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)

<table>
<tr><th>Sl. No.</th><th>Activity to be monitored</th><th>Timeline</th><th>Submission of Progress by State/UT-Compliance Status</th></tr>
<tr><td>1.</td><td>Ensure 100% treatment of sewage at least in situ remediation</td><td>31.03.2021</td><td>
Total Sewage Generation in Kerala: 3759.28 MLD
Total Sewage Treatment capacity in the state: 124.335 MLD
Out of the above, total septage treatment capacity in the state: 0.21 MLD
Gap in Sewage Treatment in the state:3634.945 MLD
No. of functional STPs in the state: 10
No. of functional septage treatment plants in the state: 2

*The sewage generated in the state is treated by septic tank - soak pit system or STP. Individual septic tank - soak pit systems are provided for households and small establishments. Individual STPs are provided for establishments such as flats, hotels, hospitals, etc. There is no open defecation in the state.

Details of existing STPs/Septage treatment plants in the State:
<table>
<tr><th>Sl. No.</th><th>City/Town</th><th>STP location</th><th>Status</th><th>STP Installed capacity</th><th>Utilization</th><th>Process</th></tr>
<tr><td>1</td><td>Thiruvananthapuram</td><td>Common Sewage Treatment Plant, Muttathara, Trivandrum Maintained by Kerala</td><td>Operational</td><td>107 MLD</td><td>70 MLD</td><td>ASP</td></tr>
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					Water Authority				
			2	Pathanamthitta	Sewage Treatment Plan at Sannidhanam (5MLD) Maintained by Travancore Devaswom Board	Seasonally Operated during festival season	5 MLD	3.5 MLD	UASB and SBR
					Sewage Treatment Plan at Pamba(3.5 MLD) Maintained by Travancore Devaswom Board	Seasonally Operated during festival season	3.5 MLD	3.5 MLD	Coagulation & settling
			3	Kottayam	STP for Houseboat (0.09 MLD) at Kumarakom Maintained by District Tourism Promotion Council, Kottayam	Operational	90 KLD	90 KLD	ASP
			4	Ernakulam	Sewage treatment unit, Kerala Water Authority, Elamkulam, Ernakulam(3 MLD)	Operational	4.5MLD	3 MLD	ASP
					STP owned by Greater Cochin Development Authority,Kadavanthra, Kochi (0.45 MLD)	Operational	0.45MLD	0.45 MLD	ASP

					Septage Tratment Plant at BrahmapuramKochi Corporation, Ernakulam	Operational	0.1MLD	0.1 MLD	MBBR
					Septage Tratment Plant at Wellington Island, Kochi Corporation	Operational	0.1MLD	0.1 MLD	MBBR
			5	Kannur	Sewage treatment Plant at Taliparambu (0.5MLD) Taliparambu Municipality, Kannur	Operational	0.5MLD	0.5MLD	ASP
			6	Thrissur	Sewage treatment Plant at Guruvayur in Thrissur District	Not yet commissioned	3 MLD	Not started functioning	ASP
					FSTP at Mattampuram	Completed. Not started functioning.	0.01 MLD	Not started functioning	BIOLOGICAL
			7	Malappuram	Sewage treatment Plant-at Malappuram Municipal Bus stand	Operational	0.03 MLD	0.03 MLD	MBBR
					Sewage treatment Plant-at Tirur (fish market)	Operational	0.045 MLD	0.045 MLD	BIOLOGICAL

8	Adimaly Grama Panchayat, Idukki	Sewage treatment Plant at Comfort station, Adimaly Grama Panchayat, Idukki	Operational	0.01 MLD	Just started functioning	Electro coagulation		

Details of proposed STPs/FSTPs in the State:

Plant No.	Plant	Place	Capacity (MLD)	Status of the project	Funding Scheme	Process
1.	STP	Municipal Bus Stand, Tirur	0.05	Work on going. 90% of work completed.	Fund is provided by Tirur municipality	Biological
2.	FSTP	Cherthala municipality, Alappuzha	0.25	Under technical scrutiny	Suchitwa Mission	Anaerobic baffled reactor and MBBR
3.	Decentralised sewerage scheme	Thrissur Corporation	2.5	To be retendered	Amrut Implemented by ULB	Biological
4.	Decentralised sewerage system	Kochi Corporation Division 15	1.4	Tendered but not awarded	Amrut Implemented by ULB	Biological
5.	Decentralised sewerage system	Kochi Corporation Division 16	1.1	Tendered but not awarded	Amrut Implemented by ULB	Biological
6.	Decentralised	Kochi Corporation	1.4	Tendered	Amrut	Biological

				sewerage system	Division 17		but not awarded	Implemented by ULB	
			7.	FSTP	Andamukkam, Kollam Corporation	0.1	Tendered but not awarded	Amrut Implemented by ULB	Electro coagulation
			8.	FSTP	Vasoorichira, Kollam Corporation	0.1	To be cancelled	Amrut Implemented by ULB	Electro coagulation
			9.	FSTP	Karikkuzhi Ela, Kollam Corporation	0.1	To be retendered	Amrut Implemented by ULB	Electro coagulation
			10.	FSTP	Ramavarmapuram, Thrissur	0.1	Awarded but Agreement not executed	Amrut Implemented by ULB	Electro coagulation
			11.	FSTP	Yakkara, Palakkad Municipality	0.1	Awarded but Agreement not executed	Amrut Implemented by ULB	Electro coagulation
			12.	FSTP	Chellora, Kannur Corporation	0.1	Agreement executed but not started	Amrut Implemented by ULB	Electro coagulation
			13.	FSTP	Chakkumkandam, Guruvayur Municipality, Thrissur	0.1	Work started	Amrut Implemented by ULB	Electro coagulation
			14& 15	Mobile septage units-2 nos.	Alappuzha municipality	0.01	Technical sanction to be issued	Amrut Implemented by ULB	Electro coagulation

			16.	STP	General Hospital, Alappuzha	0.24	Tendered but not awarded	Amrut Implemented by ULB	Electro coagulation
			17.	STP	Shatabdhi Mandiram, Alappuzha	0.015	Technical sanction to be issued	Amrut Implemented by ULB	Biological
			18.	STP	Thottumadi Colony, Alappuzha	0.05	Technical sanction to be issued	Amrut Implemented by ULB	Biological
			19.	STP	General Hospital, Thrissur	0.36	Awarded but Agreement not executed	Amrut Implemented by ULB	Electro coagulation
			20.	STP	District Hospital, Palakkad	0.27	Awarded but Agreement not executed	Amrut Implemented by ULB	Electro coagulation
			21.	STP and associated network	Sundaram Colony, Palakkad	0.8	Tendered but not awarded	Amrut Implemented by ULB	Biological
			22& 23	Sewage and Septage treatment plants	Sewage treatment plant at Medical College with Septage treatment plant, Kozhikode	1 MLD and 2 MLD plants	Work started	Amrut Implemented by ULB	Electro coagulation
			24.	Sewerage system	Sewerage system in Zone A, Package B, Kozhikode	6.0	Tendered but not awarded	Amrut Implemented by ULB	Biological
			25.	Sewerage	Sewerage system in	7.0	Tendered	Amrut	Biological

				system	Zone A, Package A, Kozhikode		but not awarded	Implemented by ULB	
			26.	Decentralised sewerage network with STP	Decentralised sewerage network with STP in old Kannur Municipal area, Kannur	1.0	Tendered but not awarded	Amrut Implemented by ULB	Biological
			27.	STP	STP at Medical College- Phase I & II, Thiruvanathapuram	5.0	Work started	Amrut Implemented by Kerala Water authority	Biological
			28.	STP	STP-Phase I & II, Kollam	12.0	Tendered but not awarded	Amrut Implemented by Kerala Water authority	Biological
			29.	Rejuvenation of 5 MLD STP	Rejuvenation of 5 MLD STP at Elamkulam, Kochi	5.0	Awarded but Agreement not executed	Amrut Implemented by Kerala Water authority	Biological

Status of STPs/FSTPs proposed in the action plan of polluted river stretches

District	River- Polluted River stretch	Local body	Details of STPs as per action plan	Status for the month of July
Kannur	Peruvamba – ALONG PERUVAMBA	Payyannur Municipality	Proposed 10 KLD STP at fish market, Perumba by Payyannur Municipality	DPR stage

				Malappuram	Thirur-NADUVILANGADI TO THALAKKADATHUR	Thirur municipality	Setting up of STP at Market -45KLD Setting up of STP at Private Bus stand-50 KLD- Thirur municipality	Operational Under construction 90% of work completed
					Kadalundi river - ALONG HAJIRAPPALLY/ HAJIYARPALLI	Malappuram municipality	Setting up of STP of 30KLD	Operational
				Palakkad	Bharathapuzha- ALONG PATAMBI	Pattambi Municipality	Primary Sewage Treatment Plant (oil and grease trap with grit chamber) and Septage Treatment plant - Pattambi Municipality	Proposal Submitted Before Council
				Thrissur	Kecheri- PULIYANNOR TO KECHERY	Wadakkanchery Municipality	Common STP of 500 MLD to cater the entire city– Wadakkanchery Municipality 2 common STPs are proposed, one at Athani market (350 KLD) and other at Ottupara market (500 KLD).	Identified land and soil test is ongoing DPR prepared and Submitted before KIIFB
					Karuvannur- ALONG KARUVANNUR	Irinjalakkuda Municipality	Construction of FSTP and STP- Irinjalakkuda Municipality proposed	Tendering process in progress for

							preparation of DPR
				Puzhakkal-OLARIKKARA TO PUZHACKAL	Thrissur Corporation	Sewage treatment plant of 100 KLD at Ramavarmapuram, Thrissur Sewage treatment plant of 360 KLD at General Hospital, Thrissur in Amrut Project-Thrissur Corporation Constructing decentralised sewerage scheme at Vanchikulam -2.5 MLD plant - Thrissur Corporation	Work tendered and selection memo issued work awarded but Agreement not executed To be retendered
				Chithrapuzha-IRUMPANAM TO KARINGACHIRA	Thrippunithura Municipality	Additional STP requirement (if needed) (Thrikkakkara Municipality, Thripunithura Municipality)- Associated with Cochin Corporation Brahmapuram plant	Requested Government for land
				Kadambrayar-MANCKAKADAVU TO BRAHMAPURAM	Thrikkakkara Municipality	Provide facility for the treatment of sewage, sullage and garbage generated- Thrikkakkara Municipality	Requested Government for land - Clarifications submitted to Urban

								Directorate by Municipality
					Periyar- ALWAYE-ELOOR TO KALAMASSERY	Aluva Municipality	Augmentation and Revamping of existing STP at near Adwaitha Ashramam - Aluva Municipality	Aluva Municipality budgeted the amount in 2019-20 & 2020-21 plan project. Waiting for TS from Suchitwa Mission.
							. Augmentation and Revamping of existing STP at Aluva Market - Aluva Municipality	An amount of 10 lakhs is included in the 2020-21 annual project. Fisheries department should handover the ETP to municipality so that Municipality can revamp and augment the ETP.

						Kalamassery Municipality	Installation of common STP of 10 KLD for Kalamassery Municipality and ETP at Municipal Market Kalamassery Municipality	Under costruction – 80% completed
				Kozhikode	Kallayi- THEKEPURAM TO ARAKKINAR	Kozhikode corporation	Setting up of common STP of(13 MLD) (i.e. at Kothi bridge- 6 MLD plant proposed and at Avikkal -7 MLD plant proposed) Establishment of Sewage treatment plant with septage treatment plant at Medical college (3 MLD plant) 2 MLD, 1 MLD plant	Tendering in progress Under construction
				Pathanamthtitta	Pamba- MANNAR TO THAKAZHY	Mannar grama panchayath & Kadapra grama panchayath	STP is not required. Proposed installation of screening, septic tank & disinfection systems for storm water drains in Mannar & Parumala town	Action is being taken
				Alappuzha	Manimala- KALLOOPARA TO THONDRA	Chengannoor and Thiruvalla municipality	Septage and sewage treatment plant for Chengannoor and Thiruvalla municipality proposed	Proposal for setting up an FSTP in Chengannur is initiated.

			Trivandrum	Karamana-MALEKKDU TO THIRUVALLAM	Trivandrum corporation	107 MLD common STP exists 5 MLD sewage treatment plant at Medical College -Kerala Water Authority proposed Additional STP requirement by Kerala Water Authority for 60 crores	Operational Under construction-40% completed A detailed engineering report for engaging consultant Prepared

AMRUT - SEPTAGE PLANTS

Category	Number of Plants	Cost (Rs. Cr.)	AMRUT City
Work started	1	4.50	Guruvayoor-1no.
Agreement executed but not started	1	3.42	Kannur-1no.
Awarded but Agreement not executed	2	6.91	Thrissur-1no., Palakkad-1no.
Tendered but not awarded	1	4.22	Kollam-1no.
To be retendered	1	4.22	Kollam-1no.

			TS not issued	2	0.80	Alappuzha-2nos.
			To be cancelled	1	4.22	Kollam-1no.
			Total	**9**	**28.29**	

AMRUT - SEWAGE PLANTS

Category	Number of Plants	Cost (Rs. Cr.)	AMRUT City
Work started	3	33.28	Kozhikkode-2 nos., Thiruvananthapuram-1no.
Awarded but Agreement not executed	3	22.92	Thrissur-1no., Kochi- 1 no., Palakkad-1no.
Tendered but not awarded	9	269.32	Kochi- 3 nos., Kozhikkode-2 nos., Palakkad-1no., Kollam-1no., Kannur-1no., Alappuzha-1 no.
To be retendered	1	53.40	Thrissur-1no.
TS not issued	2	2.68	Alappuzha-2nos.
Total	**18**	**381.60**	

<table>
<tr><td></td><td></td><td></td><td>AMRUT - SEPTAGE & SEWAGE PLANTS

<table>
<tr><th>Category</th><th>Number of Plants</th></tr>
<tr><td>Total septage treatment plants</td><td>9</td></tr>
<tr><td>Total sewage treatment plants</td><td>18</td></tr>
<tr><td>Grand Total of plants</td><td>27</td></tr>
<tr><td>Plants being implemented by ULB (no.)</td><td>24</td></tr>
<tr><td>Plants being implemented by KWA(no.)</td><td>3</td></tr>
<tr><td>Consultants employed for DPR(no.)</td><td>1(21 plants/27 plants)</td></tr>
<tr><td>Work awarded- implemented by ULB</td><td>8(septage-4 & sewage-4)</td></tr>
<tr><td>Work awarded- implemented by KWA</td><td>2(sewage-2)</td></tr>
</table></td></tr>
<tr><td></td><td>Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STP s must</td><td>Progressing</td><td>Progressing</td></tr>
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	be ensured		
2.	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	31.03.2021	Progressing
5.	Chief Secretaries may set up appropriate monitoring mechanism at State level Specifying accountability of nodal authorities not below the Secretary level Chief Secretaries may have an accountable person attached in their office for this purpose	Completed	*VideG.O.(Rt)No.93/2020/WRD dated 28.01.2020 Government of Kerala nominated Deputy Secretary (Projects),Water Resource Department as the nodal authority,Government of Kerala for monitoring the compliance of the directions in the order on fortnightly basis and to maintain record of progress and to act as an accountable person to the Chief Secretary for the purpose. *Vide G.O.(Rt)No.223/2020/WRD dated 12.03.2020 Government of Kerala appointed a monitoring committee comprising of Additional Chief Secretary, Water Resources Department as Chairperson and Principal Secretary, LSGD, Principal Secretary, Environment, Secretary, Water Resources Department and Staff officer to Chief Secretary as nodal officers & members.

