agricultural lands are to be strictly under technical expertise.
10. Rain water recharging measures must be adopted.
11. Eco tourism and water tourism projects are to be designed giving due importance for protecting the environment. The activities are to be organized in such ways which do not induce any types of pollution to the water body. Strict monitoring from the concerned authorities are recommended in functioning of the tourism projects.
12. Implement Green Protocol effectively in local self-governments. Prohibit littering of plastics in the area. Plastic wastes shall be handled as per the provisions of Plastic Waste (Management and Handling) Rules, 2018.

13. The existing waste water treatment facilities of Taliparamba Municipality shall be augmented in such a way so as to operate round theyear.
14. Actions shall be taken by the local bodies to clean the storm water drains. Rejuvenation of small streams, creeks leading into the river is to bedone.
15. Round the clock patrolling shall be provided so as to prevent waste dumping on public places.

**National Mission for Clean Ganga**

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

**RIVER KUPPAM, KANNUR**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>	Monthly before 20 <sup>th</sup> of every month	

<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&amp;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 &amp; Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p>	<p><b><u>MADAYI</u></b> 16 soak pit completed</p> <p><b><u>UDAYAGIRI</u></b> Identified drains already cleaned before commencement of monsoon by harithakarmasena in local bodies</p> <p><b><u>MADAYI</u></b> 100 ring compost Unit supplied, placed order for 96 units of Ring Compost ( for bio degradable waste disposal) Non bio degradable waste is collecting through Haritha Karma sena and handed over to RRF</p> <p><b><u>Udayagiri</u></b> Compost pit -105 completed Biogas -39 completed Soak pit -18 completed</p> <p><b><u>PATTUVAM</u></b> Ring compost -150</p>
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<p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of 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</p>	<p>Pipe compost-600  Biogas plant-25  Compost pit -100  Thumboor muzhi-1</p> <p>Lab report is attached</p> <p><b><u>MADAYI</u></b>  ONGOING  <b><u>Udayagiri</u></b>  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><b><u>Pattuvam</u></b>  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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	removing encroachment		
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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 May 2023	% works completed	Details of works remaining
<b>Udayagiri GP</b>								
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					
<b>Chapparappadavu GP</b>								
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)					
		<b>Pariyaram Panchayat</b>						
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					
		<b>Madayi GP</b>						
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 drains and stoppage of the same	Local Body	2022					
<b>Thalipparamba Municipality</b>								
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						
<b>Pattuvam GP</b>								
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 May 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>	

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### Combined Action Plan

	<b>Proposed action</b>	<b>Agency</b>	<b>Timeline</b>	Progress in the month of December 2020	Progress in the month of January 2021	P th o 2
1	Provide toilets 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 Suchitwa Mission, Revenue department	Proposed Construction Of new community Toilet at satellite points on the bank of river			
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 Solid Wastes Management Rules, 2016	Pollution Control Board , Health department	Check they have board consent and sanitation facility is provided			
5	Adequate number of kitchen bins shall be provided	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 the river. 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	% work completed
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks				
2	B(ii)	Ground water recharging / rain water harvesting				
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps				
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices				

## National Mission for Clean Ganga

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

### **RIVER PERUVAMBA, KANNUR**

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		All houses and establishments have their own disposal facility
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		No STP Proposal
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2022	Some of the works in action plan is completed already and some are ongoing as informed by local bodies.
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>		

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&amp;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 &amp; 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><b><u>RAMANTHALI</u></b></p> <p>There are 5 natural drains meeting the river, of which 3 drains cleaned.</p> <ol style="list-style-type: none"> <li>1. Parappa Thodu (Ward 6)- 1 Km.</li> <li>2. Chennakki Thodu (Ward 8) – 1.3 Km.</li> <li>3. Kallayi Thodu (Ward 3&amp;4) – 1 Km.</li> </ol> <p>Two are partly cleaned and the cleaning work is in progress.</p> <ol style="list-style-type: none"> <li>1. Manthan Thodu (Ward 6) -1 Km</li> <li>2. Ambachikundu Thodu (Ward 15) – 500 M (The work is slowly ongoing due to the higher level of water in stream, 40% Completed)</li> </ol>
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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

