

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

No.	Activity	Implementing agency	Time line	Progress in the month of January-2023	Progress in the month of February-2023	Progress in the month of March 2023	% works completed	Details of works remaining
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/up gradation of Thaliyal and Aranoor Sewerage Pump house by rehabilitation of existing well, construction of new well and grit chamber, installation of new pump Sets	Kerala Water Authority	May 2020	Arannoor	5%	5%	98%	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 nd well partly completed. b) Diesel generator – to be supplied by contractor. Work terminated at the risk and cost of the contractor. Work nearing completion. Approval to be received from Electrical Inspectorate. Based on the completion certificate forwarded to Deputy Chief Electrical Inspectorate, AE has
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								inspected the pump house and suggested some additions required on the panel board. Accordingly, panel board modification work is in progress. Probable date of completion 15.05.2023
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May 2020				100%	Work Completed on 8.8.21.
2.1.4	Installation of adequate pumps in Mudavanmughal and Enchakkal pumping stations.	Kerala Water Authority	March 2020				100%	Pump sets installation at Enchakkal and Mudavanmughal pump house completed.
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 also completed. For Arannoor and Thaliyal. Erection of diesel generator is already included in the item mentioned 2.1.2. For



								Enchakkal already exists.
2.1.6	Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchanthodu, control storm water entry into sewer to avoid overflow in Thampanoor area. Sewage generated in Rajaji Nagar shall be diverted to main sewer line. Sewage generated in Thoppil area shall be diverted main sewer line	Kerala Water Authority	Dec 2020				100%	Work completed.
2.1.7	Discharge of sewage in Parayilkadavu shall be stopped as there is overflow of sewage reaches in houses having sewerage connection and this may lead to discharge of sewage in to River Karamana.	Kerala Water Authority	Completed				100 % completed	Rehabilitation work of existing pipe line is included in the work State Plan -2019-20- Rehabilitation of sewer line from Sathya Nagar to Karamana BHS and allied works. Works Completed.
	Divert the sewer line							



2.1.8	from the School compound of Government Karamana High School	Kerala Water Authority	completed				100% completed	Work mentioned is same as the above work which is completed.
2.1.9	Rehabilitation by laying new lines increasing size of undersized main and reconstruction by dilapidated manholes for the last 3 years	Kerala Water Authority	May 2020		0%	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 Expected to be completed by 31.05.2023 for one AMRUT work
	Total works in progress/completed (76No.) Works dropped (2No.)						Dropped – 2 No. (Rs. 1.52cr.) State plan-2	Two works dropped due to not getting offers on repeated tenders and expiry of AS
2.1.10	Extension of sewer network wherever technically feasible in new areas of existing blocks	Kerala Water Authority	May 2020		0.5%	0.5%	98%	Works completed - 22 No. (Rs. 5.86 cr.) AMRUT-10, State plan-11 MLA ADF/SDF-1



	<p>In progress/Ongoing (24No.)</p>			<p>0.5%</p>				<p>In progress –2No. (Rs. 11.35 cr.) AMRUT-2(Details included in Excel sheet attached) State plan-0 Expected date of completion 10.05.23</p>
	<p>Tendering/ To be arranged (1No.) Land acquisition -1 In progress-2</p>					<p>To be arranged</p>	<p>To be arranged–1-Nos. (Rs. 7.885 cr.) Land Aquisition in progress-1Nos</p>	<p>Land acquisition processfor three work completed and land handed over to KWA and AS obtained for arranging the work under State Plan 22-23 and one work arranged and one tendered. LA for one work in initial stage.(Details shown in excel sheet attached) Direction from head office to cancel one work and recast the estimate and submit for new AS. Same has been approved in State Plan 2022-</p>



									23 and tendered. Agreement Executed.Expected date of completion 31.05.23
2.1.11	Procurement of sewer cleaning machines and equipment maintenance	of Kerala Water Authority	Mar 2020	0%	0%	0%	100%		Work completed.



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

2. Long Term Works

Sl No.	Long term measures proposed	Implementing agency	Amount Required (Rs.in Crore)	Time line	Progress in the month of February	Progress in the month of March	% works completed	Details of works remaining
3.1.1	Extension of sewerage system to Block F to G coastal belt							Consultant appointed for preparing Detailed Project Report for uncovered wards of the Thiruvananthapuram Corporation and Rehabilitation of existing system was terminated from the contract due to breach of contract by the firm vide Proceedings No. KWA/SE/SEW/EOI/REPL/338/2020-2021 of the Superintending Engineer, Sewerage Circle, Kerala Water Authority Thiruvananthapuram dated 31.05.2022 to arrange the balance work at their risk and cost. As discussed in the Chief Secretary, GoK' s meeting dated 21/06/2022 the work of Preparation of DPRs has to be done internally. Meanwhile the terminated firm M/s REPL filed a complaint against KWA in the Hon'ble High court of Kerala (WP(C) No 26031 of the year
3.1.2	Extension of sewerage system to Block H to R							
3.1.3	Extension of sewerage system to Newly added areas of corporation viz,							
3.1.4	Providing sewerage system in Block A to E							
3.1.5	Rehabilitation of existing Network and pump house in block A to E							
3.1.6	Procurement of equipments for maintenance of sewerage system							



3.1.7

Additional STP
requirementKerala Water
AuthorityThree
years

2022) and obtained a stay against KWA at first up to 22.08.22 which is then got extended up to 14.09.22 against taking any coercive actions. DPR preparation of sewerage system to the uncovered areas of TMC is now being carried out internally by KWA. The total wards were divided in to 9 clusters. Cluster 1 comprises of 5 wards - Attukal, Kalady, Kallipankulam, Ambalathara and kamaleswaram wards - The DPR for cluster 1 was submitted on 13/10/2022 for obtaining AS. Cluster 3, which was originally consisting of Thiruvallam, Poonkulam and Vellar is the second in the priority list and is taken up. This Cluster is then modified by adding more wards and is divided into 3 zones. Zone 1 of cluster 3 is consisting of Puthenpally and Part of Muttathara (until STP) is taken up on priority based on the demand of Thiruvananthapuram Corporation and submitted for AS.

The DPR of Cluster 3 Zone 2 and Zone 3 is prepared and is under scrutiny. The DPR for cluster 2 is prepared and kept in shelf of





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

Sl. No	Name of Drain	Parameters														
		pH			Electrical Conductivity(μ S/cm)			BOD(mg/l)			TC(Nos/100ml)			FC		
	Months	FEB	MAR	APR	FEB	MAR	APR	FEB	MAR	APR	FEB	MAR	APR	FEB	MAR	APR
1	Parumala Drain	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2	MannarTown Drain	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
3	Kuriyathkadavu Thodu	6.89	Nil	Nil	66.86	Nil	Nil	0.3	Nil	Nil	1900	Nil	Nil	800	Nil	Nil
4	Karuvellil Thodu	Nil	7.76	7.55	Nil	42.66	42.84	Nil	1.1	0.9	Nil	4500	3000	Nil	2000	1200
5	Nochithodu	7.01	7.37	7.4	59.84	39.61	65.98	0.7	0.9	0.3	2000	1900	2200	1100	1000	800
6	Pattaparambil Thodu	6.99	7.34	7.2	52.84	48.64	39.81	0.06	0.3	0.4	700	1500	300	300	900	0
7	Kappiyarissery Thodu	6.96	Nil	Nil	102	Nil	Nil	0.8	Nil	Nil	2600	Nil	Nil	1600	Nil	Nil
8	Kombankery Thodu	7.15	7.15	7.2	50.99	35.04	35.39	0.3	0.3	0.5	1100	2400	600	600	1300	0
9	Perackalthodu	6.98	7.26	7.23	131.7	62.85	33.04	0.4	0.06	0.3	1400	1900	1500	700	800	100
10	Erathodu	7.03	7.25	7.16	51.89	47.98	49.9	0.5	1.4	0.1	1600	1200	2000	500	700	400
11	Kolarayaru	6.98	7.25	7.2	42.97	39.03	31.17	0.06	0.5	0.5	1200	2400	500	600	1300	0

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

<i>SI NO</i>	<i>BOTTLE NO.</i>	<i>Name of Drains</i>	<i>PH</i>	<i>BOD</i>	<i>TC</i>	<i>FC</i>
1	TK1	Panayampalathodu	7.75	1.2	1700	500
2	TK2	PadathupalamThodu	7.17	3.3	1000	300
3	TK3	Thottappuzha	Nil	Nil	Nil	Nil
4	TK4	Kuttapuzha under Kattodubridge	7.35	0.1	1400	500
5	TK5	Kadavumbara	7.15	0.1	700	100
6	TK6	Drain under Varappalam Bridge	Nil	Nil	Nil	Nil
7	TK7	Drain under kallupalam Bridge	6.83	2.5	1300	500
8	TK8	Komalamthodu	7.02	0.06	2100	800
9	TK9	Vennikulam Valiyathodu	7.28	0.7	2200	1000
10	TK10	Paduthodu	7.09	0.5	2500	1200
11	TK11	Mallappally Valiyathodu	Nil	Nil	Nil	Nil

National Mission for Clean Ganga

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

RIVER PAMBA, PATHANAMTHITTA

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

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

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

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of FEB 2023	Progress in the month of MAR 2023	Progress in the month of APR 2023	% works completed	Details of works remaining
A(a)	No industries	-	-				-	-
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project	Result attached	Result attached	Result attached	100%	Nil
C(ii)	Establishment of de-centralized solid waste treatment facility	Mannar Panchayat, Panchayath	31.02.2023	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near Mannar Private Bus	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near	Construction of 2 aerobic compost units completed (One each in Grama Panchayat Office compound and near Mannar	100%	Inauguration of functioning.

				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.	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.	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		
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					Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021.	27/08/2021		
C	Establishment of Material Collection Facility	Mannar Panchayat,	31.02.2023	Second Phase of collection of non-biodegradable plastic materials is completed, segregated and transported to Clean Kerala Company(CKC). A total quantity of	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Non-	100%	Construction of permanent MCF building.

				<p>2 tonnes is transported to CKC so far. About 3 tonnes of plastic materials is kept ready for transportation. Socio-Economic Unit (SEU) has been selected as implementing agency for the construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP.</p>	<p>Karma Sena(HKS). Non-biodegradable plastic materials has bCollection, segregation and transportation of non-biodegradable plastic materials is continuing. About 9 tonnes of plastic materials</p>	<p>biodegradable plastic materials has bCollection, segregation and transportation of non-biodegradable plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready</p>		
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					handed over to Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for transportation. Socio-Economic Unit (SEU) has been selected as implementing agency for the construction of Two mini MCFs in each	for transportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.		
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					ward in all the 18 wards of Mannar GP. Plastic Waste management Bylaw (draft) has been passed by Mannar GP on 05/02/2021.			
C	Resource Recovery Facility	Mannar Panchayat, Panchayath	31.02.2023	As there is no RRF in Mavelikkara Block Panchayat in which Mannar GP belongs, nearby Chengannur Block Panchayat has agreed	As there is no RRF in Mavelikkara Block Panchayat in which Mannar GP belongs, nearby	As there is no RRF in Mavelikkara Block Panchayat in which Mannar GP belongs, nearby Chengannur	100%	

				<p>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 Vridhdhasad anam owned by GP and segregated and transported to Clen Kerala company.</p>	<p>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</p>	<p>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 Vridhdhasad anam owned by GP and segregated and transported</p>		
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					<p>Vridhdhas adanam owned by GP and segregated and transported to Clen Kerala company. Plastic Waste management Bylaw (draft) has been passed by Mannar GP on 05/02/2021.</p> <p>to Clen Kerala company. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021.</p>			
C	Installing household and community level solid waste management units	Mannar Panchayat	31.02.2023	Construction of 2 aerobic compost units	Collection, segregation and transporta	Collection of Non-biodegradable plastic	100%	Operation of Aerobic compost unit.

				<p>completed (One each in Grama Panchayat Office compound and near Mannar Private Bus Stand. Second Phase of collection of non-biodegradable plastic materials is completed, segregated and transported to Clean Kerala Company(CKC). A total quantity of 2 tonnes is transported to CKC so far. About 3 tonnes of</p>	<p>tion of non-biodegradable plastic materials is continuing . About 4.5 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for trasportati</p>	<p>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)</p>		
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				<p>plastic materials is kept ready for transportation. Socio-Economic Unit (SEU) has been selected as implementing agency for the construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP.</p>	<p>on. Socio-Economic Unit (SEU) has been selected as implementing agency for the construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP. Plastic Waste management Bylaw (draft) has been passed by Mannar GP on</p>	<p>) so far. About 500 kg of plastic materials is kept ready for transportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed. Plastic Waste management Bylaw (Final) has been passed by Mannar GP on 19/06/2021. Action Plan on solid waste</p>		
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					05/02/2021.	Management is approved by Grama Panchayat Committee on 27/08/2021.		
C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.02.2023	Second Phase of collection of non-biodegradable plastic materials is completed, segregated and transported to Clean Kerala Company(CKC). A total quantity of 2 tonnes is transported to CKC so far.	Collection, segregation and transportation of non-biodegradable plastic materials is continuing . About 4.5 tonnes of plastic materials handed over to	Collection of Non-biodegradable plastic materials from houses and institutions is conducted by Haritha Karma Sena(HKS). Collection, segregation and transportation of non-biodegradable	100%	The process has to be repeated throughout the year.

					<p>Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept ready for trasportati on.Socio-Economic Unit (SEU) has been selected as implement ing agency for the constructi on of Two mini MCFs in each ward in all the 18</p>	<p>e plastic materials is continuing. About 12 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 500 kg of plastic materials is kept ready for trasportation. Construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP is completed.</p>		
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					wards of Mannar GP.	Plastic Waste management Bylaw(final) has been passed by Mannar GP on 19/06/2021. Action Plan on solid waste Management is approved by Grama Panchayat Committee on 27/08/2021.		
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Parumala Town	Kadapra Panchayat	31.12.2020					

C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Mannar Town	Mannar Panchayat	30.09.2020	Due to the lack of space and fund, construction of small STP is not included in the annual plan of Mannar Grama Panchayat. It will be suitable if the Govt . takes necessary steps in this matter.	Due to the lack of space and fund, construction of small STP is not included in the annual plan of Mannar Grama Panchayat. It will be suitable if the Govt . takes necessary steps in this matter.	Due to the lack of space and fund, construction of small STP is not included in the annual plan of Mannar Grama Panchayat. It will be suitable if the Govt . takes necessary steps in this matter.	0%	Not applicable
C	Construction of compound wall with fencing	Irrigation department	31.03.2021					
C	Removing light jungle and muddies from river courses	Irrigation department	31.03.2021					

C	Electrical-Light arrangements and Surveillance cameras	Irrigation department	31.03.2021					
C	Regualting activites in flood plain zone, protection and management of flood plain zone	Irrigation department	31.03.2021					
	Greenery developmentPlantation plan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment	Irrigation department	31.03.2021					
C (b) (ii)	Green Protocol implementation in all Offices institution & Public function	Mannar, Panchayat	31.01.2023	Green Protocol is strictly observed in Mannar GP and other offices as well as public functions . Strict instruction in writing is given to owners of auditoriums , assembly halls, etc to comply with Green	Green Protocol is strictly observed in Mannar GP and other offices as well as public functions . Strict instruction in writing is given to owners of auditoriums , assembly halls, etc to comply with Green	Green Protocol is strictly observed in Mannar GP and other offices as well as public functions . Strict instruction in writing is given to owners of auditoriums , assembly halls, etc to comply with Green protocol while conducting ceremonies. Rs. 1,50,000/-	100%	Continuation of Green Protocol .

