

**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- Monthly PR- May 2022*****1. Short term plan****Maintenance and de-bottle necking of existing sewerage network**

No.	Activity	Implementing agency	Time line	Progress in the month of March-2022	Progress in the month of April-2022	Progress in the month of May 2022	% works completed	Details of works remaining
2.1.1	Pumping lines from the terminal pumping stations namely Kuriyathi, Pattoor, Kannammoola and Enchakkal pumping stations are to be connected directly to STP at Muttathara	Kerala Water Authority	May 2019				100%	100% work of Kuriathy completed. Pumping main of Pattoor, Kannammoola and Enchakkal included in Long term works.
							100%	a. Completed



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	Aranoor	0%	0%	80%	b. a) Providing RCC lining for the existing two wells. Lining for first well completed. 2 Pump sets erected in first well and commissioned. Pumping main also completed. Lining for 2 <sup>nd</sup> well partly completed. b) Diesel generator – to be supplied by contractor. Work terminated at the risk and cost of the contractor. Estimate for balance work under preparation.
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May 2020				100%	Work Completed and plant commissioned on 8.8.21.



2.1.4	Installation of adequate pumps in Mudavanmughal and Enchakkal pumping stations.	Kerala Water Authority	March 2020				100%	Pump sets installation at Enchakkal and Mudavanmughal pump house completed.
2.1.5	DG sets in all lift and pumping stations – Mudavanmughal, Aranoor, Thaliyal, Kuriyathi, Pattoor, Kannammola, Pattom, Murinjapalam and Enchakkal	Kerala Water Authority	May 2020				100%	DG sets installation of seven pumping stations completed. Approval from Electrical inspectorate received. Work completed. Trial run in progress. For Arannoor and Thaliyal. Erection of diesel generator is already included in the item mentioned 2.1.2. For Enchakkal already exists.
2.1.6	Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhancha- nthodu, control storm water entry into sewer to avoid overflow in Thampanoor area. Sewage generated in Rajaji Nagar shall be diverted to main sewer line. Sewage generated in Thoppil area shall be diverted main sewer line	Kerala Water Authority	Dec 2020				100%	Work completed.



2.1.7	Discharge of sewage in Parayilkadavu shall be stopped as there is overflow of sewage reaches in houses having sewerage connection and this may lead to discharge of sewage into RiverKaramana	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		1%	0%	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 Balance one AMRUT work expected to be completed by 31.10.2022
							To be arranged – 2 No. (Rs.	Two works dropped due to



	<b>Total works in progress/completed (76No.)</b> <b>Works in tendering (2No.)</b>						1.52cr.) State plan-2	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		1%	1%	96%	Works completed - 22 No. (Rs. 5.86 cr.) AMRUT-10, State plan-11 MLA ADF/SDF-1
	In progress/Ongoing (24No.)							In progress -2 No. (Rs. 11.35 cr.) AMRUT-2 State plan-0 Expected date of completion 31.07.22
								4 works need Land acquisition. Land acquisition process nearly completed for two works and 2.3 Crores has been remitted to



	Tendering/ To be arranged (1No.) Land acquisition -4			2%			To be arranged- 1-Nos. To be (Rs. 7.885 arranged cr.) Land Aquisition in progress-4 Nos	District Collector and the same is in 19(1) notification stage. Now additional amount of 1.35 crore requested by Thahasildar. Sanction for the same to be obtained. Second work is also in 19(1) notification stage-1.40 Cr remitted to LA Thahasildar and LA for one work in initial stage under the consideration of District Collector. Direction from head office to cancel one work and recast the estimate and submit for new AS. Same has been approved in State Plan 2021-22 and tendered. Quoted rate is high. Since offer received was high estimate revised and submitted of additional AS under State plan 2022-3. Expected date of completion 31.12.22
2.1.11	Procurement of sewer cleaning machines and equipment maintenance	Kerala Water Authority	Mar 2020	0%	0%	0%	100%	Work completed.





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

## 1. Long term Plan

	Long term measures proposed	Implementing agency	Amount Required (Rs.in Crore)	Time line	Progress in the month of February	Progress in the month of March	% works completed	Details of works remaining
3.1.1	Extension of sewerage system to Block F to G coastal belt	Kerala Water Authority		Three years				Consultant for preparing Detailed Project Report for uncovered wards of the Thiruvananthapuram Corporation and Rehabilitation of existing system, appointed and DER preparation in progress under PPD Regional Office/ Sewerage Circle, Tvm
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 sewerage system							





3.1.7	Additional STP requirement						
	<b>Total Amount required :</b>		<b>5000 Crores</b>				

\* Out of the 100 wards in Thiruvananthapuram Corporation, 43 wards ( Blocks A to E ) are fully/Partially covered with sewerage facility. For 35 Wards ( Blocks F to R ) design of sewerage network was prepared earlier but needs modification in lieu of the change in demography. Hence designs are to be prepared for 58 wards including 23 wards for which no designs are available. The long term measures are envisaged to cover the entire wards in the Thiruvananthapuram Corporation. For preparing DPR for rehabilitation of existing sewerage system and for establishing Sewerage Septage management system for uncovered areas of Thiruvananthapuram Corporation, AS has been obtained under RKI. Out of the 100 wards, 19 wards abutting river Karamana have been prioritized with an emphasis to abate the pollution of river as well as to utilize the full capacity of existing STP at Muttathara as early as possible. DPR for 19 prioritized wards was prepared and submitted to Govt. of Kerala and RKI on 14/10/2021, seeking AS for an estimated amount of Rs.1513 crores including GST & cost of land.

During the meeting chaired by the Hon'ble Mayor of Thiruvananthapuram Municipal Corporation on 26/10/2021, Secretary Thiruvananthapuram Municipal Corporation expressed difficulties in raising funds of this magnitude. Following this, the Additional Chief Secretary, Water Resource directed to redesign the system with decentralized STP units. The Consultant firm M/s REPL, Delhi had submitted draft DPRs. But, on scrutiny, major discrepancies were observed. The DPRs are under revision. A meeting with M/s REPL was conducted by the MD, KWA on 24/02/2022. During the meeting the firm agreed to submit the DPRs of 100 wards by 31.05.2022, giving first priority to submit the DPRs of 6 priority wards abutting Karamana river, in the neighbourhood of the existing STP at Muttathara. The sewage from these wards can be treated at the existing plant at Muttathara.

As the firm, M/s.REPL could not submit the DPR the firm is terminated from the work of Preparation of Detailed Engineering Report/Detailed Project Report for Rehabilitation of the Existing Sewerage System and Providing Sewerage/ Septage Management System for Uncovered Areas of Thiruvananthapuram Corporation vide proceedings on 31/05/2022. Steps are taken to arrange the DPR preparation.



**STATE WATER MONITORING PROGRAMME (SWMP) 2022**

Analysis Report for the month of MAY-2022

**KARAMANA**

Name of River		SAMPLE ID									
Date and Time of Sample collection		Peppara	Aruvikkara	Mangatukadavu	Pallathukadavu	Thiruvallom	Moonnattumukku				
Method of analysis											
Sl no.	Parameters										
1	Temperature, degree celsius	27	26	26	26	26	27				27
2	pH	7.1	7.1	6.8	7.1	7.1	6.9				7
3	Turbidity, NTU	1	1.8	2.2	2.4	2.4	2.8				4.2
4	Electrical Conductivity, $\mu$ mhos/cm	56	79	155	455	455	495				580
5	DO, mg/L	6.3	7.2	7.7	3.8	3.8	3.2				3.8
6	BOD, mg/L	1.6	2.6	2.4	6.6	6.6	6.6				6.6
7	NH3-N, mg/L	BDL	BDL	BDL	BDL	BDL	BDL				BDL
8	Nitrate-N, mg/L	BDL	BDL	BDL	BDL	BDL	BDL				1.08
9	Chloride, mg/L	8	11	30	98	98	90				112
10	Phosphate, mg/L	BDL	BDL	BDL	BDL	BDL	BDL				BDL
11	Total Alkalinity as CaCO3, mg/L	12	20	31	72	72	78				82
12	Total Hardness as CaCO3, mg/L	20	26	36	100	100	100				107
13	Calcium Hardness as CaCO3, mg/L	12	16	28	88	88	60				75
14	Magnesium Hardness as CaCO3, mg/L	8	10	8	12	12	40				32
15	Sodium, mg/L	4.2	5.8	15.9	50.9	50.9	50.4				70
16	Potassium, mg/L	1.9	2.1	2.9	5	5	8.3				7.2
17	Boron, mg/L	0	0	0	0	0	0				0
18	SAR	0.230208	0.27993	0.681471	1.348358	1.348358	1.235427				1.703521
19	Total Coliform, cfu/100ml	400	1000	1500	4700	4700	5600				32000
20	Faecal Coliform, cfu/100ml	100	400	900	2800	2800	3100				6300
21	Faecal Streptococci, cfu/100ml	ND	ND	ND	ND	ND	ND				ND

*(Handwritten Signature)*

Assistant Environmental 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 PAMBA, PATHANAMTHITTA**

S. No	Activity to be monitored	Timeline	Submission of progress by State/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none"><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> <p>(vii)Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p>		
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(x) Rain water harvesting

(xi) Maintaining minimum Environmental flow of river

(xii) Plantation on both sides of the river

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

## ACTION PLAN FOR RIVER PAMBA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of April- 2022	Progress in the month of May- 2022	% works completed	Details of works remaining
A(a)	No industries	-	-	-	-	-	-
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project				
C(ii)	Establishment of de- centralized solid waste treatment facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near Mannar Private Bus Stand. The work was executed by M/s Floret Technologies, Thiruvananthapuram. An amount of Rs. 13,60,000/- was allocated in the annual plan of Mannar GP for this project. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near Mannar Private Bus Stand. The work was executed by M/s Floret Technologies, Thiruvananthapuram. An amount of Rs. 13,60,000/- was allocated in the annual plan of Mannar GP for this project. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021		Inauguration of functioning.

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

C	Establishment of Material Collection Facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Non- biodegradable plastic materials has bCollection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for trasportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Non- biodegradable plastic materials has bCollection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for trasportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.	100%	Construction of permanant MCF building, collection and transportation of Non-bio degradable Materials to RRF for processing.
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				<p>Material Collection Facility is fully functional in Kadapra Grama Panchayath</p> <p>MCF construction completed 13 mini MCF implimentedc in all wards in Niranam Panchayath</p>	<p>Material Collection Facility is fully functional in Kadapra Grama Panchayath</p> <p>MCF construction completed 13 mini MCF implimentedc in all wards in Niranam Panchayath</p>		
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C	Resource Recovery Facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021	<p>As there is no RRF in Mavelikkara Block Panchayat in which Mannar GP belongs, nearby Chengannur Block Panchayat has agreed to receive the plastic materials collected and transported by Mannar GP. Mannar GP has started stockpiling of plastic waste materials collected through HKS in a hall above the Vridhdhasadanam owned by GP and segregated and transported to Clen Kerala company. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.</p> <p><b>Resource recovery facility is working as a centralised arrangement at BlockPanchayath level in Kadapra Grama Panchayath</b></p>	<p>As there is no RRF in Mavelikkara Block Panchayat in which Mannar GP belongs, nearby Chengannur Block Panchayat has agreed to receive the plastic materials collected and transported by Mannar GP. Mannar GP has started stockpiling of plastic waste materials collected through HKS in a hall above the Vridhdhasadanam owned by GP and segregated and transported to Clen Kerala company. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.</p> <p><b>Resource recovery facility is working as a centralised arrangement at BlockPanchayath level in Kadapra Grama Panchayath</b></p>	100%	Collection and transportation of Non-bio degradable Materials to RRF for processing
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				It will be suitable if RRF is established at Block level in Niranam Grama Panchayath	It will be suitable if RRF is established at Block level in Niranam Grama Panchayath		
C	Installing household and community level solid waste management units	Mannar Panchayat	31.03.2021	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021. Action Plan on solid waste Management is approved by Grama Panchayat Committee	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021. Action Plan on solid waste Management is approved by Grama Panchayat	100%	Construction and operation of Aerobic compost unit.

				on 27/08/2021	Committee on 27/08/2021.		
C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.03.2021	<p>Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw(final) has been passed by Mannar GP on 19/06/2021. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021</p>	<p>Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw(final) has been passed by Mannar GP on 19/06/2021. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021.</p>		Continuing

C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Parumala Town	Kadapra Panchayat	31.12.2020	The Panchayath has its resolution considered that sewage treatment plants is currently not needed within Panchayath area around Parumala	The Panchayath has its resolution considered that sewage treatment plants is currently not needed within Panchayath area around Parumala		
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Mannar Town	Mannar Panchayat	31.12.2020	Due to the lack of space and fund, construction of small STP is not included in the annual plan of Mannar Grama Panchayat. It will be suitable if the Govt . takes necessary steps in this matter.	Due to the lack of space and fund, construction of small STP is not included in the annual plan of Mannar Grama Panchayat. It will be suitable if the Govt . takes necessary steps in this matter.	0%	Not applicable
C	Construction of compound wall with fencing	Irrigation department	31.03.2021	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government			
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 development Plantatioplan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment	Irrigation department	31.03.2021				
C (b) (ii)	Green Protocol implementation in all Offices institution & Public function	Mannar, Kadapra/ Niranam Panchayat	31.05.2020	Green Protocol is strictly observed in Mannar GP and other offices as well as public functions . Strict instruction in writing is given to owners of auditoriums , assembly halls, etc to comply with Green protocol while conducting ceremonies. Rs. 1,50,000/- has been allocated for a project for the setting up of cloth bag/paper bag unit so that use of plastic carry bags can be discouraged . Green Audit was conducted in Mannar GP Office and other 13 Government Offices within the Panchayat Area. 11 offices were certified to have fulfilled Green Audit parameters. Certificates were awarded to the successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021	Green Protocol is strictly observed in Mannar GP and other offices as well as public functions . Strict instruction in writing is given to owners of auditoriums , assembly halls, etc to comply with Green protocol while conducting ceremonies. Rs. 1,50,000/- has been allocated for a project for the setting up of cloth bag/paper bag unit so that use of plastic carry bags can be discouraged . Green Audit was conducted in Mannar GP Office and other 13 Government Offices within the Panchayat Area. 11 offices were certified to have fulfilled Green Audit parameters. Certificates were awarded to the successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021.	100%	Continuation of Green Protocol .

				<p>Green protocol has been implemented in Public offices of Kadapra Gramapanchayat</p>	<p>Green protocol has been implemented in Public offices of Kadapra Gramapanchayat</p>		
				<p>Necessary instruction are given to all offices and institution to strictly comply with the green protocol and is regularly monitored in Niranam Grama Panchayath</p>	<p>Necessary instruction are given to all offices and institution to strictly comply with the green protocol and is regularly monitored in Niranam Grama Panchayath</p>		

D(a)	Issues relating to E-flow,maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department	30.11.2020	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government		
D (b)	Irrigation practices	Irrigation department	30.04.2020				
E	Awareness programmes for sections of public	Kerala State Pollution Control Board	31.05.2020				
C	Management of municipal, plastic, hazardous, biomedical and electrical waste	LSGD	31.03.2021	Draft by-law of Plastic Waste Handling has been passed by the Grama panchayat Committee on 05/02/2021. Collection, segregation and transportation of non-biodegradable plastic	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-		



			<p>materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation.Socio-Economic Unit (SEU) has been selected as implementing agency for the construction Two mini MCFs in each ward in all the 18 wards of Mannar GP.For the management of electrical, electronic and hazardous waste, the Grama Panchayat has reached in an agreement with Clean Kerala Company. Collection and handing over of electrical, electronic and hazardous 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>	<p>biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation.Socio-Economic Unit (SEU) has been selected as implementing agency for the construction Two mini MCFs in each ward in all the 18 wards of Mannar GP.For the management of electrical, electronic and hazardous waste, the Grama Panchayat has reached in an agreement with Clean Kerala Company. Collection and handing over of electrical, electronic and hazardous 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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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 2022	Progress in the month of May 2022	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	NOC has not been issued to industries for Ground Water extraction during April 2022	NOC has not been issued to industries for Ground Water extraction during May 2022	Demand based	1.As per the GEC estimation all the blocks in the District has been categorized as SAFE. 2.Provisions of GW (control & Regulation) Act 2002 is implementing strictly for regulating extraction of GW resource in the district
2	B(ii)	Ground water recharging / rain water harvesting	Artificial Recharge Structure 5 sites found feasible.	Estimate prepared and sent to Director GWD for 5 Artificial Recharge Structure .	Demand based	All the blocks in the district is categorized as SAFEas per GEC estimation. Kadapra-Niranam Area is not feasible for Ground Water Recharge. However, GW recharging programme is taken up in some pockets in the midland area including Manimala basin. Where seasonal GW level fluctuation is noticed.

3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Groundwater sample collection during the month of April 2022 from monitoring wells (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis soon	Groundwater sample collection during the month of May 2022 from monitoring wells (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis soon	Periodical assessment(Regular programme) Chemical analysis result ofgroundwater samples collected during November-2020 reveals that the gw quality is good and potable.	(i)Maintaining a network of observation wells in various hydrogeomorphic units throughout the district from which water level and water samples have been collected periodically and analysed. (ii)generally groundwater quality is good and potable
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report  ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose	Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report  ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose	Continuing programme	i)Borewell/tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report of GWD ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose. iii)Awareness programmes organised to the public to adopt rainwater harvesting measures

**WATER QUALITY DATA OF POLLUTED RIVER STRETCHES MAY- 2022****DISTRICT OFFICE, PATHANAMTHITTA****Date of Sampling: 05.05.2022**

Sl.No	PARAMETERS	THAKZHY	EDATHUA	MANNAR
1	Temperature, °C	30	27	29
2	pH	6.8	6.3	6.7
3	Conductivity, µmhos/cm	69	53	61
4	Turbidity, NTU	3.3	1.8	2.9
5	Phenolphthalein Alkalinity, as CaCO <sub>3</sub>	Nil	Nil	Nil
6	Total Alkalinity, as CaCO <sub>3</sub>	12	11	11
7	Chloride, mg/l	14	12	10
8	COD, mg/l	3.2	6.4	3.2
9	TKN, mg/l	0.3	0.25	0.25
10	Ammoniacal-N, mg/l	0.032	0.179	0.026
11	Hardness, as CaCO <sub>3</sub> mg/l	26	34	22
12	Calcium, as CaCO <sub>3</sub> mg/l	16	20	14
13	Magnesium as CaCO <sub>3</sub> , mg/l	10	14	8
14	Sulphate, mg/l	2.88	2.9	2.12
15	Sodium, mg/l	7.2	6.3	5.5
16	Total Dissolved Solids, mg/l	46	44	36
17	Total Fixed Solids, mg/l	41	39	31
18	Total Suspended Solids, mg/l	36	34	26
19	Phosphate, mg/l	BDL	BDL	BDL
20	Boron, mg/l	-	-	-
21	Potassium, mg/l	1.033	1.132	0.981
22	BOD, mg/l	0.7	0.9	0.9
23	Fluoride, mg/l	0.3	0.2	0.25
24	Dissolved Oxygen, mg/l	6.1	5.8	5.9
25	Nitrate-N, mg/l	0.235	BDL	0.273
26	Total Coliform, CFU/100 ml	220	280	280
27	Faecal Coliform, CFU/100 ml	70	90	40
28	SAR	0.61392	0.618886	0.5098
29	% of sodium	15.9658	14.3259	14.7512
30	Faecal Strepto Coccus,CFU/100 ml	Nil	Nil	Nil