<b>Action Plan of LocalBody</b>								
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 May 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 implement ation 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 HarithasahayaSamithi	PayyannurMunicipality	Ongoingproject	90%	100%	100%	ongo ing	Completed

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 stake holders	Kankol – Alappadamba GP	Once in a month					

A(b)	Sanitation Facility No markets and houses on the bank	Ramanthali GP		Availa ble	Availa ble	Availa ble	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 Comp ost- 100 Comp ost Pit –15 Bioga s Plant- 10	Ring Comp ost- 100 Comp ost Pit – 0 Bioga s Plant – 0	Ring Comp ost- 290 Comp ost Pit – 0 Bioga s Plant – 0	100 %	



## Action Plan by Irrigation Department

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2022	Progress in the month of June2022	Progress in the month of May 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	Irrigation Department	2020	Work completed under SDRF scheme by MI Division Kannur.				

	across Koykottuvayalthodu in Kunhima ngalam Panchayath  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	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

	managemen t for a period of 2 years with a fund of 0.25 Crore from the available fund			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.				
<b>Combined Action by KSPCB</b>								
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 facility is provided.	Pollution Control Board, Health authority						
5	Household waste Adequate number of Kitchen bins shall be provided	Municipalities and local bodies						
6	Market Providing proper waste handling facility for wastewater And solid wastes		Six months 30					
7	Rendering plant Rendering plant for poultry wastes	Local body	Six months					
8	Slaughter house Slaughter house waste disposal facility	Local body						
9	Establishment like service station and workshops  Strict monitoring of disposal of waste (sewage, sullage, degradable waste, non-biodegradable waste) surveyed area and also in the catchment of the river i) Verify whether consent 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 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.
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		<b><u>MADAYI</u></b> 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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary,Ministry of Jal Shakti</li><li>• Member Secretary,CPCB</li></ul>		



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 May 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 May 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

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

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

**Action Plan by Ground Water Department**

Sl.No	Ref para no:48 as per NGT order 673/2018 dated:20.09.2018	Activity	Progress in the month of December 2020	Progress in the month of January 2021	Progress in the month of January 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME MAY 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		10-05-2023	10-05-2023	10-05-2023	10-05-2023	10-05-2023
Sl.No	Determinants	Kankol	Karikuzhithodu	Thattarakadavu Bridge	Kuttyol palam	
1	Temperature, 0C	30		31	31	
2	Dissolved Oxygen, mg/l	5.2		5.8	6.5	
3	pH	7		7.28	6.2	
4	Conductivity, µmhos/cm	346		63400	217	
5	BOD, mg/l	1.2		3.2	3	
6	Turbidity, NTU	1.8		2.6	3.1	
7	Total Alkalinity, mg/l	42		72	16	
8	Chloride, mg/l	52		21500	49	
9	Ammoniacal-N, mg/l	0.0212		0.6421	0.0082	
10	Hardness as CaCO <sub>3</sub> , mg/l	46		7500	37	
11	Calcium as CaCO <sub>3</sub> , mg/l	8		1800	21	
12	Magnesium as CaCO <sub>3</sub> , mg/l	38		5700	16	
13	Sulphate, mg/l	BDL		BDL	BDL	
14	Phosphate, mg/l	0.086		BDL	BDL	
15	Fluoride, mg/l	0.1		0.0421	BDL	
16	Total Coliform, MPN/100 ml	400		500	800	
17	Fecal Coliform, MPN/100 ml	200		460	400	

Karikuzhithodu Sampling point of Kavvayi River seems to be dry on 10-05-2023

*Signature*  
 10/05/2023  
 Aneeshak K  
 Assistant Scientist  
 Kerala State Pollution Control Board  
 District Office, Kariyur-670002

POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME April 2023

PERUMBA RIVER

RIVER

JSA1, JSA2, PGSA

KERALA STATE POLLUTION CONTROL BOARD KANNUR

10-05-2023

10-05-2023

12-05-2023

12-05-2023

KANDAKALI

CHANDAPURA

MATAHAMAGAL  
AM

KACHERIKADVU

Determinants

S/N

1

Temperature, 0C

30

31

5.02

5.02

2

Dissolved Oxygen, mg/l

6.2

6.42

6.14

7.28

3

pH

6.73

6.72

63400

3.82

4

Conductivity, umhos/cm

160.2

2.26

3

3.82

5

BOD, mg/l

3.2

2.8

7.1

2.5

6

Turbidity, NTU

19

22

16

92

7

Total Alkalinity, mg/l

21

29

21000

0.0623

8

Chloride, mg/l

0.0322

0.0211

8400

27

2900

5500

392.2

12

Magnesium as CaCO<sub>3</sub>, mg/l

BDL

28.22

BDL

13

Sulphate, mg/l

BDL

0.0106

0.8

14

Phosphate, mg/l

0.02

600

490

16

Total Coliform, MPN/100 ml

560

500

320

17

Fecal Coliform, MPN/100 ml

380

350

200

*Amudha*  
08.06.2023  
Amudha-k

POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME MAY 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		30-05-2023	30-05-2023	10-05-2023	24-05-2023
Sl.No	Determinants	KAPUGAL	ATHIYADAM	RAMAPURAM	VAYALAPRA
1	Temperature, 0C			31	31
2	Dissolved Oxygen, mg/l			4.3	3.8
3	pH			7.6	7.92
4	Conductivity, µmhos/cm			54400	49000
5	BOD, mg/l			3	2.9
6	Turbidity, NTU			6.2	3
7	Total Alkalinity, mg/l			35	82
8	Chloride, mg/l			17000	22000
9	Ammoniacal-N, mg/l			0.281	0.0641
10	Hardness as CaCO <sub>3</sub> , mg/l			2000	6800
11	Calcium as CaCO <sub>3</sub> , mg/l			600	1900
12	Magnesium as CaCO <sub>3</sub> , mg/l			1400	4900
13	Sulphate, mg/l			192.3	384.26
14	Phosphate, mg/l			BDL	BDL
15	Fluoride, mg/l			0.3	0.5
16	Total Coliform, MPN/100 ml			900	540
17	Fecal Coliform, MPN/100 ml			400	310

Kapugal of Ramapuram river Sampling point seems to be Dry.  
Athiyadam of Ramapuram river Sampling point seems to be Dry.

*Ameeshak K K*  
08.06.2023  
Ameeshak K K

POLLUTED RIVER STRETCH WATER QUALITY MONITORING PROGRAMME MAY 2023

Station Name		KUPPAM RIVER						
Type of Water body		RIVER						
Completed by		JSA1, JSA2, PGSA						
Agency		KERALA STATE POLLUTION CONTROL BOARD KANNUR						
Date of sample taken		30-05-2023	30-05-2023	10-05-2023	30-05-2023	30-05-2023	30-05-2023	30-05-2023
Sl.No	Determinants	VELLICHAN KEEL	MANGALAS SERRY	KUPPAM BRIDGE	VARIANKOT TAM	VELLAVU	KUTTIYERIKADAVU	
1	Temperature, 0C	32	32	31	31	31	31	31
2	Dissolved Oxygen, mg/l	4.02	5.2	4	5.8	5.86	6.6	6.6
3	pH	6.87	7.1	7	80.2	7.86	7.08	7.08
4	Conductivity, µmhos/cm	54900	54100	46900	49200	48600	45100	45100
5	BOD, mg/l	3.6	2.86	3	2.2	2.8	1.6	1.6
6	Turbidity, NTU	2.1	2.1	6.8	2.2	2.1	1.8	1.8
7	Total Alkalinity, mg/l	60	62	21	52	58	4.9	4.9
8	Chloride, mg/l	21000	18500	19000	10500	9800	9000	9000
9	Ammoniacal-N, mg/l	0.0962	0.0966	0.0681	0.0652	0.0062	BDL	BDL
10	Hardness as CaCO <sub>3</sub> , mg/l	3700	4800	6000	2600	2500	2700	2700
11	Calcium as CaCO <sub>3</sub> , mg/l	3400	200	1900	2300	1700	2000	2000
12	Magnesium as CaCO <sub>3</sub> , mg/l	300	4600	4100	300	800	700	700
13	Sulphate, mg/l	328.66	380.27	296.6	160.23	112.32	186.23	186.23
14	Phosphate, mg/l	BDL	BDL	0.213	BDL	BDL	BDL	BDL
15	Fluoride, mg/l	0.02	0.04	0.0428	0.05	0.4	0.3	0.3
16	Total Coliform, MPN/100 ml	500	700	900	600	720	300	300
17	Fecal Coliform, MPN/100 ml	180	460	400	420	400	120	120