	Monitoring at State level must take place	Fortnightly	Review on progress of action plans is being done at district and state level

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)

KARAMANA RIVER – July 2020

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	31.03.2020	Sewage Generation -128 MLD Sewage Treated - 80 MLD Existing CSTP Capacity-107MLD Other Individual STP-3.57 MLD Progress on Expanding the sewage networks submitted by KWA attached as Annexure I
	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	Progress report on setting up STPs connecting Drains are not submitted
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2020	Not reported
5	Chief Secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the Secretary level	22.01.2020 22.01.2020	

	• Chief Secretaries may have an accountable person attached in their office for this purpose.		
	• Monitoring at State level must take place	Fortnightly Commencing 21.12.2019	
6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Monthly (preferably before 20th of every month)	

6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline	Completed 31-12-2020 Completed	11 Polluting Drains were identified Sewage Generation -128 MLD Sewage Treated - 80 MLD in 107 MLD CSTP Other Individual STPs-3.57 MLD • 5 MLD sewage treatment plant at Medical College-40% completed-Delay due to Covid lockdown • Pumping lines from the terminal pumping station Kuriyathi, to be connected directly to STP at Muttathara- • Rehabilitation/upgradation of Thaliyal and Aranoor Sewerage Pumphouse by rehabilitation of existing well, construction of new

		Sept 2020 Dec 2020 Dec 2020 Dec 2020 Sept 2020	well and grit chamber, installation of new pump sets Thaliyal- 50% completed Arannoor-25% Completed • DG sets in all lift and pumping stations – (To avoid over flow into Drains due to power failure) (Mudavanmughal,Kuriyathi,) (Pattoor, Kannammola,Plamoodu,Murinjapalam) • Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchanthodu,control stormwater entry into sewer to avoid overflow in Thampanoorarea. Sewage generated inRajaji Nagar shall bediverted to main sewerline. Sewagegenerated in Thoppil area shall be diverted main sewerline-Work awarded. Work revised by rerouting the pipeline through main road in front of KSRTC terminal at Thampanoor • Divert the sewer line from the School compound of Government Karamana High School(90% completed) - Work was delayed due to

		March 2021

	(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.		There is no existing CETP in polluted stretch. No CETP proposed as there are no industries identified in polluted stretch.
	(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline		As per Progress report submitted by trivandrum corporation Solid waste generated-353.51 TPD Solid waste treated -349 TPD Gap- 4.51 TPD Progress report submitted by TVM Corp attached as Anexxure II
	(v)Latest water quality ofpolluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		Water quality of stations in polluted stretch, drains attached as Annexure III a, b
	(vi)Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste		• The Two Bridges in the polluted Stretch(maruthoorkadav and

	and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.		thiruvallom) which were susceptible to waste dumping into the river was provided with fencing of adequate height. • Bio medical waste in Hospitals. Clinics and Laborataries are disposed via Centralised CBMWT of IMAGE
	(vii)Ground water regulation (viii) Adopting good irrigation practices,		Not reported • Development package for ParvathyPuthanar-(Amnt in action plan-Rs 15000 Lakhs)-Work is being implemented by Kerala water ways & Infrastructure Ltd. In addition, to obtain funding for Phase –I work, DPR for Rs. 52.33 Cr was submitted to KIIFB. • Karimadom Tank improvements ,desilting, sheet piling under preparation and providing fencing(Amnt in action plan-Rs 450 Lakhs) -Estimate under preparation –implemented by irrigation department
	(ix) Protection and management of food plain Zones (FPZ),		• Development of Karamana River basin-(Amnt in action plan-Rs 913 Lakhs)-12 out of 16 works completed, details are given in Annexure IV. implemented by

			irrigation department
	(x) Rain water harvesting,		Not submitted
	(xi) Maintaining minimum Environmental flow of river	31.03.2021	• Desilting and development of Amayizhenjanthodu-(Amnt in action plan-Rs 2500 Lakhs) - Tendered- opening date 21.7.2020- implemented by irrigation department • Improvements to Thekkenekkara canal and desilting(Amnt in action plan-Rs 500 Lakhs)-Estimate submitted for sanction- implemented by irrigation department
	(xii) Plantation on both sides of the river		Not reported
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment		Bio- diversity park at Karamana II phase - walkway ,gate, fencing, lightening etc-96% completed-Work in Progress.-Implemented by irrigation dept

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No.		Activity	Cost	Source of fund	Time line	Present Status	Expected date of completion	Remarks
1	**a**	Pumping lines from the terminal pumping station Kuriyathi, to be connected directly to STP at Muttathara	3.38	AMRUT	May-19	Work completed and commissioned.	Completed	Sewerage from the pumping stations at Kuriyathi, Pattoor, Kannanmoola & Enchakkal reaches a stilling chamber at Perunelli and reaches the STP by gravity. Out of the total quantity of sewage reaching the chamber, 50% was from Kuriyathi. Once the work is completed, there is no overflow from the stilling chamber and . hence the other works are not an immediate requirement but required to be executed for preventing future overflow.
	b	Pumping lines from the terminal pumping station ,Pattoor to be connected directly to STP at Muttathara				DER for replacing old cast iron pumping main from Pattoor to STP at Muttathara amounting to Rs.18.91 Crores has been prepared.		Can be carried out if sufficient fund are sanctioned under AMRUT
	c	Pumping lines from the terminal pumping station, Kannammoola to be connected directly to STP at Muttathara				DER for replacing old cast iron pumping main from Kannammoola to STP at Muttathara 22.90 Crores has been prepared.		
	d	Enchakkal				Presently only 5 MLD discharge is reaching the stilling chamber at		

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						Perunelli near Muttathara and hence pipeline need not be replaced urgently		
2		Rehabilitation/upgradation of Thaliyal and Aranoor Sewerage Pumphouse by rehabilitation of existing well, construction of new well and grit chamber, installation of new pump sets	2.37	Plan scheme	May-20	Thaliyal- 50%	30.09.2020	a) 7 m dia 9 m deep RCC well - Completed b)Grit chamber -completed c)Interconnection works between existing and newly constructed well, and grit chamber- held up due to the heavy rain. d) Erection of pumpsets and diesel generator - orders placed by contractor.
						Arannoor- 25%	31.12.2020	a) Providing RCC lining for the existing two wells Second well can be commenced only after erecting new pumpsets in the completed well, being live. b) Erection of pumpsets and diesel generator - orders placed by contractor. The work is held up due to COVID 19 restrictions and monsoon.
3		Commissioning 5 MLD sewage treatment plant at Medical College	19.2	AMRUT	May-20	Progress - 40%	31.12.2020	Progress of the work slowed down due to pending payment of 3.5 Cr from AMRUT and Covid lock down. EE, Sewerage Division, Pattoor has addressed to

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								Secretary, Thiruvananthapuram Corporation for fund to settle the bill amount - IInd part bill Rs.1.47 Crore (No.KWA/PD-T/AB1-120(A)/2009) dated 05/03/2020 and IIIrd part bill for Rs.1.43 Crores by letter dated 26/06/2020.
4		Installation of adequate pumps in Mudavanmughal and Enchakkal pumping stations	0.23	Plan scheme	Mar-20	High offers received on tender. 42.83 % & 46.67 % above respectively and both single tenders	31.12.2020	Both the works tendered twice, but cancelled due to non-participation. Single offer received during third tender call. Tenders are under processing in CE(SR) office, after extending firm period of tenders.
5	a	DG sets in all lifting and pumping stations – (Mudavanmughal, Kuriyathi,)	0.3	Plan scheme	May-20	Single offer received		Tender invited twice, but no participation and hence cancelled. Single offer received in third tender call. The firm informed that they will not extend the firm period beyond 31.08.20 .Tender is under processing at CE(SR) office. Quoted @ 10.64% above.
	b	(Pattoor, Kannammola, Plamoodu,Murinjapalam)	0.56			Work order issued		
	c	Thaliyal and Aranoor						Erection of diesel generator is already included in the item

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								mentioned 2 above
	d	Enchakkal						Diesel generator is already existing
6		Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchan thodu, control stormwater entry into sewer to avoid overflow in Thampanoor area. Sewage generated in Rajaji Nagar shall be diverted to main sewerline. Sewage generated in Thoppil area shall be diverted to main sewerline	Revised estimate 0.38 cr	Maintenance	Dec-19	Work awarded. Work revised by rerouting the pipeline through main road in front of KSRTC terminal at Thampanoor.	31.12.2020	Foot path cutting requested from M/s KRFB. Estimate not yet received. Can be started after the monsoon as Thampanoor is a water logged area. Only one month is required for completion of work. EE, Sewerage Division, Pattoor has send a reminder letter to KRFB on 12/08/2020.
7		Discharge of sewage in Parayil kadavu shall be stopped as there is overflow of sewage from houses having sewage reaches connection and this may lead to discharge of sewage into river karamana.						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. Out of 450m pipe laying, only 15m pipe laying work is to be completed. Request for road cutting sanction for this 15m submitted by PWD. EE, Sewerage Division, Pattoor has send a reminder letter to PWD on 12/08/2020.
8		The sewer line from the School compound of Government Karamana High School shall be	0.42	Plan Scheme	May-20	90 % completed	31.09.2020	Out of 450m pipe laying, only 15m pipe laying work is to be completed.

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		diverted.						Request for road cutting sanction for this 15m is submitted to PWD. EE, Sewerage Division, Pattoor has send a reminder letter to PWD on 12/08/2020.
9		Rehabilitation by laying new lines increasing size of undersized main and reconstruction by dilapidated manholes for the last 3 years	16.71	Plan Scheme/AMRUT		Works completed – 47 No. (Rs. 9.49 cr.) AMRUT-42, State plan-23 MLA ADF/SDF-2	Completed	AS received in seperate financial years under each category.
		Total works (67No.)				In progress – 20 No. (Rs. 7.22 cr.) AMRUT-10, State plan-10 MLA ADF/SDF-0		AS received in seperate financial years under each category.
		Works to be arranged (12 No.)	3.43			To be arranged – 12 No. (Rs. 3.43 cr.) AMRUT-3, State plan-8 MLA ADF/SDF-1		Out of 12 works to be arranged a) 4 works approved by KWA Board and awaiting sanction from AMRUT SHPSC. b) For 8 works tenders were invited many times but there was no participation due to the delay in the payment of the already completed/ ongoing works.Currently due date of the above tenders are 22.8.20
		Extension of sewer network wherever technically feasible in new areas of existing blocks				Works completed - 16 No. (Rs. 2.82 cr.) AMRUT-7, State plan-8 MLA ADF/SDF-1	Completed	AS received in seperate financial years under each category.
	a	Total works completed/in progress (21 Nos.)	15.83			In progress – 5 No. (Rs. 13.01 cr.)AMRUT-2,		AS received in seperate financial

						State plan-3 MLA ADF/SDF-0		years under each category.
10	b	Works to be arranged (8 No.)	9.26	Plan scheme/AMRUT		To be arranged– 8 Nos. (Rs. 9.26 cr.) AMRUT-3 State plan-5		Out of 8 works to be arranged, a) 3 works approved by KWA Board and awaiting sanction from AMRUT b) 4 works need Land acquisition c) one work re-tendered with due date on 22.8.2020
11		Procurement of sewer cleaning machines and equipment maintenance	3.17	Plan Scheme	May-20	No response to repeated tender.		Estimate to be re-casted.
12		Establishment of six additional blocks in uncovered areas		JNNURM/AMRUT		Works completed - 1 No. (Rs. 2.28 cr.)		
	a	Total works completed/in progress (11 Nos.)	91.14			In progress – 10 No. (Rs. 88.86 Cr.)		Works slowed due to COVID -19 restrictions and monsoon
	b	Works to be arranged (9 No.)	21.78			Tendered/To be tendered – 9 No. (Rs. 21.78 cr.)		Nobody is participating the tender due to delay in payment of the already completed/ongoing works due to shortage of funds

Draft #2 of File KWA/HO/OP-IV/716/2019 (PART-III) Approved by Managing Director on 18-Aug-2020 09:22 AM - Page 6

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

Karamana River Action Plan

Sl. No.	Activity	Implementing Agency	Unit	No. of units	Cost in Rs. Cr.	Source of fund	Time for completion	Status
2.2.1	Slaughter house and poultry waste	Thiruvananthapuram Corporation	Rendering plant	1	9.6	Central, State and ULB Share	March 2021	**Slaughter House**- Work awarded to KEL Agreement executed duration-1 year. Agenda sent for Council decision. **Poultry waste**- TMC starts collecting poultry waste coming under jurisdiction of 25 HI Office from 1st November 2019 on pilot basis with online tracking of vehicles. Entire functioning of system is managed by green Trivandrum Software and its link is provided in corporation website. The entire poultry waste generated in whole Corporation area is collected and supplied to rendering plant in Aluva and Tamil Nadu.
2.2.2	Sanitation facility and Treatment of waste water in the markets of Pangode, Kumarichanda, Kannettumukku	Thiruvananthapuram Corporation	Treatment plant Portable aerobic bins	2 4	0.3	Plan fund	March 2021	**Kumarichanda**: STP Plant (Bio membrane bioreactor Technology- 10KLD) is installed and applied for consent to operate to KSPCB. **Pangode**: Steps were taken to clean existing septic tank and an estimate amount of 40lakhs prepared for establishing modern ETP and council decided to include in plan 2021. Prepared DPC approved project –Rennovation of pangode fish market ETP-25KLD.
2.2.3	Provide facility for the treatment of sewage, sullage and	Thiruvananthapuram Corporation	Aero bins at various places (28) Proposed sites					Garbage: Regarding Solid Waste

	garbage generate in the poonthura slum area between Karamana river and sea		1. Moonnathumukku 2. Poonthura-HI Office 3. Cheriyanmuttam-Poonthura 4. Beemapally Compound 5. Tsunami Colony 6. Mother Theresa Colony 7. KumariChantha 8. Poonthura Marker 9. Moonnattumukku bridge 10. Ambalathara-Nilama 11. Fisherman Flat-Muttathara 12. Perunalli Market	28	3.36	Plan Scheme	March	Management in PoonthuraColony door to door collection started and wetwaste is treated in Aerobic bin and drywaste to RRC. Regarding treatment of sullage, land availability is a problem to establish a common treatment facility. So sucking tanker will be provided free of cost and will be carried to STP plant at Muttathara for safe disposal.

			Road 13. Poundkadavu old market 14. Market behind Attiprazonal office 15. Tsunami Colony near 110 KV tower (Poundkadav) 16. Near ValiyavilaVeli St. Thomas Church (Poundkadavu) 17. Near Kamaleshwaram HSS 18. Valiyavetil Residence association 19. Near Arannoo					

			r Govt. Quarters 20. Kunjalumoodu Junction 21. KumarapuramThamarabhagam (near comfort station) 22. Near Kannammoola Bridge 23. Mannanthala Market 24. Santhi Nagar Residents association 25. AlantharaKattayil 26. Ulloor Market 27. Museum RKV Road 28. New Nalantha Road					

2.2.4	The discharge of waste water from the surrounding houses to the pond at Jagathy is to be stopped	Thiruvananthapuram Corporation Kerala Water Authority	Pond desilting Issued notices to the household Project is prepared for desilting the pond		0.50	Plan fund	March	Notice issued to households is to stop discharge of waste water to pond. KWA so far not identified site to set up STP
2.2.5	Around 155 Houses in Kurukuvilakom, Kannettumukku shall be provided with septic and treatment system	Thiruvananthapuram						Door to door collection facility is provided. Health Supervisor and Jagathi circle Health Inspector is authorised to issue notice on the basis of site inspection. Notice were issued to households to provide septic tank
2.2.5	Identification of illegal outlets into storm water drains and fine shall be imposed on such units	Thiruvananthapuram Corporation	Fine imposed and prosecution initiated		15.04lakhs Fine collected			
2.2.6	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Bio-Composter	50,000	9	Central, State and ULB Share		The components in the DPR are approved by the DPC. Tender proceedings are initiated. Regarding Three layers Bio-composter Bin (for wet waste management in houses) supply order issued and installation of fifty Thousand kitchen bin units is ongoing. DPR Sanctioned amount of State

								and Central share had released rupees 13,45,43,500 (partial).
2.2.7	Biodegradable waste (DPR)	Thiruvananthapuram	Thumboormuzhi aerobic bins	154	11.97	Central, State and ULB Share	May 2020	Agreement Executed. Submit before CE for pq technical bid opening.
2.2.8	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Community biogas	12	2.04	Central, State and ULB Share	May 2020	Awaiting TS from Suchithwa Mission
2.2.9	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Organic Waste Converter	1	0.4	Central, State and ULB Share	May 2020	May be dropped
2.2.10	Biodegradable waste (DPR)	Thiruvananthapuram	Portable biogas	200	0.21	Central, State and ULB Share		Dropped
2.2.11	Biodegradable Waste (DPR)	Thiruvananthapuram Corporation	Portable aero bins	100	1.50	Central, State and ULB Share		Tendered- Issued supply order
2.2.12	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Ring Compost	500	1.25	Central, State and ULB Share		Tender process going on.

2.2.13	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Segregation bins	1,00,000	4	Central, State and ULB Share		Tendered and placed before Purchase Committee. (Deducted by SBM), Included in DPR revision.
2.2.14	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	RRC	7	7	Central, State and ULB Share		Tendered and Agreement Executed.
2.2.15	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Plastic Recycling Unit	1	1.36	Central, State and ULB Share		Decided to expand to RRC for plastic pre processing
2.2.16	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Mobile MRF	5	1.3	Central, State and ULB Share		Design finalised and Tender process going on.
2.2.17	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Electronic Weigh bridge	1	0.1	Central, State and ULB Share		For EOI verified by PWD mechanical division. Agendasend to HSC for demarcating the land for installation.
2.2.18	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Solar electrical cart	25	0.5	Central, State and ULB Share		Specification is finalised, Tender process going on.
2.2.19	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Swaps Shops	4	0.2	Central, State and ULB Share		Quotation Agreement not Executed

2.2.20	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	PET bottle crushing	15	0.05	Central, State and ULB Share		May be dropped. Agenda sent to HSC for review.
2.2.21	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Community level unit Napkin destroyer	102	0.35	Central, State and ULB Share		Word Awarded
2.2.22	(DPR)	Thiruvananthapuram Corporation	Animal Crematorium at Kattela	1	1	Central, State and ULB Share	May 2020	TS Awaiting
2.2.23		Thiruvananthapuram Corporation	Urban Gardening		0.5	"	"	Cancelled
2.2.24		Thiruvananthapuram Corporation	Upgradation of present facilities	42	1.86	"	"	TS received tender process started
2.2.25		Thiruvananthapuram Corporation	Capacity Building & IEC		0.7			Process on going
2.2.26	(DPR)	Thiruvananthapuram Corporation	Viability gap Fund		0.92			VGF 1st phase issued to Harithakarmasena
2.2.27	Prevent entry of Stormwater into sewer line along with KWA	Thiruvananthapuram Corporation	KWA is authorised to prepare and implement proper sewerage lines under Amrut scheme		154	AMRUT	May 202	Closed monitoring is done by health Squad and all Health Inspectors are directed to issue notice and prosecution.

2.2.28	Take steps to prevent the solid wastes in sewer line as reported by KWA	Thiruvanant hapuram Corporation	Squad and Fines Special squad is formed at corporation level. Health Inspectors are authoriszed for regularly monitoring and preventing the waste discharge				May 2020	Employees were placed at various spots during night to prevent dumping of Solid Waste in drains. And fines are being charged. Regarding to waste throwing to public place Corporation collected an amount of Rs 413736/-as fine from 01.01.2020.