**MONTHLY ANALYSIS REPORT OF POLLUTED RIVER STRETCHES MAY- 2022****STATION : MANNAR****SAMPLING DATE : 05.05.2022**

<b>SI.NO</b>	<b>PARAMETERES</b>	<b>ITTINAYARKADAVU BRIDGE KUTTAMPEROOR</b>	<b>KOTTAKAL KADAVU BRIDGE KORATTIKADAVU</b>	<b>PARUMALA BRIDGE</b>	<b>MANNAR BRIDGE</b>
<b>1</b>	<b>Temp. (°C)</b>	<b>28</b>	<b>28</b>	<b>29</b>	<b>29</b>
<b>2</b>	<b>pH</b>	<b>6.7</b>	<b>6.8</b>	<b>6.6</b>	<b>6.7</b>
<b>3</b>	<b>Conductivity (µS/cm)</b>	<b>80.63</b>	<b>60.55</b>	<b>62.97</b>	<b>66.76</b>
<b>4</b>	<b>DO (mg/L)</b>	<b>5.1</b>	<b>5.2</b>	<b>5.4</b>	<b>6.6</b>
<b>5</b>	<b>BOD (mg/L)</b>	<b>1.6</b>	<b>1.5</b>	<b>1.4</b>	<b>0.7</b>
<b>6</b>	<b>COD (mg/L)</b>	<b>6.4</b>	<b>6.4</b>	<b>6.4</b>	<b>3.2</b>
<b>7</b>	<b>TDS (mg/L)</b>	<b>38</b>	<b>36</b>	<b>38</b>	<b>32</b>
<b>8</b>	<b>TC (CFU/100ml)</b>	<b>860</b>	<b>200</b>	<b>390</b>	<b>190</b>
<b>9</b>	<b>FC (CFU/100ml)</b>	<b>280</b>	<b>60</b>	<b>130</b>	<b>60</b>
<b>10</b>	<b>FSC(CFU/100ml)</b>	<b>Nil</b>	<b>Nil</b>	<b>10</b>	<b>Nil</b>







SI. NO	PARAMETRES	PTA 05 (KOTTAKKALKADAVU BRIDGE,KORATHIKKADAVU)				PTA 06 (NEAR PARUMALA BRIDGE)			
		02.12.21	04.01.22	07.02.22	05.03.22	02.12.21	04.01.22	07.02.22	05.03.22
1	Cadmium,mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	Chromium Total mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	Copper , mg/L	BDL	BDL	0.03	BDL	BDL	BDL	0.06	BDL
4	Iron, mg/L	0.95	1.33	1.33	1.39	0.95	BDL	0.85	1.49
5	Manganese , mg/L	0.06	0.16	0.18	0.15	BDL	0.13	0.16	0.19
6	Nickel, mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
7	Lead , mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
8	Zinc ,mg/L	0.06	0.05	0.07	0.05	BDL	0.05	0.05	0.05
9	Arsenic, mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Mercury , mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

SI. NO	PARAMETRES	PTA 07 (MANNAR-PANNAI BRIDGE)			
		02.12.21	04.01.22	07.02.22	05.03.22
1	Cadmium,mg/L	BDL	BDL	BDL	BDL
2	Chromium Total mg/L	BDL	BDL	BDL	BDL
3	Copper , mg/L	BDL	BDL	BDL	BDL
4	Iron, mg/L	0.87	0.72	0.98	0.07
5	Manganese , mg/L	0.06	0.10	0.16	0.10
6	Nickel, mg/L	BDL	BDL	BDL	BDL
7	Lead , mg/L	BDL	BDL	BDL	BDL
8	Zinc ,mg/L	0.04	0.06	0.03	0.03
9	Arsenic, mg/L	BDL	BDL	BDL	BDL
10	Mercury , mg/L	BDL	BDL	BDL	BDL



## National Mission for Clean Ganga

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

### **RIVER MANIMALA, ALAPPUZHA**

<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 upto May 2022 is enclosed.</p> <p>Awareness campaigns initiated.</p> <p>No groundwater pollution is noted in the area action yet to be initiated.</p> <p>Action will be initiated.</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 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>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p>
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## ACTION PLAN FOR RIVER PAMBA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2022	Progress in the month of April 2022	Progress in the month of May 2022	% 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	NIL	NIL		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	NIL	NIL		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	NIL	NIL		0%	Yet to be initiated
C(b)(ii)	Green Protocol implementation in all offices, institution & public functions	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.03.2020	100%	100%	100%	100%	0

D(a)	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department, Hydrographic survey department	31.03.2021					Work to be initiated
C(ii)	Establishment of decentralized solid waste treatment facilities	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.12.2020	100%	100%	100%	100%	0
C	Installing household & community level solid and domestic sewage waste management	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpanchayaths	31.12.2020	92%	NA	NA	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	92%	NA	NA	NA	NA

### ACTION BY GROUND WATER DEPARTMENT

Sl. No	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Timeline	Progress in the month of March 2022	Progress in the month of April 2022	Progress in the month of May 2022	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	31.03.2021					
2	B(ii)	Ground water recharging / rain water harvesting in Govt offices	31.03.2021					

3	NGT order in O.A no.496/2016 Identification of illegal bore wells in the catchment area.	NGT order in O.A no.496/2016 Identification of illegal bore wells in the catchment area.	31.03.2021					
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## 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**

<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		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><li>• Chief Secretaries may have an accountable person attached in their office for this purpose</li></ul>		NA
	<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 (preferably before 20 <sup>th</sup> of every month)	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>(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>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 May 2022 is enclosed.</p> <p>Awareness campaign to be initiated</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>No groundwater pollution is noted in the area so action yet to be initiated.</p> <p>Adopted.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p> <p>Action will be initiated.</p>
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## ACTION PLAN FOR RIVER PAMBA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2022	Progress in the month of April 2022	Progress in the month of May 2022	% works completed	Details of works remaining
A(a)	No industries	-	-	-			-	-
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project					
C(ii)	Establishment of de-centralized solid waste treatment facility	MannarPanchayat, Kadapra/ NiranamPanchayath	31.04.2022	Construction of 2 aerobic compost units completed (One each in GramaPanchayat Office compound and near Mannar Private Bus Stand. The work was executed by M/s Floret Technologies,	NA	NA	100%	Inauguration of functioning.

				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 GramaPanchayat Committee on 27/08/2021				
C	Establishment of Material Collection Facility	MannarPanchayat,	31.04.2022	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by	NA	NA	100%	Construction of permanent MCF building.

				<p>Haritha Karma Sena(HKS). Non-biodegradable plastic materials has bCollection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for</p>				
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				<p>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.</p>				
C	Resource Recovery Facility	MannarPanchayat, Kadapra/ NiranamPanchayath	31.03.2021	<p>As there is no RRF in Mavelikkara Block Panchayat in which Mannar GP belongs, nearby Chengannur Block Panchayat has agreed to receive the</p>	NA	NA	100%	

				<p>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 Vridhdhasada nam owned by GP and segregated and transported to Clen Kerala company. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on</p>				
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				19/06/2021.				
C	Installing household and community level solid waste management units	MannarPanchayat	31.04.2022	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean	NA	NA	100%	Operation of Aerobic compost unit.

				<p>Kerala Company(CK C) so far. About 500 kg of plastic materials is kept ready for transportati on.</p> <p>Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021. Action Plan on solid waste Management is approved by</p>				
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				GramaPanchayat Committee on 27/08/2021.				
C	Door to door collection and transportation of municipal solid waste	MannarPanchayat	31.04.2022	. Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradable plastic	NA	NA	100%	The process has to be repeated through the year.

				<p>materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CK C) so far. About 500 kg of plastic materials is kept ready for transportati on. 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</p>				
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				on 19/06/2021. Action Plan on solid waste Management is approved by GramaPancha yat 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	KadapraPanchayat	31.12.2020					
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Mannar Town	MannarPanchayat	31.12.2020	Due to the lack of space and fund, construction of small STP is not included in the annual plan of MannarGram aPanchayat.	NA	NA	0%	Not applicabl e

				It will be suitable if the Govt .takes necessary steps in this matter.				
C	Construction of compound wall with fencing	Irrigation department	31.03.2021					
C	Removing light jungle and muddies from river courses	Irrigation department	31.03.2021					
C	Electrical-Light arrangements and Surveillance cameras	Irrigation department	31.03.2021					
C	Regualtingactivites 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, Kadapra/ NiranamPanchayat	31.05.2020	Green Protocol is strictly observed in Mannar GP and other offices as well as public functions . Strict instruction in writing is given	NA	NA	100%	Continuation of Green Protocol .

				<p>to owners of auditoriums , assembly halls, etc to comply with Green protocol while conducting ceremonies. Rs. 1,50,000/- has been allocated for a project for the setting up of cloth bag/paper bag unit so that use of plastic carry bags can be discouraged . Green Audit was conducted in Mannar GP Office and other 13 Government Offices within the Panchayat Area. 11 offices were certified to have fulfilled Green Audit parameters.</p>				
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				Certificates were awarded to the successful offices and SuchitwaPadavi Declaration in Mannar GP was conducted 26/01/2021.				
D(a)	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department	30.11.2020					
D (b)	Irrigation practices	Irrigation department	30.04.2020					
E	Awareness programmes for sections of public	Kerala State Pollution Control Board	31.05.2020	Awariness classes were conducting	Awariness classes were conducting	Awariness classes were conducting	100%	
C	Management of municipal, plastic, hazardous, biomedical and electrical waste	LSGD	31.03.2021	Draft by-law of Plastic Waste Handling has been passed by the Gramapanchayat	Draft by-law of Plastic Waste Handling has been passed by the Gramapanchayat		100%	The process is to be repeated periodically.



				<p>Committee on 05/02/2021. Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation. Socio-Economic Unit (SEU)</p>	<p>Committee on 05/02/2021. Collection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for transportation. Socio-Economic Unit (SEU)</p>			
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				<p>has been selected as implementing agency for the construction Two mini MCFs in each ward in all the 18 wards of Mannar GP.For the management of electrical, electronic and hazardous waste, the GramaPanchayat has reached in an agreement with Clean Kerala Company. Collection and handing over of electrical, electronic</p>	<p>has been selected as implementing agency for the construction Two mini MCFs in each ward in all the 18 wards of Mannar GP.For the management of electrical, electronic and hazardous waste, the GramaPanchayat has reached in an agreement with Clean Kerala Company. Collection and handing over of electrical, electronic</p>			
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				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).	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).			
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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 2022	Progress in the month of April 2022	Progress in the month of May 2022	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

**ANALYSIS REPORT OF DRAINS OF MANIMALA BETWEEN KALLOOPARA AND THONDRA  
MAY-22**

SI NO	BOTTLE NO.	Name of Drains	PH	BOD	COD	TC
1	TK1	Panayampalathodu	6.8	0.9	4	1800
2	TK2	PadathupalamThodu	6.5	1.1	12	1100
3	TK3	Thottappuzha	6.8	0.7	4	1800
4	TK4	Kuttapuzha under Kattodubridge	6.7	1	4	1200
5	TK5	Kadavumbara	6.9	1	4	200
6	TK6	Drain under Varappalam Bridge	7	1.2	12	100
7	TK7	Drain under kallupalam Bridge	7.4	0.9	8	1700
8	TK8	Komalamthodu	7.5	1.1	8	600
9	TK9	VennikulamValiyathodu	7.1	0.3	12	900
10	TK10	Paduthodu	6.9	1	4	3600
11	TK11	MallappallyValiyathodu	6.5	0.7	4	600

**AnalysisResultofDrains Joining to Mannar-Thakazhi Stretch of Pamba River (2022-2023)**

Sl. No	NameofDrain	Parameters														
		pH			ElectricalConductivity(μS/cm)			BOD(mg/l)			COD(mg/l)			TC(Nos/100ml)		
		MAR	APRIL	MAY	MAR	APRIL	MAY	MAR	APRIL	MAY	MAR	APRIL	MAY	MAR	APRIL	MAY
Months	MAR	APRIL	MAY	MAR	APRIL	MAY	MAR	APRIL	MAY	MAR	APRIL	MAY	MAR	APRIL	MAY	
1	ParumalaDrain	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	MannarTown Drain	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3	Kuriyathkadavu Thodu	7.9	7.38	6.8	37.42	202.6	104.7	0.1	5.1	4.4	4	16	20	0	3100	400
4	KaruvelilThodu	7.3	6.99	7	38.39	171.5	49.99	0.4	4.3	1.5	12	12	8	500	400	800
5	Nochithodu	7.4	7.39	6.8	34.94	199.4	79.87	0.5	3.9	3.1	8	12	8	0	1800	2200
6	Pattaparambil Thodu	7.5	7.01	7.1	57.68	185.8	39.03	1.6	6.8	0.5	8	8	4	4000	2200	400
7	Kappiyarissery Thodu	7.4	7.03	7.1	32.78	98.46	44.13	0.06	3.5	1.3	4	20	4	0	800	1000
8	KombankeryThodu	7.1	7.29	7.2	85.51	51.2	38.64	6.7	0.93	0.2	8	12	4	4500	1300	400
9	Perackalthodu	7.4	7.54	7	33.9	386.7	54.71	0.1	2	0.6	8	8	8	200	1200	300
10	Erathodu	7.8	7.46	7	239.1	53.78	44.85	2.7	1.3	1.1	8	4	4	400	1100	800
11	Kolarayaru	7.4	7.35	7.1	100.8	48.81	44.7	0.7	2.1	0.2	8	12	8	0	1000	800

**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>	Thrippunithura Municipality	Done.  Completed.
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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 May 2022	Progress in the month of June 2022	% 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 started and progressing	progressing	NA	
Aa (iv)	Effluent monitoring from FACT	KSPCB	Periodical	ongoing	ongoing		
Aa (iv)	Periodical Monitoring	KSPCB	Periodical	ongoing	ongoing		
<b>(2) Drain from Cochin Refinery area</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	% works completed	Details of works remaining
Aa (iv)	Surveillance to restrict the dumping of wastes into the river and its branches	Vadavucode – Puthencruz Panchayat with the help of Police	Periodical	ongoing	ongoing		
A(b)	Sanitation Survey	Vadavucode – Puthencruz Panchayat	3 months	Survey process going on Completed 1700 houses.	Survey progressing		

E	Periodical Cleaning of Chithrapuzha	Irrigation Department	Twice in 3 years	Reach I – <b>Third term</b> cleaning started  Reach II, <b>Second term</b> term cleaning Started  Reach I-66%  Reach II -65%  For Reach III, Estimate submitted to CE	Reach I & Reach II Completed. Reach III will be implemented through Operation Vahini.		For Reach III, Estimate submitted to CE. Now decided to implement the work through Operation Vahini
	Already implemented Effluent Treatment facility in Cochin Refinery and periodical monitoring are ongoing	KSPCB		ongoing	ongoing		
<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 May2022	Progress in the month of June 2022	% works completed	Details of works remaining
A(b)	Identification of major pollution causing units(Apartments, hospitals, service stations, markets and industries) in upstream	Thrikkakkara Municipality	3 months	Progressing	Progressing		
		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	Camera installed.40 violations identified and action initiated.		

Aa(iv)	Periodical Monitoring	KSPCB	Periodical	Monthly monitoring progressing.	Monthly monitoring progressing.		
A(b)	Sanitation Survey	Thrikkakara Municipality	6 months	.No progress	Sanitation survey progressing.		
E	Periodical Cleaning	Irrigation Department	Once in a year	Reach I – <b>Third term</b> cleaning started  Reach II, <b>Second term</b> term cleaning Started  Reach I-66%  Reach II -65%  For Reach III, Estimate submitted to CE	Reach I & Reach II Completed.  Reach III will be implemented through Operation Vahini.	Reach III work will be started	

**(4) Drain joining Chithrappuzha from CSEZ(Chittethukara)**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2022	Progress in the month of June 2022	% Works completed	Details of works remaining
A(b)	Ensure proper functioning of ETP in CSEZ	KSPCB	Periodical	The CETP is functional. But, discharge standards not fully complied. Violation noted, action being initiated.	At present ETP functional. No illegal discharges. Monitoring will continue		
A(b)	Sanitation Survey and periodical cleaning	Thrikkakara Municipality	6 months	No progress reported	75 lakhs amount spend for the cleaning of creeks. 84. 9 lakhs estimate approved by		

					Council for thodu cleaning in the year 2022-2023		
Aa(iv)	Periodical Monitoring	KSPCB	Periodical	Ongoing	Ongoing		
<b>(5) Vettuvelikkadavu (Konothupuzha joining Chithrappuzha)</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	% 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	Identified the unauthorized outlets and action taken to close the outlet.  The secretary reported,  the action completed	Action completed		
A(b)	Sanitation Survey	Thripunithura Municipality	3 months	Action completed	Action 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	Secretary informed that Surveillance squad is already formed and action will be initiated for the inspections and night surveillance of squad	Squad inspection progressing.		
E	Cleaning of Konothupuzha (work Proposal already submitted by Minor Irrigation)	Irrigation Department (Minor Irrigation)	Twice in a year	Action initiated as per the directions of Hon'ble NGT OA 237/2017			
<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 March 2022	Progress in the month of April 2022	% works completed	Details of works remaining
E	Periodic Cleaning	Irrigation Department	Once in a year	Reach II(second time cleaning )will start on January	Reach II completed, Reach III FS not obtained. Decided to do the work through operation vahini		Work is not started
C(ii)	Surveillance to restrict the dumping of wastes into the river	Vadavucode - Puthercruz with the help of Police	Periodical Monitoring	Installed cameras. Action completed.	Installed cameras. Action completed.		

		Thripunithura Municipality with the help of Police	6 months	Surveillance squad is already formed and action being taken for the night surveillance	Squad inspection progressing.		
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		

### LONG TERM MEASURES

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May2022	Progress in the month of June 2022	% 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	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	.			
	Restriction of illegal dumping of Septage in to the river	Police					
	Flood Plain Zone(Management and Protection) Preparation of Inundation maps	Irrigation Department	3 years	Detailed study and investigations has to be done with the consultation of Hydrology Wing.	Detailed study and investigations has to be done with the consultation of Hydrology Wing.		

### ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of May 2022	Progress in the month of June 2022	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	NA			
2	B(ii)	Ground water recharging / rain water harvesting	Ongoing			
3	B(iii)	Periodic ground waste quality assessment and remedial actions in	Cleaning of wells are ongoing			



		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	NA			

**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	Implementing agency	Time line	Progress in the month of May 2022	Progress in the month of June 2022	% works completed	Details of works remaining
<b>(2) Manakkakkadavu</b>							
2.1.2 C(ii)	Surveillance to restrict the dumping of wastes into river and its branches	KunnathunaduPanchayat and with the help of Police		Action completed. Informed that the PWD work progressing and hence the power is temporarily disconnected will reinstate immediately after the road work.	Camera operational	100%	
<b>(4) Canal joining Kadambayar near Infopark Phasell</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	% works completed	Details of works remaining
2.2.1 E	Cleaning of thodu	Kerala Irrigation Department  &	6 months	F S pending  No progress	Decided to implement the project through Operation Vahini	Manual cleaning for the year 2021-2022 started. 90%	

		Vadavucode – PuthencruzPanchayat		Manual cleaning for the year 2021-22 started.	Manual cleaning for the year 2021-2022 started. 90% completed	completed	
2.2.3 C(ii)	Surveillance to restrict the dumping of wastes into river and its branches	Vadavucode – PuthencruzPanchayat with the help of Police	2 months	Action completed. Installed cameras.	Camera operational		Work completed
<b><u>Main Stream (Manakkadavu to Kadambayar-Chithrappuzha Confluence point) (Provided temporary bund (KozhichiraBund) inKadambayar-Chithrappuzha joining section to check salinity intrusion)</u></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	% 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	Work is ongoing. Legacy waste spread in sector 4,5,6 and 7 is now cleared and area recovered is about 10 acres i.e, 28% work is completed.	30% work completed.RDF 30 Tonnes waste disposed to Dalmia Cements. The work is stopped due to rain. Additional bailing machine not installed		Completion of the work of bio mining by January 2024

A(b)	Provide proper facilities for restricting the seepage of leachate( <b>Construction of Leachate treatment Plant: Collection tank</b> )	Kochi Corporation	April 2022	Leachate treatment plant is proposing to construct after reconstruction of the composting plant. Project completion April 2023. Selection notice was sent. Agreement signed on 14.03.2022. Estimate 39Cr for the composting plant. Submitted for council approval.	Estimate 39Cr for the composting plant. Submitted for council approval. Presently the leachate treating in the septage treatment plant .	Septage plant rectification completed	
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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	Leachate started treating on 23/02/2022 at Brahmapuram Septage treatment plant after its preliminary treatment in ratio 4:1(Septage:Leachate).Daily 20KL of leachate is treated at septage treatment plant.Applied for consent to operate from PCB for treatment of Septage together with Leachate in Septage treatment plant.  Kick off meeting before technical committee is over.Inception report is under progress.	Treatment of leachate in septage treatment plant is progressing.  Presently the leachate treating in the septage treatment plant. Collected the leachate sample from site by Ultra tech Pvt.Ltd and given for characterisation study in Enviro design lab. Site identification and demarking is completed. Selection notice sent; agreement signed on 14.03.2022	No progress	Technical committee of Suchitwa Mission held on 25.09.20 suggested treating of the leachate in septage treatment plant till reconstruction of compost plant.
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**Action plan by Gramapanchayath**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2022	Progress in the month of June 2022	% works completed	Details of works remaining
E	Installation of CCTV camera at Manakkakadavu	Kunnathunadu	30.09.2019	Completed	Action Completed	100%	



C(ii)	Cleaning of Thodu	Vadavukad-puthenkruze	6 months	-	Manual cleaning for the year 2021-2022 started.	30%	
C(ii)	Surveillance to restrict dumping of waste to the river and branches (with the help of Police)	Vadavukad-puthenkruze	2 months	Installed cameras. Action completed.	Camera operational.	100%	
<b>2. Long term Plan</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	% 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	About 500TPD WtE Plant is proposed by KSIDC. M/s Zonta Infrastratech Pvt Ltd informed that following procedures should be done before execution. 1. Environment site assessment is under progress. 2. Samples collected and sent to lab for analysis 3. Waste generation and	Characterisation report not submitted till date. Construction agreement given for vetting.	Not started	

				<p>characterization study will start by 04.04.2022. based on this result, DPR is to be prepared. Approval of DPR should be obtained from Govt.</p> <p>4. statutory clearance to be obtained</p> <ul style="list-style-type: none"><li>i. PCB Consent</li><li>ii. Factories and boilers, approval</li><li>iii. Initial fire NOC</li><li>iv. Town planning Department approval</li><li>v. Building Permit</li><li>vi. Power purchase agreement with KSEB</li></ul> <p>Further action to be initiated form the State Govt</p>			
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4.6 A(b)	Restriction of illegal dumping of septage in to the river	Police	As soon as possible				
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#### 4. REVISED ACTIONPLAN

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of May 2022	Progress in the month of June 2022	% 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. Final decision will be taken by June after the model code of conduct	The proposal submitted for council approval		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 constructed of waste management facility in market	Land have been identified near to NGO quarters for setting up aerobins and the proposal submitted for council approval.		Action pending
3.3	Provide facility for the treatment of sewage, sullage and garbage generated	Thrikkakkara Municipality		No progress	Land have been identified near to NGO- quarters for setting up aerobins and the proposal		

	Proposed places for the installation of Aerobins (1) Municipal office compound (2) NGOquarters (3) KakkanadMarket Near Eechamukku TV-Centre Anganavadi				submitted for council approval		
3.4	Providing facility for restricting discharge of waste water from the surrounding houses to the river	Thrikkakkara Municipality		Survey continuing	Progressing.DLTC Convener informed the municipality to submit the sanitation survey report.		
3.5	Providing effluent treatment plant for industries  No.of industries :75 no.s	Thrikkakkara Municipality		Actions taken by Municipality.	KSPCB is ensuring that the industries are operating with proper treatment systems.		
3.6	Identification of illegal outlets into storm water drains and fine shall be imposed on such units – 30 units	Thrikkakkara Municipality		Action initiated	The Municipality informed that their	Action initiated	Action pending
3.7	Biodegradable waste management  Bio-Composter – 2000 No.s Thumboormuzhi aerobins - 4 No.s Portable biogas – 1500 No.s	Thrikkakkara Municipality		Actions initiated to issue notice to close the outlet.	No progress		

	Ring compost – 500 No.s Napkin destroyer – 6 No.s Viability gap Fund						
<b>5. MONITORING</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	% works completed	Details of works remaining
4.1	River water quality monitoring – Monitoring of water quality	Kerala State Pollution Control Board	Ongoing; Monthly frequency	Monthly monitoring On going	monitoring progressing		
4.2	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc  Monitoring of establishments, service stations, flats, industrial units	Kerala State Pollution Control Board		On going	On going		
<b>7. LONG TERM PLAN</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	% works completed	Details of works remaining
5.1	Additional STP requirement DPR Preparation in 6 months (through consultants) To allot land, Government Procedure are ongoing	Thrikkakkara Municipality	3 years	The Secretary informed action not being taken due to land constraints.	No adequate land.		Action to be initiate d.

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	Implementing agency	Time line	Progress in the month of May 2022	Progress in the month of June 2022	% works completed	Details of works remaining
5.3	Development package  Inspection bund for Chithrapuzha and Kadambayar is included in this package. For this project, preliminary investigation of site which includes survey of land to know its availability for formation of side bund which is to be provided with tiles. The project also includes side protection work of Chitrapuzha and Kadambayar.	Irrigation department	3 years	No sanction obtained. No progress.	FS not obtained.		

	Provision for handrail sat 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.						
5.4	Desilting and development 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.	Irrigation Department	1 year (periodical cleaning -4 months x3)	Financial sanction not obtained.	FS not obtained. The EE, Irrigation informed that minor works will be implemented through Operation Vahini Project.		
5.5	sheet piling and providing fencing Fencing is provided in Sl.no 5.3	Irrigation Department	1.5years	Financial sanction not obtained.	Financial sanction not obtained.		
5.6	Development of river basin It includes cleaning and removal of water hyacinth from rivers and maintainits natural flow, depending on availability of fund.	Irrigation Department	1.5years	Financial sanction not obtained.	Financial sanction not obtained. No progress		
<b><u>9. RECOMMENDATIONS BY KERALA STATE POLLUTION CONTROL BOARD</u></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 May 2022	Progress in the month of June 2022	% Works completed	Details of works remaining

6.1	<p>Door-to-door collection and transportation of MSW</p> <p><b>100% door to door collection</b></p> <p>Proposed Kerala Solid Waste Management Authority</p>	<p>Thrikkakkara Municipality</p> <p>Local bodies of Census Town</p>		100% by 2023			
6.2	<p>Modern Solid Waste Treatment Plant Proposed Kerala Solid Waste Management Authority</p>	<p>Thrikkakkara Municipality (To allot land, Government procedure are ongoing)</p> <p>Local bodies of Census Town</p>				Actions initiated to procure land.	
6.3	<p>Rendering plant for slaughter house/poultry wastes</p> <p>Proposed Kerala Solid Waste Management Authority</p>	<p>Thrikkakkara Municipality (To allot land, Government procedure are ongoing)</p>		<p>The land identified and the land inspected by the sub committee. Final decision will be taken by June after the model code of conduct.</p>	<p>The proposal submitted for council approval.</p>	<p>Actions initiated to procure land.</p>	



6.4	Common bio-medical waste treatment facility Proposed Kerala Solid Waste Management Authority	Health Department		CBWTF started at Ambalamughal, operated by KEIL	Completed	Completed	
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 March 2022	Progress in the month of April 2022	% works completed	Details of works remaining
7.1	Flood plain zone management and E- flow maintaining Flood plain zone management & E-flow maintaining cleaning &desilting, depending on availability of fund.	IrrigationDept		It is included in the estimate of Removal of water hyacinth from Kadambayar and Removal of water hyacinth from	FS not obtained		

	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			Edachira Thodu			
7.2	Development of bio diversity parks in banks	Thrikkakkara Municipality	1 <sup>st</sup> Phase 2020-21  2 <sup>nd</sup> Phase 2021-22				

**Analysis report of polluted river stretches-R Periyar, R- Chithrapuzha,R-  
Kadambrayar For the month of MAY 2022**

STNCode	Sampling Date	Sampling Time	StnName	TypeWaterBody
2338	05.05.2022	12:00	Kadambrayar At Manackak	River
1573	05.05.2022	11:00	Chithrapuzha At Irumpanan	River

Sl. No.	Parameters		
		2338	1573
1	Temperature, °C	29	29
2	Dissolved Oxygen, mg/l	2.5	2.7
3	pH	6.5	6.5
4	Conductivity, µmhos/cm	135	500
5	BOD, mg/l	2.8	2.5
6	Nitrate-N, mg/l	0.26	0.67
7	Turbidity, NTU	2	0.8
8	Total Alkalinity, as CaCO3	27	45
9	Chloride, mg/l	29	95.5
10	COD, mg/l	8	10.4
11	TKN, mg/l	0.25	0.6
12	Ammoniacal-N, mg/l	0	0
13	Total Hardness, as CaCO3 mg/l	20	79
14	Calcium, as CaCO3 mg/l	4	20
15	Magnesium as CaCO3, mg/l	16	59
16	Sulphate, mg/l	0	25.41
17	Sodium, mg/l	14.76	51.5
18	Total Dissolved Solids, mg/l	75	275
19	Total Fixed Solids, mg/l	60	220
20	Total Suspended Solids, mg/l	22	24
21	Phosphate, mg/l	0.01	3.42
22	Boron, mg/l	0.05	0.16

23	Potassium, mg/l	4.46	4.8
24	Fluoride, mg/l	0.05	1.25
25	Total Coliform, MPN/100 ml	2000	2200
26	Feacal Coliform, MPN/100 ml	1500	1500
27	Feacal Streptococci, MPN/100ml	140	70



## National Mission for Clean Ganga

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

### **RIVER 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 APRIL2022	Progress in the months of MAY 2022	% works completed	Details of works remaining
1.A(b)	Augmentation and Revamping of existing STP at near AdwaithaAshramam and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	Dec 2019	The detailed estimate submitted by Waterman Aquatic Pvt. Ltd. company has received the DPC and council approval. The estimate has been approved by the PWD mechanical division. The approval from PWD Electrical division yet to be received.	The estimate has been approved by the PWD mechanical division. The approval from PWD Electrical division yet to be received.		
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	Administrative sanction has been got by the council for repairing of ETP on 10.01.2022. Action is being taken accordingly. The discussion with Accredited Agency is in progress	Administrative sanction has been got by the council for repairing of ETP on 10.01.2022. Action is being taken accordingly. The discussion with Accredited Agency		

					is in progress		
3.A(b)	Discharge of sewage from Hotels to the River through drain near Periyar	Aluva Municipality	2020	Health Squad inspection in progress	Health Squad inspection in progress	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	Inspection in progress		
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	Since the Civil work is being completed, fund has been requested to KIIFB for the purchase of machineries and other requirements related to modern abattoirs. DPR has been prepared.	Since the Civil work is being completed, fund has been requested to KIIFB for the purchase of machineries and other requirements related to modern abattoirs. DPR has been prepared.		
7.A(b)	Procurement of sewer cleaning machines and equipment maintenance	Aluva Municipality	March 2020	Purchased sewer cleaning machines. Cleaning work in progress. The project for the purchase of	Purchased sewer cleaning machines. Cleaning work in progress.		

				equipments for Solid waste management is handed over to Suchithwa Mission for scrutinizing. Tender procedures will start once the sanction is received.			
8.E	Installation of cameras at the waste dumping spots	Aluva Municipality	2020	The project has been approved by DPC on 28.01.2022 of estimated amount of Rs. 8,00,000/-. Technical sanction not received.	The project has been approved by DPC on 28.01.2022 of estimated amount of Rs. 8,00,000/-. Technical sanction not received.		
9.A(b)	Construction of retaining wall with HDPE liner at Kalamassery dumping yard in order to prevent the leachate discharge from the yard to ThoombungalThodu	Kalamassery Municipality	Sept 2019	Completed	Completed	100%	
10.C(ii)	Installation of plastic shredding unit	Kalamassery Municipality	June 2019	One plant is already installed and functioning.	One plant is already installed and functioning.	100%	
11.A(a)(iv)	Constitution of squads for night surveillance for finding the unauthorized dumping of sewage at NAD wet lands Kalamassery	Kalamassery Municipality, Police department	2020	NAD has not installed CCTV. Night surveillance in progress. A total amount of Rs. 472790/- enif sa deivel.	NAD has not installed CCTV. Night surveillance in progress. A total amount of Rs. 476790/- sa deivel		

					enif.		
12.A(b)	Installation of common STP for Kalamassery Municipality and ETP at Municipal Market	Kalamassery Municipality	December 2019	Common ETP is working at municipal market.75 cents land identified at North Kalamassery for sewage and septage treatment plant.	75 cents land identified at North Kalamassery for sewage and septage treatment plant.		
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	Notices have been issued to 49 units and out of them 12 have acted as per the instructions.	Notices have been issued to 49 units and out of them 12 have acted as per the instructions.		
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.	Industries department has informed that land is not available in the industrial estate.		
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	Notice issued to 49 persons. 12 persons cleared violations. Instructed to provide waste treatment facilities for treating the waste water generated in households activities in respective houses itself. Inspection in progress.	Notice issued to 49 persons. 12 persons cleared violations. Instructed to provide waste treatment facilities for treating the waste water generated in households activities in respective houses itself. Inspection in progress.		

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. Rs. 17020 /- levied till date	Camera installed on 10 locations. 2 portable (mobile) cameras has installed for identifying waste dumping spot. Rs. 18020 /- levied till date		
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	Inspection in progress		
18.E	Installation of cameras at the waste dumping spots	Eloor Municipality	2020	Keltron have installed cameras at the waste dumping spots namely the premises of Aerobic biobin near HIL Company and bin near Manjummel Arattukadavu. Due the software issue the cameras are not working most time. Keltron has agreed to rectify the issues. The cameras are currently working. Keltron have rectified the issue	Keltron have installed cameras at the waste dumping spots namely the premises of Aerobic biobin near HIL Company and bin near Manjummel Arattukadavu. Due the software issue the cameras are not working most time. Keltron has agreed to rectify the issues. The cameras are currently working. Keltron have rectified the issue		

				partially.	completely.		
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	Inspection in progress. Fine imposed Rs. 200000/- against dumping of waste in public places and water bodies.	Inspection in progress. Fine imposed Rs. 220000/- against dumping of waste in public places and water bodies.		
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	Notice was given to respective institutions and commercial establishments. Closing of outlet exposed to drains of TP canals is taken as a work by Engineering wing of KMC. Work mainly focused on four zones. They are Central zone, Edappally zone, Pachalam zone and Vytilla zone	Out of 11 flats, 9 flats on the sides of Edapallythodu were found working without STP. Rs. 25000/- has been levied as fine and notice has been issued to install STP. Four residences were found discharging septic waste to EdapallyThodu. They have been instructed to construct septic tank. A restaurant which was found discharging filtered water to Edapallythodu was instructed to		

					dispose the same through soak pit. Five Blocks of Pentaqueen flat was found working without STP. They are ready to install STP.		
21.E	Issuing notice to the defaulters	Kochi Municipal Corporation	4 months	Inspection is going on. Further actions are taken.	Inspection is going on. Further actions are taken.		
22.A(a)(iv)	Periodical inspection in the flats, hotels, shops located along the river	Kochi Municipal Corporation	Periodical	Inspection in progress	Inspection in progress		Being carried out periodically
23.A(b)	Identification of natural drains/thodu reaching river Periyar and cleaning of weeds, grasses etc.	Irrigation department	2 years	4 polluted streams have been identified. The Estimate has been submitted for restoration works. Financial sanction was not yet received. Onjithodu soil test conducted. Streams have been included in Operation Vahini.	4 polluted streams have been identified. The Estimate has been submitted for restoration works. Financial sanction was not yet received. Onjithodu soil test conducted. Streams have been included in Operation Vahini.		Detailed estimate submitted to higher authority for FS. FS not obtained so far
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	The cleaning of river tributaries and desilting is jointly implemented by Local self		

			<p>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 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 informed that instruction has been given to Estate Manager and Associations regarding this. Out of 28 units, 22 units completed clearing work. The units that have reported difficulty in clearing grasses on the river bank portion within their premises, DIC have given them strict instruction for clearing the</p>	<p>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 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 informed</p>		
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				same.	that instruction has been given to Estate Manager and Associations regarding this. All the 28 units have completed the clearing work. River side units have cleared the weeds and grass within their compound.		
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	Periodically maintained for the minimum flow of water by operating the shutter properly at Pathalam lock cum regulator.	Periodically maintained for the minimum flow of water by operating the shutter properly at Pathalam lock cum regulator.		
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	For the establishment of CETP a government order has come sanctioning Rs. 37.5 Crore to DIC		
27.A(b)	Construction of internal roads and proper drainage in Edayar industrial estate	Industries department	Work progressing	Drainage work is in progress	Drainage work is in progress		

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 have been received. The accessories for installing the cameras yet to be received. Keltron has requested 2 weeks' time for installation of the cameras.	The CCTV cameras and accessories for fixing the same have been received. Keltron has informed that they will start the installation work 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	Currently an Online water quality monitoring station is installed at the downstream side of Pathalam Bund. Tender procedures for	Tender procedures completed. The company who quoted lowest rate has visited two		

				installing new station at the upstream side have been completed. . The company who quoted lowest rate has visited two proposed sites. Site suitability report yet to be received.	proposed sites. Site suitability report yet to be received.		
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	Discussed the matter in 25.04.2022 Panchayath committee. 5 ward members have been appointed for monitoring the defaulters. Also, the respective ward members and Aluva Standing Committee chairman have been entrusted for identification of defaulters. Inspection not started	5 ward members have been appointed for monitoring the defaulters. Also, the respective ward members and Aluva Standing Committee chairman have been entrusted for identification of defaulters. Inspection not started		
34.E	Installation of cameras at the waste dumping spots	Kadungallur Panchayath	2020	Cctv camera installation Re tender invited and got 4 tenders. Arranged a meeting on 05.05.2022 to discuss the matter along with Police, Residence	E-Tender has been sanctioned by Committee and Selection notice has been sent. The party who has been awarded the Tender has been replied to		

				welfare association, Vyapaari association and Panel engineer. In the meeting, Residence welfare association and Vyapaari association have agreed to arrange the power and network required for the installation of cameras.	the notice that the agreement can be made. After fixing the installation spots, agreement procedures will be done.		
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	Notices have been issued to two flats for identifying unauthorized outlets to streams. Instructed to provide soak pit in houses.	Inspection and monitoring is performed regularly to identify the offenders. Issual of notice to those offenders is also being done regularly.		
36.E	Installation of cameras at the waste dumping spots	Choornikkara Panchayath	2020	Cameras worth Rs.22 lakh have already been installed. Monitoring is done through the installed cameras. A total amount of Rs. 11000/- has levied as fine in the last months.	Already installed cameras at certain spots. The project to install more cameras in the waste dumping spots is included in this financial year too.		