*Chudhary*  
08-06-2023  
Puneeshak.k

## 1.Kavayi

Sl.no	Drain	BOD on MAY 2023	Remarks
1	Kotti thodu	No water	Waste disposal from side by shops, Hotels, nearby mosque, Black color sludge.
2	School ground thodu	No water	
3	Kalikadapuram thodu	No water	
4	Koorikadavu	No water	Drain covered with mud ,plastic wastes
5	Ulliyathu kadavu	12	Plastic waste seen , blackish Red color water with h <sub>2</sub> s smell, Plastic waste is seen in water ,
6	Kallatu kadavu	No Water	Small amount of water which cannot be fetched
7	Muttathu kadavu	2.8	Plastic waste seen.
8	Vadipram thodu	No Water	One side is full of plastic waste No Water ,and logd from the river is present.

## 2.Peruvamba

	Drain	BOD on May 2023	Remarks
1	Naranga thodu	No water	High amount of Plastic waste. Dried thodu,
2	Perumba thodu	6	Plastic waste was noticed, water with smell, nearby shopping complex shops are dumping waste.



3	Valliohmthodu	4	Water with Plastic waste.
4	Panapuzha thodu	No Water	
5	Poomkottu Chal	No Water	Plastic waste seen side wise road.
6	Manjangottu Thode	No Water	
7	Kannelamthodu	No Water	
8	Appithodu	No Water	
9	Mavullapoyil thodu	No Water	Plastic waste,
10	Kollali thodu	No water	Small amount of water
11	Kannada thodu	No Water	
12	Koyakkotu thodu Thokadu	No Water	
13	Cherottuvayal thodu	No water	
14	Kayyil arakulam thodu Kunjimagalam puzha	4	
15	Tattanvayal thodu	No water	

### 3. Ramapuram thodu

Sl.no	Drain	BOD on May 2023	Remark
1	Kapugal thodu	No water	

2	Chembali kundu	4	Plastic waste and floating bottles are noticed.
3	Kulapram kundam thodu Kavilavalapu thodu	4.2	Almost dried,with plastic waste,which is burned by the side of thodu is seen
4	Aduthila thodu	No water	
5	Ottayi thodu	No Water	
6	Moolakadavu	No Water, Black Sludge	Oil presence in water, decayed organic materials are seen ,

#### 4.Kuppam

Sl.no	Drain	BOD on May 2023	Remarks
1	Karuvanchal	2.2	Full bags of dumped plastic wastes
2	Karthikapuram	No water	Plastic waste was noticed
3	Near Udayagiri Bridge	1.2	
4	Mukkada Thodu	No Water	
5	Moonamkunnu Thodu	No water	
6	Kuttaparamba-Neduvodu Thodu	No Water	Plastic waste, are floating in water and the thodu is full of plastic wastes coming from upstream and so
7	D/S of Alakode Hospital	No water	Bridge construction going on

8	Pathayachira	2.1	Turbid water present with high Plastic waste.
9	Near the houses on bank of main River ( @ Pariyaram GP)	3.12	
10	Near House Boat @ Pariyaram GP	2.46	
11	Kavinmunabu	No Water	
12	Manja Thodu	No water	
13	Sulthan Thodu	8.6	Floating waste is seen, plastic and intestinal waste of animals are floating.
14	Cheru thodu	No water	Full of Black sludge, and plastic and dry log ,highly polluted thodu