07.08.2020

Secretary

STATE WATER MONITORING PROGRAMME (SWMP) 2020

Analysis Report for the month of JULY-2020

Name of River	KARAMANA
Date and Time of Sample	2/7/2020
Method of analysis	

Sl no.	Parameters	SAMPLE ID					
		Peppara	Aruvikkara	Mangatukadavu	Pallathukadavu	Thiruvallom	Moonnattumukku
1	Temperature,degree celsius	26	27	26	27	27	27
2	pH	6.8	6.8	6.7	6.6	6.8	6.8
3	Turbidity,NTU	3.9	6.1	6.4	7.3	10.1	7.4
4	Electrical Conductivity,	52	56	69	125	286	322
5	DO,mg/l	6.5	7.2	4.9	2.9	2.8	0.6
6	BOD,mg/l	0.9	1.7	2.5	4.8	6.6	9
7	NH3N,mg/l	BDL	BDL	BDL	BDL	BDL	BDL
8	Nitrate,mg/l	BDL	BDL	BDL	BDL	BDL	1.3
9	Chloride,mg/l	6	8	11	14	35	43
10	Phosphate,mg/l	BDL	BDL	BDL	BDL	BDL	BDL
11	Total Alkalinity,mg/l	16	14	15	38	89	84
12	Total Hardness,mg/l	16	16	26	45	94	91
13	Calcium,mg/l	12	12	18	35	61	60
14	Magnesium,mg/l	4	4	8	10	33	31
15	Sodium,mg/l	3.9	4.3	5.8	7.4	18.2	27
16	Potassium,mg/l	1.4	1.2	1	2.5	7.2	7.2
17	Boron,mg/l	0	0	0	0	0	0
18	SAR	0.248767	0.274282	0.285674	0.283658	0.466036	0.704609
19	TC,cfu/100ml	300	400	1200	1500	4100	14000
20	FC,cfu/100ml	100	100	600	500	800	5100
21	Faecal Streptococci	ND	ND	ND	ND	ND	ND

Stations in Polluted stretch

☎0471-2303844

e.mail: kspcbdotvpm@gmail.com

KERALASTATE POLLUTION CONTROLBOARD

t l c f k w Ø m \ a e n \ o l c W \ n b { ' W t m À U v
DISTRICT OFFICE, THIRUVANANTHAPURAM

P n Ã m H m ^ o k v , X n c p h \ '] p c w
T. C. 12/96 (4,5), PLAMOODU JN., PATTOM P.O,THIRUVANANTHAPURAM – 695 004

Sn.kn. 12/96 (4,5), ³maqSv PwKvj³,]«w]n.H, Xncph\']pcw þ 695 004

Analysis Report of Drains-April-2020

Sl.No	STATIONS	pH	BOD
1	Pippinmoodu	6.2	75
2	Mudavanmugal,Arattukadavu	5.8	90
3	JagathyPalam	5.6	84
4	Kannettumukku	6.2	66
5	Chadiyara	6.4	87
6	Thamalam	6.1	45
7	Mangottukadavu	6.6	27
8	Thaliyal, Iyiranimuttom	5.6	99
9	Killippalam(Thoppilkadavu)	5.8	96
10	Kuriathy	6.1	81
11	Moonnattumukku	5.7	102

Monthly Progress Report For River Rejuvenation Committee for National Green Mission

Sl No	Activity to be monitored	Timeline	Submission of Progress by State/UT-Compliance Status	Remarks
6.1	Progress Report may be comprised of details along with completion timelines on			
Viii	Adopting good Irrigation practices		Please refer the note shown below	
ix	Protection and management of flood Plain Zones(FPZ)			
xi	Maintaining minimum environmental flow of river			

NOTE 5 Components proposed in Karamana action plan for restoring Karamana River basin. The details are given below

Sl. No	Activity	Implementing agency	Amount in Action Plan(in Lakhs)	Timeline	Remarks
1	Development package for ParvathyPuthanar	KWIL	15000		Work is being implemented by Kerala water ways & Infrastructure Ltd.Periodic maintenance of AkkulamVallakadavu stretch (6 km) was being carried out till the area was declared as a containment zone. In addition,to obtain funding for Phase –I work, DPR for Rs. 52.33 Cr was submitted to KIIFB.
2	Desilting and Development of Amayizhanjanthodu	Irrigation	2500	31/03/21	Work Tendered-and opening date 21.7.2020

3	Improvements to Thekkenekara canal and desilting	Irrigation	500		Estimate submitted for sanction
4	Karimadom Tank improvements ,desilting, sheet piling under preparation and providing fencing	Irrigation	450		Estimate under preparation
5	Development of Karamana River basin	Irrigation	913	31/03/21	12 out of 16 works completed, details are given in below table

Development of Karamana Basin

16 works were arranged/ completed for the development of KaramaRiver using KRSM Fund. The details of works are as shown below. Additionalworks for pollution abatement will be proposed based on requirements.

Sl No	Activities	Status of project	Amount in lakhs	Remarks
1	Renovation of Maruthankuzhy weir and allied works in Killi River	work completed	24	
2	pollution mitigation measures by way of gated flushing arrangement (gated weir) at Myladikkadavu	work completed	22.5	
3	Providing and fixing GI chain link fencing on both sides of various bridges upstream and downstream along Killi River from Pallathukadavu to Jagathy	work completed	70	
4	Providng and fixing GI chain link facilities both sides of bridges from Parachira to Vazhayila	Work completed	81	
5	Scientific Management Project- Pilot Project- Pollution Abatement of ThiruvallomThodu (Branch Karamana River) ThiruvallomSreeParasuramaSwamy Temple	work completed	50	
6	Scientific Management Project- Pilot Project- (KRSM Project) An integrated solid waste Management at Balikadavu of ThiruvallomThodu and beautification of the surroundings of Balikadavu	work completed	47.5	
7	An integrated solid waste management at Balikadavu of Thiruvallomthodu branch of Karamana River including a Bio- gas plant	work completed	88	
8	Scientific Management Project- Pilot Project- (KRSM Project) Bio diversity park and allied protective works on Karamana River bank	work completed	70	
9	Scientific Management Project- Pilot Project- (KRSM Project) Providing GI chain link	work completed	80	

	fencing on both sides of bridge across Karamana River at various locations			
10	An integrated solid waste management construction of bio diversity park along the right bank of Karamana River d/s of Karamana bridge.	Work completed	50	
11	Chain linked fencing on either side of ThiruvallomThodu - 450 x 2mts.	95%	55	Work in progress
12	Bio- diversity park at Karamana II phase - walkway ,gate, fencing, lightening etc.	96%	65	Work in progress
13	Dhobighat in Karamana River at Kaladi	Work completed	15	
14	Check dam in Karamana River at Kaladi	52% completed	65	Work in progress
15	Maintenance of bund road on the left side of Karaman NH road bridge to Azhankal Junction.	Work completed	120	
16	KRSM-Pilot project two years maintenance of existing fencing on bridges across Karamana River	50% completed	10	Work in progress

Sd/-

Executive 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)

Alappuzha

Manimala- KALLOOPARA TO THONDRA

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT- Compliance status	Progress for the month upto 13th August, 2020
1	Ensure 100% treatment of sewage at least in-situ remediation		NA	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	NA
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2021	NA	NA
5	Chief Secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose.		NA	NA

	• Monitoring at State level must take place	Fortnightly Commencing 21.12.2019	NA	NA
6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Monthly (preferably before 20th of every month)	NA	NA
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline	2019-2020 2020-2021	Drains contributing to river pollution were Identified- The dains are seasonal and water quality is above the required limit, no insitue treatment is required Proposal for setting up an FSTP in chenganur is initiated.	As per the latest ground water estimation committe report, all the administrative blocks and panchayaths where the manimala river is draining, fall under safe category and no ground water pollution is noted. Hence no action for

	(III) Status of CETPs Details of Existing CETP and ETP Infrastructure,Gap Analysis, proposed along with completion timeline, No. of industries and complying status. (iv) Status of Solid Waste Management & Details of Processing Facilities Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline (v)Latest water quality ofpolluted river, its tributaries,	- - 2019-2020	Since the area does not contain any industry and so not requireany CETP, this action point is revised. 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 Water quality	regulation is taken

	drains with flow details and ground water quality in the catchment of polluted river;		analysis results of the stretch up to June 2020 is enclosed	
	(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.	2019-2021	Awareness campaignto be initiated	
	(vii) Ground water regulation	2020-2021	No ground water pollution is noted in the area so action yet to be initiated	
	(viii) Adopting good irrigation practices,	2020-2021	adopted	
	(ix) Protection and management of food plain Zones (FPZ),	2020-2021	Action will be initiated	

	(x) Rain water harvesting,	2020-2021	Action will be initiated	
	(xi) Maintaining minimum Environmental flow of river	2020-2021	Action will be initiated	
	(xii) Plantation on both sides of the river	2020-2021	Action will be initiated	
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment	2020-2021	Action will be initiated	
	(xiv) Pre- monsoon cleaning activities	2020-2021	Action taken so far	As part of monsoon preparedness almost 77 number of desilting works had been completed through SDRF and others.Also

				emergency premonsoon cleaning and desilting works were conducted using fund provided by Chief Engineer (I & A) and District Collector Alappuzha

* The time lines provided above are based on the verbal communication with river rejuvenation comity irrigation and LSGI department members of Alappuzha district. Since the work has to be carried out in Pathanamthitta district, the commitments have been received from adjoining local bodies and respective departments in that district to comply with this time line and action plan. Matter has been brought to the attention Regional office Thiruvananthapuram for the necessary action.

Analysis Result of Kalloopara-2020

Parameters	Unit	MONTHS						
		JAN	FEB	MAR	APR	MAY	JUN	JULY
PH	-	6.8	6.9	6.9	7.1	6.6	6.8	6.7
Conductivity	µS/cm	227	246	258	242	295	199	254.24
Turbidity	NTU	0.9	0.9	0.9	0.9	1.1	0.9	1
DO	mg/l	8.1	8.8	6.9	7.8	7.6	7.2	6.9
BOD	mg/l	2.9	3.1	2.7	3.0	3.2	1.8	1.2
COD	mg/l	8.0	12.0	16.0	8.0	16.0	4.0	4
Chloride	mg/l	40.0	50.0	50.0	50.0	60.0	30.0	60
Sulphate	mg/l	9.8	9.9	10.4	9.6	6.3	3.8	1.74
Phosphate	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nitrate Nitrogen	mg/l	0.15	0.18	0.19	0.01	0.09	0.24	0.173
Amm. Nitrogen	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Alkalinity	mg/l	40.0	50.0	50.0	60.0	40.0	60.0	50
T.Hardness	mg/l	40.0	60.0	70.0	70.0	70.0	60.0	80
Ca. Hardness	mg/l	20.0	30.0	40.0	40.0	40.0	40.0	40
Mg. Hardness	mg/l	20.0	30.0	30.0	30.0	30.0	20.0	40
T D S	mg/l	132.4	161.4	182.6	171.6	174.8	136.3	148.2
T F S	mg/l	81.60	93.21	95.82	91.74	96.40	93.42	97.42
Fluoride	mg/l	0.80	0.80	0.80	0.8	0.90	0.52	0.572
Sodium	mg/l	25.1	26.4	27.0	25.06	22.1	17.3	19.6
Potasssium	mg/l	7.2	7.5	7.7	6.4	5.3	2.8	4.2
TSS	mg/l	44.20	46.23	42.80	43.68	47.62	44.60	46.78
Tcoli	No/100ml	500	900	700	500	200	200	500
Fcoli	No/100ml	300	400	300	200	100	100	200
Boron	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TKN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Analysis Result ofThondra -2020

Parameters	Unit	MONTHS						
		JAN	FEB	MAR	APR	MAY	JUN	JULY
PH	-	6.8	6.8	6.8	6.9	6.5	6.9	6.8
Conductivity	µS/cm	217	237.06	280	248	260	202	286.7
Turbidity	NTU	0.8	0.9	0.9	0.7	0.9	0.8	0.9
DO	mg/l	6.1	7.6	8.2	6.9	6.4	6.8	7.2
BOD	mg/l	1.4	2.6	2.1	1.9	1.6	1.8	0.9
COD	mg/l	12.0	20	16.0	16.0	8.0	4.0	8
Chloride	mg/l	40.0	60	70.0	40.0	50.0	40.0	70
Sulphate	mg/l	10.2	10.24	11.0	10.3	8.0	3.2	1.86
Phosphate	mg/l	BDL	BDL	0.1	BDL	BDL	BDL	BDL
Nitrate Nitrogen	mg/l	0.13	0.1363	0.14	0.01	0.02	0.17	0.182
Amm. Nitrogen	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Alkalinity	mg/l	40.0	50	60.0	70.0	50.0	70.0	40
T.Hardness	mg/l	40.0	70	90.0	70.0	60.0	80.0	90
Ca. Hardness	mg/l	20.0	30	50.0	40.0	30.0	30.0	50
Mg. Hardness	mg/l	20.0	40	40.0	30.0	30.0	50.0	40
T D S	mg/l	138.6	167.2	198.4	170.2	173.6	142.4	176.4
T F S	mg/l	107.60	114.82	126.36	108.20	112.40	106.32	110.2
Fluoride	mg/l	0.80	0.8	0.80	0.80	0.90	0.69	0.524
Sodium	mg/l	54.4	27.84	28.5	25.8	24.6	16.7	18.7
Potasssium	mg/l	5.8	6.2	6.8	5.1	4.9	3.2	3.8
TSS	mg/l	31.80	43.2	45.80	42.82	34.20	31.60	36.4
Tcoli	No/100ml	700	1000	1500	800	200	300	400
Fcoli	No/100ml	400	500	800	300	100	200	400
Boron	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TKN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

National Mission for Clean Ganga

Format for Submission of Monthly Progress Report by States/UTs
(Hon ble NGT in the matter of OA No.673/2018 dated 06.12.2019)
Periyar river – Aluva – Eloor-Kalamassery

Sl. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation	31.03.2020	Progressing
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	Dec 2019- 2021	1. Augmentation and Revamping of existing STP at near Adwaitha Ashramam– Aluva Municipality budgeted the amount in 2019-20 & 2020-21 plan project. Waiting for TS from Suchitwa Mission. Also got seriously affected by COVID19 pandemic. 2. Augmentation and Revamping of existing STP at Aluva Market - An amount of 10 lakhs is included in the 2020-21 annual project. Fisheries department should handover the ETP to municipality so that Municipality can revamp and augment the ETP. 3. STP in Kalamassery market – 80% STP construction work completed

			Status Report as per the email 10.08.2020
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2023	Progressing
5	Chief Secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose.	-	NA
	• Monitoring at State level must take place	-	NA
6	Progress report may be furnished by the State/UTs to • Secretary, Ministry of Jal Shakti • Member Secretary, CPCB	-	NA

6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment.	2020 2020	i) Kadungallur Panchayath • inspection conducted by health inspectors, Asha workers, panchayth officials and removed all pipe lines leading to common drain • Biogas plant, compost kit etc issued to house holds for bio degradable wastes. • MCF started in coordination with suchitwa mission. Report as per the letter from Panchayth dated 16.07.2020 ii). Choornikkara Panchayath– Previous status- Only residential apartments and houses located near the riverbank from which no discharge is found. But, there are discharges to drains in other area of panchayath. Strict measures taken against them. Panchayath identified 8 spots for Fixing CCTV camera. 24 lakhs rupees allotted for this project. Work awarded to Steel Industries Kerala Limited. – Details of present status not received iii). Aluva Municipality 1. Constituted Squad for protection of River. Identified hotels, shops etc who are discharging

		In progress 2020 3months	sewage to river and action being taken against the violators. Licence renewed only for the shops/hotels who are provided waste disposal facility. Conducted enquiry in 60 establishments including hotels, flats etc and notices being issued. meeting was conducted with owners of establishments/commercial complexes/flats/houses/hotels etc. and decided that the license will not issue to those were not constructed the Septic tank and soak pit and also The engineering department Will not issue new permit without septic tank and soak pit under KMBR rule. Report as per Municipality letter dated 06.08.2020 iv). Eloor Municipality 2. Routine inspection is going on to ensure that liquid wastes are not disposed into the drains-Eloor municipality. Report as per Municipality letter dated 06.08.2020 v). Kalamassery Municipality 3. Conducting survey for identification of establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain is under process in

			Kalamassery municipality vi). Kochi Corporation 4. Study for identification of pollution sources at Edappallythodu is reported by Kochi Corporation -Will be undertaken together with the civil work 5. Periodical inspection in the flats, hotels, shops located along the river is reported by Kochi Corporation- inspection conducted and issued notice to the violators. 6. Fencing the banks of the river to prevent dumping/throwing of wastes into the river Plan fund 20-21 proposed for the work by Kochi Corporation. Status report as per letter No.MOE2/15202/19 dated 15.07.2020
	II. <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline	Dec-2019 2021 Dec 2019 2022	(II) 1. Augmentation and Revamping of existing STP at near AdwaithaAshramam .DPR submitted to Suchitwa missionWaiting for TS from Suchitwa Mission 2. Augmentation and Revamping of exisiting STP at Aluva Market - Fisheries department not handover the ETP to municipality. Project prepared for new ETP estimated 10lakhs and submitted

			to DPC for approval. 3. STP in Kalamaserry market – 80% STP construction work completed
	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.	Sep 2019 2021	• (III)No existing CETP. • DIC, Ernakulam had submitted proposal for conducting study and preparation of DPR before the directorate of Industries. Reply form Directorate awaited.
	(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline	March 2021 In progress 2020	(iv) 1. Construction of retaining wall with HDPE liner at Kalamassery dumping yard in order to prevent the leachate discharge from the yard to ThoombungalThodu–Work under progress 2. Identification of site is in progress forinstallation of modern abattoirs including poultry and meat rendering plants in Kalamassery municipality—Not yet started. 3. Installation of modern abattoirs in Aluvamuncipality-–TS for the project obtained on

		2020	17.09.2016 and construction of building completed. Approval from Suchitwa mission pending for further action.
	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	Mar-2021	(v)Daily sampling from 4 location and sample taken from an additional point twice in a month.Monthly river sampling from 12 discharge points from industries.- Sampling ongoing by KSPCB
	(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.		(vi) 1. Aluva Municipality • Installation of cameras at the waste dumping spots – Aluva municipality formed squad to regularly monitor the issue. Camera installed by various residence associations. Action to be taken by municipality to install additional cameras. 2. Eloor Municipality For the installation of camera at various sites, project (356/21) has been made and Rs. 8,00,000 has been earmarked. Contract for installation of camera has given to Keltron and joint inspection by the Keltron and Eloor Municipality has been done to fix the various sites

		In progress	where camera has to be installed. But Keltron has not installed the cameras due to Covid-19 Pandemic restrictions (as they informed)-Eloor municipality 3. Kalamassery municipality. • Biomedical wastes handed over to image by institutions. • E-waste to clean Kerala Company. • Plastic shredding unit is operating; establishment of second unit is under discussion in Kalamassery municipality. 4. KadungallurPanchayath - The action being taken for solid waste disposal. – No progress in installation of CCTV cameras 5. River monitoring being done by KSPCB. Analysis report submitted. Identification of drains completed by KSPCB.
	(vii)Ground water regulation (viii) Adopting good irrigation practices, (ix) Protection and management of food plain Zones (FPZ), (x) Rain water harvesting, (xi) Maintaining minimum	Long term measure	Attached below

	Environmental flow of river (xii) Plantation on both sides of the river (xiii) Setting up biodiversity parks on flood plains by removing encroachment		The long term measures such as construction of dyke, ring road, etc at the industrial belt, installation of common pipeline for industrial discharge at downstream of Pathalam bund and maintaining minimum flow is coming under the action of Irrigation department. Irrigation department had not submitted any action taken report till date.