### LONG TERM MEASURES

No. (as per Action Plan)	Activity	Implementin g agency	Time line	Progress in the month of April2022	Progress in the month of May 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	An Investigation estimate of worth Rs. 12 Lakhs has been put forward to Govt for constructing surveillance road and dyke wall at the Periyar River bank at industrial belt. Investigation and detailed estimate submitted and waiting for FS	Investigation and detailed Estimate Submitted and waiting for FS		FS not obtained for the work
2.C(i)	Fencing of the river banks along the stretches of waste disposal (Edamula stretch)	Cochin Municipal Corporation	1-2 years	ppallyThodu, which is a tributary of Periyar river touches Cochin Corporation Boundary for a small stretch. The other side of this thodu is belonging to LSGs like Kalamassery, Thrikkakkara, Eloor	EdappallyThodu, which is a tributary of Periyar river touches Cochin Corporation Boundary for a small stretch. The other side of this thodu is belonging to LSGs like Kalamassery, Thrikkakkara,		

				<p>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>	<p>Elooretc. 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	1-2 years	The possession of Edappally Thodu is under the irrigation	Beautification work has been included in the KMRL IURWTS		

		Corporation		department. Hence, the beautification works of the river stretches can be done along with the IURWTS project of KMRL.	project. Due to the prevailing public protest, land acquisition procedure is being delayed		
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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 2022	Progress in the month of April 2022	Progress in the month of May 2022	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

**KERALA STATE POLLUTION CONTROL BOARD  
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR  
ANALYSIS REPORT OF RIVER PERIYAR - MAY 2022**

**Sampling point: VETTUKADAVU**

Sl. No	Parameter	Unit	06.05.2022	25.05.2022
1	Temp	°c	28.7	29.6
2	pH		6.8	6.2
3	Conductivity	µS/cm	2058.0	91.0
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	516.3	19.9
6	Hardness	"	260.0	17.0
7	D.O.	"	4.1	6.6
8	Calcium	"	44.0	4.0
9	Magnesium	"	36.5	1.7
10	Ammoniacal Nitrogen	"	18.690	4.770
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	32.0	22.0
13	BOD	"	3.1	3.0
14	Sulphate	"	16.240	3.376
15	Nitrates	"	BDL	BDL
16	TC	cfu/100ml	920.0	480.0
17	FC	"	280.0	220.0
18	FS	"	NIL	NIL







**KERALA STATE POLLUTION CONTROL BOARD  
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR**

**ANALYSIS REPORT OF RIVER PERIYAR - MAY 2022**

**Sampling point: ALUVA - MANAPPURAM**

Sl. No	Parameter	Unit	06.05.2022	25.05.2022
1	Temp	°c	28.4	29.7
2	pH		6.4	6.4
3	Conductivity	µS/cm	54.2	51.8
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	15.9	99.3
6	Hardness	"	16.0	14.0
7	D.O.	"	5.7	7.3
8	Calcium	"	3.6	3.2
9	Magnesium	"	1.7	1.5
10	Ammoniacal Nitrogen	"	2.862	0.389
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	28.0	18.0
13	BOD	"	2.1	3.2
14	Sulphate	"	1.210	2.994
15	Nitrates	"	BDL	BDL
16	TC	cfu/100ml	740.0	680.0
17	FC	"	120.0	100.0
18	FS	"	NIL	NIL





**KERALA STATE POLLUTION CONTROL BOARD**  
**ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR**  
**ANALYSIS REPORT OF RIVER PERIYAR - MAY 2022**

**Sampling point: MANJUMMAL BUND**

Sl. No	Parameter	Unit	06.05.2022	25.05.2022
1	Temp	°c	28.4	29.7
2	pH		6.5	6.5
3	Conductivity	µS/cm	67.2	92.2
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	25.8	12.9
6	Hardness	"	16.0	24.0
7	D.O.	"	4.2	2.4
8	Calcium	"	4.4	7.2
9	Magnesium	"	1.2	1.5
10	Ammoniacal Nitrogen	"	BDL	3.216
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	20.0	26.0
13	BOD	"	1.2	1.1
14	Sulphate	"	2.739	3.885
15	Nitrates	"	BDL	BDL
16	TC	cfu/100ml	600.0	540.0
17	FC	"	180.0	120.0
18	FS	"	NIL	NIL







**KERALA STATE POLLUTION CONTROL BOARD  
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR  
ANALYSIS REPORT OF RIVER PERIYAR - MAY 2022**

**Sampling point: PATHALAM BUND U/S**

Sl. No	Parameter	Unit	06.05.2022	25.05.2022
1	Temp	°c	28.5	29.5
2	pH		6.5	6.4
3	Conductivity	µS/cm	119.8	52.0
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	20.9	9.9
6	Hardness	"	34.0	15.0
7	D.O.	"	5.7	7.0
8	Calcium	"	10.8	4.0
9	Magnesium	"	1.7	1.2
10	Ammoniacal Nitrogen	"	1.166	2.438
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	24.0	36.0
13	BOD	"	1.9	2.7
14	Sulphate	"	2.357	3.758
15	Nitrates	"	BDL	BDL
16	TC	cfu/100ml	720.0	360.0
17	FC	"	160.0	80.0
18	FS	"	NIL	NIL





**KERALA STATE POLLUTION CONTROL BOARD  
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR  
ANALYSIS REPORT OF RIVER PERIYAR - MAY 2022**

**Sampling point: PATHALAM BUND D/S**

Sl. No	Parameter	Unit	06.05.2022	25.05.2022
1	Temp	°c	28.3	B
2	pH		6.8	U
3	Conductivity	µS/cm	1935.0	N
4	Turbidity	NTU	*	D
5	Chlorides	mg/L	486.5	
6	Hardness	"	230.0	O
7	D.O.	"	3.8	P
8	Calcium	"	48.0	E
9	Magnesium	"	26.7	N
10	Ammoniacal Nitrogen	"	18.830	
11	Phosphate	"	BDL	
12	Total alkalinity	"	34.0	
13	BOD	"	1.7	
14	Sulphate	"	14.330	
15	Nitrates	"	BDL	
16	TC	cfu/100ml	880.0	
17	FC	"	240.0	
18	FS	"	NIL	





**KERALA STATE POLLUTION CONTROL BOARD**  
**ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR**  
**ANALYSIS REPORT OF RIVER PERIYAR - MAY 2022**

**Sampling point: PATHALAM BRIDGE**

Sl. No	Parameter	Unit	06.05.2022	25.05.2022
1	Temp	°c	28.6	29.4
2	pH		6.6	6.1
3	Conductivity	µS/cm	124.3	47.9
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	30.8	9.9
6	Hardness	"	34.0	13.0
7	D.O.	"	5.1	5.7
8	Calcium	"	12.4	4.4
9	Magnesium	"	0.7	0.5
10	Ammoniacal Nitrogen	"	1.519	1.378
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	34.0	20.0
13	BOD	"	2.0	0.6
14	Sulphate	"	1.975	1.975
15	Nitrates	"	BDL	BDL
16	TC	cfu/100ml	840.0	360.0
17	FC	"	220.0	80.0
18	FS	"	NIL	NIL







**KERALA STATE POLLUTION CONTROL BOARD**  
**ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR**  
**ANALYSIS REPORT OF RIVER PERIYAR - MAY 2022**

**Sampling point: PUTHALAM KADAVU**

<b>Sl. No</b>	<b>Parameter</b>	<b>Unit</b>	<b>06.05.2022</b>	<b>25.05.2022</b>
<b>1</b>	<b>Temp</b>	<b>°c</b>	28.5	29.6
<b>2</b>	<b>pH</b>		6.5	6.3
<b>3</b>	<b>Conductivity</b>	<b>µS/cm</b>	58.2	76.5
<b>4</b>	<b>Turbidity</b>	<b>NTU</b>	*	*
<b>5</b>	<b>Chlorides</b>	<b>mg/L</b>	18.9	13.9
<b>6</b>	<b>Hardness</b>	"	15.0	22.0
<b>7</b>	<b>D.O.</b>	"	3.9	3.8
<b>8</b>	<b>Calcium</b>	"	4.8	5.2
<b>9</b>	<b>Magnesium</b>	"	0.7	2.2
<b>10</b>	<b>Ammoniacal Nitrogen</b>	"	BDL	4.276
<b>11</b>	<b>Phosphate</b>	"	BDL	BDL
<b>12</b>	<b>Total alkalinity</b>	"	22.0	24.0
<b>13</b>	<b>BOD</b>	"	0.2	0.9
<b>14</b>	<b>Sulphate</b>	"	2.229	2.611
<b>15</b>	<b>Nitrates</b>	"	BDL	BDL
<b>16</b>	<b>TC</b>	<b>cfu/100ml</b>	720.0	420.0
<b>17</b>	<b>FC</b>	"	140.0	100.0
<b>18</b>	<b>FS</b>	"	NIL	NIL





**National Mission for Clean Ganga**

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

**RIVER 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 2022	Progress in the month Of April 2022	Progress in the month of May 2022	% works complete d	Details of works remainin g
<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	ടി തോടി ന്റെ ഭൂരിഭാ ഗം നീളവു ം നിലവി ലില്ല എന്നു ം ശേഷി ക്കുന്ന ഏകദേ ശം 15 മീറ്ററേ റളം വരുന്ന	ടി തോടി ന്റെ ഭൂരിഭ ാഗം നീള വും നില വിലി ല്ല എന്ന ും ശേഷി ക്കു ന്ന ഏക ദേശ	ടി തോടി ന്റെ ഭൂരിഭാ ഗം നീളവ ും നിലവ ിലില്ല എന്നു ം ശേഷി ക്കുന്ന ഏകദ േശം 15 മീറ്ററേ	10 0	ni l



				ഭാഗം തൊഴി ലുറപ്പ് പദ്ധതി കൾ ഉൾപ്പെ ടുത്തി എല്ലാ വർഷ വും വൃത്തി യാക്കു ന്നു എന്നു ഹ പഞ്ചാ യത്ത് അധി കൃതർ അറിയ ിച്ചിട്ടു . ആയത ിനാൽ ടി പ്രവൃ ത്തി ആവ ശ്യമില്ല എന്ന ജനപ്ര തിനിധ ികളും, കർഷ	ഹ മീറ്റേ റാളം വരു ന്ന ഭാഗം തൊ ഴിലു റപ്പ് പദ്ധ തിക ൾ ഉൾ പ്പടു ത്തി എല്ലാ വർ ഷവും ഹ വൃ ത്തി യാ ക്കു ന്നു എന്ന ഴും പഞ്ച യത് ത്ത് അധി കൃത ൾ അറി യിച്ചി	റാളം വരു ന്ന ഭാഗം തൊഴി ലുറപ്പ് പദ്ധതി കൾ ഉൾ പ്പടു ത്തി എല്ലാ വർഷ വും വൃത്ത ിയാക്ക ുന്നു എന്നു ഹ പഞ്ചാ യത്ത് അധി കൃതർ അറിയ ിച്ചിട്ടു . ആയ തിനാ ൾ ടി പ്രവൃ ത്തി ആവ ശ്യമി		
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				<p>കരും അഭിപ്രായപ്പെട്ടു എന്ന വിവരം അസിസ്റ്റന്റ് എഞ്ചിനീയർ, മൈനർ സെക്ഷൻ, ചേർപ്പ് സ്ഥല പരിഷ്കാര ശാധനയ്ക്കു ശേഷം റിപ്പോർട്ട് ചെയ്തിട്ടുള്ളതായി എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ, മൈനർ ഇറിഗേഷൻ</p>	<p>പ്രകാരം ആയിരിക്കുമെന്ന് പ്രവൃത്തി ആവശ്യമില്ല എന്ന ജനപ്രതിനിധികളും, കർഷകരുടെയും അഭിപ്രായം കേൾക്കുകയും ചെയ്തിട്ടുള്ളതായി അസിസ്റ്റന്റ് എഞ്ചിനീയർ, മൈനർ ഇറിഗേഷൻ ശാധനയ്ക്കു ശേഷം റിപ്പോർട്ട് ചെയ്തിട്ടുള്ളതായി</p>	<p>പ്രകാരം ജനപ്രതിനിധികളും, കർഷകരുടെയും അഭിപ്രായം കേൾക്കുകയും ചെയ്തിട്ടുള്ളതായി അസിസ്റ്റന്റ് എഞ്ചിനീയർ, മൈനർ ഇറിഗേഷൻ ശാധനയ്ക്കു ശേഷം റിപ്പോർട്ട് ചെയ്തിട്ടുള്ളതായി</p>		
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				<p>ഡിവിഷൻ, തൃശ്ശൂർ അറിയപ്പെട്ടിട്ടുണ്ട്.</p> <p>ഇറിഗേഷൻ വകുപ്പ് നടപ്പിലാക്കേണ്ട പ്രവൃത്തികൾക്കുള്ള ഫലഭൂമി വിഷയം ചർച്ച ചെയ്യുന്നതിനായി 06/01/2022 അഡീഷണൽ ജില്ലാ മജിസ്ട്രേറ്റിന്റെ</p>	<p>ചേർപ്പ് സ്ഥലപരിശോധനയ്ക്കുശേഷം റിപ്പോർട്ട് ചെയ്തിട്ടുള്ളതായി എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ, മൈനർ ഇറിഗേഷൻ ഡിവിഷൻ, തൃശ്ശൂർ അറിയപ്പെട്ടിട്ടുണ്ട്.</p>	<p>ഉതായം എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ, മൈനർ ഇറിഗേഷൻ ഡിവിഷൻ, തൃശ്ശൂർ അറിയപ്പെട്ടിട്ടുണ്ട്.</p>		
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				<p>അദ്ധ്യക്ഷതയിൽ ചേർന്ന യോഗ തീരുമാനത്തിന്റെ അടിസ്ഥാനത്തിൽ ഇനിവരുന്ന River rejuvenation Committee യോഗങ്ങളിൽ ഈ വിഷയം ചർച്ച ചെയ്ത് ജലസേചന വിഭാഗത്തിന്</p>	<p>ഇറിഗേഷൻ വകുപ്പിനടിമേൽ പ്രവൃത്തികൾക്കുള്ള ഫലപ്രദതാക്കൂട്ടുന്ന വിഷയം ചർച്ച ചെയ്യുന്നതിനായി 06/01/2022 അഡീഷണൽ ജില്ലാ മജിസ്ട്രേറ്റിനെ</p>			
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				<p>ഫലപ്രസാദം ലഭ്യമാക്കുന്നതിനുള്ള നടപടികൾ ഉൾക്കൊള്ളുന്ന മെന്റോർഷിപ്പ് കോർഡിനേറ്റർ തിരുവനന്തപുരം ജില്ലാ കളക്ടർ, പരിസ്ഥിതി വകുപ്പ് പ്രിൻസിപ്പൽ സെക്രട്ടറി</p> <p>22/02/2022 ന്</p> <p>(File No.D CTSR/2213/2020-C4)</p> <p>തൃശ്ശൂർ ജില്ലാ കളക്ടർ, പരിസ്ഥിതി വകുപ്പ് പ്രിൻസിപ്പൽ സെക്രട്ടറി</p>	<p>റീവൈറ്റൈസിംഗ് കമ്മിറ്റി</p> <p>റീവൈറ്റൈസിംഗ് കമ്മിറ്റി</p> <p>River rejuvenation Committee</p>			
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				<p>         ട്രിയിം          ക്കും,          കേരള          സംസ്ഥാന          മലിനീകരണ          നിയന്ത്രണ          ബോർഡ്          മെമ്പർ          സെക്രട്ടറി          ട്രിയിം          ക്കും          കത്തുകൾ          സമർപ്പിച്ചിട്ടു          .       </p>	<p>         യം          ചർച്ച          ചെയ്ത്          ജലസേചന          വിഭാഗത്തിന്          ഫലപ്രദമായ          തീരുമാനമെടുക്കുന്നതിനുള്ള നടപടികൾ ഉൾക്കൊള്ളുന്ന          അഭ്യർത്ഥന          ചുരുക്കം          22/02/2022          ന്          (File No. DCT SR/2       </p>			
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					213/ 202 0- C4) തൃശ്ശൂർ ജില്ലാ കളക്ടർ, പരി സ്ഥി തി വകു പ്പ് പ്രിൻ സിപ്പ ൽ സെക്ര ട്ടറി യ്ക്ക് ും, കേര ള സം സ്ഥാ ന മലിന ീകര ണ നിയന്ത്രണ ബോ ർഡ് മെമ്പ			
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					ർ സെ ക്ര ട്ട റി യ് ക്ക ു ം ക ത്ത ു ക ൾ സ മ ർ പ്പ ി ച്ച ി ട്ട ു				
<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	<p>ടി പ്രവൃത്തിയ്ക്കായി 10 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് തയ്യാറാക്കി CMDRF ഹെഡിൽ ഉൾപ്പെടുത്തി സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിരുന്നുവെങ്കിലും ഫണ്ട് ലഭിച്ചിരുന്നില്ല. 03/03/2022 ലെ മൈനർ ഇറിഗേഷൻ ഡിവിഷൻ, തൃശ്ശൂർ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ കാര്യാലയത്തിലെ ഡി7 - ഗ്രീൻ ട്രിബ്യൂണൽ നമ്പർ കത്ത് പ്രകാരം പ്രവൃത്തിയുടെ എസ്റ്റിമേറ്റ് സാമ്പത്തികാനുമതി ലഭ്യമാകുന്നതിനായി സൂപ്രീം എഞ്ചിനീയർ മൈനർ ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ എറണാകുളത്തിന് വിട്ടും സമർപ്പിച്ചിട്ടുണ്ട്. സെക്രട്ടറിയ്ക്കും കത്തുകൾ സമർപ്പിച്ചിട്ടുണ്ട്. സമർപ്പിച്ചിട്ടുണ്ട്.</p>					
<b>Neerolithodu</b>									



E	Cleaning and desilting	Irrigation Department	4months	<p>ടി പ്രവൃത്തിയ്ക്കായി 10 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് തയ്യാറാക്കി CMDRF ഹെഡിൽ ഉൾപ്പെടുത്തി സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിരുന്നുവെങ്കിലും ഫണ്ട് ലഭിച്ചിരുന്നില്ല. 03/03/2022 ലെ മൈനർ ഇറിഗേഷൻ ഡിവിഷൻ, തൃശ്ശൂർ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ കാര്യാലയത്തിലെ ഡി7 - ഗ്രീൻ ട്രിബ്യൂണൽ നമ്പർ കത്ത് പ്രകാരം പ്രവൃത്തിയുടെ എസ്റ്റിമേറ്റ് സാമ്പത്തികാനുമതി ലഭ്യമാകുന്നതിനായി സൂപ്രീംസ് എഞ്ചിനീയർ മൈനർ ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ എറണാകുളത്തിന് വീടും സമർപ്പിച്ചിട്ടുണ്ട്.</p>				
<b>Painkilikayal thodu</b>								
E	Cleaning and desilting	Irrigation Department and Vallachira Panchayat	4months	<p>ടി പ്രവൃത്തിയ്ക്കായി 10 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് തയ്യാറാക്കി CMDRF ഹെഡിൽ ഉൾപ്പെടുത്തി സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിരുന്നുവെങ്കിലും ഫണ്ട് ലഭിച്ചിരുന്നില്ല. 03/03/2022 ലെ മൈനർ ഇറിഗേഷൻ ഡിവിഷൻ, തൃശ്ശൂർ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ കാര്യാലയത്തിലെ ഡി7 - ഗ്രീൻ ട്രിബ്യൂണൽ നമ്പർ കത്ത് പ്രകാരം പ്രവൃത്തിയുടെ എസ്റ്റിമേറ്റ് സാമ്പത്തികാനുമതി ലഭ്യമാകുന്നതിനായി സൂപ്രീംസ് എഞ്ചിനീയർ മൈനർ ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ എറണാകുളത്തിന് വീടും സമർപ്പിച്ചിട്ടുണ്ട്.</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	Ongoing	100	0
E	Cleaning and desilting	Irrigation Department	4months	<p>ടി പ്രവൃത്തിയ്ക്കായി 10 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് തയ്യാറാക്കി CMDRF ഹെഡിൽ ഉൾപ്പെടുത്തി സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിരുന്നുവെങ്കിലും ഫണ്ട് ലഭിച്ചിരുന്നില്ല. 03/03/2022 ലെ മൈനർ ഇറിഗേഷൻ ഡിവിഷൻ, തൃശ്ശൂർ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ കാര്യാലയത്തിലെ ഡി7 - ഗ്രീൻ ട്രിബ്യൂണൽ നമ്പർ കത്ത് പ്രകാരം പ്രവൃത്തിയുടെ എസ്റ്റിമേറ്റ് സാമ്പത്തികാനുമതി ലഭ്യമാകുന്നതിനായി സൂപ്രീംസ് എഞ്ചിനീയർ മൈനർ ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ എറണാകുളത്തിന് വീടും സമർപ്പിച്ചിട്ടുണ്ട്.</p>				

		Main Stream –along Karuvannur						
A(a)(iv)	Periodic Surveillance to restrict the dumping of waste into river and imposing Fine	Irinjalakkuda Municipality, Police Dept.		Presently no such dumping of waste. Square inspection ongoing well including night squad.	Presently no such dumping of waste. Square 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 authorize d 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 un authorize d outlets in the drain leading to the river.	There is no un authorize d outlets in the drain leading to the river.	There is no un authorize d outlets in the drain leading to the river.		