				<p>protocol while conducting ceremonies. Rs. 1,50,000/- has been allocated for a project for the setting up of cloth bag/paper bag unit so that use of plastic carry bags can be discouraged . Green Audit was conducted in Mannar GP Office and other 13 Government Offices within the Panchayat Area. 11 offices were certified to</p>	<p>protocol while conducting ceremonies. Rs. 1,50,000/- has been allocated for a project for the setting up of cloth bag/paper bag unit so that use of plastic carry bags can be discouraged . Green Audit was conducted in Mannar GP Office and other 13 Government Offices within the Panchayat Area. 11</p>	<p>has been allocated for a project for the setting up of cloth bag/paper bag unit so that use of plastic carry bags can be discouraged . Green Audit was conducted in Mannar GP Office and other 13 Government Offices within the Panchayat Area. 11 offices were certified to have fulfilled Green Audit parameters. Certificates were</p>		
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				have fulfilled Green Audit parameters. Certificates were awarded to the successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021.	offices were certified to have fulfilled Green Audit parameter s. Certificates were awarded to the successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021.	awarded to the successful offices and Suchitwa Padavi Declaration in Mannar GP was conducted 26/01/2021.		
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D(a)	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department	30.11.2020					
D (b)	Irrigation practices	Irrigation department	30.04.2020					
E	Awareness programmes for sections of public	Kerala State Pollution Control Board	31.05.2020	Awareness classes were conducting			100%	
C	Management of municipal, plastic, hazardous, biomedical and electrical waste	LSGD	31.03.2021	As for municipal and plastic waste, first phase door-to-door collection using Haritha Karma Sena is completed, segregated and transported to Clean Kerala Company(C	Draft by-law of Plastic Waste Handling has been passed by the Grama panchayat Committee on 05/02/2021.	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-	100%	The process is to be repeated periodically.

				<p>KC). A total quantity of 2 tonnes is transported to CKC so far. 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</p>	<p>n and transportation of non-biodegradable plastic materials is continuing. About 4.5 tonnes of plastic materials handed over to Clean Kerala Company(CKC) so far. About 3 tonnes of plastic materials is kept</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</p>		
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				<p>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>ready for transportation. Socio-Economic Unit (SEU) has been selected as implementing agency for the construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP. For the management of electrical, electronic and hazardous waste, the Grama Panchayat has reached in an agreement with Clean Kerala Company. Collection and handing</p>	<p>agency for the construction of Two mini MCFs in each ward in all the 18 wards of Mannar GP. For the management of electrical, electronic and hazardous waste, the Grama Panchayat has reached in an agreement with Clean Kerala Company. Collection and handing</p>		
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					waste, the Grama Panchayat has reached in an agreement with Clean Kerala Company. Collection and handing over of electrical, electronic and hazardous waste will start. Biomedical waste is being collected from	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).		
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					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 February 2023	Progress in the month of March 2023	Progress in the month of April 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

National Mission for Clean Ganga

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

RIVER MANIMALA, ALAPPUZHA

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

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

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

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

ACTION BY GROUND WATER DEPARTMENT

Sl. No	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Timeline	Progress in the month of February 2023	Progress in the month of March 2023	Progress in the month of April 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	31.03.2021					
2	B(ii)	Ground water recharging / rain water harvesting in Govt offices	31.03.2021					

3	NGT order in O.A no.496/2016 Identification of illegal bore wells in the catchment area.	NGT order in O.A no.496/2016 Identification of illegal bore wells in the catchment area.	31.03.2021					
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**Format for Submission of Monthly Progress Report by States/UTs
(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)**

RIVER CHITHRAPUZHA. ERNAKULAM

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

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p>	Thrippunithura Municipality	<p>2 persons identified and Fine Imposed Amount - 30,000</p> <p>Plastic Waste given to a Government Approved agency for recycling processing and Bio waste processed in Brahmapuram Plant.</p> <p>Bio Medical waste collect to IMAGE and plastic waste given to government approved agencies, bio waste processing to Brahmapuram Plant.</p>
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	<p>(vii)Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi)Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii)Setting up biodiversity parks on flood plains by removing encroachment</p>	Thrippunithura Municipality	
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**ACTION PLAN FOR RIVER CHITHRAPUZHA, KERALA
SHORT TERM MEASURES**

No. (as per Action Plan)	Activity	Implementin g agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remain ing
			(1) Drain joining Chithrapuzha (near Brahmapuram dumping yard) (Near FACT CD)						
C (ii)	Restricting seepage of leachate of plastic dumped in the dumping yard (Biomining of legacy waste is to be carried out)	Kochi Corporation	3 years			Bio mining stopped due to the outbreak of fire at Bhramapuram dumping yard.	Bio mining stopped due to the outbreak of fire at Bhramapuram dumping yard.		
Aa (iv)	Effluent monitoring from FACT	KSPCB	Periodical			Progressing	Progressing		
Aa (iv)	Periodical Monitoring	KSPCB	Periodical			Progressing	Progressing		
			(2) Drain from Cochin Refinery area						
No. (as per Action Plan)	Activity	Implementin g agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remain ing
Aa (iv)	Surveillance to restrict the dumping of wastes into the river and its branches	Vadavucode – Puthencruz Panchayat with the help	Periodical			Progressing	Progressing		

		of Police							
A(b)	Sanitation Survey	Vadavucode – Puthencruz Panchayat	3 months			Covered 5000 houses. DLTC directed to submit the detailed report on sanitation survey	Progressing		
E	Periodical Cleaning of Chithrapuzha	Irrigation Department	Twice in 3 years			New work proposal for the removal of water hyacinth has submitted again.	Work proposal for the removal of water hyacinth has submitted.	100%	
	Already implemented Effluent Treatment facility in Kochi Refinery and periodical monitoring are ongoing	KSPCB				Monitoring continuing	Monitoring continuing		
(3)Athikkayi branch (Provided temporary bund in joining section to check salinity intrusion)									
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
A(b)	Identification of major pollution causing units(Apartments, hospitals, service stations, markets and industries) in upstream	Thrikkakkara Municipality	3 months			Fine of Rs 41,240/- levied. Action taken for 9 violations . Rs 14090/- levied.	Fine of Rs 41,240/- levied. Action taken for 9 violations . Rs 14090/- levied. Collected Rs 1,17,000/- as fine in the month of April-May		

		KSPCB				Progressing	Progressing		
Aa(iv)	Surveillance to restrict the dumping of wastes into the river and its branches	Thrikkakkara Municipality with the help of Police	Periodical Monitoring			Camera installed.action initiated against violators. Fine Of Rs.41,240/levied. Action taken for 9 violations . Rs 14090/- levied	Progressing		
Aa(iv)	Periodical Monitoring	KSPCB	Periodical			Monthly monitoring progressing.	Monthly monitoring progressing		
A(b)	Sanitation Survey	Thrikkakara Municipality	6 months			Sanitation survey progressing. 76% completed			
E	Periodical Cleaning.	Irrigation Department	Once in a year			Reach I &II completed. Reach III implemented through Operation Vahini in August 2022. Estimate Submitted to CE	Estimate Submitted to CE	100%	
(4) Drain joining Chithrappuzha from CSEZ(Chittethukara)									
No. (as per Action Plan)	Activity	Implementin g agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% Works completed	Details of works remain ing
A(b)	Ensure proper functioning of	KSPCB	Periodical			New CETP started	Monitoring progressing	Monitorin	

	ETP in CSEZ					operational. Complying standards Monitoring progressing		g progressi ng	
A(b)	Sanitation Survey and periodical cleaning	Thrikkakara Municipality	6 months			Sanitation survey progressing. 76% completed	76% completed.		
Aa(iv)	Periodical Monitoring	KSPCB	Periodical			Ongoing	Ongoing		

(5) Vettuvelikkadavu (Konothupuzha joining Chithrappuzha)

No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% Works completed	Details of works remaining
A(b)	Identifying and closing of all unauthorized outlets into the stream joining the river	Thripunithura Municipality	6 months			The secretary reported the action is progressing. 15 notices issued			
A(b)	Sanitation Survey	Thripunithura Municipality	3 months			Reported to be completed.	completed.		
Aa(iv)	Periodical Monitoring	KSPCB	Periodical			Ongoing	Ongoing		
C(ii)	Surveillance to restrict the dumping of wastes into the river and its branches	Thripunithura Municipality with the help of Police	6 months			5.13Lakhs fine leveied in which 40,000/- fine imposed for violation identified through surveillance cameras .Fine of Rs.11,020/-	Rs. 1,15,000/-collected from violators		

						collected from violators.			
E	Cleaning of Konothupuzha (work Proposal already submitted by Minor Irrigation)	Irrigation Department (Minor Irrigation)	Twice in a year			Action initiated as per the directions of Hon'ble NGT OA 237/2017			
Main Stretch (Kadambrayar-Chithrappuzha Confluence point to Irumpanam)									
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
E	Periodic Cleaning	Irrigation Department	Once in a year			Estimate for the removal of water hyacinth has submitted again.	Estimate for the removal of water hyacinth has submitted again.	completed	
C(ii)	Surveillance to restrict the dumping of wastes into the river	Vadavucode - Puthercruz with the help of Police				Ongoing.	Ongoing.		
		Thripunithura Municipality with the help of Police	6 months			Squad inspection progressing. Surveillance reported to be continued. 5 lakhs fine levied	ngoing		

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

No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
E	Provide inspection bund for Chithrapuzha	Irrigation Department	3 years			Remind letter submitted to Thahasidar Kanayannur Thaluk regarding the survey		45%	Remaining work is Land survey.
A(b)	Additional STP requirement (if needed)	Thrikkakkara Municipality, Thripunithura Municipality	3 years			2 acres land identified.Proposed meeting in this regard			
	Restriction of illegal dumping of Septage in to the river	Police							
	Flood Plain Zone(Management and Protection) Preparation of	Irrigation Department	3 years			Detailed study and investigations has to			

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

ACTION BY GROUND WATER DEPARTMENT

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

National Mission for Clean Ganga

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

RIVER KADAMBRAYAR, ERNAKULAM

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

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p>		<p>Ongoing by KSPCB and Thrikkakkara Municipality</p> <p>Submitted earlier.</p> <p>Submitted earlier.</p> <p>The Kadambayar river shares the western boundary of Kunnathunadu Grama Panchayat for a stretch of approximately 6Kms. And 90% of this stretch consists of swamps, hence direct access to the river via land is ruled out. And in the remaining stretch, i.e., in and around Manakkakadvu bridge the DTPC operates a boat club with a riverside walkway and park. Any kind of possible river polluting activities by the general public in this area is monitored by the erection of CCTV camera's provided with the CSR aid of Wonderla Amusements Park. Also the police authorities are conducting routine surveillance operation so as to</p>
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	<p>(vii)Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi)Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii)Setting up biodiversity parks on flood plains by removing encroachment</p>	<p>prevent any possible illegal activities which pollutes the river. In addition to these preventive measures, there operates a Ward Monitoring Committee under the supervision of Kunnathunadu Grama Panchayat Committee which ensures the prevention of polluting activities by the local people.</p> <p>Ground Water Department:As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Mulanthuruthiand Vadavakkodu) comes under the Kadambrayarriver basin. All the blocks in the river stretch are safe with stage of groundwater extraction ranges from25.38% to 68.01%</p> <p>Ground Water Department and Irrigation Department : : Not submitted</p>
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ACTION PLAN FOR RIVER KADAMBAYAR, KERALA
SHORT TERM MEASURES

Short term plan

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

		Puthencruz Panchayat				Cleaning in previous year completed. New proposal submitted for the current year.	Cleaning in previous year completed. New proposal submitted for the current year		
2.2.3 C(ii)	Surveillance to restrict the dumping of wastes into river and its branches	Vadavucode Puthencruz Panchayat with the help of Police	2 months	.		Camera operational	Camera operational	100%	Work completed
			<u>Main Stream (Manakkadavu to Kadambayar-Chithrappuzha Confluence point)</u> <u>(Provided temporary bund (Kozhichira Bund) in Kadambayar-Chithrappuzha joining section to check salinity intrusion)</u>						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining

A(a)	Restricting seepage of leachate of plastic dumped in the dumping yard(Bio-mining of legacy waste going on)	Kochi Corporation	January 2024	.	.	Bio mining stopped due to fire at Bhramapuram dumping yard on 02.03.2023	At present notice issued on 19.05.2023 to the contractor for termination. special council will be scheduled to discuss the further action.	30%	Completion of the work of bio mining by January 2024
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A(b)	Provide proper facilities for restricting the seepage of leachate(Construction of Leachate treatment Plant: Collection tank)	Kochi Corporation	April 2022			Inception report prepared for the leachate treatment plant is currently under discussion.	. RFP initiated for the construction of of a new windrow compost plant of 150 T/ day capacity with a leachate treatment plant.The tender opening date is 29.04.2023		
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A(c)	Provide proper facilities for collecting and treating leachate (Construction of leachate treatment plant)	Kochi Corporation	April 2023			. Inception report prepared for the leachate treatment plant is currently under discussion	. RFP initiated for the construction of a new windrow compost plant of 150 T/ day capacity with a leachate treatment plant. The tender opening date is 29.04.2023	No progress	
			Action plan by Gramapanchayath						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
E	Installation of CCTV camera at Manakkakadavu	Kunnathunadu	30.09.2019			Action Completed	Action Completed	100%	-
C(ii)	Cleaning of Thodu	Vadavukad-puthenkruze	6 months			New proposal submitted for the current year	New proposal submitted for the current year	100%	-
C(ii)	Surveillance to restrict dumping of waste to the river and branches (with the help of Police)	Vadavukad-puthenkruze	2 months			Action Completed	Action Completed	100%	-
	2		4. Long term Plan						

No. (as per Action Plan)	Activity	Implementing agency	Time line		Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
4.5 C(ii)	Solid waste treatment facility at Brahmapuram (Construction of waste to energy plant)	Kochi Corporation	December 2023		<p>About 500 TPD WtE Plant is proposed by KSIDC in this land.M/s.Zonta Infratech Pvt Ltd informed that following procedures should be done before execution. Characterisation report not submitted till date. Construction agreement given for vetting.</p> <p>Matter regarding signing of Concessionaire agreement was discussed in the council held on 30-06-2022 and it was decided to request to the government to check the legal validity of signing the agreement by the secretary as the tender process was done by KSIDC.</p> <p>Meeting convened by Hon'ble Minister on 17.02.2022As per the decision the Corporation is tipping fee amount shall be obtained by increasing user fee</p>	No progress reported	Not started	

						collection from residential area and also enhancing property tax by 8%.Above decision submitted for council approval Council approval pending.			
4.6 A(b)	Restriction of illegal dumping of septage in to the river	Police	As soon as possible						
	6	8. REVISED ACTIONPLAN							
No. (as per Action Plan)	Activity	Implementin g agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works comple ted	Details of works remaining
3.1	Slaughter house and poultry waste Rendering plant	Thrikkakkara Municipality				The land identified and the land inspected by the sub-committee. The proposal submitted for council approval. Council not approved the proposal since land value is found higher than the market value. The proposal cancelled and decided to give advertisement again. New advertisement given	No further progress reported.		Action pending

3.2	Sanitation facility and treatment of waste water in the markets. Treatment plant, Portable aerobic bins	Thrikkakkara Municipality	2020-21 2021-22	.	.	The secretary informed that they have no adequate land for construction of waste management facility in market Not attend the meeting	No progress		Action pending
3.3	Provide facility for the treatment of sewage, sullage and garbage generated Proposed places for the installation of Aerobins (1) Municipal office compound (2) NGOquarters (3) KakkanadMarket Near Eechamukku TV-Centre Anganavadi	Thrikkakkara Municipality		.	.	Market construction completed. Facility for waste management not provided. DLTC issued directions to municipality not to start operation of market without providing waste management facilities. Not attend the meeting	No progress		
3.4	Providing facility for restricting discharge of waste water from the surrounding houses to the river	Thrikkakkara Municipality				Inspection and Survey reported to be Progressing. 1200 houses completed. Report of survey not submitted to DLTC. Survey conducted using smart garbage app. 55%	No progress		

						completed. Not attend the meeting			
3.5	Providing effluent treatment plant for industries No.of industries :75 no.s	Thrikkakkara Municipality				Inspection progressing	Progressing		
3.6	Identification of illegal outlets into storm water drains and fine shall be imposed on such units – 30 units	Thrikkakkara Municipality		Action initiated	Fine levied	Fine of Rs 41,240/- levied.	Inspection progressing. Collected Rs 1,17,000/- as fine in the month of April-May	Action initiated	Action pending
3.7	Biodegradable waste management Bio-Composter – 2000 No.s Thumboormuzhi aerobins - 4 No.s Portable biogas – 1500 No.s Ring compost – 500 No.s Napkin destroyer – 6 No.s Viability gap Fund	Thrikkakkara Municipality		Action initiated to issue notice to close the outlet.	No progress	Land has been identified near to NGO quarters for setting up aero bins and the proposal submitted for council approval Market construction completed. The land identified near NGO quarters found inadequate. Requested suchitwa mission to prepare DPR for the waste management in market.	No progress		