**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**

<b>S. No.</b>	<b>Activity to be monitored</b>	<b>Timeline</b>	<b>Submission of progress by State/UT- Compliance status</b>
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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"><li>• Secretary, Ministry of Jal Shakti</li><li>• Member Secretary, CPCB</li></ul>		

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&amp;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 &amp; 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 MAY 2023**  
**RIVER MOGRAL, KASARGOD**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
C	Material collection facility	Mogral Puthur Grama Panchayath	March 2020	<b>Completed</b>	<b>Report not submitted</b>	<b>Report not submitted</b>	100 %	NA
C	Waste collection including vehicle hire charge to collect waste.	Mogral Puthur Grama Panchayath	March 2020	<b>NIL</b>	<b>Report not submitted</b>	<b>Report not submitted</b>	0 %	
E	Installation of camera	Mogral Puthur Grama Panchayath	June 2020	<b>NA</b>	<b>Report not submitted</b>	<b>Report not submitted</b>	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	<b>Completed</b>	<b>Report not submitted</b>	<b>Report not submitted</b>	100 %	NA

C(ii)	Haritha Karmasena Activity/ Collecting Non Bio degradable materials including Plastics from households	Mogral Puthur Grama Panchayath	On-going	Started	Report not submitted	Report not submitted	75%	
C(iii)	Bamboo Capital Bamboo Planting- aiming water conservation and raising water levels thus preventing solid erosion, waste dumping in public places	Mogral Puthur Grama Panchayath	On-going	Completed	Report not submitted	Report not submitted	100 %	NA
E	River cleaning	Mogral Puthur Grama Panchayath	2019	Completed	Report not submitted	Report not submitted	100 %	NA
C(iii)	Bamboo Plantation of Madhur	Madhur grama Panchayath	2019	Report not submitted	18500 being maintained by NREGA	18500 being maintained by NREGA	100 %	NIL
C(ii)	Viability Gap Funding for Haritha Karmasena	Madhur grama Panchayath	2019	Report not submitted	Total Amount Rs 250000/- Expenditure RS 75000/-	Total Amount Rs 250000/- Expenditure RS 249965/-	72.9%	NIL
C(ii)	Material recovery facility centre	Madhur grama	2019	Report not submitted	Completed	Completed	100%	Completed



		Panchayath		<b>submitted</b>				
C(ii)	Construction of Plastic Shredding Machine building	Madhur grama Panchayath	2019	<b>Report not submitted</b>	Completed	Completed	100 %	Completed
C(ii)	Purchase of Plastic shredding machine	Madhur grama Panchayath	2019	<b>Report not submitted</b>	Completed	Completed	-	Yet to float tender
C	Tying of net on both sides of the bridge	Irrigation Department	2019-2020	DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. 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 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.	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		04.05.2023	
Nature and flow of the river		Medium flow, water level decreased	
Sl.No	Parameters	Unit	Mogral Bridge
1	Temperature	°C	29
2	pH	-	7.6
3	Conductivity	µmhos/cm	62500
4	Turbidity	NTU	1.4
5	BOD	mg/l	1.7
6	Dissolved Oxygen	mg/l	5.2
7	Total Coliforms	cfu/100ml	330
8	Feacal Coliforms	cfu/100ml	40
9	Feacal Streptococcus	cfu/100ml	ND
10	Chlorides	mg/l	21100
11	Total Alkalinity	mg/l	102
12	Total Hardness	mg/l	7800
13	Calcium Hardness	mg/l	5800
14	Magnesium Hardness	mg/l	2000
15	Calcium	mg/l	2320
16	Magnesium	mg/l	486
17	Total Dissolved Solids	mg/l	36960
18	Sodium	mg/l	11443
19	Potassium	mg/l	540