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

					riverside.			
<b>Monitoring</b>								
A(a)(iv)	River water quality monitoring	KSPCB	Ongoing; monthly frequency	Monitoring is going on March monthly basis	Monitoring is going on April monthly basis	Monitoring is going on May monthly basis		
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Going on March monthly basis.	Going on April monthlybasis.	Going on May monthly basis.		
<b>Long Term Plan</b>								
A(b)	Sewage treatment facilities to all house holds	Vallachira Grama Panachayat	1 yr	2 (no of Soak pits)	0 (no of soakpits)	0 (no of soakpits)	143(no of soakpits )	5 (no of soakpits )
A(b)	Construction of FSTP and STP	Irinjalakkuda Municipality	2 years	Constructio n of STP plant at General Hospital, Irinjalakuda – DPR approved by Suchitwa Mission	Constructi on of STP plant at General Hospital, Irinjalakud a – DPR approved by Suchitwa Mission			

C(ii)	Setting up of a modern crematorium at Mandarakkadavu, Arattupuzha	Vallachira Grama Panachayat	2 years					100
C(ii)	Solid waste treatment facility	Vallachira Grama Panachayat	2 years				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.			
E	Rejuvenation of Kanathodu	Irrigation Department	1 year	<p>ടി പ്രവൃത്തിയ്ക്കായി 10 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് തയ്യാറാക്കി CMDRF ഹെഡിൽ ഉൾപ്പെടുത്തി സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിരുന്നുവെങ്കിലും ഫണ്ട് ലഭിച്ചിരുന്നില്ല. 03/03/2022 ലെ മൈനർ ഇറിഗേഷൻ ഡിവിഷൻ, തൃശ്ശൂർ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ കാര്യാലയത്തിലെ ഡി7 - ഗ്രീൻ ട്രിബ്യൂണൽ നമ്പർ കത്ത് പ്രകാരം പ്രവൃത്തിയുടെ എസ്റ്റിമേറ്റ് സാമ്പത്തികാനുമതി ലഭ്യമാകുന്നതിനായി സൂപ്രീംസ് എഞ്ചിനീയർ മൈനർ ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ എറണാകുളത്തിന് വീടും സമർപ്പിച്ചിട്ടുണ്ട്.</p>				

E	Installation of CCTV for Surveillance to prevent the dumping of waste in to the river	Irinjalakkuda Municipality	2 years	Police Department installed CCTV and currently functioning Near Karuvannur Bridge	Police Department installed CCTV and currently functioning Near Karuvannur Bridge			
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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 2022	Progress in the month of April 2022	Progress in the month of May 2022	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	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	Artificial recharge schemes completed at Cherppu police station, Cherppu mini civil station, District training centre Urakam, Sri. Chathan master memorial school Madayikonam				

			,Irijalakkuda				
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.			
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	-	-	-	-	-

**ACTION PLAN BY GRAMAPANCHAYATH**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2022	Progress in the month of April 2022	Progress in the month of May 2022	% works completed	Details of works remaining
C	MANALIPUZHA RIVER PROTECTION -Jalaraksha Jeevaraksha - Manalipuzha conservation	Vallachira Grama Panchayath	1 year	nil	Nil	Nil	1000m	500m
C	Setting up of Nursery for Bamboo seedlings in Kadalassery	MGNREGS	31.03.2020	TS SAN CTI ONE D, BUT NOT PUB		nil	25	75

				LIC PLA CE				
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		nil	100	0
C	Cluster 2-Kurumaly puzha sub river bed -Project document preparation	Puthukkad Panchayath	1 year	Doc ume ntat ion com plet ed	Docume ntation complet ed		100	Do cu men tat ion com plet ed
C	Manalippuzha River Protection-Jala Raksha, Jeeva Raksha , Survey and Tree Plantation	Nenmenikkara Grama Panchayat	31.03.2020	3.5 km surv ey out	3.5 km survey out of 7k.mhav e been		50 %	3.5 kill o m et



				of 7 k.m have been completed and survey posts have been fixed.	comple ed and survey posts have been fixed.			er sur ve y ye t to co m ple
C	Manalipuzha River protection	MGNREGS	31.03.2020	Rec onst ruct ion & prot ecti on	3.5 km survey out of 7 k.m have been complet ed and survey			As sur ve y did no t co

				work will resume after APRIL 11	posts have been fixed			complete
A(b)	Protection and reconstruction and protection of Paliyekkara Kayalathod	MGNREGS	31.03.2020	Not completed	Not completed		863 METERS COMPLETED	Work restarted
A(b)	Reconstruction and protection of Paliyekkara Karama Thodu	MGNREGS	31.03.2020	Reconstruction & protection work will resume	Not completed		60 %	Work restarted

					me afte r APR IL 11				
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KARUVANUR

Date of sampling

03.05.2022

SL. NO	PARAMETER	UNIT	KT	MRK	KND	MDK	THR	KRV
1	PH		7.74	7.37	7.67	7.68	7.3	7.78
2	EC	µ/cm	86.1	101.1	92.86	138.2	87.19	89.46
3	BOD	mg/L	2.07	1.2	1.92	1.56	1.43	1.7
4	DO	mg/L	6.97	6	6.5	6	6.96	6
5	COD	mg/L	8	4	8	4	8	4
6	TC	CFU/100 ml	400	400	500	700	500	800
7	FC	CFU/100 ml	200	200	200	500	300	300
8	FSC	CFU/100 ml	10	10	20	20	10	20

KT - KANAKKAN KADAVU, KARUVANNUR

MRK - NEEROLI THODU

KND - KANATHODU, KARUVANNUR

MDK - MUTTIKKAL DAM, KARUVANNUR

THR- THIRUKUZHI, KARUVANNUR

KRV - PAINKILIKAYAL THODU, KARUVANNUR

**National Mission for Clean Ganga**

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

**RIVER KECHERY, THRISSUR**

<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 2022	Progress in the month of April 2022	Progress in the month of May 2022	% works completed	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					
E	Installation of CCTV s on the bank of river in town	Wadakkanchery Municipality	31.03.2022				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 submitted	Analysis report for the month April of enclosed herewith			Continuing
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Ongoing	Ongoing			Continuing
<b>Long Term Plan</b>								
E	Identification and cleaning of polluted drains reaching wadakkancheri river	Irrigation Dept	30-03-2022					ഇറിഗേഷൻ വകുപ്പ് നടപ്പിലാക്കേ പ്രവൃത്തികൾക്കുള്ള ഫലഭൂമി വിഷയം ചർച്ച ചെയ്യുന്നതിനായി 06/01/2022 അഡീഷണൽ ജില്ലാ മജിസ്ട്രേറ്റിന്റെ

								<p>അദ്ധ്യക്ഷതയിൽ ചേർന്ന യോഗത്തിരുമാനത്തിന്റെ അടിസ്ഥാനത്തിൽ ഇനിവരുന്ന</p> <p><b>River rejuvenation Committee</b></p> <p>യോഗങ്ങളിൽ ഈ വിഷയം ചർച്ച ചെയ്ത് ജലസേചന വിഭാഗത്തിന് ഹാജരായ ലഭ്യമാക്കുന്നതിനുള്ള നടപടികൾ ഉൾക്കൊള്ളുന്നതാണെന്ന് അഭ്യർത്ഥിച്ചു കൊണ്ട് (File No.DCTSR</p>
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								<p>/2213/20 20-C4)          തൃശ്ശൂർ ജില്ലാ കളക്ടർ, പരിസ്ഥിതി വകുപ്പ് പ്രിൻസിപ്പൽ സെക്രട്ടറിയ്ക്കും, കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ് മെമ്പർ സെക്രട്ടറിയ്ക്കും കത്തുകൾ സമർപ്പിച്ചിട്ടുണ്ട്.</p>
A (b)	Common STP	Wadakkanchery Municipality, Kerala Infrastructure Investment Fund Board	March 2022					<p>Site for one STP identified. Applied for NOC from District Collector (Land is Puzha Puramboke and Irrigation Department</p>

								Canal Puramboke)
C(iii)	Windrow composting at Kumbalangad yard	Wadakkanchery Municipality	March 2022	90% work compl eted	90% work comple ted			
C(ii)	Modern slaughter House	Wadakkanchery Municipality, Kerala Infrastructure Investment Fund Board	March 2022					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	Progre ss not report ed				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	Ongoing work					

		Municipality						
	River survey	Wadakkanchery Municipality	Ongoing work					
<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			
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 has been issued 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		
E	Survey process of Kechery river portion belong to Choondal Grama Panchayat to mark the boundary and encroachment	Revenue Department	completed			completed		
E	Laying of survey station	Choondal Grama Panchayat	completed			completed		
E	Digital maping and seminar on pollution control	Forestry College, Vellanikkara	31/05/2020	No progress reported		Not started		

#### IRRIGATION DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of March 2022	Progress in the month of April2022	Progress in the month ofMay2022	% works completed	Details of works remaining
1	Regulating activities in flood plain zone, protection and management of flood plain zone	Irrigation Department	30-03-2022	No progress reported				A letter has been sent from the office of SE ICC to Wadakkanchery

								Municipality instructing them to carry out this activity.
2	Greenery development Plantation plan. Plantation on both sides of the river, settling up biodiversity parks on flood plains by removing encroachment	Irrigation Department	30-03-2022					A letter has been sent from the office of SE ICC to Wadakkanchery Municipality instructing them to carry out this activity.
3	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation Department	30-03-2022			കേച്ചേരി പുഴയുടെ പരിസ്ഥിതിക നിരോധനം (E-flow) പൂർത്തിയാക്കി		

							റിപ്പോർട്ട് 18/05/2022 ന് ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ദരണവും, തിരുവനന്തപുര ത്തിന് സമർപ്പിച്ചിട്ടുണ്ട്.		
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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 March2022	Progress in the month of April2022	Progress in the month of May2022	% 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.			



2	B(ii)	Ground water recharging / rain water harvesting	Artificial recharge scheme(open well recharge) completed at Vocational Hr. secondary school Kunnamkulam .	Artificial recharge schemes (two recharge pits) completed at Govt. Nursing college and one open well recharge scheme @ Govt. Medical college.		100%	
3	B(iii)	Periodic ground water quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Water level data collected from GWD observation wells	Water level data collected from GWD observation wells			
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					0

**ACTION PLAN BY GRAMAPANCHAYATH**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2022	Progress in the month of April 2022	Progress in the month of May 2022	% works completed	Details of works remaini ng
C	Punarjani Kecherri river	Choondal Grama Panchayat	completed					Flood Wast es from the river has been remo ved and made water flow easily which reduc ed chanc es of flood .

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

<b>KECHERI RIVER</b>				
<b>Date of sampling -19.05.2022</b>				
<b>SL. NO</b>	<b>PARAMETER</b>	<b>UNIT</b>	<b>VAD1</b>	<b>VAD2</b>
1	pH	-	7.11	6.95
2	Electrical Conductivity	μ/cm	123.3	100
3	BOD	mg/L	2.4	2.21
4	DO	mg/L	6.7	6.37
5	COD	mg/L	8	4
6	T C	CFU/100ml	100	100

<b>7</b>	<b>F C</b>	<b>CFU/100ml</b>	<b>100</b>	<b>200</b>
<b>8</b>	<b>FSC</b>	<b>CFU/100ml</b>	<b>10</b>	<b>10</b>
<b>VAD1 - WADAKKANCHERY PUZHA (WADAKKANCHERY BRIDGE), KECHERY</b>				
<b>VAD2 - WADAKKANCHERY PUZHA(CHALIPPADAM ROAD), KECHE</b>				

## National Mission for Clean Ganga

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

### **RIVER PUZHAKKAL, THRISSUR**

<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 PUZHAKKAL, KERALA  
SHORT TERM MEASURES**

No. (as per Action Plan)	Activity	Implementin g agency	Time line	Progres s in the month of March 2022	Progress in the month of April2022	Progress in the month ofMay 2022	% works completed	Details of works remaining
A(b)	Identification of illegal outlets into the Panchikkalthodu and subsidiary drains	Thrissur Corporation	3 months	0	0	0	100% works completed	
A(b)	Stoppage of discharge of waste water from the surrounding houses and institutions to the drains which leads to Panchikkalthodu	Thrissur Corporation	6 months	0	2	1	90 %	2 outlets for completion
A(b)	Ensure adequate treatment facility is provided for waste water and solid waste generated from Sri Dharma Sastha temple situated on the banks of the river	Adat Grama Panchayat						Instructi on has been provide to temple authorities for construction of



								waste disposal facilities accordance with Solid Waste Management, Rules , 2016
E	Desilting of Karakattuchal	Irrigation Department	4 months		ഇറിഗേഷൻ വകുപ്പ് നടപ്പിലാക്കേ പ്രവൃത്തികൾക്കുള്ള ഫണ്ട് ലഭ്യമാക്കുന്ന വിഷയം ചർച്ച ചെയ്യുന്നതിനായി 06/01/2022 അഡീഷണൽ ജില്ലാ മജി	ടി പ്രവൃത്തിയ്ക്കായി 10 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് തയ്യാറാക്കി CM DRF ഹെഡിൽ ഉൾപ്പെടുത്തി സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിരുന്നുവെങ്കിലും ഫണ്ട് ലഭിച്ചിരുന്നില്ല.		



				<p>             ന്നുഭ്യ              രമിച്ചു              കൊ              22/02/20              22 ന്              (File              No.DCT              SR/221              3/2020              -              C4)തുശ്ശ              ുർജില്ലാ              കളക്ടർ,              പരിസ്ഥി              തിവകു              പ്ല              ഫ്രിൻസി              പ്പൽ              സെക്രട്ട              റിയ്ക്കും              ,              കേരളസ              റ്റാമാന              മലിനീക              രണ              നിയന്ത്ര              ണ              ബോർ              ഡ്              മെമ്പർ              സെക്രട്ട              റിയ്ക്കും              കത്തുക           </p>	<p>             എറണാകു              ഉത്തിന്              വിംസ              മർഷിച്ചിട്ടു              ു.           </p>		
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					ശുപരിപാടികൾ			
E	Desilting of Panchikkalthodu	Irrigation Department	4 months		Proposed to clean a length of 5.34 Km during 2022-23	Proposed to clean a length of 5.34 Km during 2022-23		
E	Desilting of Kurinjikkalthuruth	Irrigation Department	4 months				Work worth 14.27 lakh expenditure has been completed.	
E	Desilting of Muppuzha	Irrigation Department	4 months	100%	Desilting work of 1860 metre completed as per pre-monsoon activity in 2021-	100% work completed		

				m p l e t e d	22 work propose d for 2022-23 season			
E	Side protection, desilting and deepening work of Vanchikulamthodu at Poothole of length about 40 km (work in progress).	Thrissur Corporation	3 months		400 meter side protection wall completed. Work for 642 meter protection wall proposed and work in progress.	400 meter side protection wall completed. Work for 642 meter protection wall proposed and work in progress.		
E	Annual desilting, cleaning of main drains and canals with in the corporation area (work in progress).	Thrissur Corporation	3 months	1 0 0 %	180 Nos. Works are	180 Nos. Works are		

					proposed for thodu cleaning for pre monsoon activity	proposed for thodu cleaning for pre monsoon activity		
<b>Monitoring</b>								
A(a)(iv)	River water quality monitoring	KSPCB	Ongoing; monthly frequency	Analysis report for the month of March submitted	Analysis report for the month of April submitted	Analysis report for the month of May enclosed herewith		Continuing
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals, hotelsetc	KSPCB	Ongoing	Ongoing	Ongoing			Continuing
<b>Long Term Plan</b>								
A(b)	Ensuring installation of treatment facilities for at least 50% of the identified establishments	Thrissur Corporation	18 months	Progress has not been reported	Progress has not been reported	Progress has not been reported		
A(b)	100% completion of treatment facilities for targeted institutions/ buildings	Thrissur Corporation	24 months	Progress has not been reported	Progress has not been reported	Progress has not been reported		

A(b)	Construction of a drain 40 km with covering slabs to avoid the direct disposal of waste in to the open drain	Thrissur Corporation	24 months		34.65 KM of drain work and 5.705 KM of covering slabs completed and 50 More work proposed 47 numbers of work started and 46 numbers of work completed.	34.65 KM of drain work and 5.705 KM of covering slabs completed and 50 More work proposed 48 numbers of work started and 46 numbers of work completed .		
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A(b)	Construction of a drain 9000 m with covering slabs to avoid the direct disposal of waste in to the open drain	Thrissur Corporation	24 months		34.65 KM of drain work and 5.705 KM of covering slabs completed and 50 More work proposed 47 numbers of work started and 46 numbers of work completed.	34.65 KM of drain work and 5.705 KM of covering slabs completed and 50 More work proposed 48 numbers of work started and 46 numbers of work completed.		



A(b)	Construction of sewage treatment plant of 100 KLD and 360 KLD at Ramavarmapura m and District Hospital, Thrissur in Amrut Project	Thrissur Corporation	24 months			<p>1) <b>100KLD Septage Treatment Plant at Ramavarmapuram ,Thrissur</b></p> <p>Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated 01/01/2018 for Rs. 3.50Cr.TS accorded for Rs. 3.10 Cr from the technical committee constituted for AMRUT sewerage projects. Selection memo has been issued to M/s Green Eco Water Systems, Hyderabad. Hon. Council has decided to get the consent to establish from PCB first and then to proceed for further steps of executing agreement. Consent to establish obtained from PCB on</p>
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						<p>28/05/2021.Contract or has not executed the agreement even after issuing several notices in this regard. Hon.Council dated 29.01.2022 decided to terminate the contract under risk and cost of the contractor and also to black list the contractor. It has been also decided by the council to invite limited tender from accredited agencies as per rules. Now the schedule of rate changed from approved estimate. Hence estimate revision by the consultant is going on.</p> <p><b>2. 360 KLD Sewage Treatment Plant for General Hospital,Thrissur</b></p>
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						<p>Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated 01/01/2018 for Rs. 3.52Cr.TS accorded for Rs. 3.52Cr from the technical committee constituted for AMRUT sewerage projects. Work has been awarded to M/s Green Eco Water Systems, Hyderabad. Agreement executed on 14/10/2020. Consent to establish obtained from PCB on 17/12/2020. Even after conducting several meetings with the contractor, contractor has not started the work yet. Hon.Council dated 29.01.2022 decided to terminate the contract under risk and cost of the contractor and also to</p>
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						<p>black list the contractor. It has been also decided by the council to invite limited tender from accredited agencies as per rules. Now the schedule of rate changed from approved estimate. Hence estimate revision by the consultant is going on.</p>		
A(b)	Constructing decentralised sewerage scheme at Vachikulam covering most populated 7 divisions of Thrissur Corporation and more than 10000 houses & institutions	Thrissur Corporation	24 months	.	Revision estimate as per structural veting submitted for revised TS at Chief Engineer's Office TVM.			