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

	consultants) To allot land, Government Procedure are ongoing					being taken due to land constraints			
5.2	Acquiring of land and rehabilitate families from the banks of River To allot land, Government Procedure are ongoing	District Collector, Thrikkakkara Municipality, Revenue Dept	5 years						Action to be initiated.
			<u>DESILTING AND DEVELOPEMENT</u>						
No. (as per Action Plan)	Activity	Implementin g agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaini ng
5.3	Development package Inspection bund for Chithrapuzhaand Kadambrayar is included in this package. For this project, preliminary	Irrigation department	3 years			1. Estimate submitted to CE (As a preliminary step Soil investigation estimate is submitted)	1. Estimate submitted to CE (As a preliminary step Soil investigation estimate is submitted) 2. A letter has submitted to Thahasildar, Kunnathunad and		

	<p>investigation of site which includes survey of land to know its availability for formation of side bund which is to be provided with tiles. The project also includes side protection work of Chitrapuzha and Kadambayar.</p> <p>Provision for handrail at the edge of the bund is given. Overall cost comes to 25 Crore. The work is being proposed urgently and will be submitted to higher authorities for financial sanction.</p>				<p>2. A letter has submitted to Thahasildar, Kunnathunad and Kanayannur Thaluk regarding demarcation.</p> <p>De-Silting and water Hayacinth removal work completed</p>	<p>Kanayannur Thaluk regarding demarcation.</p> <p>De-Silting and water Hayacinth removal work completed</p> <p>New proposal submitted for removal of water hyacinth from Kadambayar upstream ecotourism to Kozhichira bund in Ernakulam District</p>		
5.4	<p>Desilting and development</p> <p>It includes clearing and removing water hyacinth of Kadambayar, Chitrapuzha and Edachirathodu near Infopark phase II. This is to be done periodically (every four months), depending on availability of fund.</p>	Irrigation Department	1 year (periodical cleaning -4 months x3)		<p>1. Edachira thodu work, tendered for the removal of water hyacinth</p>	<p>1. Edachira thodu work, tendered for the removal of water hyacinth</p>		

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

6.1	Door-to-door collection and transportation of MSW 100% door to door collection Proposed Kerala Solid Waste Management Authority	Thrikkakkara Municipality Local bodies of Census Town		100% by 2023					
6.2	Modern Solid Waste Treatment Plant Proposed Kerala Solid Waste Management Authority	Thrikkakkara Municipality (To allot land, Government procedure are ongoing) Local bodies of Census Town		The land identified and the land inspected by the sub-committee The proposal submitted for council	Advertisement given	Advertisement given		Actions initiated to procure land.	

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

				the proposal since land value is found higher, than the market value. The proposal cancelled and decided to give advertisement again				
6.4	Common bio-medical waste treatment facility Proposed Kerala Solid	Health Department		CBWTF started at Ambalamug	Com	Completed		Completed

	Waste Management Authority			hal, operated by KEIL	p l e t e d				
6.5	Regional sanitary landfill site identification and land acquisition Establishment and operation of Regional Sanitary Landfills Proposed Kerala State Waste Management Authority.	District Collector Local bodies							
			7.OTHERASPECTS						
No. (as per Action Plan)	Activity	Implementing agency	Time line			Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
7.1	Flood plain zone management and E- flow maintaining Flood plain zone management & E-	IrrigationDept				1. Work completed in 2022 by operation vahini. 2. New proposal submitted	1. Work completed in 2022 by operation vahini.		

	<p>flow maintaining cleaning & desilting, depending on availability of fund. During summer season Irrigation Department Provides temporary bund to prevent the salt water intrusion due to tidal effects. To maintain natural flow, sluice gate is provided. During the low tide, the shutter of the sluice gate is kept open to maintain minimum flow</p>					for the removal of water hyacinth from Kadambayar	2. New proposal submitted for the removal of water hyacinth from Kadambayar		
7.2	Development of bio diversity parks in banks	Thrikkakkara Municipality	1 st Phase 2020-21 2 nd Phase 2021-22						

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

STNCode	Sampling Date	Sampling Time	StnName	TypeWaterBody	NameOf WaterBody	River Basin
2337	No Sampling		Kadambrayar At Brahmapuram	River	Kadambrayar River	
2338	01.04.2023	10:00	Kadambrayar At Manackakadavu	River	Kadambrayar River	
1573	01.04.2024	11:10	Chithrapuzha At Irumpanam	River	Chithrapuzha River	
1154	13.04.2023	12:45	Chalakyady at Pulikkakadavu	River	Chalakyady River	

Sl. No.	Parameters	Values			
		Station Code			
		2337	2338	1573	1154
1	Temperature, °C	No sampling	28	28	29
2	Dissolved Oxygen, mg/l		1.2	3.5	6.5
3	pH		6.4	7.6	8.5
4	Conductivity, µmhos/cm		105	1833	211
5	BOD, mg/l		3.4	3	2.5
6	Nitrate-N, mg/l		0	2.69	0.32
7	Turbidity, NTU		9.8	6.9	2.8
8	Total Alkalinity, as CaCO ₃		22	36	20
9	Chloride, mg/l		15	500	48
10	COD, mg/l		6.4	9.6	6.4
11	TKN, mg/l		0.12	1.25	0.86
12	Ammoniacal-N, mg/l		0.05	0.01	0.52
13	Total Hardness, as CaCO ₃ mg/l		24	173	48
14	Calcium, as CaCO ₃ mg/l		16	128	32
15	Magnesium as CaCO ₃ , mg/l		8	45	16
16	Sulphate, mg/l		4.7	27.8	0
17	Sodium, mg/l		8.86	265.3	25
18	Total Dissolved Solids, mg/l		60	1025	116
19	Total Fixed Solids, mg/l		45	800	90
20	Total Suspended Solids, mg/l		14	20	18
21	Phosphate, mg/l		0	2.95	0
22	Boron, mg/l		NA	NA	NA
23	Potassium, mg/l		0.01	9.26	0.06
24	Fluoride, mg/l		0.4	0.6	0.4
25	Total Coliform, MPN/100 ml		3400	7000	2500
26	Feacal Coliform, MPN/100 ml		1500	3100	340
27	Feacal Streptococci, MPN/100ml		430	540	14

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

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

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

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

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

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

	sewage at NAD wet lands Kalamassery			cameras installed by municipality.Rs 6000 were imposed as fine in this month. Rs 74560/- were imposed from culprits who had thrown plastic wastes near roads..	identified using the cameras installed by municipality.Rs31,760/- were imposed as fine in this month. Rs7,04,610/were imposed total fine till datefrom culprits who had thrown plastic wastes near roads.There are no plastic inspections conducted this month.		
12.A(b)	Installation of common STP for Kalamassery Municipality and ETP at Municipal Market	Kalamassery Municipality	December 2019	75 cents land identified at North Kalamassery for sewage and septagetreatment plant. Procedures for soil testing in progress. DPR is prepared by KWA. DPR procedures in progress	75 cents land identified at North Kalamassery for sewage and septagetreatment plant. Procedures for soil testing in progress. DPR is prepared by KWA. DPR procedures in progress		

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

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

19.A(a)(i) v)	Periodical inspection in the Industries, Flats, hotels for monitoring of STP,ETP located in Cochin corporation	Kochi Municipal Corporation	Periodical	An amount of Rs. 8,00,000/- were imposed as fine from culprits. Total amount of Rs. 46,02,300/- was collected as fine till date. Under OA147case,it is insrtructed to monitor the wghole stretch of the canal.16 houses and 18 establishments were identified.As a result 11 flats, 4 houses and 3 hotels were closed. Collected Rs31,00,000/ as fine from 6 hotels due to unauthorized discharge.92 new establishments are also identified where notice is issued to 16 establishments and rest of them are yet to issued.	Representative from concerned local body has not attended the meeting		
20.A(a)	Inventory of sources of pollution through a rapid study/Study for identification of pollution sources at Edappallythodu	Kochi Municipal Corporation	3 months	Survey completed by HI and JHI of KMC. Location of waste disposal in TP canals and Edappallythoduwas identified. Closing of outlet exposed to drains	Representative from concerned local body has not attended the meeting		

				of TP canals is taken as a joint work by Engineering and Health wing of KMC. Work mainly focused on four zones. They are Central zone, Edappally zone, Pacalam zone and Vytilla zone.			
21.E	Issuing notice to the defaulters	Kochi Municipal Corporation	4 months	Inspection is going on. Further actions are taken.	Representative from concerned local body has not attended the meeting		
22.A(a)(iv)	Periodical inspection in the flats, hotels, shops located along the river	Kochi Municipal Corporation	Periodical	Inspection in progress			Being carried out periodically
23.A(b)	Identification of natural drains/thodu reaching river Periyar and cleaning of weeds, grasses etc.	Irrigation department	2 years	4 polluted streams have been identified. The Estimate has been submitted for restoration works. Financial sanction was not yet received. Onjithodu soil test conducted. Streams have been included in Operation Vahini.	4 polluted streams have been identified. The Estimate has been submitted for restoration works. Financial sanction was not yet received. Onjithodu soil test conducted. Streams have been included in Operation Vahini.		Detailed estimate submitted to higher authority for FS. FS not obtained.

24.C(iii)	Clearing of weeds, grasses at the river bank in order to ensure the smooth flow of water	Irrigation department	3 years	<p>The cleaning of river tributaries and desilting is jointly implemented by Local self government department and irrigation through Operation Vahini. Once this cleaning and desilting is completed the water table will increase and which in turn reduces the pollution. Measures are being taken to ensure the natural flow of the river. Desilting work in progress. For the remaining work, request have been submitted to RRC along with the DPR. Financial sanction to be received. The DIC has informed to clear off the grasses and weeds which are obstructing the smooth flow of drains in the industrial estate. DIC has reported that they have directed Estate Manager to ensure that the units near Periyar river banks are clearing the grass in their unit premises periodically.</p>	<p>The cleaning of river tributaries and desilting is jointly implemented by Local self government department and irrigation through Operation Vahini. Once this cleaning and desilting is completed the water table will increase and which in turn reduces the pollution. Measures are being taken to ensure the natural flow of the river. Desilting work in progress. For the remaining work, request have been submitted to RRC along with the DPR. Financial</p>		
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					<p>sanction to be received. The DIC has informed to clear off the grasses and weeds which are obstructing the smooth flow of drains in the industrial estate. DIC has reported that they have directed Estate Manager to ensure that the units near Periyar river banks are clearing the grass in their unit premises periodically.</p>		
25.D(a)	Maintaining of Minimum flow in river during lean period and periodical operation of Regulators at River in-order to maintain minimum flow.	Irrigation department	3 years	Shutters are being operated periodically at the Pathalam lock cum regulator to maintain the flow of river	Shutters are being operated periodically at the Pathalam lock cum regulator to maintain the flow of river		

26.A(b)	Common Effluent Treatment Plant at Edayar Industrial Estate	Industries department	2022	<p>For the establishment of CETP a government order has come sanctioning Rs. 37.5 Crore to DIC. KWA is entrusted to implement the project. DPR for the same has been submitted. The project is under Government consideration. In the approved amount operational maintenance cost and GST was not included. In the Chief Secretary's meeting held on 23.08.2022, for the revision of CETP project proposal 3 months time has been allotted.</p>	<p>For the establishment of CETP a government order has come sanctioning Rs. 37.5 Crore to DIC. KWA is entrusted to implement the project. DPR for the same has been submitted. The project is under Government consideration. In the approved amount operational maintenance cost and GST was not included. In the Chief Secretary's meeting held on 23.08.2022, for the revision of CETP project</p>		
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					proposal 3 months time has been allotted.		
27.A(b)	Construction of internal roads and proper drainage in Edayar industrial estate	Industries department	Work progressing	For the construction of internal roads and drainage in Edayar industrial estate, Rs. 6.54 crore has been handed over to PWD. The work will be starting soon.	The construction of roads & drains in Industrial Development Area in Edayar was not yet started. A meeting was arranged with P.W.D on 23.01.2023. They have intimated that the work will be started soon.		
28.A(b)	Installation of common discharge pipe line at downstream of PathalamRegulator Bridge	Industries department, Irrigation department	3 years	It was decided to include the project of installing the common discharge pipeline in the DPR of CETP. Under this circumstance, the work comes under the responsibility of KWA.	It was decided to include the project of installing the common discharge pipeline in the DPR of CETP. Under this circumstance, the work comes under the responsibility of KWA.		

29.E	Installation of Night vision surveillance cameras at the River Bank side	KSPCB	2020	The CCTV cameras and accessories have been installed. 7 new cameras have been installed. Maintenance of two cameras in progress.	The CCTV cameras and accessories have been installed. 7 cameras have been installed. New two cameras is yet to be installed. It will be fixed soon.		
30.A(a)(iv)	Periodical Monitoring of Eloor, Edayar, Kalamassery Industrial belts	KSPCB	2020	Routine inspection is going on. Night Surveillance also carried out continuously.	Routine inspection is going on. Night Surveillance also carried out continuously.		
31.A(a)(iv)	Monitoring of quality of water at various intake point	Kerala Water Authority	2020	Status not reported	Status not reported		
32.A(a)(iv)	Installation of additional continuous online River water monitoring station	KSPCB	2022	The maintenance works of Online monitoring station in the downstream side of Pathalam Bund have been completed and is working. Online monitoring station in the upstream side has been installed. Connection work to display board in progress.	The maintenance works of Online monitoring station in the downstream side of PathalamBundh ave been completed and is working. Online monitoring station in the upstream side		

					has been installed. Connection work to display board in progress.		
33.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Kadungallur Panchayath	2020	Joint inspections were done by Heath Inspector & Asha workers	. Representative from concerned local body has not attended the meeting		
34.E	Installation of cameras at the waste dumping spots	Kadungallur Panchayath	2020	6 cameras have been installed near Onjithodu. Total Rs. 25000/- have been levied as fine.			
35.A(b)	Identification of the establishments/commercial complexes/flats/houses/hotelse tc. who is discharging the sewage to the public drain	Choornikkara Panchayath	2020	Inspection and monitoring is performed regularly to identify the offenders. Issual of notice to those offenders is also being done regularly. 4 flats have been identified and reported to KSPCB..	Soak pits are distributed to residewnts.notice regarding unauthorised discharge of effluent is forwaded to pcbkadavanthara		
36.E	Installation of cameras at the waste dumping spots	Choornikkara Panchayath	2020	12 Cameras have been already installed on waste dumping spots. One more camera installation is left. The fund for remaining camera will be arranged through sponsorship.	Representative from concerned local body has not attended the meeting		

LONG TERM MEASURES

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

				<p>a) Applied for land acquisition works for various canal, it's on processing under revenue department.</p> <p>b) As no land acquisition is needed for market canal, work of it will be carried out this year. KIIFB is the funding agency for the work. Tender process for the work is going on.</p>			
3.C(iii)	Beautification of the river stretches (Edamula stretch)	Cochin Municipal Corporation	1-2 years	Beautification work has been included in the KMRL IURWTS project. Due to the prevailing public protest, land acquisition procedure is being delayed. DPR will be prepared by Coastal Shipping Inland Navigation. The work will be commenced as soon as T.S is obtained.	Representative from concerned local body has not attended the meeting		

ACTION BY GROUND WATER DEPARTMENT

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

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

Sl. No	Parameter	Unit	05.04.2023	25.04.2023
1	Temp	°c	33.2	33.5
2	pH		7.1	6.8
3	Conductivity	µS/cm	112.70	74.37
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	22.8	29.8
6	Hardness	"	18.0	17.0
7	D.O.	"	3.5	3.6
8	Calcium	"	5.2	4.8
9	Magnesium	"	1.215	1.215
10	Ammoniacal Nitrogen	"	0.419	0.140
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	36.0	38.0
13	BOD	"	2.3	1.7
14	Sulphate	"	2.484	3.758
15	Nitrates	"	BDL	BDL
16	TC	cfu/100ml	2400.0	2000.0
17	FC	"	600.0	400.0
18	FS	"	NIL	NIL

* TURBIDITY METER IS OUT OF ORDER

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

Sl. No	Parameter	Unit	05.04.2023	25.04.2023
1	Temp	°c	33.1	33.9
2	pH		7.0	6.9
3	Conductivity	µS/cm	65.87	334.90
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	18.9	25.8
6	Hardness	"	16.0	16.0
7	D.O.	"	5.1	3.9
8	Calcium	"	4.0	3.2
9	Magnesium	"	1.458	1.944
10	Ammoniacal Nitrogen	"	0.318	0.011
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	40.0	22.0
13	BOD	"	1.6	1.7
14	Sulphate	"	1.847	2.611
15	Nitrates	"	BDL	BDL
16	TC	cfu/100ml	1200.0	1700.0
17	FC	"	300.0	300.0
18	FS	"	NIL	NIL