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR - JULY 2020

Sampling point: VETTUKADAVU

Sl. No	Parameter	Unit	7/5/2020	7/25/2020
1	Temp	°c	29.6	30.7
2	pH		6.5	6.7
3	Conductivity	µS/cm	187	144
4	Turbidity	NTU	3	3
5	Chlorides	mg/l	46	34
6	Hardness	"	37	28
7	D.O.	"	3.2	3.8
8	Calcium	"	8.8	6
9	Magnesium	"	3.645	3.159
10	Ammoniacal Ntrogen	"	0.312	0.326
11	Phosphate	"	BDL	BDL
12	Total alkalinity	"	15	15
13	BOD	"	3.6	2.5
14	Nitrate	"	0.699	0.584
15	TC	cfu/100ml	3200	2600
16	FC	"	900	1120

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR - JULY 2020
Sampling point: PATHALAM

Sl. No	Parameter	Unit	05.07.2020	25.07.2020
1	**Temp**	°c	29.7	30.7
2	**pH**		6.7	6.8
3	**Conductivity**	µs/cm	65	62
4	**Turbidity**	NTU	2	4
5	**Chlorides**	mg/l	18	15
6	**Hardness**	"	11	11
7	**D.O.**	"	4.2	4.1
8	**Calcium**	"	2	2.4
9	**Magnesium**	"	1.458	1.215
10	**Ammoniacal Ntrogen**	"	0.052	0.162
11	**Phosphate**	"	BDL	BDL
12	**Total alkalinity**	"	15	15

13	**BOD**	"	2.6	2.3
14	**Nitrate**	"	0.42	0.328
15	TC	CFU/100ml	1200	2000
16	FC	"	300	600

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR - JULY 2020
Sampling point: PUTHALAM

Sl. No	Parameter	Unit	05.07.2020	25.07.2020
1	**Temp**	**ºc**	29.7	30.6
2	**pH**		6.6	6.4
3	**Conductivity**	**µS**	130	96
4	**Turbidity**	**NTU**	1	2
5	**Chlorides**	**mg/l**	34	23
6	**Hardness**	**"**	28	18
7	**D.O.**	**"**	3.7	3.6
8	**Calcium**	**"**	6	4
9	**Magnesium**	**"**	3.159	1.944
10	**Ammoniacal Ntrogen**	**"**	0.182	0.317
11	**Phosphate**	**"**	BDL	BDL
12	**Total alkalinity**	**"**	20	20
13	**BOD**	**"**	2.9	2.6
14	**Nitrate**	**"**	0.892	0.72
15	**TC**	CFU/100ml	400	800
16	FC	"	100	560

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR - JULY 2020
Sampling point: MANJUMMAL BUND

Sl.NO	Parameter	Unit	05.07.2020	25.07.2020
1	**Temp**	**ºc**	29.7	30.8
2	**pH**		6.4	6.6
3	**Conductivity**	**µs**	130	114
4	**Turbidity**	**NTU**	2	2
5	**Chlorides**	**mg/l**	34	26
6	**Hardness**	**"**	28	20
7	**D.O.**	**"**	3	3.1

8	**Calcium**	**"**	6	4
9	**Magnesium**	**"**	3.159	2.43
10	**Ammoniacal Ntrogen**	**"**	0.11	0.148
11	**Phosphate**	**"**	BDL	BDL
12	**Total alkalinity**	**"**	15	15
13	**BOD**	**"**	3.6	2.9
14	**Nitrate**	mg/l	0.682	0.52
15	**TC**	CFU/100ml	130	1240
16	**FC**	"	**50**	**400**

KERALA STATE POLLUTION CONTROL BOARD
ENVIRONMENTAL SURVEILLANCE CENTRE, ELOOR
ANALYSIS REPORT OF RIVER PERIYAR - JULY 2020
Sampling point: PATHALAM BUND

Sl.NO	Parameter	Unit	05.07.2020	25.07.2020
1	**Temp**	**ºc**	29.7	30.9
2	**pH**		6.7	6.6
3	**Conductivity**	**µs**	176	401
4	**Turbidity**	**NTU**	2	3
5	**Chlorides**	**mg/l**	48	110
6	**Hardness**	**"**	36	84
7	**D.O.**	**"**	3.5	3.7
8	**Calcium**	**"**	8	18.4
9	**Magnesium**	**"**	3.888	9.234
10	**Ammoniacal Ntrogen**	**"**	0.132	0.152
11	**Phosphate**	**"**	BDL	BDL
12	**Total alkalinity**	**"**	15	15
13	**BOD**	**"**	3.2	2.4
14	**Nitrate**	mg/l	0.424	0.336
15	**TC**	CFU/100ml	780	1600
16	FC	"	200	600

FORMAT -4

STATUS OF ACTION PLAN - PERIYAR- IRRIGATION DEPARTMENT- AUGUST, 2020

Activity	Time	Present status of implementation
1) Identification of natural drains/thodu reaching river Periyar and cleaning of weeds, grasses etc	2 years	For the time being , Identified some drains and thodu reaching river Periyar river . Detailed investigation is needed to identify all drains.
2) Clearing of weeds, grasses at the river bank in order to ensure the smooth flow of water	3 years	Some works done under SDRF completed. Balance work are progressing.
3) Maintaining of Minimum flow in river during lean period and periodical operation of Regulators at River in-order to maintain minimum flow.		Shutter operation are periodically done for maintaining minimum flow.
4) Installation of common discharge pipe line at downstream of Pathalam Regulator Bridge	3 Years	NIL

5) Construction of Surveillance road on the bank of Periyar Pathalam Lock cum Regulator at the industrial area in Edayar in Eloor Municipality for a cost of 20 Crores	4 years	Investigation work is being done . Estimate will be submitted soon.
NGT- Rejuvenation of Periyar-Irrigation Investigation Subdivision Aluva-Desilting of Aaattipuzha thodu in Karumalloor Panchayath	3 months	Estimate submitted for Financial Sanction
NGT-Rejuvenation of Periyar river -Irrigation Investigation Subdivision Aluva-Desilting of Muttar river in U/S of Manjummal RCB	3 months	Estimate submitted for Financial Sanction
NGT Reguvination of Periyar Irrigation Investigation Sub division Aluva -Desilting of Periyar River near Eloor ferry in Varappuzha	3 months	Estimate submitted for Financial Sanction

EXECUTIVE ENGINEER

Sl No	Activity	Implementing agency	Action taken
1	Procurement of sewer cleaning machines and equipment maintenance	Aluva Municipality	Cleaning machines purchased and completed cleaning of 110 drains.
2	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	Construction under progress
3	Installation of plastic shredding unit	Kalamassery Municipality	One unit is under operation and installation of one more unit under discussion- reported as per email dated 10.08.2020
4	Constitution of squads for night surveillance for finding the unauthorized dumping of sewage at NAD wet lands Klaamssery	Kalamassery Municipality Police department	Status not reported
5	Installation of modern abattoirs including poultry and meat rendering plants.	Kalamassery Municipality	Site not being identified till date
6	Installation of cameras at the waste dumping spots	KalamasseryMunicipality	Status not reported
7	Identification of natural drains/thodu reaching river Periyar and cleaning of weeds, grasses etc	Irrigation department	Status not reported
8	Clearing of weeds, grasses at the river bank inorder to ensure the smooth flow of water	Irrigation department	Status not reported
9	Maintaining of Minimum flow in river during lean period and periodical operation of Regulators at River in-order to maintain minimum flow.	Irrigation department	Status not reported
10	Construction of internal roads and proper drainage in industrial estate	Industries department	90% completed
11	Installation of common discharge pipe line at downstream of Pathalam Regulator Bridge	Industries department Irrigation department	Industries department had to initiate the action

12	Installation of Night vision surveillance cameras at the River Bank side	KSPCB	Proposal submitted to Head Office
13	Periodical Monitoring of Eloor, Edayar, Kalamassery Industrial belts	KSPCB	Progressing
14	Monitoring of quality of water at various intake point	Kerala Water Authority	Status not submitted
15	Installation of additional continuous online River water monitoring station	KSPCB	Proposal submitted

LONG TERM MEASURES

Sl No	Activity	Implementing agency	Action taken
1	Construction of walkway, ring roads etc at the Periyar River bank at industrial belt.	Irrigation department	Status report not submitted by Irrigation department

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)

Bharathapuzha at Pattambi

Status reported as on 31st July 2020

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	Due to Covid 19 issues the project under pending
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	Not proposed	Not Applicable
3	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)	Due to Covid 19 issues the project under pending
5	Chief Secretaries may set up appropriate monitoring mechanism at state level ● 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
	● Monitoring at State level must	Applicable at State level	Not Applicable

	take place		
6	Progress report may be furnished by the State/UTs to ● Secretary,Ministry of Jal Shakti ● Member Secretary,CPCB	Applicable at State level	Not Applicable
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline (III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure,Gap Analysis, Proposed along with completion timeline, No. of industries and complying status. (iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure,Gap Analysis,	Primary STP (oil and grease trap with grit chamber)- March 2021 Not Proposed Not proposed MSW treatment Plant – March 2021	Due to Covid 19 issues the project under pending Not Applicable Not Applicable Construction work for the MSW treatment plant was started on

	Proposed along with completion timeline		25/05/2020 and work on progress
	(v)Latest water quality ofpolluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	March 2021	Water quality monitoring of polluted river stretch, two additional points, were completed during the period of July 2020.
	(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.	Implemented by January 2020	Management of dry wastes were achieved through the MCF and RCF facilities, BMW by CBWTDF, E-Waste by authorised collection agencies.
	(vii)Ground water regulation	No specific proposal	Not Applicable
	(viii) Adopting good irrigation practices,	No specific proposal	Not Applicable
	(ix) Protection and management of food plain Zones (FPZ),	March 2021	Project preparation on-going.

	x) Rain water harvesting,	No specific proposal	Not Applicable
	(xi) Maintaining minimum Environmental flow of river	March 2021	Project preparation on-going.
	(xii) Plantation on both sides of the river	No specific proposal	Not applicable
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment	No specific proposal	Not applicable

POLLUTED RIVER STRETCH MONITORING PROGRAMME
DATA SHEET JULY 2020

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)	07.07.2020										
		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_2S		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	31 m^3/s										
12	Major polluting source	Industrial effluent		MSW	PW		None √		Other			
13	Uses of water in downstream	Irrigation		Drinking water source √			Fishing		Domestic			
		Organized water source		Cultivation			Bathing Ghat		Others			

Sl.No	Determinant	Value
1	Temperature, ^0C	26.5
2	pH	6.94
3	Conductivity, µmhos/cm	144
4	Turbidity, NTU	BDL
5	Phenolphthalein Alkalinity, as $CaCO_3$ mg/l	BDL
6	Total Alkalinity, as $CaCO_3$ mg/l	29.35
7	Chloride, mg/l	18.62
8	COD, mg/l	8
9	TKN, mg/l	BDL
10	Ammoniacal-N, mg/l	BDL
11	Hardness, as $CaCO_3$ mg/l	44
12	Calcium, as $CaCO_3$ mg/l	28
13	Magnesium as $CaCO_3$, mg/l	16
14	Sulphate, mg/l	8.5
15	Sodium, mg/l	10.9
16	Total Dissolved Solids, mg/l	89
17	Total Fixed Solids, mg/l	63
18	Total Suspended Solids, mg/l	BDL
19	Phosphate, mg/l	0.083
20	Boron, mg/l	BDL
21	Potassium, mg/l	2.36
22	BOD, mg/l	1.2
23	Fluoride, mg/l	0.341
24	Dissolved Oxygen, mg/l	6.7
25	Nitrate-N, mg/l	1.77
26	Total Coliform, MPN/100 ml	120
27	Fecal Coliform, MPN/100 ml	80
28	Fecal Streptococci MPN/100 ml	40
29	SAR	4.98

POLLUTED RIVER STRETCH MONITORING PROGRAMME
DATA SHEET JULY 2020

Veliamkallu regulator (D/S of NWMP-2)

Station Name		BHARATHAPUZHA AT PATTAMBI																						
Type of Water body		RIVER																						
Completed by		DO, PALAKKAD																						
Agency		Kerala State Pollution Control Board																						
1	Station Code	2	3	3	2																			
2	Date and time of sample taken (DD/MM/YY, HH/MM)	07.07.2020																						
		1	2	:	5	5																		
3	Weather	Cloudy			Clear				Windy √				Raining											
4	Approximate depth of main stream	< 50 cm			50 – 100 cm √				>100 cm				Flood											
5	Color & Intensity	Clear √			Turbid				Green				Brown											
		1 = Light			2 = Moderate √				3 = High															
6	Odour	None √			Fishy				H_2S				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	120 m^3/s																						
12	Major polluting source	Industrial effluent			MSW				PW				None √				Other							
13	Uses of water in downstream	Irrigation			Drinking water source √								Fishing				Domestic							
		Organized water source							Cultivation				Bathing Ghat				Others							

Sl.No	Determinant	Value
1	Temperature, ^0C	26
2	pH	6.92
3	Conductivity, µmhos/cm	177.3
4	Turbidity, NTU	BDL
5	Phenolphthalein Alkalinity, as $CaCO_3$ mg/l	BDL
6	Total Alkalinity, as $CaCO_3$ mg/l	39.6
7	Chloride, mg/l	20.58
8	COD, mg/l	8
9	TKN, mg/l	0.001
10	Ammoniacal-N, mg/l	BDL
11	Hardness, as $CaCO_3$ mg/l	60
12	Calcium, as $CaCO_3$ mg/l	32
13	Magnesium as $CaCO_3$, mg/l	28
14	Sulphate, mg/l	12.28
15	Sodium, mg/l	10.6
16	Total Dissolved Solids, mg/l	117
17	Total Fixed Solids, mg/l	86
18	Total Suspended Solids, mg/l	BDL
19	Phosphate, mg/l	0.096
20	Boron, mg/l	BDL
21	Potassium, mg/l	2.21
22	BOD, mg/l	1.1
23	Fluoride, mg/l	0.35
24	Dissolved Oxygen, mg/l	6.9
25	Nitrate-N, mg/l	1.9
26	Total Coliform, MPN/100 ml	200
27	Fecal Coliform, MPN/100 ml	40
28	Fecal Streptococci MPN/100 ml	20

National Mission for Clean Ganga

Format for Submission of Monthly Progress Report by States/UTs

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

RIVER BAVANI AT ELECHIVAZHI

Status reported as on 31st July 2020

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
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	Not proposed	Not Applicable
3	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
4	Chief Secretaries may set up appropriate monitoring mechanism at state level • 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
5	• Monitoring at State level must take place	Applicable at State level	Not Applicable

6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Applicable at State level	Not Applicable
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline (III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure,Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.	Drains contributing pollution to the River were not identified Not Proposed Not proposed	Not Applicable Not Applicable Not Applicable

	(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline	Dec 2020	Dry waste- Material Collection Facility 80% completed Wet waste- 100% Managed at source level
	(v)Latest water quality ofpolluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	March 2021	Water quality monitoring of polluted river stretch and three additional points were completed up to July2020
	(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.	Implemented by January 2020	Not applicable
	(vii)Ground water regulation	No specific proposal	Not applicable
	(viii) Adopting good irrigation practices,	No specific proposal	Not applicable
	(ix) Protection and management of food plain Zones (FPZ),	March 2021	Project Preparation is going on

	(x) Rain water harvesting,	No specific proposal	Not applicable
	(xi) Maintaining minimum Environmental flow of river	March 2021	Project Preparation is going on
	(xii) Plantation on both sides of the river	No specific proposal	Not applicable
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment	No specific proposal	Not applicable

POLLUTED RIVER STRETCH MONITORING PROGRAMME
DATA SHEET JULY 2020

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)	02.07.2020																	
		1	2	:	1	5													
3	Weather	Cloudy			Clear √				Windy				Raining						
4	Approximate depth of main stream	< 50 cm √			50 – 100 cm				>100 cm				Flood						
5	Color & Intensity	Clear √			Turbid				Green				Brown						
		1 = Light √			2 = Moderate				3 = High										
6	Odour	None √			Fishy				H2S				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	93.6 m^3/s																	
12	Major polluting source	Industrial effluent			MSW			PW	None √				Other						
13	Uses of water in downstream	Irrigation √			Drinking water source √							Fishing				Domestic √			
		Organized water source						Cultivation	Bathing Ghat				Others						

Sl.No	Determinant	Value
1	Temperature, ^0C	24
2	pH	7.2
3	Conductivity, µmhos/cm	48
4	Turbidity, NTU	BDL
5	Phenolphthalein Alkalinity, as $CaCO_3$ mg/l	BDL
6	Total Alkalinity, as $CaCO_3$ mg/l	16
7	Chloride, mg/l	4.9
8	COD, mg/l	4
9	TKN, mg/l	BDL
10	Ammoniacal-N, mg/l	BDL
11	Hardness, as $CaCO_3$ mg/l	18
12	Calcium, as $CaCO_3$ mg/l	10
13	Magnesium as $CaCO_3$, mg/l	8
14	Sulphate, mg/l	BDL
15	Sodium, mg/l	208
16	Total Dissolved Solids, mg/l	28
17	Total Fixed Solids, mg/l	20
18	Total Suspended Solids, mg/l	BDL
19	Phosphate, mg/l	0.025
20	Boron, mg/l	BDL
21	Potassium, mg/l	0.72
22	BOD, mg/l	0.66
23	Fluoride, mg/l	0.381
24	Dissolved Oxygen, mg/l	7.1
25	Nitrate-N, mg/l	0.56
26	Total Coliform, MPN/100 ml	140
27	Fecal Coliform, MPN/100 ml	40
28	Fecal Streptococci MPN/100 ml	absent
29	SAR	3.94