### 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 2022	Progress in the month of April2022	Progress in the month ofMay2022	% 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.	.		
2	B(ii)	Ground water recharging / rain water harvesting				100%	
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 and water samples collected from GWD observation wells.			
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

**ACTION PLAN BY GRAMAPANCHAYATH**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2022	Progress in the month of April2022	Progress in the month of May2022	% works completed	Details of works remaining
C	Removing weeds in Puzhakkal River	AdatGramapanchayath	31.03.2020				100%	0
C(ii)	Removing waste from all wards through kudumbasree	KUDUMBASREE	31.03.2020				100%	0
C	water conservation projects-- tree plantation under GA in18 wards 100000/ each	MGNREGS	31.03.2020				79%	21
C	ward 14 pachthurthucmstruction	Haritha Keralam Mission	31.03.2020				100%	0
C	side protection to water bodies coir geo textile	MGNREGS	31.03.2020				90%	10

<b>PUZHAKKL</b>						
<b>Date of sampling - 24.05.2022</b>						
<b>SL. NO</b>	<b>PARAMETER</b>	<b>UNIT</b>	<b>SBA</b>	<b>KTH</b>	<b>PTU</b>	<b>MP</b>
1	PH		7.1	6.94	7.23	6.77
2	EC	μ/cm	191.8	272.2	374.4	172.1
3	BOD	mg/L	1.43	1.62	2	1.8
4	DO	mg/L	6	6.18	7.52	6.8
5	COD	mg/L	8	4	4	8
6	T C	CFU/100ml	200	300	100	100
7	F C	CFU/100ml	100	100	NIL	NIL
8	FSC	CFU/100ml	10	10	NIL	NIL
SBA - NEAR SOBHA CITY, KIZHAKKUMMURI ROAD , PUZHAKKAL KTH - KURINJAKKAL THODU, PUZHAKKAL PTU - PANCHIKKAL THODU, PUZHAKKAL MP - MUPPUZHA, PUZHAKAL						

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

**RIVER BHARATHAPUZHA, PALAKKAD – MAY2022**

<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	Kerala Water Authority prepared a DPR for STP and submitted to the Government. The STP is proposed to be installed at Nambram in Pattambi municipality in about 50 cent of land.. The survey for the sewerage pipeline was also completed and it was also included in the DPR.
	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	
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 was prepared a DPR for sewerage network and STP and submitted for approval.
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>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>Kerala Water Authority is preparing a DPR for sewerage network and STP and submitted for approval.</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 April 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>
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(vii)Ground water regulation	No specific proposal	Not Applicable
(viii) Adopting good irrigation practices	No specific proposal	Not Applicable
(ix) Protection and management of food plain Zones (FPZ)	March 2021	DPR for regulating flood plain zone protection and management, and E-flow maintenance in the Bharathapuzha at Pattambi were prepared by Irrigation Department and submitted to the government several months ago. But funding did not get sanctioned.
(x) Rain water harvesting	No specific proposal	Not Applicable
(xi)Maintaining minimum Environmental flow of river	March 2021	A more comprehensive DPR by Irrigation Department and submitted for approval of State Government
(xii) Plantation on both sides of the river	No specific proposal	Not applicable
(xiii)Setting up biodiversity parks on flood plains by removing encroachment	No specific proposal	Not applicable

## ACTION PLAN FOR RIVER BHARATHAPUZHA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of April2022	Progress in the month ofMay2022	% 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	Tendering work is in progress	A total of 1600 household units were sanctioned and it is being distributed based on applications.	70% implemented	2% 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. Planning Board approved budget of	DPR for regulating flood plain zone protection and management, and E-flow maintenance in the Bharathapuzha at Pattambi were prepared and	Implementation not started	Full implementation remaining

				500 Crore for NGT related projects. That fund may be utilised for the implementation of DPR.	submitted to the government several months ago. But funding did not get sanctioned.		
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 2022	Water quality monitoring in Bharathapuzha at Pattambi and two additional points were completed until May 2022	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	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.	Kerala Water Authority prepared a DPR for STP and submitted it to the Government. The STP is proposed to be installed at Nambram in Pattambi municipality in about 50 cent of land. The survey for the sewerage pipeline was also completed and it is also included in the DPR.	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.	Pattambi Municipality allocated funds for the installation of a modern slaughterhouse and assorted rendering plant but land could not be identified for the same.	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	DPR for the renovation of two sanitary complexes (located at bus stand and near Nila Hospital) and	25% implemented	75% remaining

				Municipality is in progress.	one new at Pattambi market was prepared and its tendering processes were also completed.		
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 2022**

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)	5/7/2022									
		1	0	:	4	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	54 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	26.5
2	Dissolved Oxygen, mg/l	6.8
3	pH	7.77
4	Conductivity, µmhos/cm	262
5	BOD, mg/l	1.73
6	Nitrate-N, mg/l	0.149
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	90
10	Chloride, mg/l	24.98
11	COD, mg/l	8
12	TKN, mg/l	0.008
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	104
15	Calcium as CaCO <sub>3</sub> , mg/l	70
16	Magnesium as CaCO <sub>3</sub> , mg/l	34
17	Sulphate, mg/l	10.8
18	Calcium (Ca <sup>2+</sup> ), mg/l	28
19	Magnesium (Mg <sup>2+</sup> ), mg/l	8.262
20	Sodium, mg/l	14
21	Total Dissolved Solids, mg/l	150
22	Total Fixed Solids, mg/l	98
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	BDL
25	Boron, mg/l	BDL
26	Potassium, mg/l	3.8
27	Fluoride, mg/l	0.13
28	Total Coliform, MPN/100 ml	900
29	Fecal Coliform, MPN/100 ml	700
30	Fecal Streptococcus, MPN/100 ml	80
31	% SODIUM	21.85
32	SAR	0.6

**POLLUTED RIVER STRETCH MONITORING PROGRAMME  
DATA SHEET MAY 2022**

Veliampallu 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)	5/7/2022									
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	336 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	27
2	Dissolved Oxygen, mg/l	6.08
3	pH	7.76
4	Conductivity, µmhos/cm	257
5	BOD, mg/l	1.13
6	Nitrate-N, mg/l	0.328
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	99
10	Chloride, mg/l	24.98
11	COD, mg/l	7
12	TKN, mg/l	0.01
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	106
15	Calcium as CaCO <sub>3</sub> , mg/l	74
16	Magnesium as CaCO <sub>3</sub> , mg/l	32
17	Sulphate, mg/l	0.621
18	Calcium (Ca <sup>2+</sup> ), mg/l	29.6
19	Magnesium (Mg <sup>2+</sup> ), mg/l	7.776
20	Sodium, mg/l	14
21	Total Dissolved Solids, mg/l	167
22	Total Fixed Solids, mg/l	110
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	BDL
25	Boron, mg/l	BDL
26	Potassium, mg/l	2.8
27	Fluoride, mg/l	0.13
28	Total Coliform, MPN/100 ml	1200



**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 2022**

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 April 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>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>	<p>March 2021</p> <p>No specific proposal</p> <p>No specific proposal</p>	<p>A more comprehensive DPR prepared and submitted to the Government for approval by Irrigation Department</p> <p>Not applicable</p> <p>Not applicable</p>
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## ACTION PLAN FOR RIVER BHAVANI, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of April2022	Progress in the month of May2022	% 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 completing the project	MSW treatment plant(MCF and RRF) was completed, machineries for RRF were purchased and waiting for KSEB connection for its installation. Wet waste processing was not started in the Pudur Panchayath	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	Minis MCF in the colonies of	62% implemented	38 % implementati

				PudurPanchayath were started as an alternative of installation of waste bin in the colonies. Mini MCF facility were installed in the four wards and its coverage will be extend over all the 13 wards	PudurPanchayath were started as an alternative of installation of waste bin in the colonies. Mini MCF facility were installed in the 8 wards and its coverage will be extend over all the 13 wards		on remaining
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	Side protection work near to Thekkuvatta LIS to be started	85%	15 %

				a new work on River Bhavani at Thekkuvatta LIS.			
C(i)	Seasonal clearance of jungle and muddies from river courses	Irrigation department	2020 - 21	Work in this season at two locations at Pampanthode&Ranganathapuram were completed	Implemented	100	NIL
D	Construction of Check dams at the identified locations	Irrigation department	2020 - 21	Checkdam at Boothivazhy, Anakkal&Chemmannura re proposed in the DPR	Administrative sanction obtained for Bhoothivazhi and Aralikonam Check Dams & looking forward for TS. DPR for the check dams of Anakkal and Chemmannur were suggested to be revised by government. The revised DPR will be submitted on May 2022.	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	Implementati on not started	Full implementati

					solution		on remaining
E	Information Education and Communication (IEC)	Pudur Grama Panchayath	2019 -20	Awareness programs conducted	Implemented	Implemented	Implemented
A(a)	Monitoring of river water quality by sampling	KSPCB	2019 -20	Water quality monitoring in Bhavani at Elachivazhi and three additional points were completed until April 2022	Water quality monitoring in Bhavani at Elachivazhi and three additional points were completed until May 2022	Implemented. Will continue up to the full implementation of the action plan.	Implemented.



**POLLUTED RIVER STRETCH MONITORING PROGRAMME  
DATA SHEET MAY 2022**

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)	5/9/2022									
		1	0	:	5	0					
3	Weather	Cloudy		Clear ✓			Windy		Raining		
4	Approximate depth of main stream	< 50 cm		50 – 100 cm ✓			>100 cm		Flood		
5	Color & Intensity	Clear ✓		Turbid			Green		Brown		
		1 = Light ✓		2 = Moderate			3 = High				
6	Odour	None ✓		Fishy			H <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	14 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			

<b>Sl.No</b>	<b>Determinants</b>	<b>Values</b>
1	Temperature, 0C	30
2	Dissolved Oxygen, mg/l	6.53
3	pH	7.74
4	Conductivity, $\mu$ hos/cm	171
5	BOD, mg/l	1.8
6	Nitrate-N, mg/l	0.271
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	75
10	Chloride, mg/l	10.99
11	COD, mg/l	7
12	TKN, mg/l	0.01
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	78
15	Calcium as CaCO <sub>3</sub> , mg/l	50
16	Magnesium as CaCO <sub>3</sub> , mg/l	28
17	Sulphate, mg/l	2.48
18	Calcium (Ca <sup>2+</sup> ), mg/l	20
19	Magnesium (Mg <sup>2+</sup> ), mg/l	6.804
20	Sodium, mg/l	6.2
21	Total Dissolved Solids, mg/l	114
22	Total Fixed Solids, mg/l	75
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	BDL
25	Boron, mg/l	BDL
26	Potassium, mg/l	1.9

27	Fluoride, mg/l	0.15
28	Total Coliform, MPN/100 ml	1300
29	Fecal Coliform, MPN/100 ml	1000
30	Fecal Streptococcus, MPN/100 ml	Absent
31	% SODIUM	14.35
32	SAR	0.31

<b>POLLUTED RIVER STRETCH MONITORING PROGRAMME DATA SHEET MAY 2022</b>												
Chalayur 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)	5/9/2022										
		1	1	:	3	0						
3	Weather	Cloudy			Clear ✓			Windy		Raining		
4	Approximate depth of main stream	< 50 cm			50 – 100 cm ✓			>100 cm		Flood		
5	Color & Intensity	Clear ✓			Turbid			Green		Brown		
		1 = Light ✓			2 = Moderate			3 = High				
6	Odour	None ✓			Fishy			H <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	7 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	30
2	Dissolved Oxygen, mg/l	7.06
3	pH	7.83
4	Conductivity, µmhos/cm	276
5	BOD, mg/l	0.93
6	Nitrate-N, mg/l	0.379
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	126
10	Chloride, mg/l	13.99
11	COD, mg/l	4
12	TKN, mg/l	BDL
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	129
15	Calcium as CaCO <sub>3</sub> , mg/l	93
16	Magnesium as CaCO <sub>3</sub> , mg/l	36
17	Sulphate, mg/l	4.09
18	Calcium (Ca <sup>2+</sup> ), mg/l	37.2
19	Magnesium (Mg <sup>2+</sup> ), mg/l	8.748

20	Sodium, mg/l	8.1
21	Total Dissolved Solids, mg/l	172
22	Total Fixed Solids, mg/l	114
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	BDL
25	Boron, mg/l	BDL
26	Potassium, mg/l	1.8
27	Fluoride, mg/l	0.14
28	Total Coliform, MPN/100 ml	1800
29	Fecal Coliform, MPN/100 ml	600
30	Fecal Streptococcus, MPN/100 ml	20
31	% SODIUM	11.83
32	SAR	0.31

<b>POLLUTED RIVER STRETCH MONITORING PROGRAMME DATA SHEET MAY 2022</b>												
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	<b>Station Code</b>		1	2	0	8						
2	<b>Date and time of sample taken (DD/MM/YY, HH/MM)</b>		5/9/2022									
			1	1	:	4	5					
3	<b>Weather</b>		Cloudy			Clear <input checked="" type="checkbox"/>			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	17.5 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	30
2	Dissolved Oxygen, mg/l	6.6
3	pH	7.85
4	Conductivity, µmhos/cm	235
5	BOD, mg/l	1.93
6	Nitrate-N, mg/l	0.354
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	99
10	Chloride, mg/l	16.98
11	COD, mg/l	7

12	TKN, mg/l	0.011
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO <sub>3</sub> , mg/l	102
15	Calcium as CaCO <sub>3</sub> , mg/l	70
16	Magnesium as CaCO <sub>3</sub> , mg/l	32
17	Sulphate, mg/l	1.86
18	Calcium (Ca <sup>2+</sup> ), mg/l	28
19	Magnesium (Mg <sup>2+</sup> ), mg/l	7.776
20	Sodium, mg/l	10.5
21	Total Dissolved Solids, mg/l	150
22	Total Fixed Solids, mg/l	99
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	BDL
25	Boron, mg/l	BDL
26	Potassium, mg/l	2.8
27	Fluoride, mg/l	0.14
28	Total Coliform, MPN/100 ml	1200
29	Fecal Coliform, MPN/100 ml	600
30	Fecal Streptococcus, MPN/100 ml	80
31	% SODIUM	19.44
32	SAR	0.45

**NATIONAL WATER QUALITY MONITORING PROGRAMME  
(NWMP -6 DATA- MAY - 2022)**

<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)	5/9/2022									
		1	2	:	0	0					
3	Weather	Cloudy		Clear ✓			Windy		Raining		
4	Approximate depth of main stream	< 50 cm		50 – 100 cm			>100 cm ✓		Flood		
5	Color & Intensity	Clear ✓		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	24 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	30
2	Dissolved Oxygen, mg/l	6.2



3	pH	7.93
4	Conductivity, $\mu\text{mhos/cm}$	218
5	BOD, mg/l	1.2
6	Nitrate-N, mg/l	0.382
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as $\text{CaCO}_3$ mg/l	BDL
9	Total Alkalinity, as $\text{CaCO}_3$ mg/l	90
10	Chloride, mg/l	18.4
11	COD, mg/l	6
12	TKN, mg/l	0.007
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as $\text{CaCO}_3$ mg/l	98
15	Calcium, as $\text{CaCO}_3$ mg/l	57
16	Magnesium as $\text{CaCO}_3$ , mg/l	41
17	Sulphate, mg/l	2.23
18	Calcium ( $\text{Ca}^{2+}$ ), mg/l	22.8
19	Magnesium ( $\text{Mg}^{2+}$ ), mg/l	9.963
20	Sodium, mg/l	8.9
21	Total Dissolved Solids, mg/l	140
22	Total Fixed Solids, mg/l	92
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	BDL
25	Boron, mg/l	BDL
26	Potassium, mg/l	2.1
27	Fluoride, mg/l	0.12
28	Total Coliform, MPN/100 ml	800
29	Fecal Coliform, MPN/100 ml	300
30	Fecal streptococci , MPN/100 ml	40

31	% Sodium	16.11
32	SAR	0.39

**National Mission for Clean Ganga**

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

**RIVER KADALUNDI, MALAPPURAM**

<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>Last updated report submitted was on May 20 2022</p> <p>(I) Identified 3 drains on 10/12/2018 at the hajiyyar pally stretch.</p> <p>(ii) Malappuram municipality – 30 KLD. Not completed revamping &amp; not submitted application for consent as well till date. Given direction several times during DLTC meetings to submit the proposal for revamping and get it approved from Board . The matter was discussed in the DLMC meeting on 16/6/22, and EE suggested giving work order to a single contractor on DBOT basis as per latest govt. order dated 28/4/22 which gave permission to LSGD s for the same.</p> <p>(iii) NIL</p> <p>(iv) Activities progressing with decentralised source level treatment method and 2506 devices are distributed.</p> <p>(v) Attached Analysis Report for the month of May 2022. More activities are progressing under the “ Thelineer Ozhukum Navakeralam “scheme</p>
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<p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices,</p> <p>(ix) Protection and management of food plain Zones (FPZ),</p> <p>(x) Rain water harvesting,</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		<p>(vi) Actions being initiated to prevent illegal waste dumping. Bio-Medical Waste collecting through IMAGE .Municipality has one MRF and 3 MCF's. Dry Waste Collecting through HKS and stored in these facilities from where recyclable materials are handed over to authorised recyclers and rejects, to KEIL through Clean Kerala Company.</p> <p>(vii) NA</p> <p>(viii) Complying</p> <p>(ix) NA</p> <p>(x) Complying</p> <p>(xi) Complying</p> <p>(xii) NA</p> <p>(xiii) NA</p>
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1.6	The discharge of waste water from the surrounding houses to the Valiyathodu - Blocking of discharge of liquid waste	Malappuram Municipality	completed	completed	completed	completed	completed	completed
1.7	Identification of illegal outlets into storm water drains and fine imposed on such units.	Malappuram Municipality	ongoing	completed	completed	completed	completed	completed
1.8	Biodegradable waste  Bio gas plants- 186  Bio bins – 908  Bucket compost – 1445  Tumburmuzhi Aerobic bins - 4  Submitted proposal for 8000 ring compost systems	Malappuram Municipality	In progress	In progress	In progress	In progress	completed	Completed
1.9	Non biodegradable waste  MCF &  Plastic shredding and Bailing  Echo Kiosk	Malappuram Municipality	Completed   March 2020	Completed   In progress	Completed   In progress	Completed   40 mini MCF project submitted to DPC	Completed   In progress	Completed   Waiting for approval



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

No.	Activity	Implementing agency	Time line	Progress in the month of March 2022	Progress in the month of April 2022	Progress in the month of May2022	% works Completed	Details of works remaining
2.1	River water quality Monitoring- Thirurangadi, Hajiyarpally National Water Quality Programme(NWMP)	KSPCB	Ongoing; Monthly frequency	100%				
2.2	River water quality Monitoring -	KSPCB	Ongoing; Seasonal - Pre -	100%				

	Thirurangadi, Kooriyad, Manikut, Hajiyarpally, Anakkayam, Oravambrum - State Water monitoring programme (SWMP)		monsoon, monsoon, post - monsoon					
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2.3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc. in Malappuram Municipalarea	KSPCB	Ongoing; Interval; Red – 1 month, Orange- 3 months, Green- 6 months	100%				
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### 3.GROUND WATER DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of March 2022	Progress in the month of April 2022	Progress in the month of May2022	% works compl eted	Details of works remaining
3.1.	Ground Water resources and regulation of ground water extraction by	Ground water Department		No action included in the approved action plan to be performed by Ground Water	No action included in the approved action plan to be performed by Ground Water	No action included in the approved action plan to be performe		

	<p>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>			<b>Department</b>	<b>Department</b>	<b>d by Ground Water Department</b>		
3.2	<p>Ground water recharging / rain water harvesting (Earlier status : The average pre - monsoon</p>	Ground water Department		<b>No action included in the approved action plan to be performed by Ground Water Department</b>				

	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.)							
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, adopting good irrigation practices	Ground water Department		<b>No action included in the approved action plan to be performed by Ground Water Department</b>				

<p>(Earlier status : The total irrigation draft in the area ranges from 979.683 - 1857.49 ha.m.)</p>							
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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 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> <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 Infra structure, Gap Analysis, Proposed along with completion timeline</p>	<p>Last updated report submitted was on MAY 20 , 2022</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. As per Board directions to replace blower and renovate aeration tank, and to construct RVH for fish market, estimate of Rs.1, 88000/- prepared to place before the council. During DLTC meeting they have reported that the renovation work is over. Accordingly conducted site inspection by Board on 30.03.2022 to evaluate progress, No progress found. Informed that they have no proper technical personnel to give a technical sanction of the renovation work. Since about 3 years repeated directions are being issued for time bound renovation of fish market STP. The matter was discussed in the DLMC meeting conducted on 16/6/22. It was suggested by EE to give work order to a single contractor on DBOT basis as per latest govt. order dated 28/4/22 which gave permission to LSGD s for the same.</p> <p>(ii) <u>Tirur municipal Bus Stand STP</u>-50 KLD –<b>Present status</b> – Truss work of shelter completed and electrical installation works going on.95% of total work completed. Expected to be completed shortly.</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>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 month of May2022)</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>
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	<ul style="list-style-type: none"><li>(x) Rain water harvesting,</li><li>(xi) Maintaining minimum Environmental flow of river</li><li>(xii) Plantation on both sides of the river</li><li>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</li></ul>		<ul style="list-style-type: none"><li>(x) Complying</li><li>(xi) Complying</li><li>(xii) NA</li><li>(xiii) Reported that encroachment survey is completed and now the process of laying survey stones is in progress.</li></ul>
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# ACTION PLAN FOR RIVER TIRUR, KERALA