* TURBIDITY METER IS OUT OF ORDER

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

Sl. No	Parameter	Unit	05.04.2023	25.04.2023
1	Temp	°c	33.4	B
2	pH		7.1	U
3	Conductivity	µS/cm	250.30	N
4	Turbidity	NTU	*	D
5	Chlorides	mg/L	58.6	
6	Hardness	"	37.0	O
7	D.O.	"	6.2	P
8	Calcium	"	9.6	E
9	Magnesium	"	3.159	N
10	Ammoniacal Nitrogen	"	0.525	
11	Phosphate	"	BDL	
12	Total alkalinity	"	50.0	
13	BOD	"	2.6	
14	Sulphate	"	5.032	
15	Nitrates	"	BDL	
16	TC	cfu/100ml	700.0	
17	FC	"	100.0	
18	FS	"	NIL	

* TURBIDITY METER IS OUT OF ORDER

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

Sl. No	Parameter	Unit	05.04.2023	25.04.2023
1	Temp	°c	33.2	33.8
2	pH		7.7	6.7
3	Conductivity	µS/cm	224.30	80.49
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	49.6	22.8
6	Hardness	"	33.0	15.0
7	D.O.	"	6.2	4.1
8	Calcium	"	9.6	4.4
9	Magnesium	"	2.187	0.972
10	Ammoniacal Nitrogen	"	0.664	0.022
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	48.0	30.0
13	BOD	"	2.1	1.4
14	Sulphate	"	4.140	1.847
15	Nitrates	"	BDL	BDL
16	TC	cfu/100ml	500.0	600.0
17	FC	"	NIL	NIL
18	FS	"	NIL	NIL

* TURBIDITY METER IS OUT OF ORDER

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

ANALYSIS REPORT OF RIVER PERIYAR - APRIL 2023

Sampling point: VETTUKADAVU

Sl. No	Parameter	Unit	05.04.2023	25.04.2023
1	Temp	°c	33.1	33.7
2	pH		8.1	8.0
3	Conductivity	µS/cm	17320.00	5912.00
4	Turbidity	NTU	*	*
5	Chlorides	mg/L	5659.4	3375.8
6	Hardness	"	2300.0	900.0
7	D.O.	"	8.5	2.9
8	Calcium	"	760.0	200.0
9	Magnesium	"	97.200	97.200
10	Ammoniacal Nitrogen	"	1.535	0.798
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	102.0	50.0
13	BOD	"	4.4	1.3
14	Sulphate	"	101.700	50.250
15	Nitrates	"	BDL	BDL
16	TC	cfu/100ml	400.0	900.0
17	FC	"	NIL	200.0
18	FS	"	NIL	NIL

* TURBIDITY METER IS OUT OF ORDER

National Mission for Clean Ganga

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

RIVER KARUVANNUR, THRISSUR

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

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

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of february2023	Progress in the month Of March 2023	Progress in the month of April 2023	% works complete d	Details of works remainin g
Thirukuzhy thodu								
A(a)(iv)	Surveillance to restrict dumping of wastes into river and its branches	Vallachira Panchayat with the help of Police		-	-	-		
E	Cleaning and desilting of canal	Irrigation Department and Vallachira Panchayat	4months				10 0	nil
Thodu near Kadalassery bridge								
A(b)	Identification of pollution sources and surveillance to restrict dumping of wastes	Vallachira, Pudukad & Nenmanikkara Panchayats	1 month	Ongoing	Ongoing	Ongoing	10 0	0
E	Cleaning and desilting	Irrigation Department and Vallachira Panchayat	4months	nil	nil	nil	10 0	0

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

		Department		<p>പ്രകാരം 9.5 ലക്ഷം രൂപയ്ക്ക് 2702-01-800-86-00-00-00-P-V എന്ന ഹെഡിൽ ഭരണാനുമതി ലഭിച്ചിട്ടുണ്ട്. പ്രസ്തുത തോട് വല്ലച്ചിറ പഞ്ചായത്തിന്റെ അധീനതയിൽ ആയതിനാൽ പ്രവൃത്തിക്ക് സാങ്കേതികാനുമതി നൽകുന്നതിന് പഞ്ചായത്തിന്റെ resolution ആവശ്യമാണ്. പ്രസ്തുത resolution ലഭ്യമാകുന്നതിനായി പഞ്ചായത്ത് സെക്രട്ടറിക്ക് കത്ത് സമർപ്പിച്ചിട്ടുണ്ട്</p>				
Main Stream –along Karuvannur								
A(a)(iv)	Periodic Surveillance to restrict the dumping of waste into river and imposing Fine	Irinjalakkuda Municipality, Police Dept.		Presently no such dumping of waste. Square inspection ongoing well including night squad	Presently no such dumping of waste. Squad inspection ongoing well including night squad.	Presently no such dumping of waste. Squad inspection ongoing well including night squad.		
A(b)	Sanitation Survey	Irinjalakkuda Municipality	3 Months	100% Completed	100% Completed	100% Completed		
A(b)	Closing of all un authorized outlets leading to the river	Irinjalakkuda Municipality		Inspection is going on. There is no 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 unauthorize d outlets in the drain leading to the river.	There is no unauthoriz ed outlets in the drain leading to the river	There is no unauthoriz ed outlets in the drain leading to the river.		
E	Boards to display slogans against littering waste in various Places other IEC Activities Like posters, notices and classes	Irinjalakkuda Municipality	6 months	Installed boards along Karuvannur river side against littering waste and animal bath. Board installation process is going on in various places of municipal area. We used tp conduct surveys, distributed	Installed boards along Karuvannur river side against littering waste and animal bath. Board installation process is going on in various places of municipal area. We used tp conduct	Installed boards along Karuvannur river side against littering waste and animal bath. Board installation process is going on in various places of municipal area. We used tp conduct surveys, distributed		

				notices to all the houses near to the riverside.	surveys, distributed notices to all the houses near to the riverside.	notices to all the houses near to the riverside.		
Monitoring								
A(a)(iv)	River water quality monitoring	KSPCB	Ongoing; monthly frequency	Monitoring is going on November monthly basis	Monitoring is going on December monthly basis	Monitoring is going on monthly basis		
A(b)	Inspection & effluent quality monitoring of the Flats, industrial units, service stations, hospitals,hotels etc	KSPCB	Ongoing	Going on November monthly basis.	Going on December monthly basis.	Going on monthly basis		
Long Term Plan								
A(b)	Sewage treatment facilities to all house holds	Vallachira Grama Panachayat	1 yr	Nil	Nil	nil	100	0
A(b)	Construction of FSTP and STP	Irinjalakkuda Municipality	2 years	Constructio n of STP plant at General Hospital, Irinjalakuda	Constructi on of STP plant at General Hospital, Irinjalakud	Constructio n of STP plant at General Hospital, Irinjalakuda		

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

		Department		2022-23 സാമ്പത്തിക വർഷത്തെ പ്രയോജിറ്റി ലിസ്റ്റിൽ ഉൾപ്പെടുത്തി ചീഫ് എഞ്ചിനീയർ, ജലസേചനവും ദണ്ഡനവും തിരുവനന്തപുരത്തിന് സമർപ്പിച്ചിട്ടുണ്ട്.				
E	Installation of CCTV for Surveillance to prevent the dumping of waste in to the river	Irinjalakkuda Municipality	2 years	Police Department installed CCTV and currently functioning Near Karuvannur Bridge	Police Department installed CCTV and currently functioning Near Karuvannur Bridge	Police Department installed CCTV and currently functioning Near Karuvannur Bridge		

ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of February 2023	Progress in the month of March 2023	Progress in the month of April 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.		

2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground water quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.		
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices		Awareness class on groundwater resource conservation and management conducted for the elected representatives officials, public and students in Vellangallur Block	-	-	-

ACTION PLAN BY GRAMPANCHAYATH

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of February 2023	Progress in the month of March 2023	Progress in the month of April 2023	% works completed	Details of works remaining
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C	MANALIPUZHA RIVER PROTECTION -Jalaraksha Jeevaraksha - Manalipuzha conservation	Vallachira Grama Panchayath	1 year	Nil	Nil	Nil	1000m	500m
C	Setting up of Nursery for Bamboo seedlings in Kadalassery	MGNREGS	31.03.2020	TS SAN CTIONED, BUT NOT PUBL IC PLAC E	TS SANCTI ONED, BUT NOT PUBLIC PLACE	nil	25	75
C	Side protection of Manalippuzha with organic materials available locally	MGNREGS	31.03.2020	Nil	Nil	nil	25	75
C	Side Protection of Manalippuzha with Bamboo plants	MGNREGS	31.03.2020	Nil	Nil	nil	100	0
C	Deepening & Protecting Muttikkal Thodu by Spreading Geo Textiles	MGNREGS	31.03.2020	600 m	600 m	nil	100	0
C	Cluster 2-Kurumaly puzha sub river bed -Project document preparation	Puthukkad Panchayath	1 year	Docu ment ation com plete d	Docume ntation complet ed		100	Docu ment ation compl eted

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

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

KARUVANUR

Date of sampling

03.04.2023

SL. NO	PARAMETER	UNIT	KT	MRK	KND	MDK	THR	KRV
1	PH		7.91	7.83	7.75	7.35	7.59	7.3
2	EC	µ/cm	57.8	61.3	86	108	56.95	64.81
3	BOD	mg/L	2.91	0.906	0.906	1.22	0.266	1.06
4	DO	mg/L	5.89	4.74	4.56	4.16	4.26	4.58
5	COD	mg/L	28	4	4	8	12	4
6	TC	CFU/100 ml	700	200	200	100	100	600
7	FC	CFU/100 ml	100	50	100	50	50	200
8	FSC	CFU/100 ml	NIL	NIL	NIL	NIL	NIL	NIL

KT - KANAKKAN KADAVU, KARUVANNUR

MRK - NEEROLI THODU

KND - KANATHODU, KARUVANNUR

MDK - MUTTIKKAL DAM, KARUVANNUR

THR- THIRUKUZH, KARUVANNUR

KRV - PAINKILIKAYAL THODU, KARUVANNUR

National Mission for Clean Ganga

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

RIVER KECHERY, THRISSUR

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

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

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

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

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

						മതി ക്കാ യി ജലം സമ നവും ഭരണ വും ചിപ് എ ത്തിന ിയർ ക്ക് അയ ച്ചിട്ടു . കൂടാ തെ ടി പ്രവൃ ത്തി “Res tori ng poll uted stre tche s of river s base		
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						<p>d on NGT Ord ers” എന്ന ശീർ ഷക ത്തി ൽ ഉൾ പ്പെ ത്തി യ കാ ർ യ്ക്കു മുൻ ഗണ നാ ലി സ് സ ക ൽ കു ടി 17 - 0 2- 20 23 ന് ഇ ന്ദ ര ജ യ് ൻ ദ യ് മി നി സ് സ ഷ ൻ ചീ ഫ് എ</p>		
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						ബിന റയർ ക്ക് സമർ പ്പിച്ചി ട്ടു്.		
A (b)	Common STP	Wadakkanchery Municipality, Kerala Infrastructure Investment Fund Board	March 2022	Topographical survey completed . Site identified and report submitted before Hon. District Collector for getting land	Topogr aphical survey comple ted . Site identifi ed and report submitt ed before Hon. District Collect or for getting land.			Site for one STP identified. Applied for NOC from District Collector (Land is Puzha Puramboke and Irrigation Department Canal Puramboke)
C(iii)	Windrow composting at Kumbalangad yard	Wadakkanchery Municipality	March 2022	Construction of windrow compost plant work completed and	Construction of windrow compost plant work completed		90% work comple ted	Construction of windrow compost plant work completed and trial run

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

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

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

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

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

E	Digital mapping and seminar on pollution control	Forestry College, Vellanikkara	31/05/2020		completed			
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IRRIGATION DEPARTMENT

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

ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of February 2023	Progress in the month of March 2023	Progress in the month of April 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.		
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground water quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Water level data collected from GWD observation wells	Water level data collected from GWD observation wells	Water level data collected from GWD observation wells		
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of February 2023	Progress in the month of March 2023	Progress in the month of April 2023	% works completed	Details of works remaining
C	Punarjani Kecherri river	Choondal Grama Panchayat	Completed					Flood Wastes from the river has been removed and made water flow easily which reduced chances of flood .
C(ii)	Surveying of river side, eviction and planting trees	Choondal Grama Panchayat						Survey completed
C	Side Protection	Choondal Grama Panchayat	Completed					
C	Bio fencing related to river bank protection –	MGNRES	Not started					

	water and soil Conservation project ward 3,4,7							
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KECHERI RIVER				
Date of sampling -04.04.2023				
SL. NO	PARAMETER	UNIT	VAD1	VAD2
1	pH	-	8.13	8.34
2	Electrical Conductivity	µs/cm	140.2	116
3	BOD	mg/L	1.33	1.7
4	DO	mg/L	4.32	5.86
5	COD	mg/L	12	32
6	TC	CFU/100ml	500	250
7	F C	CFU/100ml	200	100
8	FSC	CFU/100ml	NIL	NIL
VAD1 - WADAKKANCHERY PUZHA (WADAKKANCHERY BRIDGE), KECHERY				
VAD2 - WADAKKANCHERY PUZHA(CHALIPPADAM ROAD), KECHERY				

National Mission for Clean Ganga

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

RIVER PUZHAKKAL, THRISSUR

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation	30.04.2023	In progress
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	30.04.2023	In progress
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		STP completed initial PCB NOC obtained.
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none">• Specifying accountability of nodal authorities not below the Secretary level• Chief Secretaries may have an accountable person attached in their office for this purpose		1. 360 KLD Sewage Treatment Plant for General Hospital, Thrissur Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated 01/01/2018 for Rs. 3.52Cr. TS accorded for Rs. 3.52Cr from the technical committee constituted for AMRUT sewerage projects. Work has

			<p>been awarded to M/s Green Eco Water Systems, Hyderabad. Agreement executed on 14/10/2020. Consent to establish obtained from PCB on 17/12/2020. Even after conducting several meetings with the contractor, contractor has not started the work. Hon.Council dated 29.01.2022 decided to terminate the</p> <p>contract under risk and cost of the contractor and also to black list the contractor. It has been also decided by the council to invite limited tender from accredited agencies as per rules. Now the schedule of rate changed from approved estimate. Corporation council dated 31.08.2022 approved the recasted estimate amounting to Rs. 4.50 cr. Revised AS obtained for Rs. 4.5 cr. vide GO(Rt) No. 3222/22/LSGD dtd:</p>
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			<p>27.12.2022. Revised technical sanction obtained for Rs. 4.50 Cr. on 18.12.2022 open technology tender invited on 21.12.2022. Agreement executed on 28.03.2023 with M/s Green Method. Work in progress.</p> <p>100KLD Septage Treatment Plant at Ramavarmapuram,Thrissur</p> <p>Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated 01/01/2018 for Rs. 3.50Cr.TS accorded for Rs. 3.10 Cr from the technical committee constituted for AMRUT sewerage projects. Selection memo has been issued to M/s Green Eco Water Systems, Hyderabad. Hon. Council has decided to get the consent to establish from PCB first and then to proceed for further steps of executing agreement. Consent to establish obtained from PCB on 28/05/2021.Contractors has not executed the agreement even after</p>
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			<p>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</p> <p>to black list the contractor. It has been also decided by the council to invite limited tender from accredited agencies as per rules. Now the schedule of rate changed from approved estimate. Revised technical sanction for the recast estimate amounting to Rs. 3.5 Cr. obtained on 18.12.2022. Open technology tender invited on 21.12.2022. Single tender received and hence retendered. Single tender received again, quotation invited. 3 bids received, technical bid evaluation is in progress.</p>
	<ul style="list-style-type: none"> Monitoring at State level must take place 		NA
6	Progress report may be furnished by the State/UTs to		

	<ul style="list-style-type: none">• Secretary, Ministry of Jal Shakti• Member Secretary, CPCB		
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6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic</p>		
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	<p>waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of flood plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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**ACTION PLAN FOR RIVER PUZHAKKAL, KERALA
SHORT TERM MEASURES**