POLLUTED RIVER STRETCH MONITORING PROGRAMME
DATA SHEET JULY 2020

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)	02.07.2020													
		1	1	:	1	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				H2S			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	100.8 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	Determinant	Value
1	Temperature, ^0C	25
2	pH	7.09
3	Conductivity, µmhos/cm	69.27
4	Turbidity, NTU	BDL
5	Phenolphthalein Alkalinity, as $CaCO_3$ mg/l	BDL
6	Total Alkalinity, as $CaCO_3$ mg/l	22
7	Chloride, mg/l	8
8	COD, mg/l	4
9	TKN, mg/l	BDL
10	Ammoniacal-N, mg/l	BDL
11	Hardness, as $CaCO_3$ mg/l	23
12	Calcium, as $CaCO_3$ mg/l	14
13	Magnesium as $CaCO_3$, mg/l	9
14	Sulphate, mg/l	0.87
15	Sodium, mg/l	4.6
16	Total Dissolved Solids, mg/l	40
17	Total Fixed Solids, mg/l	29
18	Total Suspended Solids, mg/l	BDL
19	Phosphate, mg/l	0.07
20	Boron, mg/l	BDL
21	Potassium, mg/l	1.1
22	BOD, mg/l	0.66
23	Fluoride, mg/l	0.412
24	Dissolved Oxygen, mg/l	6.9
25	Nitrate-N, mg/l	0.05
26	Total Coliform, MPN/100 ml	160
27	Fecal Coliform, MPN/100 ml	40
28	Fecal Streptococci MPN/100 ml	absent
29	SAR	4.47

POLLUTED RIVER STRETCH MONITORING PROGRAMME
DATA SHEET JULY 2020

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)	02.07.2020													
		1	2	:	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		H2S		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	135 m^3/s									
12	Major polluting source	Industrial effluent		MSW	PW	None √		Other			
13	Uses of water in downstream	Irrigation √		Drinking water source √			Fishing		Domestic √		
		Organized water source			Cultivation	Bathing Ghat			Others		

Sl.No	Determinant	Value
1	Temperature, ^0C	25
2	pH	6.93
3	Conductivity, µmhos/cm	160
4	Turbidity, NTU	BDL
5	Phenolphthalein Alkalinity, as $CaCO_3$ mg/l	BDL
6	Total Alkalinity, as $CaCO_3$ mg/l	35
7	Chloride, mg/l	21.56
8	COD, mg/l	4
9	TKN, mg/l	0.002
10	Ammoniacal-N, mg/l	BDL
11	Hardness, as $CaCO_3$ mg/l	50
12	Calcium, as $CaCO_3$ mg/l	24
13	Magnesium as $CaCO_3$, mg/l	26
14	Sulphate, mg/l	14
15	Sodium, mg/l	11.5
16	Total Dissolved Solids, mg/l	100
17	Total Fixed Solids, mg/l	73
18	Total Suspended Solids, mg/l	BDL
19	Phosphate, mg/l	0.08
20	Boron, mg/l	BDL
21	Potassium, mg/l	2.35
22	BOD, mg/l	1.2
23	Fluoride, mg/l	0.43
24	Dissolved Oxygen, mg/l	6.7
25	Nitrate-N, mg/l	0.27
26	Total Coliform, MPN/100 ml	220
27	Fecal Coliform, MPN/100 ml	60
28	Fecal Streptococci MPN/100 ml	absent
28	SAR	4.79

NATIONAL WATER QUALITY MONITORING PROGRAMME
(NWMP -6 DATA-JULY 2020)

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)	02.07.2020									
		1	2	:	5	0					
3	Weather	Cloudy		Clear √		Windy		Raining			
4	Approximate depth of main stream	< 50 cm √		50 – 100 cm		>100 cm		Flood			
5	Color & Intensity	Clear √		Turbid		Green		Brown			
		1 = Light √		2 = Moderate		3 = High					
6	Odour	None √		Fishy		H2S		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	105 m^3/s									
12	Major polluting source	Industrial effluent		MSW	PW	None √		Other			
13	Uses of water in downstream	Irrigation √		Drinking water source √			Fishing		Domestic		
		Organized water source			Cultivation	Bathing Ghat			Others		

Sl.No	Determinant	Value
1	Temperature, ^0C	25
2	pH	7.81
3	Conductivity, µmhos/cm	95
4	Turbidity, NTU	BDL
5	Phenolphthalein Alkalinity, as $CaCO_3$ mg/l	BDL
6	Total Alkalinity, as $CaCO_3$ mg/l	35
7	Chloride, mg/l	6.86
8	COD, mg/l	4
9	TKN, mg/l	0.001
10	Ammoniacal-N, mg/l	BDL
11	Hardness, as $CaCO_3$ mg/l	42
12	Calcium, as $CaCO_3$ mg/l	24
13	Magnesium as $CaCO_3$, mg/l	18
14	Sulphate, mg/l	BDL
15	Sodium, mg/l	3.8
16	Total Dissolved Solids, mg/l	55
17	Total Fixed Solids, mg/l	39
18	Total Suspended Solids, mg/l	BDL
19	Phosphate, mg/l	0.026
20	Boron, mg/l	BDL
21	Potassium, mg/l	0.91
22	BOD, mg/l	0.66
23	Fluoride, mg/l	0.412
24	Dissolved Oxygen, mg/l	6.9
25	Nitrate-N, mg/l	1.55
26	Total Coliform, MPN/100 ml	180
27	Fecal Coliform, MPN/100 ml	60
28	Fecal streptococci , MPN/100 ml	absent
29	SAR	3.01

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)

MPR OF TIRUR & KADALUNDY

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	31.03.202	
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.202	
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.202	
	Chief Secretaries may set up appropriate monitoring mechanism at state level • 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 22.01.2020	
	• Monitoring at State level must take place	Fortnightly Commencing 21.12.2019	
6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Monthly (preferably before 20th of every month)	

	1. KADALUNDI RIVER		
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment.		Last updated report submitted was on 19 june 2020 Identified 3 drains on 10.12.2018
	(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline	March 2020	**Kadalundi river :** Malappuram municipality – 30KLD – Finished - Maintenance works under progress
	(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.		Nil
	(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline		Disposal using sanitary landfills , composting , operations, MRF, MCF etc

	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		Attached as Annexure I (analysis report during the month of july 2020)
	(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.		Biomedical waste disposal through IMAGE Plastic waste through municipality undertaking Decentralized waste processing through biogas , compost plants etc.
	(vii)Ground water regulation		
	(viii) Adopting good irrigation practices,		Permission for extraction of ground water by local body.
	(ix) Protection and management of food plain Zones (FPZ),		Effluent from industrial units utilized after treatment
	(x) Rain water harvesting,		FPZ are identified
	(xi)Maintaining minimum Environmental flow of river		Enforced through local bodies
			Dumping of SW on river banks are controlled . River rejuvenation measures taken.
	(xii) Plantation on both sides of the river		
	(xiii) Setting up biodiversity parks on flood plains by		Initiated

	removing encroachment		Initiated

2.TIRUR - PONNANI RIVER

6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline (III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure,Gap Analysis, Proposed along with completion timeline, No. of industries and complying status. (iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure,Gap Analysis, Proposed along		Last updated report submitted was on 19 june 2020 Total 17 drains. Out of which 9 were additionally identified on 11.07.2019. **Tirur river :** Market -45KLD –finished Bus stand -50 KLD- under construction (Expected time period was june 2020, but works slowed down due to COVID 19.) Nil Disposal using sanitary landfills , composting , operations, MRF, MCF ect.

	with completion timeline		
	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		Attached as Annexure II (analysis report during the month of july 2020)
	(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.		Biomedical waste disposal through IMAGE Plastic waste through municipality undertaking Decentralized waste processing through biogas , compost plants etc.
	(vii)Ground water regulation		Permission for extraction of ground water by local body.
	(viii) Adopting good irrigation practices,		Effluent from industrial units utilized after treatment
	(ix) Protection and management of food plain Zones (FPZ),		FPZ are identified
	(x) Rain water harvesting,		
	(xi)Maintaining minimum Environmental flow of river		Enforced through local bodies Dumping of SW on river banks are controlled . River rejuvenation measures taken.
	(xii) Plantation on both sides of the river		Initiated
	(xiii) Setting up biodiversity		

	parks on flood plains by removing encroachment		Initiated

ANNEXURE I

ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN KADALUNDY RIVER –JULY 2020 ALONG HAJIYARPALLY

Sl .No	Name of point	PARAMETERS				
		P^H	DO (mg/l)	BOD(mg/l)	COD(mg/l)	FC (cfu/100ml)
1	Valiyangadi drain	7.6	6.2	0.6	2.4	28
2	Valiyangadi bypass drain	6.9	4.9	0.8	3.2	32
3	Valiyathod drain	7.4	6.8	1.2	4.8	36
4	Hajiyarpally	7.3	7	0.3	1.6	40

ANNEXURE II

ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN TIRUR RIVER –JULY 2020

Sl No	Name of point	PARAMETERS				
		P^H	DO(mg/l)	BOD(mg/l)	COD(mg/l)	FC(cfu/10
1	Drain near Tirur Railway station	6.9	4.4	0.4	1.6	46
2	Thazhepalam drain	7.1	5.5	1.4	6	44
3	Naduvilangadi drain (old ponnani thodu)	7.3	3.6	0.4	1.6	84
4	Annassery darin	6.8	7.5	1	4	56
5	Canal at CV Land	7.2	2.6	0.6	2.8	60
6	Canal at Mangalam thuruth	6.6	2.3	0.6	1.6	62
7	Canal at Pulloni	7.2	2.3	1.2	5.1	36
8	Drain near Mangattiri bridge	5.9	5.3	1.1	4	72
9	Drain near Ettirikkadavu bridge	7.8	4.7	0.8	3.6	80
10	Epothingal	6.3	3.2	0.3	1.2	44
11	Asarikkadav	6.9	3.8	0.8	4	48
12	Kandanath kadav	5.4	4.8	1.6	6.8	28
13	Pancharamoola	5.8	4.2	1	4.4	36
14	Kakadav	5.6	3.8	1.1	3.6	32
15	Kanathkadav	7.8	6.7	1.2	4.8	72
16	Drain near tirur railway station	7.7	4	0.8	3.6	40
17	Payyanangadi(kadayithodu)	7.4	3.9	0.8	3.2	72

Kerala State Pollution Control Board DO Kasaragod

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)

MOGRAL RIVER – JULY 2020

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status	Progress for the month of July, 2020
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 • Specifying accountability of nodal authorities not below the Secretary level			

	• Chief Secretaries may have an accountable person attached in their office for this purpose.			
	• Monitoring at State level must take place			
6	Progress report may be furnished by the State/UTs to • Secretary, Ministry of Jal Shakti • Member Secretary, CPCB	Monthly (preferably before 20th of every month)		

6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline (III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.	Dumping plastics and wastes by public from Mogral NH bridge in Mogral Puthur Grama Panchayath.	Fencing work on both sides of Mogral NH Bridge at Mogral Kadavath proposed by Irrigation Department, Kasaragod. Mostly rural area. No separate STP provided. Mostly scattered houses, individual septic tank soak pit system provided. No CETP	DPR submitted to the CE (I&A) on 27.11.2019 for FS approval. Estimate submitted to Chief Engineer through PRICE ID: 2019/10715/IA dated 15.11.2019 for approval.

	(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline (v) Latest water quality of polluted river,	December 2020	**<u>Mogral Puthur Grama Panchayath -</u>** MCF provided. Waste being collected through Haritha Karma Sena. Installation of camera for waste dumping monitoring. **<u>Madhur Grama Panchayath</u>** – MCF located at panchayath premises. Before lockdown, Haritha Karma Sena used to collect solid waste. **<u>Chengala Grama Panchayath -</u>** MCF is proposed and site identified.	Since Pandemic works are partially affected. Proposal being prepared with an estimated expenditure of Rs. 2 Lakhs. Due to Pandemic lockdown works are interrupted.

	its tributaries, drains with flow details and ground water quality in the catchment of polluted river; (vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc. (vii)Ground water regulation (viii) Adopting good irrigation practices, (ix) Protection and management of food plain Zones (FPZ),		Attached the analysis report of water quality for the month of July 2020. Also attached the analysis report of the drain joining the Mogral river. Hotel waste is disposed through pig farms. Fencing work on both sides of Mogral NH Bridge at Mogral Kadavath proposed by Irrigation Department, Kasaragod.	DPR submitted to the CE (I&A) on 27.11.2019 for FS approval. Estimate submitted to Chief Engineer through PRICE ID: 2019/10715/IA dated 15.11.2019 for approval.

	(x) Rain water harvesting, (xi)Maintaining minimum Environmental flow of river		The river (stream) is very short (total length 34 km) and seasonal. The river goes dry during the summer in the upstream and sea water inflow in tail ends. Mogral bridge is just downstream of the NWMP sampling station. Within 5 km from the point of sampling the width of the river reduces from 70 - 80 m to 20 m on the upstream and within the next 2 km upstream it reduces to just 8 m. The river mouth up	The water level in Mogral River has increased with high flow in the month of July 2020.

	(xii) Plantation on both sides of the river (xiii) Setting up biodiversity parks on flood plains by removing encroachment		to a length of few kilo meters gets water mainly due to tides. The NWMP sampling station is just half kilometres from the sea shore. Thick vegetation present on the banks. Coconut and arecanut farms are present on both sides of the river.	

Sd/-

The Environmental Engineer

Kerala State Pollution Control Board, DO Kasaragod			
ANALYSIS REPORT - JULY 2020			
Source of Sample		Drain joining Mogral river at Kadavath	Upstream of the same drain joining Mogral river near Kottakkunnu
Date of Sampling		24.07.2020	24.07.2020
Latitude		12°33'36.5"N	12˚33'31.7" N
Longitude		74°57'29.6"E	74˚57'47.7" E
Distance from the river		114.07m	582.34m
Sl No.	Parameters	Sample 1	Sample 2
1	Temperaure,˚C	29	28
2	pH	6.6	6.4
3	Conductivity, µmhos/cm	285	95
4	Turbidity,NTU	3.2	2.4
5	BOD ,mg/L	1.2	0.8
6	Dissolved Oxygen ,mg/L	5.6	6.5
7	Chloride ,mg/L	86	12
8	Total Alkalinity ,mg/L	32	22
9	Total Hardness ,mg/L	45	32
10	Calcium Hardness ,mg/L	28	22
11	Magnesium Hardness ,mg/L	17	10
12	Calcium ,mg/L	11.2	8.8
13	Magnesium ,mg/L	4.1	2.4
14	Total Dissolved Solids ,mg/L	178	52
15	Total Coliforms , cfu/100ml	120	100
16	Feacal Coliforms, cfu/100ml	64	24
17	Feacal Streptococcus, , cfu/100ml	10	ND
18	Sodium ,mg/L	45	6.2
19	Pottasium ,mg/L	5.8	0.5

Sd/-
Assistant Scientist

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			24.07.2020
Nature and flow of the river			High flow, water level rised
Sl.No	Parameters	Unit	Mogral Bridge
1	Temperature	˚C	29
2	pH	-	6.4
3	Conductivity	µmhos/cm	310
4	Turbidity	NTU	8.4
5	BOD	mg/l	1.3
6	Dissolved Oxygen	mg/l	5.5
7	Total Coliforms	cfu/100ml	100
8	Feacal Coliforms	cfu/100ml	60
9	Feacal Streptococcus	cfu/100ml	10
10	Chlorides	mg/l	70
11	Total Alkalinity	mg/l	50
12	Total Hardness	mg/l	57
13	Calcium Hardness	mg/l	34
14	Magnesium Hardness	mg/l	23
15	Calcium	mg/l	13.6
16	Magnesium	mg/l	5.6
17	Total Dissolved Solids	mg/l	179
18	Sodium	mg/l	40
19	Potassium	mg/l	6.8

FORMAT 3

Kerala State Pollution Control Board DO Kasaragod

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)

UPPALA RIVER – JULY 2020

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status	Progress for the month of July, 2020
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 • Specifying accountability of nodal authorities not below the Secretary level			

	• Chief Secretaries may have an accountable person attached in their office for this purpose.			
	• Monitoring at State level must take place			
6	Progress report may be furnished by the State/UTs to • Secretary, Ministry of Jal Shakti • Member Secretary, CPCB	Monthly (preferably before 20th of every month)		
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with	Dumping plastics and wastes by public from Uppala NH bridge in Mangalpady Grama Panchayath	Fencing work on both sides of Uppala NH Bridge proposed by Irrigation Department, Kasaragod. Mostly rural area. No separate STP provided. Mostly scattered houses, individual septic tank	Estimate submitted to Chief Engineer through PRICE ID: 2019/10825/IA dated 15.11.2019 for approval.

	completion timeline		soak pit system provided.	
	(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.	.	No CETP.	
	(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline	Annual report to be submitted on or before 30.06.2020	**<u>Mangalpady Grama Panchayath-</u>** MCF located at Kubanur. Solid waste is been collected daily by a private company named as Green Space. Installation of camera for waste dumping monitoring.	Solid waste collection is ongoing and annual report not yet submitted. Since pandemic works are being interrupted. Proposal being prepared with an estimated expenditure of Rs. 20 Lakhs.