<b>1. IRRIGATION DEPARTMENT</b>								
<b>1.</b>								
No.	Activity	Implementing agency	Time line  31.03.2020	Progress during month of March 2021	Progress during month of April 2022	Progress during month of May2022	% 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			No progress	These two works are combined and estimate submitted for an amount of Rs 28.6Lakhs. No sanctions are approved till date..(price id-2021/4249/IA)	Formation of ring bund, Apron extension and construction of cut off wall, Installation of new shutters with hoisting arrangements and related Mechanical works.
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	In progress	In progress	No progress	Civil work 0% and mechanical works 10%	
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## 2.TIRUR MUNICIPALITY

No.	Activity	Implementing agency	Time line	Progress during month of March 2021	Progress during month of April 2022	Progress during month of May2022	% works completed	Details of works remaining
2.1	Provide septic tank for nearest houses	Tirur Municipality	Dec 2019	completed	completed	completed	100	NIL
2.2	Establishment of Solid waste Treatment Plant Thumboor Muzhi Model Aerobic Bin	Tirur Municipality	March 2020	completed	completed	completed	100	NIL
2.3	Establishment of Non Degradable waste treatment Plant, Resource Recovery facility, Plastic Shredding Unit Segregation shed	Tirur Municipality	March 2020	completed	completed	Completed	100	NIL
2.4	Slaughter House	Tirur Municipality	December 2020	Civil work completed. Electrical work.	Machineries installation going on	progressing	90%	In progress

				progressing				
2.5	Fencing on Bridgeside Thalakkadathur Bridge	Tirur Municipality	December 2020	completed	completed	completed	100	NIL
2.6	Installation of CCTV Camera near the river Bank Thalakadathur Bridge	Tirur Municipality	May 2020	Completed	completed	completed	100	NIL
2.7	Planting of Bamboo seedlings on the river bank (Thazhepalam)	Tirur Municipality	June 2020	Completed	completed	completed	100	NIL
2.8	Renovation of Effluent treatment plant at fish Market. AMC Granted ETP with Aerobic System	Tirur Municipality	June 2019	Estimate by electrical engineer approved by the council. Given for estimate of Mechanical engineer	Submitted project for renovation work to get approval	No progress		No progress
2.9	Setting up of STP at Private Bus stand	Tirur Municipality	June 2020	Electrical and shelter work on going	Truss work completed. Electrical installation work on going	Electrical work is going on.	95	In progress

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

### 3.KERALA STATE POLLUTION CONTROL BOARD

No.	Activity	Implementing agency	Time line	Progress in the month of march 2021	Progress in the month of April 2022	Progress in the month of May2022	% 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 month, Orange- 3 months, Green- 6 months				Ongoing

**4. ACTION PLAN BY VARIOUS GRAMA PANCHAYATHS- THALAKKAD, VETOM, MANGALAM,  
CHERIYAMUNDAM**

No.	Activity	Implementing agency	Time line	Progress in the month of March 2021	Progress in the month of April 2022	Progress in the month of May2022	% 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 YetterikadavuKunjulikkadavuMan gattiri Bridge, Aikkanchiri Bridge, Paravanna Bridge	Vetom - 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	- Dispute on making road in private property..Discussions going on to solve the issue.	Inprogress	Inprogress	90%	Nearing completion  Landscaping work remainig as per estimate
4.5	Fencing on bridge side Thalakkadathur	Cheriyamundam Grama Panchayath	March 2020	completed	completed	completed	100	NIL

### 5.GROUND WATER DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of march 2022	Progress in the month of April 2022	Progress in the month o May 2022	% works completed	Details of works remaining
5.1.	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks  (Earlier status: As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Tirur and Kuttippuram) comes under the Tirur river basin. These two blocks are semi-critical blocks and the stage of groundwater extraction ranges from 77.75 % to 77.92%)	Ground water Department  Therefore, to regulate ground water resources in this area, no permission is granted for packaged drinking water industries or any other water induced industries	NA	No permits issued	No permits issued	No permits issued	NA	NA
5.2	Ground water recharging / rain water harvesting  (Earlier status: The average pre	NA	NA		NO ACTION INCLUDED UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN BY	NA	NA

	monsoon groundwater level ranges from 6.14mbgl - 8.49 mbgl.)					GROUND WATER DEPARTMENT		
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 INCLUDED UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NA	NA

## 6.REVENUE DEPARTMENT

No	Activity	Implementing agency	Timeline	Progress March 2022	Progress April 2022	Progress May2022	% works completed	Details of works remaining
6.1	Survey of boundaries of river side	Revenue department		In progress.  Thalakkad grama panchayath has remitted fund recently and survey under progress	In progress	In progress	Completed . The survey stone is being laid.	Encroachment survey completed.



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**ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN TIRUR RIVER MAY  
2022**

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	7.9	4.3	0.8	2.4	88
2	Thazhepalam drain	7.6	3.2	1.2	3.6	44
3	Naduvilangadi drain (old ponnani thodu)	Dried				
4	Annassery drain	Dried				
5	Canal at CV Land	Dried				
6	Canal at Mangalam thuruth	7.8	6.0	0.7	2	72
7	Canal at Pullooni	7.6	6.6	0.8	3	16
8	Drain near Mangattiri bridge	Dried				
9	Drain near Ettirikkadavu bridge	7.4	4	0.7	3	100
10	Epothingal	7.0	5.3	0.7	3	52
11	Asarikkadav	7.4	4.1	0.5	3	48
12	Kandanath kadav	7.4	5	1	1.5	52
13	Pancharamoola	Dried				
14	Kakadav	7.3	6	0.7	2.8	56
15	Kanathkadav	7.3	6.8	0.7	2.8	40
16	Drain near tirur railway station	Dried				
17	Payyanangadi(kadayithodu)	Dried				

**ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN  
KADALUNDY RIVER MAY 2022 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	7.3	7.5	0.9	3.6	100

**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 MARCH 2022– 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) – Tendering in progress
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/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 insitu 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>work in progress</p>	<p>Drains identified. Pollution load calculated. Action plan prepared. Joint squad of PCB and Corporation inspection in action. Issued notice to 92 units during the period 2019. 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 Kallayi river from Kaduppini to Kothi -DPR submitted to SE,INC,KKD on 16.10.2019 for Rs 773.05 lakhs(7.30 crores for desilting of river and 43.05 lakhs for fencing of 5 bridges) under action plan of Kallayi river and fencing of sides of the river. Work entrusted to KWIL – Dredging ,Desilting and removal of weeds fro 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 waste management &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 (OA no. 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 40TPD 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 Njeliyamparamba(Super MRF) 3TPD- with plastic shredding unit, west hill industrial estate -2TPD -- with plastic shredding unit,Near Jayanthi nagar colony) -70% completed
	Functioning	(v) 24 units of aerobic compost facilities existing ( Tagore hall, S K 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- 3nos(Mental Hospital 1TPD, ITI Malikadav -1TPD, Juvine home-1TPD)
	Functioning	(viii) 3 Biogas plants in market (Central market 2TPD, Vegetable market 2TPD, New bus stand,2TPD)
	Functioning	(ix)Treatment facility for waste in Central Market – Tendering in Progress
	30/03/2021	(x) Establishment of slaughter house-
	31/12/2022	<b><u>Mavoor Panchayath</u></b> MCF 1 nos,ring compost,compost pit- Completed and functioning
	31.03.2021	<b><u>Perumanna Panchayat</u></b> Compost pit and MCF with baling machine (1 nos) -Work in progress
	31.03.2021	<b><u>Peruvayal Panchayat</u></b> Compost pit,mini MCF 2 nos,bio gas plant- Work in progress MCF-1 nos temporarily functioning
		<b><u>Olavanna Panchayat</u></b> MCF-1 completed Mini MCF -3 Work in progress MRF -1 In block



<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>31/03/2021</p>	<p>Analysis report of Kallayi river stretch for the month of September 2020 Attached as <b>Annexure 2</b></p> <p>Same as Item no. 5.1(v) Fine of 32 Lakhs imposed for illegal dumping of solid wastes into rivers and public places. Installation of CCTV. Biomedical waste from Hospital, labs, clinics collected through image, plastic waste disposal through recyclers. Individual solid waste processing facilities like bio gas plant, bio bins in high rise building, hotels, restaurants etc. Fencing proposed by irrigation department.</p> <p>NIL</p> <p>NIL</p> <p>Flood prone mapping- Proposed by irrigation department</p> <p><b><u>Mavoor Panchayat</u></b> Well recharging-Estimate under preparation</p>
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		31/03/2021	<b><u>Peruvayal Panchayat</u></b> Well recharging-Work in progress
		31/03/2021	<b><u>Olavanna Panchayat</u></b> Well recharging-Work in progress
(xi) Maintaining minimum environmental flow of river		31/03/2021	Initiated <b><u>Perumanna Panchayat</u></b> Cleaning of Mampuzha river-Work in Progress
		31/03/2021	<b><u>Perumanna Panchayat</u></b> Cleaning of Mampuzha river-Ongoing
		Completed	<b><u>Olavanna Panchayat</u></b> Cleaning of Mampuzha river-Completed
(xii) Plantation on both sides of the river		Completed	<b><u>Mavoor Panchayat</u></b> 3500units completed
(xiii) Setting up biodiversity parks on flood plains by removing encroachment			Bio park in Kozhikode district- Proposed by irrigation department

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



*Shabna*

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**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 MARCH 2022–Kuttiady 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	03/21  31.05.2024  03/2022	<p><b><u>Chakkittapara Panchayath</u></b> Massive awareness program conducted. Community toilet and household latrine schemes implements MRF and MCF. Work in good condition. Project for household compost bin in progress and carried out drainage reparse 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 Panchayath</u></b> Ward wise awareness programme conducted. community toilet 'Take a Break' started and house hold latrine schemes implemented.MCF started. Project for house hold bucket compost completed.</p>
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation	03/21	<p><b><u>Chakkittapara Panchayath</u></b> Committed to implement major scheme next year</p>

	of sewage to the STPs must be ensured	31.05.2024	<p><b><u>Payyoli municipality</u></b></p> <ol style="list-style-type: none"> <li>1. Action plan prepared under SBM 2.0</li> <li>2. Action plan prepared under Amrut Scheme</li> </ol> <p><b><u>Thurayur Grama Panchayath</u></b></p> <p>Major scheme will be implemented only by the availability of funds</p>
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	03/21  31.12.2024	<p><b><u>Chakkittapara Panchayath</u></b></p> <p>River origin areas are in Chakkittapara, No industrial unites, ODF Project implemented</p> <p><b><u>Payyoli municipality</u></b></p> <ol style="list-style-type: none"> <li>1. Action plan prepared under SBM 2.0</li> <li>2. Action plan prepared under Amrut Scheme</li> </ol> <p><b><u>Thurayur Grama Panchayath</u></b></p> <p>No industrial unit in thurayur grama panjayath ODF project implemented</p>
4	<p>Chief secretaries may set up appropriate monitoring mechanism at state level</p> <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> <li>• Monitoring at state</li> </ul>		Not applicable



	level must take place		
5	<p>Progress report may be furnished by the state/UTs to</p> <ul style="list-style-type: none"> <li>Secretary, ministry of jalshakti</li> <li>Member secretary, CPCB</li> </ul>	Monthly (preferably before 20 <sup>th</sup> of every month)	Nil
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 insitu treatment</p>	<p>Primary STP (Oil and Grease trap with grit chamber) Will be implemented by 31/3/2021</p> <p>3/2021</p> <p>03/2022</p>	<p>Drains identified. Pollution load calculated. Action plan prepared. Notices issued by concerned Panchayath Secretaries to individual units. Action under progress by individual units.</p> <p>Monthly progress report of Kuttiady, Maruthomkara, Cheruvannur, Changaroth, Perambra, Kavilumpara, Velom Panchayaths, Chakkittapara, Payyoli, Thurayoor, Irrigation department, Water Authority, Shuchitwa mission for the month of October 2020 is attached as <b>Annexure 3. Chakkittapara Panchayath</b></p> <p>River originate from Chakkittapara Grama Panchayat. Polluting sources are not identified.</p> <p><b>Thurayur Grama Panchayath</b></p> <p>Polluted area in river are not identified.</p>

<p>(ii) <u>status of STPs, I&amp;D and sewage networks</u></p> <p>Details of existing infrastructure, proposed along with completion timeline</p>	<p>3/21</p> <p>31.05.2024</p> <p>3/21</p>	<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></p> <p>: Nil</p> <p><b><u>Payyoli municipality</u></b> Action plan prepared under SBM 2.0</p> <p><b><u>Thurayur Grama Panchayath</u></b> Nil</p>
<p>(iii) <u>status of CETPs</u></p> <p>Details of existing CETP and ETP infrastructure ,Gap analysis, proposed along with complying status</p>	<p>31.12.2024</p> <p>03/2022</p>	<p><b><u>Payyoli municipality</u></b> ✓ No CETPs proposed ✓ Action plan prepared under SBM 2.0</p> <p><b><u>Thurayur 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 waste management &amp; details of processing facilities</u>  Details of existing infrastructure, Gap analysis, proposed along with completion timeline</p>	31/03/2021	Construction started for block level MRF for 7 panchayath in the Kuttiyadi block.
	Completed and functioning	MCF of Kuttiyadi Panchayath set up with shredding unit- work completed and functioning.
	Completed and functioning	Mini MCF set up in all wards of Kuttiyadi panchayath.
	Completed and functioning	<b><u>Kavilumpara panchayath</u></b> 3 MCFs are functioning.
	Completed and functioning	<b><u>Maruthomkara Panchayath</u></b> MRF completed and functioning. Biogas plant work completed.
	31/10/2021	<b><u>Velom Panchayath</u></b> Community level – Biogas plant. Work under construction(80% work completed). 50 nos of Biogas plant for house hold- Completed and functioning 50 nos of Biogas plant for house hold- Completed and functioning
	31/10/2021	<b><u>Perambra Panchayath</u></b> MCF- Tendering in progress Mini MCF – work completed.
		<b><u>Changaroth Panchayath</u></b> Project for setting up MCF approved. Site to be identified soon. Biogas plant and Ring compost for house hold proposed. Plastic shredding unit proposed.

	03/2021	<p><b><u>Chakkittapara Panchayath</u></b> House Hold plastic waste collected as per the guidelines of Suchithwa Mission .</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>	31/10/2024	<p><b><u>Payyoli Municipality</u></b> 1. Temporary MCF exist &amp; 18 mini MCF under construction of permanent MCF going on to be complete by September 2022</p> <p><b><u>Thurayur Grama Panchayath</u></b> House hold plastic waste collected as the guideline of Suchitwa mission</p> <p>Water quality monitoring result for the month of October 2020 is attached as <b>Annexure-4</b></p> <p><b><u>Chakkittapara Panchayath</u></b> No details available</p> <p>Same as Item no. 5.1(v) Biomedical waste from Hospital, labs ,clinics collected through image, plastic waste disposal through recyclers. Individual solid waste processing facilities like bio gas plant, bio bins in high rise building, hotels etc. Fencing proposed by irrigation department.</p> <p><b><u>Chakkittapara Panchayath</u></b></p>



	03/2021	No waste dumping <b><u>Thurayur Grama Panchayath</u></b> No waste dumping
(vii) ground water regulation	31/10/2023	<b><u>Chakkittapara Panchayath</u></b> Ground water regulation and action taken <b><u>Thurayur Grama Panchayath</u></b> Ground water regulation and action taken
(viii) adopting good irrigation practices	31/10/2024	<b><u>Thurayur Grama Panchayath</u></b> As per the direction of Government, action will be taken <b><u>Chakkittapara Panchayath</u></b> As per the direction of Government, action will be taken
(ix) protection and management of flood plain zones(FPZ),	31/10/2024	NIL
(x) Rain water harvesting	Work in progress	<b><u>Velom panchayath</u></b> 22527 rain water pit , well recharge – 1500 houses
	31/10/2024	<b><u>Kavilumpara panchayath</u></b> well recharge – 160 houses <b><u>Maruhtonkara panchayath</u></b> Well recharge- Action plan and TS approved <b><u>Cheruvanoor</u></b>



03/2021

(xi) Maintaining minimum  
environmental flow of  
river

31/10/2024

03/2021

**panchayath** Well  
Recharge – Project in  
progress

**Thurayur Grama**  
**Panchayath**

Project for well water  
and well recharge is in  
progress as per the  
action plan of  
MGNREGS

**Chakkittapara**  
**Panchayath**

Project for well water  
pit and well recharge  
adopted

**Chakkittapara**  
**Panchayath**

Project for well water pit  
and well recharge adopted

**Kavilumpara**  
**panchayath** Adopted  
steps to remove sands  
and rock dumped during  
rain flood

**Maruthonkara**  
**panchayah** 74 works  
ongoing under  
MGNREGS(RWH, soil  
Conservation).

**Kavilumpara**  
**panchayath** 5 works  
ongoing under  
MGNREGS for  
protection of river sides

**Chakkittapara**  
**Panchayath**

River Originating area,  
Noticed environment flow

**Payyoli Municipality**  
Rejuvenation/cleaning of  
Naivarani thodu by  
removing slit and other  
solid wastes-Work in

<p>(xii) Plantation on both sides of the river</p>	<p>03/2021</p>	<p>Progress <b><u>Thurayur Grama Panchayath</u></b> River originating area , Noticed environmental <b><u>Chakkittapara Panchayath</u></b> Bamboo planting will be done in MGNREGS <b><u>Thurayur Grama Panchayath</u></b> Bamboo planting will be done only by the direction of governing council</p>
<p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>	<p>31.05.2024</p>	<p><b><u>Chakkittapara Panchayath</u></b> Action will be taken depending upon availability of fund <b><u>Thurayur Grama Panchayath</u></b> Action will be taken depending upon availability of fund</p>

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



*Shabna Kushe Shekhar*

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Environmental Engineer

**National Mission for Clean Ganga**

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

**RIVER 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></ul>		

	<ul style="list-style-type: none"><li>• Member Secretary,CPCB</li></ul>		
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6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&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>  There are 5 natural drains meeting the river, all cleaned.</p> <p>RRF at block level</p> <p>Lab analysis reported by KSPCB is attached</p>
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	<p><u>Processing Facilities</u>  Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by</p>		<p>Implementing in all households as per KPBR rules</p>
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	removing encroachment		
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## ACTION PLAN FOR RIVER KAVVAI, 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 2022	% 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 December 2020	Progress in the month of January 2021	Progress in the month of February 2021	% works completed	Details of works remaining
E	Desilting and rejuvenation of NarangaThodu in	Irrigation Department	2020					

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

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

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

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

## National Mission for Clean Ganga

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

### **RIVER KUPPAM, KANNUR**

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		Almost all residence and commercial establishments have their own insitu sewage remediation
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		A common STP is at Taliparamba
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2021	
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none"><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>(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

## 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 2022	% 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 stakeholders	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 stakeholders	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 to 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 December 2020	Progress in the month of January 2021	Progress in the month of February 2021	% works completed	Details of works remaining
1	Providing fencing on Kuppam bridge (NH) across Kuppam river at Thalipparamba in Thalipparamba Municipality	Irrigation department	2021					
2	Providing Fencing on Pazhayangadi Bridge across Kuppam River at Pazhayangadi	Irrigation Department	2021					
3	Regulating activities in flood plain zone, protection and management of flood plain zone	Irrigation Department	3 years					

4	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					
5	Issues relating to E- flow, maintaining minimum environmental flow of river(by having watershed management provisions)	Irrigation Department	3 years					

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

7	Rendering plant for poultry wastes	Local body	As per their project and fund availability					
8	Slaughter house waste disposal facility	Local body	One common slaughter house for 3 to 4 local body					
9	Strict monitoring of disposal of waste(sewage, sullage, degradable waste, non-biodegradable waste) surveyed area and also in the catchment of theriver i)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 February 2021	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					



2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground water quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					



## National Mission for Clean Ganga

**Format for Submission of Monthly Progress Report by States/UTs  
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### **RIVER PERUVAMBA, 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></ul>		

	<ul style="list-style-type: none"><li>• Member Secretary,CPCB</li></ul>		
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<p>6.1 Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&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</p>	<p><b><u>RAMANTHALLI</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>the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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## ACTION PLAN FOR RIVER PERUVAMBA, KERALA

<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 2022	% 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 implementat ion in progress
C(ii)	Non biodegradable Waste Disposal MCF and RRF	PayyannurMunicipality	Ongoing				1	MCF & RRF in function
E	Awareness  Youth, Asha workers	PayyannurMunicipality	Ongoingproject	90%	100%	100%	ongoing	Completed