No. (as per Action Plan)	Activity	Implementin g agency	Time line	Progress in the month of February 2023	Progress in the month of March 2023	Progress in the month of April 2023	% works completed	Details of works remaining
A(b)	Identification of illegal outlets into the Panchikkal thodu and subsidiary drains	Thrissur Corporation	3 months			0	87%	
A(b)	Stoppage of discharge of waste water from the surrounding houses and institutions to the drains which leads to Panchikkal thodu	Thrissur Corporation	6 months	15	12	8	89.9 %	0
A(b)	Ensure adequate treatment facility is provided for waste water and solid waste generated from Sri Dharma Sastha temple situated on the banks of the river	Adat Grama Panchayat						Instr uctio n has been provi de to temp le auth oriti es for

								cons struction of waste disposal facilities in accordance with swm 2016
E	Desilting of Karakattuchal near Green field to Puzhakkal (Green field)	Irrigation Department	4 months	ടി പ്രവൃത്തിക്കായി 10 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് പ്രൈസ് 3 യിൽ തയ്യാറാക്കി പ്രദാനം	ടി പ്രവൃത്തിയ്ക്കായി 10.00 ലക്ഷം രൂപയുടെ എസ്റ്റിമേറ്റ് ജുഡicial ല 3.0 ൽ തയ്യാറാക്കി	Tendering stage for financial year 2023-24	0	

			<p>സാമ്പത്തികാനുമതി ലഭിക്കുന്നതിനായി സുപ്രീം ഏഞ്ചിനിയർ, മൈനർ ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ ഏറണാകുളത്തിനും, സുപ്രീം ഏഞ്ചിനിയർ, ഇറിഗേഷൻ സെൻട്രൽ സർക്കിൾ, തൃശ്ശൂരിനും സമർപ്പിച്ചിട്ടുണ്ട്.</p>	<p>15/09/2022 ന് ചീഫ് എഞ്ചിനിയർ, ജലസേചനവും ഭരണവും തിരുവനന്തപുരത്തിന് സാമ്പത്തികാനുമതിയ്ക്കായി സമർപ്പിച്ചിട്ടുണ്ട്.</p>			
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				പ്രവൃത്തി നടപ്പിലാക്കുന്നതിന് ഫണ്ട് ലഭ്യമായിട്ടില്ല.				
E	Desilting of Panchikkal thodu	Irrigation Department	4 months	Work completed	Work completed	Work completed	100	
E	Desilting of Kurinjikkal thuruth	Irrigation Department	4 months		Estimate submitted for fund			
E	Desilting of Muppuzha(Cleaning and deepening of feeder canal from railway bridge near Vanchikulam to diversion of Karanchira and Enamakkal feeder canal near Nedupuzhakadavu)	Irrigation Department	4 months	Work completed	100% work completed	100% work completed	100	

E	Side protection, desilting and deepening work of vanchikulam thodu at Poothole of length about 40 km (work in progress).	Thrissur Corporation	3 months	550 meter side protection wall completed. 642 meter protection wall proposed and work in progress.	660 meter side protection wall completed. 460 meter protection wall proposed and work in progress.	995 meter side protection wall completed. 25 meter protection wall proposed and work in progress. 130 Nos. Works are proposed and work not started.		
E	Annual desilting, cleaning of main drains and canals within the corporation area (work in progress).	Thrissur Corporation	3 months	195 Nos. Works are proposed for thodu	195 Nos. Works are proposed for	190 Nos. Works are proposed in 23-24 annual plan and projects are		

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

A(b)	Construction of a drain 40 km with covering slabs to avoid the direct disposal of waste in to the open drain	Thrissur Corporation	24 months	35.05 KM of drain work and 5.80 KM of covering slabs completed and More works proposed under annual plan and 48 numbers of work completed.	35.30 KM of drain work and 5.85 KM of covering slabs completed and More works proposed under annual plan 2022-23 and 46 numbers of work completed	38.5 KM of drain work and 7.10 KM of covering slabs completed and More works proposed under annual plan 2023-24.		
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A(b)	Construction of a drain 9000 m with covering slabs to avoid the direct disposal of waste in to the open drain	Thrissur Corporation	24 months	35.30 KM of drain work and 5.85 KM of covering slabs completed and More works proposed under annual	37.10 KM of drain work and 6.70 KM of covering slabs completed and More works proposed under annual plan 2022-23.	38.5 KM of drain work and 7.10 KM of covering slabs completed and More works proposed under annual plan 2023-24.		

				al plan 2022 -23 and 46 num bers of work com plete d				
A(b)	Construction of sewage treatment plant of 100 KLD and 360 KLD at Ramavarmapuram and District Hospital, Thrissur in Amrut Project	Thrissur Corporation	24 months			1) 100KLD Septage Treatment Plant at Ramavarmapuram, Thrissur Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated 01/01/2018 for Rs. 3.5Cr.TS accorded for Rs. 3.10 Cr from the technical committee constituted for AMRUT sewerage projects. Selection memo has been issued to M/s		

						<p>Green Eco Water Systems, Hyderabad. Hon. Council has decided to get the consent to establish from PCB first and then to proceed for further steps of executing agreement. Consent to establish obtained from PCB on 28/05/2021. Contractor has not executed the agreement even after issuing several notices in this regard. Hon. Council dated 29.01.2022 decided to terminate the contract under risk and cost of the contractor and also to black list the contractor. It has been also decided by the council to invite limited tender from accredited agencies as per rules. Now the schedule of rate changed from approved estimate. Revised technical sanction for the recast</p>
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					<p>estimate amounting to Rs. 3.5 Cr. obtained on 18.12.2022. Open technology tender invited on 21.12.2022. Single tender received and hence retendered. Single tender received again, quotation invited. 3 bids received, technical bid evaluation is in progress.</p> <p>2. 360 KLD Sewage Treatment Plant for General Hospital, Thrissur</p> <p>Administrative Sanction has been accorded for this project vide GO (Rt) No. 5/2018/LSGD dated</p>
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						<p>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. 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</p>
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						<p>estimate. Corporation Council dtd. 31.08.2022 approved the recasted estimate amounting to Rs. 4.50 cr. Revised AS obtained for Rs. 4.5 cr. vide GO(Rt) No. 3222/22/LSGD dtd: 27.12.2022. Revised technical sanction obtained for Rs. 4.50 Cr. on 18.12.2022 open technology tender invited on 21.12.2022. Agreement executed on 28.03.2023 with M/s Green Method. Work in progress.</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	Project cancelled in AMR UT-1 and prop				2.50 MLD MLD : Corporation on Council decided to cancel the project in

				osed in AMR UT 2.0				AMRUT -1 and proposed the same in AMRUT 2.0. vid Council resolution 78-A1 dtd. 08.12.202 2. 26 th SLTC of AMRUT-1 held on 20.12.202 2 and 24.12.202 2 approved the same and recomme nded to SHPSC. 32 nd SHPSC dated 23.01.202
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								Honble Mayor has sent letter on 28.04.2023 to Agricultural Officer for producing proof for inclusion of the proposed land in RAMSAR site. Reminder letter sent on 08.05.2023.
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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 February 2023	Progress in the month of March 2023	Progress in the month of April 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.	According to the latest GEC report there is no critical / over exploited blocks in Thrissur Dt.		
2	B(ii)	Ground water recharging / rain water harvesting	Proposal for two artificial recharge schemes(dug well recharge) submitted for technical sanction. Two artificial recharge schemes tendered.	Three sites selected for the implementation of artificial recharge schemes.	Village Pond Kolazhy GP selected for rejuvenation		
3	B(iii)	Periodic ground water quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.	Water level data collected from GWD observation wells.		
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

ACTION PLAN BY GRAMAPANCHAYATH

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

PUZHAKKAL						
Date of sampling – 04.04.2023						
SL. NO	PARAMETER	UNIT	SBA	KTH	PTU	MP
1	PH			8.02	8.07	8.02

2	EC	µs/cm		449.6	465.2	134.4
3	BOD	mg/L		0.89	2.29	0.69
4	DO	mg/L		5.12	4.8	4.56
5	COD	mg/L		12	12	4
6	TC	CFU/100ml		NIL	200	300
7	F C	CFU/100ml		NIL	100	200
8	FSC	CFU/100ml		NIL	NIL	NIL
<p>SBA - NEAR SOBHA CITY, KIZHAKKUMMURI ROAD , PUZHAKKAL(Sample could not collected because there is no sufficient water)</p> <p>KTH - KURINJAKKAL THODU, PUZHAKKAL</p> <p>PTU - PANCHIKKAL THODU, PUZHAKKAL</p> <p>MP - MUPPUZHA, PUZHAKAL</p>						

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

Nhangatiri Temple (U/S of NWMP-2)

Station Name		RIVER BHARATHAPUZHA AT PATTAMBI (NWMP-2)									
Type of Water body		RIVER									
Completed by		DO, PALAKKAD									
Agency		Kerala State Pollution Control Board									
1	Station Code	2	3	3	2						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	4/4/2023									
		1	1	:	2	0					
3	Weather	Cloudy			Clear ✓			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm ✓			>100 cm		Flood	
5	Color & Intensity	Clear ✓			Turbid			Green		Brown	
		1 = Light			2 = Moderate ✓			3 = High			
6	Odour	None ✓			Fishy			H ₂ S		Other	
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease		Water Hyacinth	
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓			
9	Human activities around the station	Cattle wading			Tourism spot			Fishing	Bathing ✓		Other
10	Location details	U/s of town or industrial area ✓			D/s of town or industrial area			Pilgrim center/Bathing Ghat/Water intake		None	
11	Flow rate	10.8m ³ /s									
12	Major polluting source	Industrial effluent			MSW	PW	None ✓		Other		
13	Uses of water in downstream	Irrigation			Drinking water source ✓			Fishing		Domestic	
		Organized water source			Cultivation			Bathing Ghat		Others	

Sl.No	Determinants	Values
1	Temperature, 0C	31
2	Dissolved Oxygen, mg/l	6.8
3	pH	7.07
4	Conductivity, μmhos/cm	233.7
5	BOD, mg/l	2.66
6	Nitrate-N, mg/l	0.3
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	75
10	Chloride, mg/l	27.98
11	COD, mg/l	7.98
12	TKN, mg/l	0.008
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	85
15	Calcium as CaCO ₃ , mg/l	58
16	Magnesium as CaCO ₃ , mg/l	27
17	Sulphate, mg/l	5.4621
18	Calcium (Ca ²⁺), mg/l	23.2
19	Magnesium (Mg ²⁺), mg/l	6.5
20	Sodium, mg/l	15.91
21	Total Dissolved Solids, mg/l	145
22	Total Fixed Solids, mg/l	91.35
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.1792
25	Boron, mg/l	BDL
26	Potassium, mg/l	2.81
27	Fluoride, mg/l	0.209
28	Total Coliform, MPN/100 ml	600
29	Fecal Coliform, MPN/100 ml	300
30	Fecal Streptococcus, MPN/100 ml	60
31	% SODIUM	28.07
32	SAR	0.75

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

Veliampallu regulator (D/S of NWMP-2)													
Station Name		BHARATHAPUZHA AT PATTAMBI											
Type of Water body		RIVER											
Completed by		DO, PALAKKAD											
Agency		Kerala State Pollution Control Board											
1	Station Code	2	3	3	2								
2	Date and time of sample taken (DD/MM/YY, HH/MM)	4/4/2023											
3	Weather	Cloudy			Clear ✓			Windy			Raining		
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm ✓			Flood		
5	Color & Intensity	Clear ✓			Turbid			Green			Brown		
		1 = Light			2 = Moderate ✓			3 = High					
6	Odour	None ✓			Fishy			H ₂ S			Other		
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease			Water Hyacinth		
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓					
9	Human activities around the station	Cattle wading			Tourism spot			Fishing		Bathing ✓		Other	
10	Location details	U/s of town or industrial area			D/s of town or industrial area ✓			Pilgrim center/Bathing Ghat/Water intake			None		
11	Flow rate	220.8 m ³ /s											
12	Major polluting source	Industrial effluent			MSW		PW		None ✓		Other		
13	Uses of water in downstream	Irrigation			Drinking water source ✓				Fishing		Domestic		
		Organized water source			Cultivation		Bathing Ghat		Others				

Sl.No	Determinants	Values
1	Temperature, 0C	31
2	Dissolved Oxygen, mg/l	6.53
3	pH	7.17
4	Conductivity, µmhos/cm	262
5	BOD, mg/l	2.06
6	Nitrate-N, mg/l	0.3
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	88
10	Chloride, mg/l	27.98
11	COD, mg/l	6.18
12	TKN, mg/l	0.006
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	95
15	Calcium as CaCO ₃ , mg/l	60
16	Magnesium as CaCO ₃ , mg/l	35
17	Sulphate, mg/l	8.3173
18	Calcium (Ca ²⁺), mg/l	24
19	Magnesium (Mg ²⁺), mg/l	8.5
20	Sodium, mg/l	18
21	Total Dissolved Solids, mg/l	167
22	Total Fixed Solids, mg/l	108.55
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.128
25	Boron, mg/l	BDL
26	Potassium, mg/l	3
27	Fluoride, mg/l	0.178
28	Total Coliform, MPN/100 ml	200

**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 – APRIL 2023

S. No	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation	March 2021	Field Survey was completed and the location was identified for STP. Kerala Water Authority is preparing a DPR for sewerage network and STP for Pattambi Municipality.
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	Not proposed	Not Applicable
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	March 2021 (Primary STP and Septage Treatment Plant proposed, not STP)	Kerala Water Authority is preparing a DPR for sewerage network and STP.
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none"> • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose 	Applicable at State level	Not Applicable
	<ul style="list-style-type: none"> • Monitoring at State level must take place 	Applicable at State level	Not Applicable
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"> • Secretary, Ministry of Jal Shakti • Member Secretary, CPCB 	Applicable at State level	Not Applicable

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv)<u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p>	<p>Primary STP (oil and grease trap with grit chamber)- March 2021</p> <p>Not Proposed</p> <p>Not proposed</p> <p>MSW treatment Plant – March 2021</p> <p>March 2021</p> <p>Implemented by January 2020</p> <p>No specific proposal</p>	<p>Kerala Water Authority is preparing a DPR for sewerage network and STP.</p> <p>Not Applicable</p> <p>Not Applicable</p> <p>Implemented</p> <p>Water quality monitoring of polluted river stretch and two additional points were completed until JANUARY 2022. Results are complying with outdoor bathing standards.</p> <p>Management of dry wastes were achieved through the MCF and RCF facilities, BMW by CBWTFD, E-Waste by authorised collection agencies.</p> <p>Not Applicable</p>
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<p>(viii) Adopting good irrigation practices</p>	<p>No specific proposal</p>	<p>Not Applicable</p>
<p>(ix) Protection and management of food plain Zones (FPZ)</p>	<p>March 2021</p>	<p>A more comprehensive DPR by Irrigation Department and submitted for approval of State Government</p>
<p>(x) Rain water harvesting</p>	<p>No specific proposal</p>	<p>Not Applicable</p>
<p>(xi) Maintaining minimum Environmental flow of river</p>	<p>March 2021</p>	<p>A more comprehensive DPR by Irrigation Department and submitted for approval of State Government</p>
<p>(xii) Plantation on both sides of the river</p>	<p>No specific proposal</p>	<p>Not applicable</p>
<p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>	<p>No specific proposal</p>	<p>Not applicable</p>

ACTION PLAN FOR RIVER BHARATHAPUZHA, KERALA

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

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

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

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

Cheerakuzhi (U/S of NWMP-6)

Station Name	RIVER BHAVANI AT ELACHIVAZHI												
Type of Water body	RIVER												
Completed by	DO, PALAKKAD												
Agency	Kerala State Pollution Control Board												
1	Station Code	1	2	0	8								
2	Date and time of sample taken (DD/MM/YY, HH/MM)	4/7/2023											
		0	1	:	3	0							
3	Weather	Cloudy			Clear ✓			Windy			Raining		
4	Approximate depth of main stream	< 50 cm			50 – 100 cm ✓			> 100 cm			Flood		
5	Color & Intensity	Clear ✓			Turbid			Green			Brown		
		1 = Light ✓			2 = Moderate			3 = High					
6	Odour	None ✓			Fishy			H ₂ S			Other		
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease			Water Hyacinth		
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓					
9	Human activities around the station	Cattle wading ✓			Tourism spot			Fishing		Bathing ✓		Other	
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing		None ✓			
11	Flow rate	05.86 m ³ /s											
12	Major polluting source	Industrial effluent			MSW		PW		None ✓		Other		
13	Uses of water in downstream	Irrigation ✓			Drinking water source ✓			Fishing		Domestic ✓			
		Organized water source			Cultivation		Bathing Ghat		Others				