			<u>Manjeshwar Grama Panchayath</u>- MCF and plastic shredding unit provided.	Both completed but yet to start working.
	.		Installation of camera along with warning boards.	Completed and installed.
	(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		Attached the analysis report of water quality in the month of July 2020.	
	(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.		Hotel waste is disposed through pig farms. Fencing work on both sides of Uppala NH Bridge proposed by Irrigation Department, Kasaragod.	Estimate submitted to Chief Engineer through PRICE ID : 2019/10825/IA dated 15.11.2019 for approval.
	(vii)Ground water regulation			

	(viii) Adopting good irrigation practices, (ix) Protection and management of food plain Zones (FPZ), (x) Rain water harvesting, (xi) Maintaining minimum Environmental flow of river		The river (stream) has a length of 50 km with drainage area of 250 sq. km of which 174 sq. km of the catchment lie in Karnataka and 76 sq.km is in Kerala. The river is seasonal. The river goes dry during summer in the upstream and sea water inflow in tail ends. Uppala bridge, the NWMP sampling station, which is 1.25 km away from the seashore, is just downstream of the identified polluted river stretch. The tidal water is	The water level in Uppala River has increased with high flow in the month of July 2020.

			entering the river to a few kilometres.	
	(xii) Plantation on both sides of the river		Thick vegetation present on the banks. Paddy fields and coconut farms are present on both sides of the river.	
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment			

Sd/-

The Environmental Engineer

Kerala State Pollution Control Board, DO Kasaragod

ANALYSIS REPORT - JULY 2020

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			24.07.2020
Nature and flow of the river			High flow, water level rised
Sl.No	**Parameters**	**Unit**	**Uppala Bridge**
1	Temperature	˚ C	29
2	pH	-	7.38
3	Conductivity	µmhos/cm	127
4	Turbidity	NTU	17.1
5	BOD	mg/l	2.4
6	Dissolved Oxygen	mg/l	8.5
7	Total Coliforms	cfu/100ml	220
8	Feacal Coliforms	cfu/100ml	68
9	Feacal Streptococcus	cfu/100ml	10
10	Chlorides	mg/l	19
11	Total Alkalinity	mg/l	35
12	Total Hardness	mg/l	39
13	Calcium Hardness	mg/l	22
14	Magnesium Hardness	mg/l	17
15	Calcium	mg/l	8.8
16	Magnesium	mg/l	4.1
17	Total Dissolved Solids	mg/l	75
18	Sodium	mg/l	11
19	Potassium	mg/l	2.1

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			24.07.2020
Nature and flow of the river			Water level rised, high flow
Sl.No	**Parameters**	**Unit**	**Uppala River Near Bhagavathi Temple (Bhagavathi Gate)**
1	Temperature	˚ C	29
2	pH	-	6.52
3	Conductivity	µmhos/cm	102
4	Turbidity	NTU	6.6
5	BOD	mg/l	1.9
6	Dissolved Oxygen	mg/l	8.5
7	Total Coliforms	cfu/100ml	110
8	Feacal Coliforms	cfu/100ml	28
9	Feacal Streptococcus	cfu/100ml	10
10	Chlorides	mg/l	15
11	Total Alkalinity	mg/l	32
12	Total Hardness	mg/l	32
13	Calcium Hardness	mg/l	21
14	Magnesium Hardness	mg/l	11
15	Calcium	mg/l	8.4
16	Magnesium	mg/l	2.673
17	Total Dissolved Solids	mg/l	65
18	Sodium	mg/l	8.5
19	Potassium	mg/l	1.2

Sd/-
Assistant Scientist

National Mission for Clean Ganga- PAMBA RIVER(MANNAR_THAKAZHY)

Progress Report for July, 2020

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

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	31.03.202	Major hospitals/hotels established & are operating ETP regularly and it is monitored by the Board.
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.202	STP not required. Action is being taken for installation of screening, septic tank & disinfection systems for storm water drains in Mannar & Parumala town.
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2020	No STP required. The other items in the Action Plan is to be completed.
4	Chief Secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the Secretary level	22.01.2020	NA

	• Chief Secretaries may have an accountable person attached in their office for this purpose.	22.01.2020	
5	• Monitoring at State level must take place	Fortnightly Commencing 21.12.2019	NA
6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Monthly (preferably before 20th of every month)	

6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline (III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure,Gap Analysis, Proposed along with completion timeline, No. of industries and complying status. (iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline		Revised Action Plan already submitted. No sewerage system. STP is not required as the towns on the banks of the polluted stretches are very small. NA Rendering Plant coming up at nearby Thiruvalla Town. MCF facility for plastic waste formed. Steps have been taken for establishing

			Thumboormoozhy type aerobic facility & for providing individual waste processing facilities by the concerned local bodies.
	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		Attached
	(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.		Direction has been issued to all the hotels in the stretch.
	(vii)Ground water regulation		Not much ground water problem in the area.
	(viii) Adopting good irrigation practices, (ix) Protection and management of food plain Zones (FPZ),	}	Proposal submitted by Irrigation Dept waiting approval.
	(x) Rain water harvesting,		No water scarcity problems.

	(xi)Maintaining minimum Environmental flow of river		Minimum flow is there in the river.
	(xii) Plantation on both sides of the river		- Proposal submitted by Irrigation Dept waiting approval.
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment		-Do-

The analysis reports of the polluted stretch Mannar- Thakazhy since the declaration of the Lockdown in March, 2020 shows that the parameters are within limits permitted by the Hon'ble NGT. The analysis reports for the months of June & July, 2020 are attached herewith.

ALEXANDER GEORGE

Digitally signed by ALEXANDER GEORGE
Date: 2020.08.11 12:07:44 +05'30'

Environmental Engineer

11.08.2020

Kerala State Pollution Control Board

Pathanamthitta

WATER QUALITY DATA OF POLLUTED RIVER STRETCHES JUNE - 2020

DISTRICT OFFICE, PATHANAMTHITTA

Date of Sampling: 15.06.2020

Sl.No	PARAMETERS	THAKAZHY	EDATHUA	MANNAR
1	Temperature ,°C	30	30	27
2	pH	6.5	6.6	6.3
3	Turbidity ,NTU	3.1	2.1	3.4
4	Electrical Conductivity ,µS/cm	64	60.61	67
5	DO, mg/L	5.8	6.2	4.3
6	BOD, mg/L	1.1	0.7	1.5
7	NH_3N, mg/L	BDL	BDL	BDL
8	Nitrate , mg/L	BDL	BDL	0.0759
9	Chloride mg/L,	10	10	10
10	Phosphate , mg/L	-	-	-
11	Total Alkalinity, mg/L	9	11	10
12	Total Hardness, mg/L	28	30	18
13	Calcium , mg/L	20	18	12
14	Magnesium, mg/L	8	12	6
15	Sodium, mg/L	5.11	5.33	4.9
16	Pottassium , mg/L	0.632	0.164	0.341
17	Boron , mg/L	-	-	-
18	SAR	0.42	0.42	0.502
19	TC , CFU/100mL	210	440	300
20	FC, CFU/100mL	60	120	90
21	FS, CFU/100mL	NIL	NIL	NIL

3/08/2020

for ASSISTANT SCIENTIST

WATER QUALITY DATA OF POLLUTED RIVER STRETCHES JULY - 2020

DISTRICT OFFICE, PATHANAMTHITTA

Date of Sampling: 29.07.2020

Sl.No	PARAMETERS	THAKAZHY	EDATHUA	MANNAR
1	Temperature ,°C	27	27	27
2	pH	6.8	7.1	6.7
3	Turbidity ,NTU	2.6	1.3	3.2
4	Electrical Conductivity ,µS/cm	53.66	56.73	56
5	DO, mg/L	6.4	5.9	6.1
6	BOD, mg/L	0.9	1.0	0.9
7	NH_3N, mg/L	BDL	BDL	BDL
8	Nitrate , mg/L	BDL	BDL	0.113
9	Chloride mg/L,	12	8	10
10	Phosphate , mg/L	BDL	BDL	BDL
11	Total Alkalinity, mg/L	9	10	10
12	Total Hardness, mg/L	24	28	20
13	Calcium , mg/L	14	16	12
14	Magnesium, mg/L	10	12	8
15	Sodium, mg/L	6.66	3.98	5.5
16	Pottassium , mg/L	0.731	0.412	0.461
17	Boron , mg/L	-	-	-
18	SAR	0.591	0.327	0.534
19	TC , CFU/100mL	230	400	330
20	FC, CFU/100mL	80	120	100
21	FS, CFU/100mL	NIL	NIL	NIL

Beena V.R

Kerala State Pollution Control Board, District Office, Kozhikode

NATIONAL MISSION FOR CLEAN GANGA

Format for submission of monthly progress report by state/UTs

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

For the month of July 2020 – Kallai polluted river stretch

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-complinance status
1	Ensure 100% treatement of sewage at least in-situ remediation		
2	Commencement of setting up of STPs and other sources of generation of sewage to the STPs must be ensured	31.12.2020	Construction of 2 MLD, 1 MLD STP plant of Calicut medical college started
3	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	31.03.2021	Proposal for 13 MLD STP (6 MLD STP plant proposed at Kothi, 7 MLD STP plant proposed at Avikkal) – Tendering in progress
4	Chief secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the secretary level • Chief secretaries may have an accountable person attached in their office for this purpose		NIL
	• Monitoring at state level must take place	Fortnightly commencing 21.12.2019	NIL

5	Progress report may be furnished by the state/UTs to • Secretary,ministry of jal shakti • Member secretary,CPCB	Monthly (preferably before 20th of every month)	NIL
5.1	Progress report may be comprised of details along with completion timeline on:		
	(i) identification of polluting source including drains contributing to river pollution and action as per NGT order on insitu treatment .	Action continuing	Drains identified. Pollution load calculated. Action plan prepared. Joint squad of PCB and Corporation inspection in action. Issued notice to 92 units during the period 2019. 30 units installed treatment facilities. During Jan-Mar 2020 joint squad of PCB and corporation inspected 82 units. Issued notice to 56 units. In 16 units installation of treatment units Effluent treatment facilities are under progress.Monthly progress report submitted by Kozhikode corporation attached as **Annexure 3**
	(ii) status of STPs, I&D and sewage networks details of existing infrastructure,proposed along with completion timeline	31.12.2020 31.03.2021	(i)Construction of 2 MLD, 1 MLD STP plant of Calicut medical college started. (ii)Proposal for 13 MLD STP (6 MLD STP plant proposed at Kothi, 7 MLD STP plant proposed at Avikkal) – Tendering in progress. (iii)STP of 13 MLD proposed at Kotooli.About 12% of sewer lines were laid by KWA – Honble NGT stayed the project (OA no. 215/2016). (iv)Individual septic tank and soak pit system provided for house hold, units like bakery, cool bars small restaurants with less seating capacity.

			Individual STPs for high rise building, hotels, Restaurants, Commercial buildings. Attached as **Annexure 3**
	(iii) status of CETPs details of existing CETP and ETP infrastructure ,Gap analysis,proposed along with complying status	No specific proposal	No CETP proposed
	(iv) status of solid waste management & details of processing facilities details of existing infrastructure, Gap analysis,proposed along with completion timeline	Functioning	(i)Existing centralized waste disposal facility of 100 MT/DAY at Njeliyanparamba(windrow composting)
		30/06/2021	(ii)Proposal of 450 TPD waste to energy plant at Njeliyanparamba implementation in progress.
		Functioning	(iii) Chicken waste rendering plant of 40TPD functioning in Thamarassery – 170 chicken stalls of Kozhikode corporation are disposing off the waste through this rendering plant.
		Functioning	(iv) 3 MRF facilities existing (At Njeliyamparamba(Super MRF) 3TPD-with plastic shredding unit, west hill industrial estate -2TPD --with plastic shredding unit,Near Jayanthi nagar colony)
		Functioning	(v) 24 units of aerobic compost facilities existing (Tagore hall, S K Pottakkad hall, Jubilee hall, Mofusil bus stand,T.B. Clinic,Circle office).
		Functioning	(vi)350 ring compost and 150 Biogas plants installed in house holds.
		Functioning	(vii) Community level biogas plant-3nos(Mental Hospital 1TPD, ITI

			Malikadav -1TPD, Juvine home- 1TPD) (viii) 3 Biogas plants in market (Central market 2TPD, Vegitable market 2TPD, New bus stand,2TPD)
		30/03/2021	(ix)Treatment facility for waste in Central Market – Tendering in Progress
		31/12/2022	(x) Establishment of slaughter house-DPR submitted. Attached as **Annexure 3**
	(v) latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		As Kallayi stretch is in the containment zone , samples couldnot be collected and analysed for the month of July 2020
	(vi) preventing dumping of waste and scientific waste management including bio-medical waste plastic waste and decentralizeing waste processing, including waste generated from hotels, ashrams,etc.		Same as Item no. 5.1(v) Fine of 32 Lakhs imposed for illegal dumpinh og solid wastes into rivers and public places.Instalation of CCTV. Biomedical waste from Hospital,labs ,clinics collected through image, plastic waste disposal through recyclers. Individual solid waste processing facilities like bio gas plant, bio bins in high rise building, hotels, restaurants etc. Fencing proposed by irrigation department. **Attached as Annexure 3**
	(vii) ground water regulation		
	(viii) adopting good		NIL

	irrigation practices		NIL
	(ix) protection and management of flood plain zones(FPZ),		Initiated
	(x) Rain water harvesting		Desiltation of Kallayi River – Action plan of Irrigation dept.**Annexure 3**
	(xi) Maintaining minimum environmental flow of river		Initiated
	(xii)Plantation on both sides of the river		NIL
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment		

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

SE, KWA

National mission for clean Ganga

Format for submission of monthly progress report by state/UTs

For the month of June 2020 – Kallai polluted river stretch

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT- complinace status Kallai	**Progress for the month of July, 2020**
1	Ensure 100% treatement of sewage at least in-situ remediation			Sewerage scheme for Kozhikode Corporation is held up for legal issues. Implementation can be resumed after settling the suit.
	Commencement of setting up of STPs and other sources of generation of sewage to the STPs must be ensured			-Do-
2	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	31.03.2021	1. Proposal for 13 MLD STP(6 MLD STP plant proposed at Kothi, 7 MLD STP plant proposed at Avikkal) – Tendering in progress 2.Initiated the construction of 2 MLD ,1MLD plant-medical college	Not related to KWA
5	Chief secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the secretary level • Chief secretaries may		NIL	Not related to KWA

	have an accountable person attached in their office for this purpose			
	• Monitoring at state level must take place		NIL	Not related to KWA
6	Progress report may be furnished by the state/UTs to • Secretary,ministry of jal shakti • Member secretary,CPCB	Monthly (preferably before 20th of every month)	NIL	Not related to KWA
6.1	Progress report may be comprised of details along with completion timeline on: (i) identification of polluting source including drains contributing to river pollution and action as per NGT order on insitu treatment (ii) status of STPs, I&D and sewage networks details of existing infrastructure,proposed along with completion timeline (iii) status of CETPs details of existing CETP and ETP infrastructure ,Gap analysis,proposed along with complying status (iv) status of solid waste	Primary STP (oil & grease gap with grit chamber) Not proposed Implementation of MCF &	Action plan submitted Tendering in progress NIL	Not related to KWA

	management & details of processing facilities details of existing infrastructure, Gap analysis,proposed along with completion timeline	RRF was achieved by January 2020 Will be implemented	Existing centralized waste disposal facility of 70 MT/DAY at Njeliyanparamba(windrow composting) ,proposal of waste to energy plant at Njeliyanparamba implementation in progress	
	(v) latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	Will be implemented	Water quality monitoring result in month of may polluted river stretch-attached as annexure-2	
	(vi) preventing dumping of waste and scientific waste management including bio-medical waste plastic waste and decentralizeing waste processing, including waste generated from hotels, ashrams,etc.	No specific proposal No specific proposal	Biomedical waste collected through image, plastic waste disposal through recyclers centralized solid waste (windrow composting) facility 70 MT/DAY at Njeliyanparaba	
	(vii) ground water regulation	No specific proposal	NIL	
	(viii) adopting good irrigation practices		NIL	
	(ix) protection and management of flood plain zones(FPZ),	No specific proposal	NIL	
	(x) Rain water harvesting		Initiated	
	(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		Initiated NIL	

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

ANNEXURE 3

KOZHIKODE CORPORATION

	Sl. no	Action taken	Implementing agency	Estimated Expenditure	Time limit	Expected outcome
1	Identification of illegal outlets into storm water drain and issue Notice to such units	Issued notice to 92 units during the period 2019. 30 units installed disposal facilities. During Jan 2020 to march 2020 conducted joint inspection along with PCB officers and inspected 82 units. Issued notice to 56 units . In 16 units installation of Effluent treatment facilities are under progress. Action continuing	Corporation	Not needed	30.12.2020	Reduced pollution load in drains
2	Waste to energy project proposed at Njeliyamparamba	Work Awarded and clearing started	KSIDC	250 Crore	30.06.2021	Reduced dumping of solid wastes in river and public places
3	Establishment of Aerobic compost units	24 units established in 6 sites 3.1 Tagore Hall(2 no.) 3.2 S.K pottakkad hall 3.3 Jubilee hall 3.4 Mofusil bus stand 3.5 T.B clinic 3.6 Circle office	Corporation	25 lakhs	Completed and functioning	Reduced dumping of solid wastes

4	Seggregation of solid waste at source level and treatment of house hold wastes	360 ring compost and 150 biogas plant installed	Corporation	2.5 crore	Own fund	Completed and Functioning	Reduced dumping of house hold wastes into drains
5	Setting up of rendering treatment plant for chicken stall wastes	Installed in Thamarassery panchayath. Now waste is collected from 170 chicken stalls from Kozhikode Corporation	Rendering plant	12 crore	Private investment	Functioning	Reduced dumping of wastes on the banks of river
6	Implementation of Green protocol unit	Purchased 7500 steel plates and steel glasses	Corporation	9 lakhs	Own fund	Completed	Reduced use of plastic
7	Setting up of common STP of(13 MLD)	TENDERING OF BOTH STP IN PROGRESS	Corporation	Total-116.5 crore	Central/state Govt./municipality combined project	31.03.2021	Entire polluted river stretch identified by CPCB will be free from effluent discharge to public drain
		7.1 At Kothi bridge- 6 MLD plant proposed		56.63 crore			
		7.2 At Avikkal -7 MLD plant proposed		59.87 crore			
8	Cleaning of Canoli canal	Combined cleaning with public and Government	Corporation	46 lakhs	C.S.R fund(KWIL) and Suchitwa Mission	20.07.2021	Reduced pollution load in canoli canal

9	Purchasing of Solar Boat for Canoli canal cleaning	D.P.C approved the project	Corporation	30 lakhs	Own fund	31.03.2021	Reduced pollution load in canoli canal
10	Installation of CCTV Camera for the Identification and monitoring of illegal activities	D.P.C approved the project. Contacted Keltron	Corporation	30 lakhs	Own fund	31.03.2021	Reduced dumping of wastes in to river, road side.
11	Establishment of Mobile Septage Units	D.P.C approved the project	Corporation	50 lakhs	Own fund	31.03.2021	Reduction of pollution load in river
12	Action taken against dumping of wastes into river and public places	Fine RS. 32 lakh imposed	Corporation	-	-	Action Continuing	Reduction of dumping of wastes in public places
13	Cleaning of B.K canal	Cleaning of canal reaching Kallayi river. Tender awarded to ULCC	Corporation	2.88 crore	Central/state Govt./municipality combined project	31.03.2021	Reduced pollution load in B.K canal leading to Kallayi
14	Establishment of treatment plant at Medical college (3 MLD plant)	Tender over 14.1 -2 MLD plant proposed 14.2- 1 MLD plant proposed	Corporation	14.10 crore	Central/state Govt./municipality combined project	Construction Started. Expected to be completed by - 31.12.2021	Reduction in pollution load at canoli canal