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



	Plant (2460 Nos)							
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		Available	Available	Available	80%	
C(ii)	Non Biodegradable waste disposal  MCF and sending to RRF	Ramanthali GP	2020	no	Yes	yes	100%	
E	Drain Cleaning and Side protection	Ramanthali GP	2022	Done	Done	Done	100%	
E	Awareness Youth, Asha workers and other stake holders	Ramanthali GP	2022	Done	Done	Done	100%	
C(ii)	Bio degradable waste disposal Ring Compost – 1000 Nos Compost Pit – 2000 Nos Biogas Plant – 100	Ramanthali GP	2022	Ring Compost-100 Compost Pit –	Ring Compost-100 Compost Pit –	Ring Compost-290 Compost Pit –	100%	

	Nos			15 Biogas Plant- 10	0 Biogas Plant – 0	0 Biogas Plant – 0		
<b>Action Plan by Irrigation Department</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 February 2021	% works completed	Details of works remaining
E	Providing fencing on Perumbabridge (NH) across Perumbariver at Payyannur in Payyannur Municipality	Irrigation department	2021					
E	Desilting and reconstruction of salt water exclusion cross bar across perumbathodu in Payyannur Municipality  MI Class II Plan fund	Irrigation Department	2021					

E	Desilting and repair of salt water exclusion cross bar across Koykottuvayal thodu inKunhimangalam Panchayath  State Disaster Response Fund	Irrigation Department	2020					
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	3 years					
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	Irrigation Department	3 years					

	bank of the river will be completed within 3 years from the commencement of works with a fund of 0.40 crores							
E	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)  By Micro watershed management for a period of 2 years with a fund of 0.25 Crore from the available fund	Irrigation Department	2 years					
<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 February 2021	% works completed	Details of works remaining
1	Sanitation Providing of toilets to residences With treatment and	Local body						

	disposal system for sewage and sullage							
2	Community Toilet  Proposed construction of new community Toilet at satellite points on the bank of river	All local bodies, Suchitwa Mission, 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	Pollution Control Board	Six months					

	Sanitation survey is to be conducted for 100m on either sides of the other parts of polluted stretch if any located nearby							
11	Awareness 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 February 2021	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier Status : As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Neeleswaram and Payyannur) comes under the Peruvamba river basin. All the blocks in the river stretch are safe with stage of					

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

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

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



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

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

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

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

## National Mission for Clean Ganga

**Format for Submission of Monthly Progress Report by States/UTs  
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### **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 food plain Zones (FPZ)

(x) Rain water harvesting

(xi) Maintaining minimum Environmental flow of river

(xii) Plantation on both sides of the river

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

## 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 2022	% 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 December 2020	Progress in the month of January 2021	Progress in the month of February 2021	% works completed	Details of works remaining
C (ii)	Providing fencing on Ramapurambr idge across Ramapuramri ver at Madayi GP	Irrigation department	2021					
E	Desilting and repair of salt water exclusion cross bar at Ramapuram in cheruthazham GP	Irrigation Department	2020					
E	Regualting activites in flood plain zone, protection and management of flood plain zone	Irrigation Department	-3 years	-			-	
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					
E	Issues relating to E-flow, maintaining minimum environmental flow of river(by having watershed management provisions)	Irrigation Department	2 years					

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

C (ii)	Providing proper waste handling facility. For wastewater and solid wastes		Six months				
C (ii)	Rendering plant for poultry wastes	Local body	Six months				
C (ii)	Slaughter house waste disposal facility	Local body					
A (iv)	Strict monitoring of disposal of waste(sewage, sullage, degradable waste, non-biodegradable waste) surveyed area and also in the catchment of theriver i)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 February 2021	% 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					

## 1. Kavvayi River

Table 1 Concentrations of water quality parameters measured from May -2022

Sl no	Parameters	Kankol	Karikuzhithodu	Thattarakadavu Bridge	Kuttyol palam
	<b>Date of collection</b>	<b>1/6/2022</b>	<b>1/6/2022</b>	<b>1/6/2022</b>	<b>20/05/2022</b>
1	pH	6.68	6.23	7.21	6.9
2	Electrical Conductivity, $\mu\text{s}/\text{cm}$	43.3	48.4	11200	838
3	BOD, mg/L	0.62	0.88	1.2	1.98
4	Dissolved Oxygen, mg/L	6.28	6.3	5.6	6
5	Total coliform, cfu/100ml	600	620	420	250
6	Faecal coliform, cfu/100ml	200	240	180	80
7	Turbidity	0.1	0.6	1.1	1.2
8	Total Hardness, mg/L	32	30	1430	18
10	Calcium Hardness, mg/L	18	20	720	14
9	Magnesium Hardness, mg/L	22	10	710	4
11	Ammonia-NO <sub>3</sub> , mg/L	0.0621	0.0028	0.0982	BDL
12	Sulphate, mg/L	BDL	BDL	113.6	BDL
13	Phosphate, mg/L	BDL	BDL	BDL	0.411
14	Fluoride, mg/L	BDL	BDL	BDL	BDL
15	Total Alkalinity, mg/L	12	10	38	12
16	Chloride, mg/L	8	8	6200	12

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## 2. PERUVAMBA

Sl no	Parameters	Kacherikadavu	Mathamangalam	Chandapura	Kandakali
	<b>Date of collection</b>	<b>22/05/2022</b>	<b>22/05/2022</b>	<b>20/05/2022</b>	<b>22/05/2022</b>
1	pH	6.84	6.63	7.1	7.00
2	Electrical Conductivity, $\mu\text{s}/\text{cm}$	63.1	68.3	926	600
3	BOD, mg/L	0.56	0.8	1.8	1.9
4	Dissolved Oxygen, mg/L	6.64	6.6	6.8	5.02
5	Total coliform, cfu/100ml	180	220	200	240
6	Fecal coliform, cfu/100ml	80	80	80	80
7	Turbidity	2.2	2	1	0.9
8	Total Hardness, mg/L	20	18	30	1400
9	Calcium Hardness, mg/L	10	14	15	800
10	Magnesium Hardness, mg/L	10	4	15	600
11	Ammonia-NO <sub>3</sub> , mg/L	BDL	BDL	BDL	BDL
12	Sulphate, mg/L	BDL	BDL	BDL	126.32
13	Phosphate, mg/L	BDL	BDL	0.1656	0.26
14	Fluoride, mg/L	BDL	BDL	0.0003	0.2
15	Total Alkalinity, mg/L	19	18	15	58
16	Chloride, mg/L	20	14	16	2230

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### 3. RAMAPURAM

Sl no	Parameters	Kappugal	Athiyadam	Ramapuram	Vayalapra
	<b>Date of collection</b>	<b>22/05/2022</b>	<b>22/05/2022</b>	<b>20/05/2022</b>	<b>22/05/2022</b>
1	pH	6.68	6.23	6.9	7.21
2	Electrical Conductivity, $\mu\text{s/cm}$	49	63	1550	2860
3	BOD, mg/L	0.53	0.4	0.97	1.9
4	Dissolved Oxygen, mg/L	6.4	6.8	4.07	6
5	Total coliform, cfu/100ml	220	400	100	380
6	Fecal coliform, cfu/100ml	80	80	40	200
7	Turbidity	0.5	0.8	1.7	1.8
9	Total Hardness, mg/L	38	36	80	840
8	Calcium Hardness, mg/L	30	16	65	400
10	Magnesium Hardness, mg/L	2	20	15	440
11	Ammonia-NO <sub>3</sub> , mg/L	BDL	BDL	0.6378	0.0324
12	Sulphate, mg/L	BDL	BDL	93.61	184.26
13	Phosphate, mg/L	BDL	BDL	0.15	BDL
14	Fluoride, mg/L	BDL	BDL	BDL	BDL
15	Total Alkalinity, mg/L	20	16	48	74
16	Chloride, mg/L	28	24	166	4000

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#### 4. Kuppam

Sl no	Parameters	Velichankeel	Mangalasserry	Kuppam bridge	Variankottam	Vellavu	Kuttyerikkadavu
	Date of collection	22/05/2022	22/05/2022	20/05/2022	22/05/2022	22/05/2022	22/05/2022
1	pH	7.72	7.84	7.2	7.62	7.28	7.46
2	Electrical Conductivity, $\mu\text{s}/\text{cm}$	2506	1140	610	820	630	318
3	BOD, mg/L	1.86	2.4	1.9	2.6	1.2	1.4
4	Dissolved Oxygen, mg/L	5.86	6.64	5	6.82	6.32	6.64
5	Total coliform, cfu/100ml	480	420	150	360	240	340
6	Faecal coliform, cfu/100ml	120	180	40	120	160	80
7	Turbidity	1.2	1.4	2.7	2	1.4	0.9
8	Total Hardness, mg/L	1820	840	42	520	540	360
10	Calcium Hardness, mg/L	820	720	20	140	220	180
9	Magnesium Hardness, mg/L	1000	120	22	380	320	180
11	Ammonia-NO <sub>3</sub> , mg/L	0.0231	0.0632	0.5812	0.0362	0.0432	0.0131
12	Sulphate, mg/L	188.40	188.36	121.78	180.26	140	86.22
13	Phosphate, mg/L	BDL	BDL	0.48	BDL	0.6213	BDL
14	Fluoride, mg/L	0.02	0.013	BDL	BDL	BDL	BDL
15	Total Alkalinity, mg/L	68	52	36	58	30	30
16	Chloride, mg/L	132	114	83	72	86	68

കേരള പരിസ്ഥിതി മന്ത്രാലയം  
 Kerala State Pollution Control Board  
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## 1.Kavvayi

Sl.no	Drain	BOD on May 2022	Remarks
1	Kotti thodu	4.8	Floating water with green colour
2	School ground thodu	No water	
3	Kalikadapuram thodu	1.4	
4	Koorikadavu	No water	Drain covered with mud
5	Ulliyathu kadavu	3.2	Plastic waste seen .blackng water
6	Kallatu kadavu	0.8	
7	Muttathu kadavu	1.8	Plastic waste seen.
8	Vadipram thodu	4.8	.Plastic waste ,decaying of wood etc are seen.

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## 2.Peruvamba

	Drain	BOD on May 2022	Remarks
1	Naranga thodu	1.8	Plastic waste was noticed
2	Perumba thodu	2.8	Water with yellowish colour
3	Valliohmthodu	3	Water with Plastic waste.
4	Panapuzha thodu	0.98	
5	Poomkottu Chal	0.9	Plastic waste seen side wise road.
6	Manjangottu Thode	1.5	
7	Kannelamthodu	1.86	
8	Appithodu	1.8	
9	Mavullapoyil thodu	1.24	Plastic waste, and side wall are not proper which is obstructing the flow of water.
10	Kollali thodu	1.2	
11	Kannada thodu	No water	
12	Koyakkotu thodu Thokadu	No water	
13	Cherottuvayal thodu	1.8	
14	Kayyil arakulam thodu Kunjimagalam puzha	2.8	
15	Tattanvayal thodu	1.1	

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### 3. Ramapuram thodu

Sl.no	Drain	BOD on May 2022	Remark
1	Kapugal thodu	1.1	
2	Chembali kundu	3	Plastic waste and flotting bottles are noticed.
3	Kulapram kundan thodu Kavilavalapu thodu	2.82	Waste from house are seen by the banks of the thodu .and plastic waste by side.
4	Aduthila thodu	No Water	
5	Ottayi thodu	3.2	
6	Moolakadavu	No Water	Dark black colour thick sludge which cannot be collected.

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#### 4.Kuppam

Sl.no	Drain	BOD on May 2022	Remarks
1	Karuvanchal	0.62	Stagnent water ,blocked because of high waste dumped.
2	Karthikapuram	0.68	
3	Near Udayagiri Bridge	0.84	
4	Mukkada Thodu	0.22	Less flow of water which cannot be fetch
5	Moonamkunnu Thodu	1.2	
6	Kuttaparamba-Neduvodu Thodu	1.1	
7	D/S of Alakode Hospital	No water	
8	Pathayachira	1.62	Turbid water present with high Plastic waste.
9	Near the houses on bank of main River ( @ Pariyaram GP)	2.86	
10	Near House Boat @ Pariyaram GP	2.24	
11	Kavinmunabu	1.1	
12	Manja Thodu	3.4	
13	Sulthan Thodu	2.82	Floating Waste are seen
14	Cheru thodu	No water.	

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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 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 Progress Report may be comprised of details along with completion timelines on:

- (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.
- (II) Status of STPs, I&D and sewerage networks Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline
- (III) Status of CETPs  
Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status
- (iv) Status of Solid Waste Management & Details of Processing Facilities  
Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline
- (v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;
- (vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic

	<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 2022**  
**RIVER MOGRAL, KASARGOD**

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



C(ii)	Haritha Karmasena Activity/ Collecting Non Bio degradable materials including Plastics from households	Mogral Puthur Grama Panchayath	On-going	On-going	Not submitted the report	Started	75%	
C(iii)	Bamboo Capital Bamboo Planting- aiming water conservation and raising water levels thus preventing solid erosion, waste dumping in public places	Mogral Puthur Grama Panchayath	On-going	Completed	Not submitted the report	Completed	100 %	NA
E	River cleaning	Mogral Puthur Grama Panchayath	2019	Completed	Not submitted the report	Completed	100 %	NA
C(iii)	Bamboo Plantation of Madhur	Madhur grama Panchayath	2019	18500 being maintained by NREGA	18500 being maintained by NREGA	18500 being maintained by NREGA	100 %	NIL
C(ii)	Viability Gap Funding for Haritha Karmasena	Madhur grama Panchayath	2019	Total Amount Rs 250000/- Expenditure RS 75000/-	Total Amount Rs 250000/- Expenditure RS 75000/-	Total Amount Rs 250000/- Expenditure RS 249965/-	25%	NIL
C(ii)	Material recovery facility centre	Madhur grama Panchayath	2019	Completed	Completed	Completed	100%	Completed

C(ii)	Construction of Plastic Shredding Machine building	Madhur grama Panchayath	2019	Completed	Completed	Completed	100 %	Completed
C(ii)	Purchase of Plastic shredding machine	Madhur grama Panchayath	2019	-----	-----	---	-	Yet to float tender
C	Tying of net on both sides of the bridge	Irrigation Department	2019-2020	DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10715/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	-	Work still under process.
A(a)	Water quality monitoring	KSPCB	Being done regularly					

Sd/-

Environmental Engineer

## National Mission for Clean Ganga

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

### **RIVER UPPALA, 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 waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p>		
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	<p>(vii)Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi)Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii)Setting up biodiversity parks on flood plains by removing encroachment</p>		
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**ACTION PLAN FOR RIVER UPPALA, KASARAGOD DISTRICT, KERALA**  
**MONTHLY PROGRESS REPORT FOR THE MONTH OF MAY 2022**  
**RIVER UPPALA, KASARGOD**

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2022	Progress in the month of April 2022	Progress in the month of May 2022	% works completed	Details of works remaining
C(ii)	Material collection facility. Operation	Mangalpady Grama Panchayath	2019	Not submitted the report	Not submitted the report	NIL	100%	Completed. Kubanoor Plant is working
C	Waste management including purchase of vehicle to collect waste.	Mangalpady Grama Panchayath/ Green Space Private company	2019- 2020	Not submitted the report	Not submitted the report	NIL	-	Approval for purchase of vehicle not sanctioned from Government.
E	Installation of camera	Mangalpady Grama Panchayath	March 2020	Not submitted the report	Not submitted the report	NIL		
C	Electrification of material collection facility	Manjeshwaram Grama Panchayat	2019-2020	Not submitted the report	Not submitted the report	Electrified	100%	Completed
C	Transportation of collected waste	Manjeshwaram Grama Panchayat	March 2020	Not submitted the report	Not submitted the report	8675kg plastic waste transported		Work yet to be completed.
E	Installation of camera	Manjeshwaram Grama Panchayat	March 2020	Not submitted the report	Not submitted the report	New Project formulated to Install 25 CC Cameras		Tendered

C	Tying of net on both sides of the bridge	Irrigation Department	2019-2020	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	DPR submitted to Chief Engineer (Price ID: 2019/10825/IA) for approval. Present status reported to Superintending Engineer, Minor Irrigation Circle, Kozhikode on 20.07.2021	--	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

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		16.05.2022	
Nature and flow of the river		Medium flow, water level increased	
Sl.No	Parameters	Unit	Mogral Bridge
1	Temperature	°C	27
2	pH	-	7.85
3	Conductivity	µmhos/cm	35900
4	Turbidity	NTU	1
5	BOD	mg/l	1
6	Dissolved Oxygen	mg/l	5.2
7	Total Coliforms	cfu/100ml	480
8	Feacal Coliforms	cfu/100ml	80
9	Feacal Streptococcus	cfu/100ml	10
10	Chlorides	mg/l	12500
11	Total Alkalinity	mg/l	96
12	Total Hardness	mg/l	5500
13	Calcium Hardness	mg/l	3500
14	Magnesium Hardness	mg/l	2000
15	Calcium	mg/l	1400
16	Magnesium	mg/l	486.0
17	Total Dissolved Solids	mg/l	21350
18	Sodium	mg/l	6470
19	Potassium	mg/l	141

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		16.05.2022	
Nature and flow of the river		Water level increased, medium flow	
Sl.No	Parameters	Unit	Puzhakkara
1	Temperature	°C	27
2	pH	-	7.22
3	Conductivity	µmhos/cm	874
4	Turbidity	NTU	3.6
5	BOD	mg/l	1.1
6	Dissolved Oxygen	mg/l	5.5
7	Total Coliforms	cfu/100ml	250
8	Feacal Coliforms	cfu/100ml	64
9	Feacal Streptococcus	cfu/100ml	10
10	Chlorides	mg/l	200
11	Total Alkalinity	mg/l	30
12	Total Hardness	mg/l	92
13	Calcium Hardness	mg/l	52
14	Magnesium Hardness	mg/l	40
15	Calcium	mg/l	20.8
16	Magnesium	mg/l	9.720
17	Total Dissolved Solids	mg/l	510
18	Sodium	mg/l	120
19	Potassium	mg/l	32

Sd/-  
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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		16.05.2022	
Nature and flow of the river		Moderate flow, water level increased	
Sl.No	Parameters	Unit	Uppala Bridge
1	Temperature	° C	27
2	pH	-	7.7
3	Conductivity	µmhos/cm	51400
4	Turbidity	NTU	1.2
5	BOD	mg/l	2.4
6	Dissolved Oxygen	mg/l	5
7	Total Coliforms	cfu/100ml	420
8	Feacal Coliforms	cfu/100ml	72
9	Feacal Streptococcus	cfu/100ml	20
10	Chlorides	mg/l	17900
11	Total Alkalinity	mg/l	97
12	Total Hardness	mg/l	7900
13	Calcium Hardness	mg/l	5000
14	Magnesium Hardness	mg/l	2900
15	Calcium	mg/l	2000
16	Magnesium	mg/l	704.7
17	Total Dissolved Solids	mg/l	30450
18	Sodium	mg/l	9250
19	Potassium	mg/l	120

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		16.05.2022	
Nature and flow of the river		Water level increased, moderate flow	
Sl.No	Parameters	Unit	Uppala River Near Bhagavathi Temple
1	Temperature	° C	27
2	pH	-	7.81
3	Conductivity	µmhos/cm	19090
4	Turbidity	NTU	1.2
5	BOD	mg/l	1.9
6	Dissolved Oxygen	mg/l	5.1
7	Total Coliforms	cfu/100ml	540
8	Feacal Coliforms	cfu/100ml	188
9	Feacal Streptococcus	cfu/100ml	30
10	Chlorides	mg/l	6200
11	Total Alkalinity	mg/l	33
12	Total Hardness	mg/l	1640
13	Calcium Hardness	mg/l	1300
14	Magnesium Hardness	mg/l	340
15	Calcium	mg/l	520
16	Magnesium	mg/l	82.6
17	Total Dissolved Solids	mg/l	11020
18	Sodium	mg/l	3500
19	Potassium	mg/l	187

Sd/-  
Assistant Scientist