Sl.No	Determinants	Values
1	Temperature, 0C	30
2	Dissolved Oxygen, mg/l	6.73
3	pH	7.06
4	Conductivity, μmhos/cm	165
5	BOD, mg/l	1.35
6	Nitrate-N, mg/l	0.4479
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	64
10	Chloride, mg/l	13.99
11	COD, mg/l	4.05
12	TKN, mg/l	0.002
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	71
15	Calcium as CaCO ₃ , mg/l	55
16	Magnesium as CaCO ₃ , mg/l	16
17	Sulphate, mg/l	1.6138
18	Calcium (Ca ²⁺), mg/l	22
19	Magnesium (Mg ²⁺), mg/l	3.8
20	Sodium, mg/l	8
21	Total Dissolved Solids, mg/l	100
22	Total Fixed Solids, mg/l	63
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	BDL
25	Boron, mg/l	BDL
26	Potassium, mg/l	1
27	Fluoride, mg/l	0.162
28	Total Coliform, MPN/100 ml	300
29	Fecal Coliform, MPN/100 ml	200
30	Fecal Streptococcus, MPN/100 ml	20
31	% SODIUM	19.39
32	SAR	0.41

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

Chalayur Uru (U/S of NWMP-6)

Station Name		RIVER BHAVANI AT ELACHIVAZHI									
Type of Water body		RIVER									
Completed by		DO, PALAKKAD									
Agency		Kerala State Pollution Control Board									
1	Station Code	1	2	0	8						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	4/7/2023									
3	Weather	Cloudy			Clear ✓			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm ✓			>100 cm		Flood	
5	Color & Intensity	Clear ✓			Turbid			Green		Brown	
		1 = Light ✓			2 = Moderate			3 = High			
6	Odour	None ✓			Fishy			H ₂ S		Other	
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease		Water Hyacinth	
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓			
9	Human activities around the station	Cattle wading ✓			Tourism spot			Fishing	Bathing ✓		Other
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing		None ✓	
11	Flow rate	7.14m ³ /s									
12	Major polluting source	Industrial effluent			MSW	PW	None ✓		Other		
13	Uses of water in downstream	Irrigation ✓			Drinking water source ✓			Fishing	Domestic ✓		
		Organized water source			Cultivation	Bathing Ghat		Others			

Sl.No	Determinants	Values
1	Temperature, 0C	30
2	Dissolved Oxygen, mg/l	6.66
3	pH	7.16
4	Conductivity, μmhos/cm	197.3
5	BOD, mg/l	1.33
6	Nitrate-N, mg/l	0.5518
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	85
10	Chloride, mg/l	11.99
11	COD, mg/l	3.99
12	TKN, mg/l	BDL
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	90
15	Calcium as CaCO ₃ , mg/l	65
16	Magnesium as CaCO ₃ , mg/l	27
17	Sulphate, mg/l	2.2345
18	Calcium (Ca ²⁺), mg/l	26
19	Magnesium (Mg ²⁺), mg/l	6.56
20	Sodium, mg/l	7
21	Total Dissolved Solids, mg/l	110
22	Total Fixed Solids, mg/l	75.9
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.0128
25	Boron, mg/l	BDL
26	Potassium, mg/l	1
27	Fluoride, mg/l	0.198
28	Total Coliform, MPN/100 ml	400
29	Fecal Coliform, MPN/100 ml	200
30	Fecal Streptococcus, MPN/100 ml	40
31	% SODIUM	14.02
32	SAR	0.32

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

Karathur (D/S of NWMP-6)

Station Name		RIVER BHAVANI AT ELACHIVAZHI									
Type of Water body		RIVER									
Completed by		DO, PALAKKAD									
Agency		Kerala State Pollution Control Board									
1	Station Code	1	2	0	8						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	4/7/2023									
		0	2	:	0	0					
3	Weather	Cloudy			Clear <input checked="" type="checkbox"/>			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm <input checked="" type="checkbox"/>		Flood	
5	Color & Intensity	Clear <input checked="" type="checkbox"/>			Turbid			Green		Brown	
		1 = Light <input checked="" type="checkbox"/>			2 = Moderate			3 = High			
6	Odour	None <input checked="" type="checkbox"/>			Fishy			H ₂ S		Other	
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease		Water Hyacinth	
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None <input checked="" type="checkbox"/>			
9	Human activities around the station	Cattle wading <input checked="" type="checkbox"/>			Tourism spot			Fishing	Bathing <input checked="" type="checkbox"/>		Other
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing		None <input checked="" type="checkbox"/>	
11	Flow rate	16.32 m ³ /s									
12	Major polluting source	Industrial effluent			MSW	PW	None <input checked="" type="checkbox"/>		Other		
13	Uses of water in downstream	Irrigation <input checked="" type="checkbox"/>			Drinking water source <input checked="" type="checkbox"/>			Fishing <input checked="" type="checkbox"/>	Domestic <input checked="" type="checkbox"/>		
		Organized water source			Cultivation		Bathing Ghat		Others		

Sl.No	Determinants	Values
1	Temperature, 0C	30
2	Dissolved Oxygen, mg/l	6.66
3	pH	7.22
4	Conductivity, μmhos/cm	240.9
5	BOD, mg/l	1.36
6	Nitrate-N, mg/l	0.45
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, mg/l	BDL
9	Total Alkalinity, mg/l	99
10	Chloride, mg/l	18.99
11	COD, mg/l	4.08
12	TKN, mg/l	0.003
13	Ammoniacal-N, mg/l	BDL
14	Hardness as CaCO ₃ , mg/l	112
15	Calcium as CaCO ₃ , mg/l	69
16	Magnesium as CaCO ₃ , mg/l	43
17	Sulphate, mg/l	3.8
18	Calcium (Ca ²⁺), mg/l	27.6
19	Magnesium (Mg ²⁺), mg/l	10.4
20	Sodium, mg/l	8
21	Total Dissolved Solids, mg/l	140
22	Total Fixed Solids, mg/l	91
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.352
25	Boron, mg/l	BDL
26	Potassium, mg/l	2
27	Fluoride, mg/l	0.189
28	Total Coliform, MPN/100 ml	Absent
29	Fecal Coliform, MPN/100 ml	Absent
30	Fecal Streptococcus, MPN/100 ml	Absent
31	% SODIUM	13.18
32	SAR	0.33

Station Name		RIVER BHAVANI AT ELACHIVAZHI									
Type of Water body		RIVER									
Completed by		DO, PALAKKAD									
Agency		Kerala State Pollution Control Board									
1	Station Code	1	2	0	8						
2	Date and time of sample taken (DD/MM/YY, HH/MM)	4/7/2023									
3	Weather	Cloudy			Clear ✓			Windy		Raining	
4	Approximate depth of main stream	< 50 cm			50 – 100 cm			>100 cm ✓		Flood	
5	Color & Intensity	Clear ✓			Turbid			Green		Brown	
		1 = Light ✓			2 = Moderate			3 = High			
6	Odour	None ✓			Fishy			H ₂ S		Other	
7	Floating Matter	Floating Algae			Floating sludge			Oil & Grease		Water Hyacinth	
8	Visible effluent discharges in proximity	Industrial			Municipal sewage			None ✓			
9	Human activities around the station	Cattle wading ✓			Tourism spot			Fishing	Bathing	Other	
10	Location details	U/s of town or			D/s of town or			Pilgrim center/Bathing		None ✓	
11	Flow rate	10.85m ³ /s									
12	Major polluting source	Industrial effluent			MSW	PW	None ✓		Other		
13	Uses of water in downstream	Irrigation ✓			Drinking water source ✓			Fishing	Domestic		
		Organized water source			Cultivation	Bathing Ghat		Others			

Sl.No	Determinant	Value
1	Temperature, °C	30
2	Dissolved Oxygen, mg/l	7.4
3	pH	8.06
4	Conductivity, µmhos/cm	238
5	BOD, mg/l	1.33
6	Nitrate-N, mg/l	0.3
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	104
10	Chloride, mg/l	17.99
11	COD, mg/l	4
12	TKN, mg/l	0.003
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	105
15	Calcium, as CaCO ₃ mg/l	60
16	Magnesium as CaCO ₃ , mg/l	45
17	Sulphate, mg/l	1.95
18	Calcium (Ca ²⁺), mg/l	24
19	Magnesium (mg ²⁺), mg/l	10.9
20	Sodium, mg/l	10
21	Total Dissolved Solids, mg/l	140
22	Total Fixed Solids, mg/l	79.8
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.0192
25	Boron, mg/l	BDL
26	Potassium, mg/l	2
27	Fluoride, mg/l	0.21
28	Total Coliform, MPN/100 ml	300
29	Fecal Coliform, MPN/100 ml	100
30	Fecal streptococci, MPN/100 ml	20
31	% Sodium	16.81
32	SAR	0.42

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

RIVER BHAVANI, PALAKKAD- MAY 2023

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation	March 2020. Target achieved	Action plan completed. Septic tank systems are adopted for entire sewage treatment
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	Not proposed	Not Applicable
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	STP not Proposed	Septic tank systems are adopted for entire sewage treatment
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none"> • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose 	Applicable at State level	Not Applicable
	<ul style="list-style-type: none"> • Monitoring at State level must take place 	Applicable at State level	Not Applicable
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none"> • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB 	Applicable at State level	Not Applicable

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p>	<p>Drains contributing pollution to the River were not identified</p> <p>Not Proposed</p> <p>Not proposed</p> <p>Dec 2020</p>	<p>Not Applicable</p> <p>Not Applicable</p> <p>Not Applicable</p> <p>Dry waste- Implemented. Material Collection Facility and 80% of work completed for MSW treatment plant. Wet waste- 100% Managed at source level</p>
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<p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p>	<p>March 2021</p>	<p>Water quality monitoring of polluted river stretch and three additional points were completed until JANUARY 2022</p>
<p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p>	<p>Implemented by January 2020</p>	<p>Not applicable</p>
<p>(vii) Ground water regulation</p>	<p>No specific proposal</p>	<p>Not applicable</p>
<p>(viii) Adopting good irrigation practices</p>	<p>No specific proposal</p>	<p>Not applicable</p>
<p>(ix) Protection and management of food plain Zones (FPZ)</p>	<p>March 2021</p>	<p>A more comprehensive DPR prepared and submitted for approval by Irrigation Department -Check dams at Bhoothivazhi, Anakkal and Chemmanur are proposed in the DPR.</p>
<p>(x) Rain water harvesting</p>	<p>No specific proposal</p>	<p>Not applicable</p>

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

ACTION PLAN FOR RIVER BHAVANI, KERALA

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

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

				completed			
D	Construction of Check dams at the identified locations	Irrigation department	2020 - 21	Checkdam at Boothivazhy, Anakkal&Chemmannura are proposed in the DPR	Checkdam at Boothivazhy, Anakkal&Chemmanur are proposed in the DPR	75%	25 %
D	Issues relating to Eflow, maintaining minimum environmental flow of river(by having watershed management provisions)	Irrigation department	2020 - 21	DPR prepared for comprehensive solution	DPR prepared for comprehensive solution	Implementation not started	Full implementation remaining
E	Information Education and Communication (IEC)	Pudur Grama Panchayath	2019 -20	Awareness programs conducted	Implemented	Implemented	Implemented
A(a)	Monitoring of river water quality by sampling	KSPCB	2019 -20	Water quality monitoring in Bhavani at Elachivazhi and three additional points were completed until April2023	Water quality monitoring in Bhavani at Elachivazhi and three additional points were completed untilMay 2023	Implemented. Will continue up to the full implementation of the action plan.	Implemented.

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

RIVER KADALUNDI, MALAPPURAM

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

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p>		<p>Last updated report submitted was on April 20 ,2023</p> <p>(I) Identified 3 drains on 10/12/2018 at the hajiyyar pally stretch. Already Screen Net installed to both side of the bridge and periodic inspection & drainage of cleaning doing.</p> <p>(ii) Malappuram municipality – 30 KLD. Consent application is submitted for the revamping activities, now the application has been returned for clarification . Action plan prepared through KWA</p> <p>(iii) NIL</p> <p>(iv) Activities progressing with decentralised source level treatment method and 2506 devices are distributed. New Project approved for 6000 Ring compost unit. Project Approved .Got T.S.E. Tender.</p> <p>(v) Attached Analysis Report for the month of April 2023. More activities are progressing under the “ Thelineer Ozhukum Navakeralam “scheme</p> <p>(vi) Actions being initiated to prevent illegal waste dumping. Bio-Medical Waste collecting through IMAGE</p>
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<p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices,</p> <p>(ix) Protection and management of food plain Zones (FPZ),</p> <p>(x) Rain water harvesting,</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		<p>.Municipality has one MRF and 3 MCF's. Dry Waste Collecting through HKS and stored in these facilities from where recyclable materials are handed over to authorised recyclers and rejects, to KEIL through Clean Kerala Company.</p> <p>(vii) NA</p> <p>(viii) Complying</p> <p>(ix) NA</p> <p>(x) Complying</p> <p>(xi) Complying</p> <p>(xii) NA</p> <p>(xiii) NA</p>
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1.6	The discharge of waste water from the surrounding houses to the Valiyathodu - Blocking of discharge of liquid waste	Malappuram Municipality	completed	completed	completed	completed	completed	completed
1.7	Identification of illegal outlets into storm water drains and fine imposed on such units.	Malappuram Municipality	ongoing	completed	completed	completed	completed	completed
1.8	Biodegradable waste Bio gas plants- 186 Bio bins – 908 Bucket compost – 1445 Tumburmuzhi Aerobic bins - 4 Submitted proposal for 8000 ring compost systems	Malappuram Municipality	In progress	In progress	In progress	In progress	completed	Completed
1.9	Non biodegradable waste MCF & Plastic shredding and Bailing Echo Kiosk	Malappuram Municipality	Completed March 2020	Completed In progress	Completed In progress	Completed 40 mini MCF project submitted to DPC	Completed DPR on progressing	Completed Waiting for approval

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

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

2.2	River water quality Monitoring - Thirurangadi, Kooriyad, Manikut, Hajiyarpally, Anakkayam, Oravambrum - State Water monitoring programme (SWMP)	KSPCB	Ongoing; Seasonal - Pre - monsoon, monsoon, post - monsoon	100%				
2.3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc. in Malappuram Municipal area	KSPCB	Ongoing; Interval; Red – 1 month, Orange- 3 months, Green- 6 months	100%				
3.GROUND WATER DEPARTMENT								
No.	Activity	Implementing agency	Time line	Progress in the month of February 2023	Progress in the month of march 2023	Progress in the month of April 2023	% works completed	Details of works remaining
3.1.	Ground Water resources and regulation of	Ground water Department		<i>No action included in the approved plan to</i>	<i>No action included in the approved action plan to</i>	<i>No action included in the approved</i>		

	<p>ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier status : As per Groundwater resources of Kerala, 2017 estimate a total number of 3 blocks (Mankada, Vengara and Malappuram) comes under the Kadalundi river basin. Out of three blocks Malappuram and Vengara are semi-critical blocks and the rest is a safe one, stage of groundwater extraction ranges from 69.43 % to 79.84%)</p>			<p><i>performed by Ground Water Department</i></p>	<p><i>be performed by Ground Water Department</i></p>	<p><i>action plan to be performed by Ground Water Department</i></p>		
3.2	<p>Ground water recharging / rain water harvesting</p>	<p>Ground water Department</p>		<p><i>No action included in the approved action plan to be performed by</i></p>				

	(Earlier status : The average pre monsoon groundwater level ranges from 7.59mbgl - 13.57 mbgl. Groundwater Department has implemented 3 no of roof top rain water recharging through recharge pit schemes in Vengarablock.)			<i>Ground Water Department</i>				
3.3	<p>Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or handpumps</p> <p>(Earlier status : Groundwater Department has 6 observation dug wells and 14 bore wells in the river stretch. (report attached) (Map No: 7 attached))</p>	Ground water Department		<i>No action included in the approved action plan to be performed by Ground Water Department</i>				
3.4	For regulating use of ground water for irrigation purpose,	Ground water Department		<i>No action included in the approved action plan to be performed by Ground Water Department</i>				

adopting good irrigation practices (Earlier status : The total irrigation draft in the area ranges from 979.683 - 1857.49 ha.m.)							
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**Format for Submission of Monthly Progress Report by States/UTs
(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)**