15	Construction of drains at Y.M.RC Ayyankar colony	Tendering process in progress	Corporation	14.10 crore	Central/state Govt./municipality combined project	31.03.2021	To prevent pollution load in drain leading kallayi
16	Implementation of STP at Kottooli (13.5 MLD)	12%Sewer lines already laid few years back by KWA. But Hon'ble NGT stayed the project (NGT case no: 215/2016(SZ)	Corporation	90.04 crore	K.S.U.D.P fund (No fund available at present)	Hon'ble NGT stayed the project (NGT case no: 215/2016(SZ)	Reduction of pollution load in canoli canal. Drains from mavoor road, karaparamb, sarovaram leading to canoli canal will be free from effluent discharge to public drain
17	Treatment facility for waste water in Central market	Tendering process in progress	Corporation	50 lakhs	Own fund	30.03.2021	Reduction of waste water entering into drains
18	Establishment of comfort stations	Work completed.4 comfort stations remaining. Work in progress	Corporation	90 lakhs	Own fund	31.03.2021	Reduction in pollution load to drain
19	Provide facility for MRF,RRF, Super MRF	3 units existing 1.Njeliyanparamb .2 Industrial estate 3.Meyorbhavanjayanthinagar colony	Suchitwa Mission	1.58 crore	Suchitwa Mission fund	Project in progress	Reduced disposal of solid-waste

20	Identification of illegal outlets from house to storm water drain and issue Notice to such Houses	Action in progress as decided in the DLTC	Corporation		Multiple funds	31.12.2021	Reduced disposal of domestic effluents in to drains
21	Establishment of Plastic shredding unit	Two units implemented. One at westhill, another one at Njeliyanparamba. Remaing in progress	Corporation	75 lakhs	Own fund	31.12.2021	Reduce dumping of plastic in public places
22	Establishment of slaughtering unit	Submitted DPR	Corporation	10.5 crore	Submitted to KIFBI	31.12.2022	Reduce dumping of slaughter house wastes
23	Cleaning of drains in Kozhikode Town	With the help of Health inspectors and ULCC actions carried on	Corporation	1.68 crore	Own fund andSuchitwa Mission	Ongoing	Reduce pollution loads in drain

Kerala State Pollution Control Board, District Office, Kozhikode

NATIONAL MISSION FOR CLEAN GANGA

Format for submission of monthly progress report by state/UTs

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

For the month of July 2020 – Kuttiady polluted river stretch

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-complinace status
1	Ensure 100% treatement of sewage at least in-situ remediation		
2	Commencement of setting up of STPs and other sources of generation of sewage to the STPs must be ensured		Nil
3	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning		Nil
4	Chief secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the secretary level • Chief secretaries may have an accountable person attached in their office for this purpose		Nil
	• Monitoring at state level must take place		Nil

5	Progress report may be furnished by the state/UTs to • Secretary,ministry of jal shakti • Member secretary,CPCB	Monthly (preferably before 20th of every month)	Nil
5.1	Progress report may be comprised of details along with completion timeline on: (i) identification of polluting source including drains contributing to river pollution and action as per NGT order on insitu treatment	Primary STP (Oil and Grease trap with grit chamber) Will be implemented by 31/3/2021	Drains identified. Pollution load calculated. Action plan prepared. Notices issued by concerned Panchayath Secretaries to individual units. Action under progress by individual units. Monthly progress report of Kuttiady, Maruthomkara, Cheruvannur, Changaroth,Perambra, Kavilumpara, Velom Panchayaths, Irrigation department, Water Authority, Shuchitwa mission for the month of July 2020 is attached as **Annexure 1.**
	(ii) status of STPs, I&D and sewage networks details of existing infrastructure,proposed along with completion timeline		Mostly rural area. No common STP proposed. Individual septic tank and soak pit system provided for house hold, units like bakery, cool bars small restaurants with less seating capacity. Individual STPs for high rise building, hotels, Restaurants, Commercial buildings. **Attached as Annexure 1**

	(iii) status of CETPs details of existing CETP and ETP infrastructure ,Gap analysis,proposed along with complying status	---	No CETPs proposed
	(iv) status of solid waste management & details of processing facilities details of existing infrastructure, Gap analysis,proposed along with completion timeline	31/03/2021 Completed and functioning Completed and functioning Completed and functioning 31/103/2021 31/10/2020 31/03/2021	**<u>Kuttiyadi Panchayth</u>** Construction started for block level MRF for 7 panchayath in the Kuttiyady block. MCF of Kuttiyadi Panchayath set up with shredding unit- work completed and functioning. Mini MCF set up in all wards of Kuttiyadi panchayath. **<u>Kavilumpara panchayath</u>** 3 MCFs are functioning. **<u>Maruthomkara Panchayath</u>** MRF completed and functioning. Biogas plant work completed. **<u>Velom Panchayath</u>** – Community level – Biogas plant.Work under construction(80% work completed). 50 nos of Biogas plant for house hold- Completed and functioning **<u>Perambra Panchayath</u>** MCF- Tendering in progress Mini MCF – work completed. **<u>Changaroth Panchayath</u>** Project for setting up MCF approved. Site to be identified soon. Biogas plant and Ring compost for house hold proposed. Plastic shredding unit

			proposed. **Attached as Annexure 1**
	(v) latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		Water quality monitoring result for the month of July 2020 is attached as **Annexure-2**
	(vi) preventing dumping of waste and scientific waste management including bio-medical waste plastic waste and decentralizeing waste processing, including waste generated from hotels, ashrams,etc.		Same as Item no. 5.1(v) Biomedical waste from Hospital,labs ,clinics collected through image, plastic waste disposal through recyclers.Individual solid waste processing facilities like bio gas plant, bio bins in high rise building, hotels etc. Fencing proposed by irrigation department. **Attached as Annexure 1**
	(vii) ground water regulation		NIL
	(viii) adopting good irrigation practices		NIL
	(ix) protection and management of flood plain zones(FPZ),		
	(x) Rain water harvesting	Work in progress 31/03/2021	**<u>Velom panchayath</u>** 22527 rain water pit , well recharge – 1500 houses **<u>Kavilumpara panchayath</u>** well recharge – 160 houses

			<u>Maruhtonkara panchayath</u> Well recharge- Action plan and TS approved **<u>Cheruvanoor panchayath</u>** Well Recharge – Project in progress
	(xi) Maintaining minimum environmental flow of river		**<u>Kavilumpara panchayath</u>** Adopted steps to remove sands and rock dumped durig rain flood **<u>Maruthonkara panchayah</u>** 74 works ongoing under MGNREGS(RWH, soil conservation). **<u>Kavilumpara panchayath</u>** 5 works ongoing under MGNREGS for protection of river sides **Attached as Annexure 1**
	(xii) Plantation on both sides of the river		
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment		

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

ANNEXURE 1

KUTTIADY GRAMAPANCHAYAT

Si No	Action Proposed	Action Taken	Implementing Agency	Estimate Expenditure	Funding Agency	Time Limit	Expected Outcome
1	Geo Textiles at River	Completed	MGNREGS	3 Lakhs	MGNREGS	31.03.2018	Prevented Soil Erosion
2	Haritha Sahaya Sthapana Agreement	Massive Awareness Programes and survey Conducted	Kuttiady Gramapanchayt	1.96 lakhs	Kuttiady Gramapanchayt	31.03.2021	Awarencess Campaingning Total House holds and Institutions
3	Removal of Non Biodegradable waste	Collected Solid waste Extensively from all wards	Kuttiady Gramapanchayt	4 lakhs	Kuttiady Gramapanchayt	31.03.2021	Remove all the solid waste and keep the surroundings clean
4	Clean Green Kuttiadi	Project is going on with good result	Kuttiady Gramapanchayat	15 lakhs	Kuttiady Gramapanchayt	31.03.2021	Collection, Segregation and disposal
5	Community toilet	Project Implemented and 5 toilts completed	Suchitwa mission	10 Lakhs	Kuttyadi Grama Panchayath	31.03.2021	Establish community latrines at public places
6	MRF	Started MRF at Block Level	Block Panchayat	57.5 Lakhs	Kuttyadi Grama Panchayath	31.03.2021	Block level MRF for 7 Grama panchayath in the block

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10/8/2018

7	MCF	MCF Has been setup with Shreadding unit Mini MCF Setup in all wards	Kuttiady Gramapanchayat	5 Lakhs	Suchitwa mission	complited	Arrange space to store the collected waste
8	Sanitary Latrine	Project is in good Progress with target of sixty (60) Sanitary Latrine	Kuttiady Gramapanchayat	5.54 lakhs	CFC	31.03.2021	Remove all pit latrines and make all latrines as septic
9	Well Reacharging	Project prepared and taken action for Implimentation	Kuttiady Gramapanchayat	10 Lakhs	MGNREGS	31.03.2021	Rechargeb 100 Wells
10	Camera Srveilance	Camera Fitted	Kuttiadi	2 Lakhs	Sponcership	Completed	Cover Kuttiadi Town Under Survilance

SHAJI M. STEEPHAN
SECRETARY
KUTTIADI GRAMA PANCHAYAT
Ph: 0496 2597 250, 0496 048 131

Changaroth Grama Panchayath

Sl. no	Action proposed	Action taken	Implementing agency	Estimated Expenditure	Funding agency	Time limit	Expected outcome
1	Setting up of MCF	Project approved. Site to be fixed soon	Grama Panchayath	3 lakhs	Grama Panchayath	31.01.2021	Waste free houses and water bodies
2	Collection of non bio degradable waste	Collection process continuing	Gramapanchayat through Haritha karma sena	3 lakhs	User fee Rs 50/-per house and rs 50/shops	Throughout the year	Waste free houses and water bodies
3	Bio gas plants for house hold	Project approved	Grama panchayath	2 lakhs	Grama panchayath	31.03.2021	Waste free houses and water bodies
4	Ring compost unit	Project approved	Grama panchayath	2 lakhs	Grama panchayath	31.03.2021	Waste free houses and water bodies
5	Plastic shredding unit	New proposal	Grama panchayath	5 lakhs	Grama panchayath	31.03.2021	Project cancelled due to public protest against plastic shredding unit
6	House hold sanitary units	Project approved	Grama panchayath	5 lakhs	Grama panchayath	31.03.2021	Waste free houses and water bodies
7	Transportation of waste material to refinement unit	Completed in 12 wards.Remaining in progress	Grama panchayath	13 lakhs	Grama panchayath	31.08.2021	Waste free houses and water bodies

AEO 11/8/2020

Secretary
Changaroth Grama Panchayat
Kadiyangad P.O.), Pin: 673525
Phone: 0495 2668164

Velom Grama Panchayath

Sl. no	Action proposed	Action taken	Implementing agency	Estimated Expenditure	Funding agency	Time limit	Expected outcome
1	Govardhian Biogas plant	80 % work completed	Grama panchayath	15 lakhs	Suchitwa mission	31.03.2021	700 litre capacity
2	MCF	Work already completed	Suchitwa mission	15 lakhs	Suchitwa mission	Completed and functioning	collection of Plastic and non bio degradable waste
3	Biogas plant 50 No.s	Work completed	Suchitwa mission	5 lakhs	Suchitwa mission	Completed and functioning	1000 litre capacity
4	Well recharge 1500 houses	Work in progress	MGNREGS	80 lakhs	MGNREGS	31.03.2021	1500 well recharge

AE 11/8/2020

VELOM GP

National mission for clean Ganga

Formate for submission of monthly progress report by state/UTs

For the month of June 2020 – Kuttiady polluted river stretch

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-complinace status Kuttiady	**Progress for the month of July, 2020**
1	Ensure 100% treatement of sewage at least in-situ remediation			Nil
	Commencement of setting up of STPs and other sources of generation of sewage to the STPs must be ensured			Yes
2	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	31.03.2021	Not Applicable	
5	Chief secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the secretary level • Chief secretaries may have an accountable		Not Applicable	

	person attached in their office for this purpose			
	• Monitoring at state level must take place		Not Applicable	
6	Progress report may be furnished by the state/UTs to • Secretary,ministry of jal shakti • Member secretary,CPCB	Monthly (preferably before 20th of every month)	Not Applicable	
6.1	Progress report may be comprised of details along with completion timeline on: (i) identification of polluting source including drains contributing to river pollution and action as per NGT order on insitu treatment (ii) status of STPs, I&D and sewage networks details of existing infrastructure,proposed along with completion timeline (iii) status of CETPs details of existing CETP and ETP infrastructure ,Gap analysis,proposed along with complying status (iv) status of solid waste	Primary STP (oil & grease gap with grit chamber) Not proposed Implementation of MCF & RRF was achieved by	Progressing NIL Implemented	Nil Nil Nil Nil

	management & details of processing facilities details of existing infrastructure, Gap analysis,proposed along with completion timeline	January 2020 Will be implemented	Water quality monitoring of	polluted river stretch
	(v) latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	Will be implemented	Water quality monitoring result in month of may polluted river	NA
	(vi) preventing dumping of waste and scientific waste management including bio-medical waste plastic waste and decentralizeing waste processing, including waste generated from hotels, ashrams,etc.	No specific proposal No specific proposal	stretch-attached as annexure-1	NA
	(vii) ground water regulation		NIL	
	(viii) adopting good irrigation practices	No specific proposal	NIL	
	(ix) protection and management of flood plain zones(FPZ),	No specific proposal		Nil
	(x) Rain water harvesting			Completed

(Hon'ble the of OA		(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		NIL NIL Initiated Initiated NIL	22527 rain water pits	NGT in matter

No.673/2018 dated 06.12.2019)

Maruthomkara Grama Panchayath

Sl. no	Action proposed	Action taken	Implementing agency	Estimated Expenditure	Funding agency	Time limit	Expected outcome
1	MRF	Work completed	Block panchayath	12 lakhs	10 lakh Suchitwa mission + 2 lakh plant fund	Completed and functioning	To prevent pollution of Kuttyadi river
2	Biogas plant	Work completed	Grama panchayath	5 lakhs	Plan fund	Completed and functioning	To prevent pollution of Kuttyadi river
3	Well recharge	Action plan and TS approved	Grama panchayath	40 lakhs	MGNREGA	31.03.2021	To prevent pollution of Kuttyadi river
4	Sanitary complex	One unit completed one in progress	Grama panchayath	6 lakhs	Plan fund	31.03.2021	To prevent pollution of Kuttyadi river
5	Haritha sahaya sthapana agreement	Completed	Grama panchayath	2.5 lakhs	Plan fund	30.04.2020	To prevent pollution of Kuttyadi river

AEA
11/8/20

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National mission for clean Ganga

Formate for submission of monthly progress report by state/UTs

For the month of June 2020 – Kuttiady polluted river stretch

MARUTHONKARA GP

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-complinace status Kuttiady	**Progress for the month of July, 2020**
1	Ensure 100% treatement of sewage at least in-situ remediation			Nil
	Commencement of setting up of STPs and other sources of generation of sewage to the STPs must be ensured			Yes
2	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	31.03.2021	Not Applicable	
5	Chief secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the secretary level • Chief secretaries may have an accountable		Not Applicable	

	person attached in their office for this purpose			
	• Monitoring at state level must take place		Not Applicable	
6	Progress report may be furnished by the state/UTs to • Secretary,ministry of jal shakti • Member secretary,CPCB	Monthly (preferably before 20th of every month)	Not Applicable	
6.1	Progress report may be comprised of details along with completion timeline on: (i) identification of polluting source including drains contributing to river pollution and action as per NGT order on insitu treatment (ii) status of STPs, I&D and sewage networks details of existing infrastructure,proposed along with completion timeline (iii) status of CETPs details of existing CETP and ETP infrastructure ,Gap analysis,proposed along with complying status (iv) status of solid waste management & details of	Primary STP (oil & grease gap with grit chamber) Not proposed Implementation of MCF & RRF was achieved by January 2020	Progressing NIL Implemented	Nil nil Nil Nil

	processing facilities details of existing infrastructure, Gap analysis,proposed along with completion timeline	Will be implemented	Water quality monitoring of polluted river stretch	NA
	(v) latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	Will be implemented	Water quality monitoring result in month of may polluted river stretch- attached as annexure-1	NA
	(vi) preventing dumping of waste and scientific waste management including bio-medical waste plastic waste and decentralizeing waste processing, including waste generated from hotels, ashrams,etc.	No specific proposal No specific proposal No specific proposal	NIL 1	Nil Nil
	(vii) ground water regulation			
	(viii) adopting good irrigation practices	No specific proposal		
	(ix) protection and management of flood plain zones(FPZ),		NIL	nil
	(x) Rain water harvesting		NIL	
	(xi) Maintaining minimum environmental flow of river		Initiated	74 works ongoing under MGNREGS(water

	(xii)Plantation on both sides of the river (xiii) Setting up biodiversity parks on flood plains by removing encroachment		Initiated NIL	harvesting,Soil Cinservation) NIL

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

Secretary
Maruthomkara Grama Panchayath
P.O. Maruthomkara, Pin: 673613
Ph: 2[illegible]

July - 2020

Perambra Grama Panchayath

Sl. no	Action proposed	Action taken	Implementing agency	Estimated Expenditure	Funding agency	Time limit	Expected outcome
1	Haritha sahaya sthapana agreement	To be signed requested to change the agency	Perambra grama panchayath	3.5 lakhs	Perambra grama panchayath fund	31.10.2020 (Due to Covid-19 restriction)	Total sanitation
2	Solid waste removal	To be signed requested the same agency	Perambra grama panchayath	10 lakhs	Perambra grama panchayath fund	31.03.2021	Total sanitation
3	Zero waste perambra	Being in progress	Perambra grama panchayath	5 lakhs	Perambra grama panchayath fund	31.03.2021	Total sanitation
4	Public toilet	Commissioned	Perambra grama panchayath	16 lakhs	Perambra grama panchayath fund	Completed	Total sanitation
5	MCF	Re-tendered	Perambra grama panchayath	18 lakhs	Perambra grama panchayath fund	31.10.2020 (Due to Covid-19 restriction)	Total sanitation
6	Fish market construction	Civil Work completed. Electrification work to tendered	Perambra grama panchayath	55 lakhs	Perambra grama panchayath fund	31.03.2021	Total sanitation