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		04.05.2023	
Nature and flow of the river		Water level decreased, Medium flow	
Sl.No	Parameters	Unit	Puzhakkara
1	Temperature	°C	28
2	pH	-	7.75
3	Conductivity	µmhos/cm	15700
4	Turbidity	NTU	0.3
5	BOD	mg/l	1.5
6	Dissolved Oxygen	mg/l	6
7	Total Coliforms	cfu/100ml	910
8	Feacal Coliforms	cfu/100ml	92
9	Feacal Streptococcus	cfu/100ml	20
10	Chlorides	mg/l	4900
11	Total Alkalinity	mg/l	58
12	Total Hardness	mg/l	2300
13	Calcium Hardness	mg/l	1800
14	Magnesium Hardness	mg/l	500
15	Calcium	mg/l	720
16	Magnesium	mg/l	121.5
17	Total Dissolved Solids	mg/l	9620
18	Sodium	mg/l	2650
19	Potassium	mg/l	84

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"><li>• Specifying accountability of nodal authorities not below the Secretary level</li><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		
	<ul style="list-style-type: none"><li>• Monitoring at State level must take place</li></ul>		
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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 MAY 2023**  
**RIVER UPPALA, KASARGOD**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
C(ii)	Material collection facility. Operation	Mangalpady Grama Panchayath	2019	<b>Not submitted the report</b>	<b>NA</b>	<b>Not submitted the report</b>	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	<b>Not submitted the report</b>	<b>Rented Vehicle</b>	<b>Not submitted the report</b>	-	New projects will plan for the protection of river Uppala.
E	Installation of camera	Mangalpady Grama Panchayath	March 2020	<b>Not submitted the report</b>	<b>Work completed</b>	<b>Not submitted the report</b>		Project will be completed within 31.03.2023
C	Electrification of material collection facility	Manjeshwaram Grama Panchayat	2019-2020	Electrified	Electrified	<b>Not submitted the report</b>	100%	Completed
C	Transportation of collected waste	Manjeshwaram Grama Panchayat	March 2020	waste transported	waste transported	<b>Not submitted the report</b>		Work yet to be completed.
E	Installation of camera	Manjeshwaram Grama Panchayat	March 2020	New Project formulated to Install 6 CC Cameras, project amount deposited to Keltron and work started by Keltron	New Project formulated to Install 6 CC Cameras, project amount deposited to Keltron and work started by Keltron	<b>Not submitted the report</b>		Tendered

C	Tying of net on both sides of the bridge	Irrigation Department	2019-2020	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval. 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.	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		04.05.2023	
Nature and flow of the river		Moderate flow, water level decreased	
Sl.No	Parameters	Unit	Uppala Bridge
1	Temperature	° C	29
2	pH	-	7.58
3	Conductivity	µmhos/cm	62200
4	Turbidity	NTU	0.1
5	BOD	mg/l	1
6	Dissolved Oxygen	mg/l	5.2
7	Total Coliforms	cfu/100ml	620
8	Feecal Coliforms	cfu/100ml	420
9	Feecal Streptococcus	cfu/100ml	70
10	Chlorides	mg/l	21700
11	Total Alkalinity	mg/l	80
12	Total Hardness	mg/l	6400
13	Calcium Hardness	mg/l	4800
14	Magnesium Hardness	mg/l	1600
15	Calcium	mg/l	1920
16	Magnesium	mg/l	388.8
17	Total Dissolved Solids	mg/l	36660
18	Sodium	mg/l	11526
19	Potassium	mg/l	479

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		04.05.2023	
Nature and flow of the river		Water level decreased, moderate flow	
Sl.No	Parameters	Unit	Uppala River Near Bhagavathi Temple
1	Temperature	° C	28
2	pH	-	7.29
3	Conductivity	µmhos/cm	30400
4	Turbidity	NTU	0.1
5	BOD	mg/l	1.6
6	Dissolved Oxygen	mg/l	6.2
7	Total Coliforms	cfu/100ml	950
8	Feecal Coliforms	cfu/100ml	172
9	Feecal Streptococcus	cfu/100ml	40
10	Chlorides	mg/l	10500
11	Total Alkalinity	mg/l	42
12	Total Hardness	mg/l	4100
13	Calcium Hardness	mg/l	2500
14	Magnesium Hardness	mg/l	1600
15	Calcium	mg/l	1000
16	Magnesium	mg/l	388.8
17	Total Dissolved Solids	mg/l	18200
18	Sodium	mg/l	5460
19	Potassium	mg/l	166

Sd/-  
Assistant Scientist