RIVER TIRUR, MALAPPURAM

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

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <ul style="list-style-type: none"> (i) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment. (ii) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infra structure, Gap Analysis, Proposed along with completion timeline 	<p>Last updated report submitted was on April 20, 2023</p> <ul style="list-style-type: none"> (i) Identified 17 drains out of which 9 were additionally identified on 11.07.2019 (ii) <u>Tirur Fish Market STP</u>– 45 KLD- Not working condition. . Accordingly conducted site inspection by Board on 19.10.2022 to evaluate progress, No progress found. Since about 3 years repeated directions are being issued for time bound renovation of fish market STP. (ii) <u>Tirur municipal Bus Stand STP</u>-50 KLD –Present status- All equipments are installed and three phase electrical connection obtained. Sewer line work and road work under progressing. Trial run will be conducted May 15 of this month iii) NIL (iv) De centralised treatment facilities, Disposal using sanitary landfills, composting operations, MRF, MCF etc. Slaughter house- completed civil work. Electrical installation works started.
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<p>(iii) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices,</p> <p>(ix) Protection and management of food plain Zones (FPZ),</p>		<p>(v) Attached as Annexure II-Analysis report during the month of April 2023</p> <p>(vi) Actions are being initiated to prevent illegal waste dumping. BMW are being disposed scientifically through IMAGE. Municipality have MRF, MCF facilities</p> <p>(vii) NA</p> <p>(viii) Complying</p> <p>(ix) NA</p> <p>(x) Complying</p> <p>(xi) Complying</p> <p>(xii) NA</p> <p>(xiii) Reported that encroachment survey is completed and now the process of laying survey stones is in</p>
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	<ul style="list-style-type: none">(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		progress.
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ACTION PLAN FOR RIVER TIRUR, KERALA

1. IRRIGATION DEPARTMENT								
1.								
No.	Activity	Implementing agency	Time line	Progress during month of February 2023	Progress during month of march 2023	Progress during month of April 2023	% works completed	Details of works remaining
1.1. 1	Strengthening the right side bund of Tirur- Ponnani Puzha at Porur, ward no. 1 Tirur Municipality	Irrigation Department	6 Months		AS Accorded.	TS Accorded. Work Tendered	In progress	
1.1. 2	Cleaning and development of old Ponnani Thodu at Thazhepalam	Irrigation Department	6 Months			Nil		
1.1. 3	Repair and Rehabilitation of Koottayi Regulator cum Bridge across Tirur Ponnani Puzha in Mangalam Grama Panchayath in Malappuram Dist	Irrigation Department	18 Months	Civil work 0% and mechanical works 10%	Civil work 5% Mechanical works 90%	Investigation work on going	8%	Ring bund formation, Bailing out of water, Apron Extension, Cut off wall formation.

	2.TIRUR MUNICIPALITY							
No.	Activity	Implementing agency	Time line	Progress during month of February 2023	Progress during month of march 2023	Progress during month of April2023	% works completed	Details of works remaining
2.1	Provide septic tank for nearest houses	Tirur Municipality	Dec 2019	completed	completed	completed	100	NIL
2.2	Establishment of Solid waste Treatment Plant Thumboor Muzhi Model Aerobic Bin	Tirur Municipality	March 2020	completed	completed	completed	100	NIL
2.3	Establishment of Non Degradable waste treatment Plant, Resource Recovery facility, Plastic Shredding Unit Segregation shed	Tirur Municipality	March 2020	completed	completed	Completed	100	NIL
2.4	Slaughter House	Tirur Municipality	December 2020	Civil work and mechanical work on going	Electrification work on going	In progress	90%	In progress
2.5	Fencing on Bridgeside	Tirur Municipality	December 2020	completed	completed	completed	100	NIL

	Thalakkadathur Bridge							
2.6	Installation of CCTV Camera near the river Bank Thalakkadathur Bridge	Tirur Municipality	May 2020	Completed	completed	completed	100	NIL
2.7	Planting of Bamboo seedlings on the river bank (Thazhepalam)	Tirur Municipality	June 2020	Completed	completed	completed	100	NIL
2.8	Renovation of Effluent treatment plant at fish Market. AMC Granted ETP with Aerobic System	Tirur Municipality	June 2019	Technical sanction has not been received from suchitwa mission	No progress. As State suchitwa mission does not give sanction for new DPR of the STP plant. Hence join meeting is proposed for preparing the technical report of the status of existing STP units with IRTC members.	No progress.	No progress	(See minutes)
2.9	Setting up of STP at Private Bus stand	Tirur Municipality	June 2020	In progress. Trail run will be conducted 31 th of this month	In progress. Trial run will be conducted on May 15 of this month.	In progress	99.9%	In progress (See minutes)

2.10	Setting up of a new drain after demolishing the old one. The old one was the hub of the waste water outlet of the shops and other establishments. The proposed drain is constructing in the middle of the road so as to avoid intrusion of pipes from outside	Tirur Municipality	June 2020	Completed	Completed	Completed	100	Completed	
2.11	Identification of illegal outlets in to storm water drain sand fine shall be imposed on such units	Tirur Municipality					Fine imposing mechanism going on	NIL	
3.KERALA STATE POLLUTION CONTROL BOARD									
No.	Activity	Implementing agency	Time line	Progress in the month February of 2023	Progress in the month of march 2023	Progress in the month of April 2023	% works completed	Details of works remaining	
3.1	River water quality Monitoring- Thalakadathur National Water Quality	KSPCB	Ongoing; Monthly frequency				Ongoing monthly frequency		

	Programme(NWMP)					
3.2	River water quality Monitoring State Water monitoring programme (SWMP)	KSPCB	Ongoing; Seasonal			Ongoing seasonal
3.3	Inspection and effluent quality monitoring of the flats, Industrial units, Service stations, hospitals, auditorium, hotels in Municipal area		Ongoing; Interval; Red - 1 months			Ongoing

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

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

		Kozhikode					completed	Landscaping work remainig as per estimate
4.5	Fencing on bridge side Thalakkadathur	Cheriyamundam Grama Panchayath	March 2020	complete d	completed	completed	100	NIL

5.GROUND WATER DEPARTMENT

No.	Activity	Implementing agency	Time line	Progress in the month of February 2023	Progress in the month of March2023	Progress in the month o April 2023	% works completed	Details of works remaining
5.1.	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier status: As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Tirur and Kuttippuram) comes under the Tirur river basin. These two blocks are semi-critical blocks and the stage of groundwater extraction ranges from 77.75 % to 77.92%)	Ground water Department Therefore, to regulate ground water resources in this area, no permission is granted for packaged drinking water industries or any other water induced industries	NA	No permits issued	No permits issued	No permits issued NO ACTION INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NA	NA
5.2	Ground water recharging / rain water harvesting (Earlier status: The average pre -monsoon groundwater level ranges from 6.14mbgl - 8.49 mbgl.)	NA	NA		NO ACTION INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NO ACTION INCLUDE UNDER THIS PLAN BY GROUND WATER	NA	NA

						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 INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NO ACTION INCLUDE UNDER THIS PLAN BY GROUND WATER DEPARTMENT	NA	NA

6.REVENUE DEPARTMENT

No	Activity	Implementing agency	Timeline	Progress February 2023	Progress march 2023	Progress April2023	% works completed	Details of works remaining
6.1	Survey of boundaries of river side	Revenue department		Completed	Completed	Completed	100%	Encroachment survey completed.

National Mission for Clean Ganga

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

RIVER KALLAYI, KOZHIKODE

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

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p>		
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	<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 KALLAYI, KERALA

Kozhikode Corporation								
No.	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
1	Identification of illegal outlets into storm water drain and issue Notice to such units	Kozhikode Corporation	30.12.2020					
2	Waste to energy project proposed at Njeliyamparamba	KSIDC	30.06.2021					
3	Establishment of Aerobic compost units 24 units established in 6 sites	Kozhikode Corporation	Completed and functioning					
4	Segregation of solid waste at source level and treatment of house hold wastes 300 ring compost and 150 biogas plant installed	Kozhikode Corporation	30.06.2019					
5	Setting up of rendering treatment plant for chicken stall wastes Installed in Thamarassery panchayath.	Fresh cut agency	on trial run					

	Now waste is collected from 170 units							
6	Implementation of Green protocol unit	Kozhikode Corporation	30.06.19					
7	Setting up of common STP of(13 MLD) 7.1 At Kothi bridge- 6 MLD plant proposed 7.2 At Avikkal -7 MLD plant proposed	Kozhikode Corporation	31.03.2020					
8	Cleaning of Canoli canal	Kozhikode Corporation	20.07.2019					
9	Purchasing of Solar Boat for Canoli canal cleaning	Kozhikode Corporation	31.03.2020					
10	Installation of CCTV Camera for the Identification and monitoring of illegal activities	Kozhikode Corporation	31.03.2020					
11	Establishment of Mobile Septage Units	Kozhikode Corporation	31.03.2020					
12	Action taken against dumping of wastes into river and public places	Kozhikode Corporation	Continuing					
13	Cleaning of B.K canal	Kozhikode Corporation	31.03.2020					
14	Establishment of treatment plant at Medical college (3 MLDplant)	Kozhikode Corporation	31.03.2020					

	Tender over 14.1 -2 MLD plant proposed 14.2- 1 MLD plant proposed							
15	Construction of drains at Y.M.RC Ayyankar colony	Kozhikode Corporation	31.03.2020					
16	Implementation of STP at Kottooli (13.5 MLD)	Kozhikode Corporation						
17	Treatment facility for waste water in Central market	Kozhikode Corporation						
18	Establishment of comfort stations	Kozhikode Corporation						
19	Provide facility for MRF,RRF, Super MRF 3 units existing 19.1 Njeliyanparamb 19.2 Industrial estate 19.3 Meyor bhavanjayanthinagar colony	Suchitwa Mission	Project in progress					
20	Identification of illegal outlets from house to storm water drain and issue Notice to such Houses	Kozhikode Corporation						
21	Establishment of Plastic shredding unit	Kozhikode Corporation	Project started					
22	Establishment of slaughtering unit	Kozhikode Corporation						

23	Cleaning of drains in Kozhikode Town	Kozhikode Corporation	Ongoing					
Irrigation Department								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
1	Desilting of Kallayi river from Kaduppini to Kothi in Kozhikode Corporation	Irrigation department	31.03.21					
2	Provide fencing on the sides of the Bridge	Irrigation department	31.03.21					
3	Dredging, Desilting & removal of weeds from E K Canal (11.2 km)	Irrigation department	31.07.19					
4	Bio Park in Kozhikode District	Irrigation department						

5	Flood Prone Mapping in Kozhikode District	Irrigation department						
Kerala State Pollution Control Board								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
1	River water quality monitoring- Kallayi river National Water Quality Monitoring Programme (NWMP)	KSPCB	Ongoing; monthly frequency					
2	River water quality monitoring- Kallayi rivers State Water Monitoring Programme, KSPCB fund (SWMP)	KSPCB	Ongoing. Seasonal monitoring- pre-monsoon, monsoon,					

			post- monsoon					
3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc . in Malappuram Municipal area	KSPCB	Ongoing Interval: Red– 1month. Orange – 3 months. Green – 6 months.					
	SuchitwaMission							
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining

1	Board displaying messages against dumping to be placed in river banks	Suchitwa Mission	15.07.19					
Action Plan by Ground Water Department								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May 2023	% works completed	Details of works remaining
B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier status: As per Groundwater resources of Kerala, 2017 estimate ,Kozhikkode Block comes under the Kallai river basin and the block is safe with stage of groundwater extraction							

	68.49%)							
B(ii)	<p>Ground water recharging / rain water harvesting</p> <p>(Earlier status : The average pre-monsoon groundwater level is 7.23mbgl. Groundwater Department has implemented 3 no of dug well recharge schemes at Kozhikkode block)</p>							
B(iii)	<p>Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps</p> <p>(Earlier status - Groundwater Department has 1 observation piezometer (BW)in the river stretch.)</p>							
B(iv)	<p>For regulating use of ground water for irrigation purpose, adopting good irrigation practices</p> <p>(Earlier status - The total irrigation draft in the block area is 488.76 ha.m.)</p>							

Action plan by irrigation Department

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
E	Dredging and desilting	Irrigation Dept	3 years					
E	E-flow (by micro water shed management)	Irrigation Dept	3 years					
E	Flood plain zone (protection and management)	Irrigation Dept	3 years					
E	Greenery development (plant in trees on thebanks)	Irrigation Dept	3 years					

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 KUTTIYADI, KOZHIKODE

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

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p>		
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	<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 KUTTIYADI, KERALA

Kuttyadi Grama Panchayath								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
D	Geo textiles at river bed	MGNREGS	31.03.2018					
E	Haritha sahayastapana agreement	Kuttyadi Grama Panchayath	31.03.2020					
C(ii)	Removal of Non bio degradable waste	Kuttyadi Grama Panchayath	31.03.2020					
C(ii)	Clean green kuttyadi	Kuttyadi Grama Panchayath	31.03.2020					
A(b)	Community toilet	Suchitwa mission	31.03.2020					
C(ii)	MRF	Block panchayath	31.03.2020					

C(ii)	MCF	Kuttyadi Grama Panchayath	31.03.2019					
A(b)	Sanitary latrine	Kuttyadi Grama Panchayath	31.03.2019					
B(ii)	Well recharging	MGNREG	31.03.2019					
E	Camera surveillance	Kuttyadi Grama Panchayath	completed					
E	Rejuvenation of Kuttyadi Puzha	MGNREGS	31.03.2020					
C(ii)	Disposal of non degradable bio waste	Kuttyadi Grama Panchayath	31.03.2020					
E	Clean Village	Kuttyadi Grama Panchayath	31.03.2020					
C(ii)	MRF	Block Panchayat	31.03.2020					
C(ii)	MCF	Kuttyadi Grama Panchayath	31.03.2020					
C(ii)	Retrofitting	Kuttyadi Grama	31.03.2020					

		Panchayath						
Changaroth Grama Panchayath								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
C(ii)	Setting up of MCF	Chengaroth GP	September 2019					
C(ii)	Collection of non-biodegradable waste	Haritha karma sena	throughout the year					
C(ii)	Bio gas plants for house hold	Chengaroth GP	November 2019					
C(ii)	Ring compost unit	Chengaroth GP	December					

			2019					
C(ii)	Plastic shredding unit	Chengaroth GP	March 2020					
A(b)	House hold sanitary units	Chengaroth GP	January 2020					
C(ii)	Transportation of waste material to refinement unit	Chengaroth GP	September 2019					
C(iii)	Bamboo Cultivation river banks	MGNREGS	31.03.2020					
Velam Grama Panchayath								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
C(ii)	Govardhian Biogas plant	Velam GP	31.03.2020					

C(ii)	MCF	Suchitwa mission	31.03.2020					
C(ii)	Biogas plant 50 No.s	Suchitwa mission	31.03.2020					
B(ii)	Well recharge 1500 houses	MGNREGS	31.03.2020					
C(ii)	Installation of Biogas plant for individual beneficiaries	Socio Economic unit Foundation	31.12.2019					
C(ii)	Installation of Ring compost	Socio Economic unit Foundation	31.12.2019					
C(ii)	Making compostpit	MGNREGS	31.0.2020					
Maruthomkara Grama Panchayath								
No. (as per Action)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April	Progress in the month of May2023	% works completed	Details of works remaining

Plan)					2023			
C(ii)	MRF	Block panchayath	2019-2020					
C(ii)	Biogas plant	Maruthomkara GP	2019-2020					
B(ii)	Well recharge	Maruthomkara GP	2019-2020					
A(b)	Sanitary complex	Maruthomkara GP	2019-2020					
E	Haritha sahayathapana agreement	Maruthomkara GP	2019-2020					
C(ii)	Biogas plant	Maruthomkara GP	31.03.2020					
A(b)	Sanitary Complex	Maruthomkara GP	31.03.2020					

Perambra Grama Panchayat

Perambra Grama Panchayat								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
E	Haritha sahayasthapana agreement	Perambra grama panchayath	31.03.2020					
C(ii)	Solid waste removal	Perambra grama panchayath	31.03.2020					
C(ii)	Zero waste Perambra	Perambra grama panchayath	31.03.2020					
A(b)	Publictoilet	Perambra grama panchayat	31.07.2019					
C(ii)	MCF	Perambra grama panchayat	31.10.2019					

C(ii)	Fish market construction	Perambra grama panchayat	31.10.2019					
Kavilumpara Grama Panchayath								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
E	Haritha sahayasthapanam agreement	Kavilumpara GP	31.03.2020					
C(ii)	Collection of non-biodegradable waste	Kavilumpara GP	31.03.2020					
C(ii)	MCF	Kavilumpara GP	31.03.2020					
B(ii)	Well recharge	MGNREGS	31.03.2020					

D	River cleaning	Kavilumpara GP	31.03.2020					
Cheruvannur Grama Panchayth								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
E	Haritha SahayaSthapana agreement	Cheruvannur GP	31.03.2020					
C(ii)	Collection of plastic waste	Cheruvannur GP	31.03.2019					
A(b)	Repairing of households toilets	Cheruvannur GP	31.03.2020					
A(b)	Construction of Community toilet at Nirappam Stadium	Cheruvannur GP	31.03.2020					

B(ii)	Well recharging	Grama panchayath & MGNREGS	31.03.2019					
A(b)	Latrine Construction	Grama panchayath & MGNREGS	31.03.2019					
Irrigation Department								
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of March 2023	Progress in the month of April 2023	Progress in the month of May2023	% works completed	Details of works remaining
E	Salt water Extrusion - Construction of RCB upstream of Perincherikadavu across Kuttiady river (Gulikapuzha) in Kozhikode District	Irrigation Dept	July 31 2022					
C(ii)	Fencing the sides of Bridges to prevent dumping of wastes - 5 no's	Irrigation Dept	July 31 2022					

National Mission for Clean Ganga

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

RIVER KAVVAYI, KANNUR

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

	<ul style="list-style-type: none">• Member Secretary,CPCB		
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<p>6.1</p>	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of</u></p>	<p><u>RAMANTHALI</u> 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

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

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

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

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

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

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

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

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

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

National Mission for Clean Ganga

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

RIVER KUPPAM, KANNUR

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		Almost all residence and commercial establishments have their own insitu sewage remediation
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		A common STP is at Taliparamba
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2021	
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none">• Specifying accountability of nodal authorities not below the Secretary level• Chief Secretaries may have an accountable person attached in their office for this purpose		
	<ul style="list-style-type: none">• Monitoring at State level must take place		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none">• Secretary, Ministry of Jal Shakti• Member Secretary, CPCB	Monthly before 20 th of every month	

<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><u>MADAYI</u> ONGOING <u>Udayagiri</u> Door to door collection of biodegradable waste is collected by local body and measures for disposing biodegradable waste is practising. All existing HCF are disposing their bmw through CBMWTF</p> <p><u>Pattuvam</u> Door to door collection of biodegradable waste is collected by local body and measures for disposing biodegradable waste is practising. All existing HCF are disposing their bmw through CBMWTF</p>
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	removing encroachment		
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ACTION PLAN FOR RIVER KUPPAM, KERALA

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

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

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

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

Action Plan by Irrigation Department

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

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

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Combined Action Plan

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

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

Action Plan by Ground Water Department

Sl.No	Ref para no:48 as per NGT order 673/2018 dated:20.09.2018	Activity	Progress in the month of December 2020	Progress in the month of January 2021	Progress in the month of January 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					

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

National Mission for Clean Ganga

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

RIVER PERUVAMBA, KANNUR

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

	<ul style="list-style-type: none">• Member Secretary,CPCB		
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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&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in</p>	<p><u>RAMANTHALLI</u></p> <p>There are 5 natural drains meeting the river, of which 3 drains cleaned.</p> <ol style="list-style-type: none"> 1. Parappa Thodu (Ward 6)- 1 Km. 2. Chennakki Thodu (Ward 8) – 1.3 Km. 3. Kallayi Thodu (Ward 3&4) – 1 Km. <p>Two are partly cleaned and the cleaning work is in progress.</p> <ol style="list-style-type: none"> 1. Manthan Thodu (Ward 6) -1 Km 2. Ambachikundu Thodu (Ward 15) – 500 M (The work is slowly ongoing due to the higher level of water in stream, 40% Completed)
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	<p>the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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ACTION PLAN FOR RIVER PERUVAMBA, KERALA

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

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

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

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

	State Disaster Response Fund			
E	Regulating activities in flood plain zone, protection and management of flood plain zone Protection and management of flood plain zone for a period of 3 years with a fund of 0.50 crores	Irrigation Department		As per the observation forwarded from the government on submitted DPR vide No.757555/C1/16/WRD, dated 30.09.2020, This work shall not be considered until adequate study is conducted.
E	Greenery development-Plantation plan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment Planting trees on the bank of the river will be completed within 3 years from the commencement of works with a fund of 0.40 crores	Irrigation Department	3 years	To ascertain the encroachment if any and Purambokk along the polluted river stretch for the proposed work, land to be demarcated by the Revenue authorities after necessary boundary survey. For the same, District collector Kannur has already been addressed from this office and subsequent bio cover works and planting trees have to be done by social forestry department.
E	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions) By Micro watershed management for a period of 2 years with a fund of 0.25 Crore from the available fund	Irrigation Department	2 years	Initially the DPR submitted for 25 lakhs. But as per the letter No.752755/C1/16/WRD Thiruvananthapuram dtd 30/09/2020 of the Additional Chief Secretary to Government and as per the present site condition of the proposed stretch, the estimate was recasted and renamed accordingly. The quantity of silt is assessed by scientific method. So the estimate prepared as per DSR 16 DPR submitted for FS for an amount of 10.70 lakhs. Now the new estimate

				prepared as per DSR 18 and DPR submitted for FS for 13.60 lakhs.				
	Combined Action by KSPCB							
No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of December 2020	Progress in the month of January 2021	Progress in the month of January 2023	% works completed	Details of works remaining
1	Sanitation Providing of toilets to residences With treatment and disposal system for sewage and sullage	Local body						
2	Community Toilet Proposed construction of newcommunity Toilet at satellite points on the bank of river	All local bodies, SuchitwaMission, Revenue department						
3	Rain water recharge Entry of rain water and rain water recharging to all thodu and drain	All local bodies, Kerala Water Authority,						
4	Solid waste management Check they have Board's consent and sanitation facilityisprovided.	PollutionControlBoard, Health authority						

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

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

ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of December 2020	Progress in the month of January 2021	Progress in the month of January 2023	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier Status : As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Neeleswaram and Payyannur) comes under the Peruvamba river basin. All the blocks in the river stretch are safe with stage of groundwater extraction ranges from 34.85% to					

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

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

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

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

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

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

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

National Mission for Clean Ganga

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

RIVER RAMAPURAM, KANNUR

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		<u>MADAYI</u> 16 soak pit,6 numbers of compost pits were completed. Supply order given for 10 MCF, out of this 5 numbers were supplied
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.20 22	NIL
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.20 22	NIL
5	Chief Secretaries may set up appropriate monitoring mechanism at state level <ul style="list-style-type: none">• Specifying accountability of nodal authorities not below the Secretary level• Chief Secretaries may have an accountable person attached in their office for this purpose		
	<ul style="list-style-type: none">• Monitoring at State level must take place		
6	Progress report may be furnished by the State/UTs to <ul style="list-style-type: none">• Secretary,Ministry of Jal Shakti• Member Secretary,CPCB		

waste generated from hotels, Ashrams, etc.

(vii) Ground water regulation

(viii) Adopting good irrigation practices

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

(x) Rain water harvesting

(xi) Maintaining minimum Environmental flow of river

(xii) Plantation on both sides of the river

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

ACTION PLAN FOR RIVER RAMAPURAM, KERALA

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

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

Action plan of Local body

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

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

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

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

Action Plan by Irrigation Department

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

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

Combined ActionPlan

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

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

Action Plan by Ground Water Department

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

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		20.04.2023	
Nature and flow of the river		Medium flow, water level decreased	
Sl.No	Parameters	Unit	Mogral Bridge
1	Temperature	°C	29
2	pH	-	7.65
3	Conductivity	µmhos/cm	61700
4	Turbidity	NTU	0.3
5	BOD	mg/l	2.1
6	Dissolved Oxygen	mg/l	5.6
7	Total Coliforms	cfu/100ml	740
8	Feacal Coliforms	cfu/100ml	236
9	Feacal Streptococcus	cfu/100ml	80
10	Chlorides	mg/l	20600
11	Total Alkalinity	mg/l	108
12	Total Hardness	mg/l	7200
13	Calcium Hardness	mg/l	5500
14	Magnesium Hardness	mg/l	1700
15	Calcium	mg/l	2200
16	Magnesium	mg/l	413.1
17	Total Dissolved Solids	mg/l	36800
18	Sodium	mg/l	11231
19	Potassium	mg/l	337

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		20.04.2023	
Nature and flow of the river		Water level decreased, Medium flow	
Sl.No	Parameters	Unit	Puzhakkara
1	Temperature	°C	29
2	pH	-	7.51
3	Conductivity	µmhos/cm	14800
4	Turbidity	NTU	0.8
5	BOD	mg/l	1.9
6	Dissolved Oxygen	mg/l	5.2
7	Total Coliforms	cfu/100ml	140
8	Feacal Coliforms	cfu/100ml	60
9	Feacal Streptococcus	cfu/100ml	10
10	Chlorides	mg/l	4700
11	Total Alkalinity	mg/l	38
12	Total Hardness	mg/l	2000
13	Calcium Hardness	mg/l	1200
14	Magnesium Hardness	mg/l	800
15	Calcium	mg/l	480
16	Magnesium	mg/l	194.40
17	Total Dissolved Solids	mg/l	8810
18	Sodium	mg/l	2490
19	Potassium	mg/l	85

Sd/-
Assistant Scientist

National Mission for Clean Ganga

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

RIVER MOGRAL, KASARGOD

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

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic</p>		
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	<p>waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p> <p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of flood plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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ACTION PLAN FOR RIVER MOGRAL, KASARAGOD DISTRICT, KERALA
MONTHLY PROGRESS REPORT FOR THE MONTH OF APRIL 2023
RIVER MOGRAL, KASARGOD

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

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

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

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

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

6.1	<p>Progress Report may be comprised of details along with completion timelines on:</p> <p>(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment.</p> <p>(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</p> <p>(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline</p> <p>(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;</p> <p>(vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.</p>		
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	<p>(vii) Ground water regulation</p> <p>(viii) Adopting good irrigation practices</p> <p>(ix) Protection and management of food plain Zones (FPZ)</p> <p>(x) Rain water harvesting</p> <p>(xi) Maintaining minimum Environmental flow of river</p> <p>(xii) Plantation on both sides of the river</p> <p>(xiii) Setting up biodiversity parks on flood plains by removing encroachment</p>		
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ACTION PLAN FOR RIVER UPPALA, KASARAGOD DISTRICT, KERALA
MONTHLY PROGRESS REPORT FOR THE MONTH OF APRIL 2023
RIVER UPPALA, KASARGOD

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of February 2023	Progress in the month of March 2023	Progress in the month of April 2023	% works completed	Details of works remaining
C(ii)	Material collection facility. Operation	Mangalpady Grama Panchayath	2019	NIL	Not submitted the report	NA	50%	After monsoon work will complete
C	Waste management including purchase of vehicle to collect waste.	Mangalpady Grama Panchayath/ Green Space Private company	2019- 2020	Project taken for promoting Haritha karma sena activities	Not submitted the report	Rented Vehicle	-	New projects will plan for the protection of river Uppala.
E	Installation of camera	Mangalpady Grama Panchayath	March 2020	Project got wetting Survey done by Keltron, Work order sent to Keltron	Not submitted the report	Work completed		Project will be completed within 31.03.2023
C	Electrification of material collection facility	Manjeshwaram Grama Panchayat	2019-2020	Electrified	Electrified	Electrified	100%	Completed
C	Transportation of collected waste	Manjeshwaram Grama Panchayat	March 2020	waste transported	waste transported	460 Kg waste transported		Work yet to be completed.

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

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

Sd/-

Environmental Engineer

UPPALA RIVER - UPPALA BRIDGE (Existing NWMP Station)			
Sampling Point		Uppala Bridge	
NWMP Station Code		2306	
Latitude		12°41'41.7"N	
Longitude		74°54'16.9"E	
Date of Sampling		20.04.2023	
Nature and flow of the river		Moderate flow, water level decreased	
Sl.No	Parameters	Unit	Uppala Bridge
1	Temperature	° C	29
2	pH	-	7.41
3	Conductivity	µmhos/cm	62400
4	Turbidity	NTU	0.2
5	BOD	mg/l	2
6	Dissolved Oxygen	mg/l	5.5
7	Total Coliforms	cfu/100ml	890
8	Feacal Coliforms	cfu/100ml	392
9	Feacal Streptococcus	cfu/100ml	90
10	Chlorides	mg/l	20600
11	Total Alkalinity	mg/l	93
12	Total Hardness	mg/l	9100
13	Calcium Hardness	mg/l	7600
14	Magnesium Hardness	mg/l	1500
15	Calcium	mg/l	3040
16	Magnesium	mg/l	364.5
17	Total Dissolved Solids	mg/l	37200
18	Sodium	mg/l	10650
19	Potassium	mg/l	240

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		20.04.2023	
Nature and flow of the river		Water level decreased, moderate flow	
Sl.No	Parameters	Unit	Uppala River Near Bhagavathi Temple
1	Temperature	° C	29
2	pH	-	7.43
3	Conductivity	µmhos/cm	28700
4	Turbidity	NTU	1
5	BOD	mg/l	1.3
6	Dissolved Oxygen	mg/l	5.5
7	Total Coliforms	cfu/100ml	410
8	Feacal Coliforms	cfu/100ml	208
9	Feacal Streptococcus	cfu/100ml	40
10	Chlorides	mg/l	9200
11	Total Alkalinity	mg/l	25
12	Total Hardness	mg/l	3200
13	Calcium Hardness	mg/l	1800
14	Magnesium Hardness	mg/l	1400
15	Calcium	mg/l	720
16	Magnesium	mg/l	340.2
17	Total Dissolved Solids	mg/l	17520
18	Sodium	mg/l	5100
19	Potassium	mg/l	168

Sd/-
Assistant Scientist

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		20.04.2023	
Nature and flow of the river		Moderate flow, water level decreased	
Sl.No	Parameters	Unit	Uppala Bridge
1	Temperature	° C	29
2	pH	-	7.41
3	Conductivity	µmhos/cm	62400
4	Turbidity	NTU	0.2
5	BOD	mg/l	2
6	Dissolved Oxygen	mg/l	5.5
7	Total Coliforms	cfu/100ml	890
8	Feacal Coliforms	cfu/100ml	392
9	Feacal Streptococcus	cfu/100ml	90
10	Chlorides	mg/l	20600
11	Total Alkalinity	mg/l	93
12	Total Hardness	mg/l	9100
13	Calcium Hardness	mg/l	7600
14	Magnesium Hardness	mg/l	1500
15	Calcium	mg/l	3040
16	Magnesium	mg/l	364.5
17	Total Dissolved Solids	mg/l	37200
18	Sodium	mg/l	10650
19	Potassium	mg/l	240

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		20.04.2023	
Nature and flow of the river		Water level decreased, moderate flow	
Sl.No	Parameters	Unit	Uppala River Near Bhagavathi Temple
1	Temperature	° C	29
2	pH	-	7.43
3	Conductivity	µmhos/cm	28700
4	Turbidity	NTU	1
5	BOD	mg/l	1.3
6	Dissolved Oxygen	mg/l	5.5
7	Total Coliforms	cfu/100ml	410
8	Feacal Coliforms	cfu/100ml	208
9	Feacal Streptococcus	cfu/100ml	40
10	Chlorides	mg/l	9200
11	Total Alkalinity	mg/l	25
12	Total Hardness	mg/l	3200
13	Calcium Hardness	mg/l	1800
14	Magnesium Hardness	mg/l	1400
15	Calcium	mg/l	720
16	Magnesium	mg/l	340.2
17	Total Dissolved Solids	mg/l	17520
18	Sodium	mg/l	5100
19	Potassium	mg/l	168

Sd/-
Assistant Scientist