AEA 11/8/2020

PERAMBRA GRAMA PANCHAYAT PERAMBRA P.O

MANOJ. O
Secretary
Perambra Grama Panchayat
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Ph: 9496048167

PERAMBRA GP

National mission for clean Ganga

Formate for submission of monthly progress report by state/UTs

For the month of June 2020 – Kuttiady polluted river stretch

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-complinace status Kuttiady	**Progress for the month of July, 2020**
1	Ensure 100% treatement of sewage at least in-situ remediation			Not Applicable
	Commencement of setting up of STPs and other sources of generation of sewage to the STPs must be ensured			Not Applicable
2	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	31.03.2021	Not Applicable	Not Applicable
5	Chief secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the secretary level • Chief secretaries may have an accountable		Not Applicable	not applicable.

	person attached in their office for this purpose			
	• Monitoring at state level must take place		Not Applicable	Not Applicable
6	Progress report may be furnished by the state/UTs to • Secretary,ministry of jal shakti • Member secretary,CPCB	Monthly (preferably before 20th of every month)	Not Applicable	Not Applicable
6.1	Progress report may be comprised of details along with completion timeline on: (i) identification of polluting source including drains contributing to river pollution and action as per NGT order on insitu treatment (ii) status of STPs, I&D and sewage networks details of existing infrastructure,proposed along with completion timeline (iii) status of CETPs details of existing CETP and ETP infrastructure ,Gap analysis,proposed along with complying status (iv) status of solid waste management & details of	Primary STP (oil & grease gap with grit chamber) Not proposed Implementation of MCF & RRF was achieved by January 2020	Progressing NIL Implemented	Nil Nil Min. MCF completed

	processing facilities details of existing infrastructure, Gap analysis,proposed along with completion timeline	Will be implemented	Water quality monitoring of polluted river stretch	Collection centre started
	(v) latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	Will be implemented	Water quality monitoring result in month of may polluted river stretch- attached as annexure-1	Nil
	(vi) preventing dumping of waste and scientific waste management including bio-medical waste plastic waste and decentralizeing waste processing,	No specific proposal No specific proposal		Nil
	including waste generated from hotels, ashrams,etc.	No specific proposal	NIL	Nil
	(vii) ground water regulation			Nil
	(viii) adopting good irrigation practices	No specific proposal		
	(ix) protection and management of flood plain zones(FPZ),		NIL	implemented under MGNREGS project
	(x) Rain water harvesting		NIL	Nil
	(xi) Maintaining minimum environmental flow of river		Initiated	Nil

	(xii) Plantation on both sides of the river (xiii) Setting up biodiversity parks on flood plains by removing encroachment		Initiated NIL	Nil Nil

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

Kavilumpara Grama Panchayath

Sl. no	Action proposed	Action taken	Implementing agency	Estimated Expenditure	Funding agency	Time limit	Expected outcome
1	Haritha Sahaya Sthapana agreement	Agreement signed with IRTC Mundoor	Grama panchayath	2.9 lakhs	Grama panchayath	31.03.2020	Awareness campaign to all house holds and Institutions
2	Collection of non bio degradable waste	Collect all solid waste by clean kerala company	Grama panchayath	1 lakh	Grama panchayath	31.03.2021	Remove all solid waste surroundings clean
3	MCF	Work completed	Grama panchayath		Grama panchayath	Complieted and functioning	MCF is Functioning
4	Well recharge	Work in progress	MGNREGS	5 lakhs	MGNREGA	31.03.2021	160 well recharge
5	River cleaning	Work completed	Grama panchayath	Nil	Grama panchayath	Completed	Cleaning of Thottilpalam River

KAVILUMPARA

National mission for clean Ganga

Formate for submission of monthly progress report by state/UTs

For the month of June 2020 – Kuttiady polluted river stretch

Sl No	Activity to be monitored	Timeline	Submission of progress by state/UT-complinace status Kuttiady	**Progress for the month of July, 2020**
1	Ensure 100% treatement of sewage at least in-situ remediation			NIL
	Commencement of setting up of STPs and other sources of generation of sewage to the STPs must be ensured			NIL
2	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	31.03.2021	Not Applicable	NIL
5	Chief secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the secretary level • Chief secretaries may have an accountable		Not Applicable	NIL

	person attached in their office for this purpose			
	• Monitoring at state level must take place		Not Applicable	
6	Progress report may be furnished by the state/UTs to • Secretary,ministry of jal shakti • Member secretary,CPCB	Monthly (preferably before 20th of every month)	Not Applicable	
6.1	Progress report may be comprised of details along with completion timeline on: (i) identification of polluting source including drains contributing to river pollution and action as per NGT order on insitu treatment (ii) status of STPs, I&D and sewage networks details of existing infrastructure,proposed along with completion timeline (iii) status of CETPs details of existing CETP and ETP infrastructure ,Gap analysis,proposed along with complying status (iv) status of solid waste management & details of	Primary STP (oil & grease gap with grit chamber) Not proposed Implementation of MCF & RRF was achieved by January 2020	Progressing NIL Implemented	NIL NIL NIL 3 MCF are working.

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	processing facilities details of existing infrastructure, Gap analysis,proposed along with completion timeline	Will be implemented	Water quality monitoring of polluted river stretch	
	(v) latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	Will be implemented	Water quality monitoring result in month of may polluted river stretch- attached as annexure-1	
	(vi) preventing dumping of waste and scientific waste management including bio-medical waste plastic waste and decentralizeing waste processing, including waste generated from hotels, ashrams,etc.	No specific proposal No specific proposal No specific proposal	NIL	
	(vii) ground water regulation			
	(viii) adopting good irrigation practices	No specific proposal		Adopted steps to remove sands and rocks dumped during rain and flood.
	(ix) protection and management of flood plain zones(FPZ),		NIL	Rain water harvesting works done by MGNREGS.
	(x) Rain water harvesting		NIL	5 works ongoing under MGNREGS for the
	(xi) Maintaining minimum environmental flow of river		Initiated	protection of river sides

	(xii)Plantation on both sides of the river (xiii) Setting up biodiversity parks on flood plains by removing encroachment		Initiated NIL	

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

Cheruvannur Grama Panchayath

Sl. no	Action proposed	Action taken	Implementing agency	Estimated Expenditure	Funding agency	Time limit	Expected outcome
1	Oleena mahila samajam agreement	Agreement signed with Niravu Vengeri	Grama panchayath	3.4 lakhs	Grama panchayath	31.03.2021	Awareness campaign to all house holds and Institutions
2	Collection of plastic waste	Collected plastic waste from all house holds & institutions through Haritha karma sena- Project completed	Grama panchayath	3.5 lakh	Grama panchayath	31.03.2021	Collecting plastic waste from all house holds & institutions and handing over to tendered agency Greenworm, Calicut. Thus creates PLASTIC WASTE FREE CHERUVANNUR

PEA
4/8/2020

3	Repairing of households toilets	Project completed	Grama panchayath	3 lakhs	Grama panchayath	complited	Repairing household toi that have poo sanitation facilities
4	Construction of Community toilet at Nirappam Stadium	Project prepared	Grama panchayath	6 lakhs	Grama panchayath	31.03.2021	Communi Toilet Com at public pl
5	Well recharging	Project in progress	Grama panchayath & MGNREGS	10 lakhs	Grama panchayath & MGNREGS	31.03.2021	Recharged wells
6	Latrine Construction	Project completed	Grama panchayath & MGNREGS	1.08 lakhs	Grama panchayath & MGNREGS	Completed	9 Latri construc

Irrigation department

Sl. no	Action proposed	Action taken	Implementing agency	Estimated Expenditure	Funding agency	Time limit	Expected outcome
1	Desilting of Kallayi river from Kaduppini to Kothi in Kozhikode Corporation	Proposal submitted under RMF	Irrigation department	7.30 crore	Revenue Department	31.03.2021	
2	Provide fencing on the sides of the Bridge	Proposal submitted under NGT	Irrigation department	Total 43.05 lakhs	Revenue non plan	31.03.2021	
	2.1 Providing Fencing on Puthiyapalam Bridge across EK canal			5.20 lakhs			
	2.2 Providing Fencing on Mooriyad Road Bridge			12.00 lakhs			
	2.3 Providing Fencing on both sides of Chamundi Bridge			3.50 lakhs			
	2.4 Providing Fencing on both sides of Kothi Bridge			20.50 lakhs			
	2.5 Providing Fencing on both sides of Ibrahim Bridge			1.85 lakhs			

Irrigation Department

Sl.No	Action Proposed	Action Taken	Implementing Agency	Estimated expenditure in Lakhs	Fund approved	Funding Agency	Time line	Expected outcome
1	Salt water Extrusion-Construction of RCB upstream of Perincheri kadavu across Kuttiady river (Gulikapuzha) in Kozhikode District	DPR submitted to KIIDC	Irrigation Dept	7200	Sanctioned in principle under KIIFB. Fund not approved	KIIFB	2022 July 31	Preventing saline water intrusion from Arabian Sea and there by to protect the agricultural land and storing water for irrigation purpose.This project cand be made use of providing drinking water without salinity in Vatakara Municipality and adjoining panchyath
2	Fencing the sides of Bridges to prevent dumping of wastes- 5 nos	Proposal under preparation	Irrigation Dept	76	To be proposed	Revenue Non plan	2021 July 31	Dumping of wastes through bridges into rivers may be reduced

2 (1)	Providing chain linked fencing on both side of kuttiady bridge across kuttiady river in kuttiady Pt.15.50La							Dumping of wastes through bridges into rivers may be reduced
2(2)	Providing chain linked fencing on both side of maruthomkara bridge across kuttiady river in maruthomkara Pt Rs 6.80 La							
2(3)	Providing chain linked fencing on both side of gulikapuzha bridge across kuttiady river in velom Pt Rs 18.6 La							

	Provide chain linked fencing on both side of thekkedath kadavu bridge of peruvayal kadiyagad road across kuttiady river in changaroth Pt Rs 23.50la							
20	Provide chain linked fencing on both side of kadiyagad bridge across kadiyagad river in chagaroth Pt 11.60							

Superintending Engineer
Irrigation North Circle
Kozhikode

Suchitwa Mission

Sl.No	Action Proposed	Action Taken	Implementing Agency	Estimated expenditure in Lakhs	Fund approved	Funding Agency	Time line	Expected outcome
1	Public Toilet	Project to be submitted by Panchayath		100000	Yes	Suchitwa Mission	31-03-2021	No Open Defecation
2	MRF	Work Progressing	Blocks				31-03-2021	Scentific Waste Processing
3	MCF	Work Progressing	Suchitwa Mission	Local Self Government				Scentific Waste Processing
4	Board displaying messages against dumping, to be placed in river banks		Suchitwa mission	25000			31-03-2021	Reduction in pollution loads to the drain

AE4 13/06/2020

ജില്ലാകോർഡിനേറ്റർ &
അസിസ്റ്റന്റ് ഡെവലപ്മെന്റ് കമ്മീഷ്ണർ
ജില്ലാ ശുചിത്വമിഷൻ, കോഴിക്കോട്.

ANNEXURE - 2

KERALA STATE POLLUTION CONTROL BOARD
കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്
കോഴിക്കോട് റീജ്യണൽ ലബോറട്ടറി
REGIONAL LABORATORY, KOZHIKODE
3rd FLOOR, ZAMORIN'S SQUARE, LINK ROAD, KOZHIKODE – 673 002
Telefax: 2300745, 46, 47
www.keralapcb.org

ANALYSIS REPORT OF RIVER WATER

Report No.	**K R O R 3 8 5 8 / 1 to 8**	**Date:**	10/08/2020
Date of Sample Collection	16/07/2020	Date of receipt of the sample	17/07/2020
		Time	10:00 AM
Sampled by:	DO ,KKD	Sample ID	DS1,DS2,DS3,DS4,DS5,DS6,DS7,DS8
Sampling Method	APHA1060B,a	Sample Lab Code	KROS 3858/1-8
Sample container	PC 2.5 L	Ref.letter No.	PCB/KKD/DO/GEN/POLLUTED RIVER STRETCHES/2018 dated 17.07.2020
Source:	KUTTYADI RIVER WATER	Received from:	EE,DO,KKD
		Period of analysis:	17.07.2020-04.08.2020
Specific sampling location:	GIVEN BELOW	No. of samples	8
		Analysed by:	CVR/JTP/DKJ
Sample preservation:	Ice box	Method:Standard Methods for the examination of Water and Wastewater, APHA AWWA WEF (22nd Ed.)	

sl no	Parameters	unit	Method No.	SAMPLE ID							
				DS1	DS2	DS3	DS4	DS5	DS6	DS7	DS8
1	pH	-	APHA 4500-H+,B	7.56	7.42	7.23	7.23	7.18	7.06	7.01	6.9
2	CONDUCTIVITY	µmhos /cm	APHA 2510B	28.7	26.02	29.08	20.17	20.76	135	37.49	24.88
3	BOD	mg/L	IS3025 (Part 44)	0.8	1.06	1	0.6	0.13	0.8	0.466	0.33
	DISSOLVED OXYGEN	mg/L	APHA 4500-O,C	8.3	8	8.3	8	8.3	6.8	7.5	8.3
5	TOTAL COLIFORM,	CFU/100ml	APHA 9222B	9000	3900	7700	2000	90	15000	6400	9000
6	FECAL COLIFORM	CFU/100ml	APHA 9222D	8000	1800	3800	1100	60	9000	3900	6000
7	TEMPERATURE	°C	APHA 2550B	26	24	25	24	24	26	23	27

Test method variation: None

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

DS1- KUTTYADI RIVER NEAR MARUTHOMKARA (DRAINAGE MOUTH), DS2-KUTTYADI RIVER AT PUZHAYORAM HOTEL, DS3- KUTTYADI RIVER NEAR PARK RESIDENCY HOTEL, DS4- KUTTYADI RIVER AT JANAKI FOREST, DS5- KUTTYADI RIVER NEAR PERUVANNAMUZHI DAM, DS6- KUTTYADI RIVER AT GULIKAPUZHA (DRAINAGE MOUTH), DS7- KUTTYADI RIVER AT KADIYANGAD RIVER, DS8- KUTTYADI RIVER BEHIND KSRTC DEPOT, THOTTILPALAM.

Scientist in charge 11/8/2020
Asst. Scientist

CONSOLIDATED MONTHLY PROGRESS REPORT OF ACTION PLAN FOR POLLUTED RIVER STRETCHES AS PER NGT O.A NO.673/2018

KAVVAI RIVER- JULY 2020

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status	Progress for the month of July, 2020
1	Ensure 100% treatment of sewage at least in-situ remediation	No time limit given	Scientific Septic Tank and Soak pit (10 Nos)	**1. Payyannur municipality** Completed
			All houses and establishments have their own disposal facility	**2. Kankol-AlappadambaGramaPanchayath**
			All houses and establishments have their own disposal facility	**3. RamanthaliGramaPanchayath**

2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	2021	STP Proposal by Payyannur Municipality at Fish market Perumba	DPR stage
3	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	
4	Chief Secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may	22.01.2020		

	have an accountable person attached in their office for this purpose.	22.01.2020		
5	• Monitoring at State level must take place	Fortnightly Commencing 21.12.2019		
6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Monthly (preferably before 20th of every month)		
6.1	Progress Report may be comprised of details along with completion timelines on:	2021	STP PROPOSED AT PERUMBA FISH MARKET	**1. Payyannur municipality** DPR STAGE

	(I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in situ treatment.		No proposal given	**2. Kankol-AlappadambaGramaPanchayath**
		2022	There are 5 natural drains meeting the river, of which 3 drains cleaned before monsoon itself and two are partly cleaned and the cleaning work is stopped due to heavy rain	**3. RamanthaliGramaPanchayath**
	(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed			

	along with completion timeline			
	(III) Status of CETPs Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.			
	(iv) Status of Solid Waste Management & Details of Processing Facilities Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline	2022	Bio bins (2061), Pit Compost(10992), Bio gas Plant(687)	**1. Payyannur municipality** Proposed project approved.
		Ongoing	Bio bins, Pit Compost, Bio gas Plant (2460 Nos)	**2. Kankol-AlappadambaGramaPanchayath** Completed

			No proposal given	**3. RamanthaliGramaPanchayath**
	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river		Attached Document	
	(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.	2022	MCF and RRF	**1. Payyannur municipality** Completed .
		2019	1.formation of	**3. Kankol-AlappadambaGramaPanchayath** 1. Completed

			Haritha Karma Sena And MCF 2. Proposal was given by for installing CCTV.	2. But not started installation due to non availability of fund
		2020	MCF	**4. RamanthaliGramaPanchayath** Completed (Proposed 5 more mini MCFs)
	(vii)Ground water regulation	2020	Proposal given by **irrigation Dept.** for Desilting and rejuvenation of river the fund for which is not sanctioned as informed.	DPR Submitted for FS to CE (I&A) Tvpmdt.7.11.19 videLr. No.D5-1429 Reju/19. (1)
	(viii) Adopting good irrigation practices,			

	(ix) Protection and management of food plain Zones (FPZ)			
	(x) Rain water harvesting,			
	(xi) Maintaining minimum Environmental flow of river			
	(xii) Plantation on both sides of the river			
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment			

1. Kavvayi River

Table 1 Concentrations of water quality parameters measured from July

Sl no	Parameters	Kankol	Karikuzhithodu	Thattarakadavu Bridge	Kuttyol palam
	Date of collection	**24/07/2020**	**24/07/2020**	**24/07/2020**	**13/07/2020**
1	pH	6.46	6.68	6.36	7.18
2	Electrical Conductivity, µs/cm	33.7	53.7	225	52.3
3	BOD, mg/L	1.63	0.13	1.5	0.61
4	Dissolved Oxygen, mg/L	6.3	6	7.3	5.67
5	Total coliform, cfu/100ml	180	140	240	300
6	Faecal coliform, cfu/100ml	40	80	80	60
7	Turbidity	0.8	0.6	0.5	1.2
8	Total Hardness, mg/L	10	17	80	10
10	Calcium Hardness, mg/L	4	3	30	6
9	Magnesium Hardness, mg/L	6	14	50	4
11	Ammonia-NO_3 ,mg/L	0.010815	BDL	BDL	BDL
12	Sulphate, mg/L	0.831168	BDL	BDL	BDL
13	Phosphate, mg/L	0.00918	BDL	BDL	BDL
14	Fluoride, mg/L	BDL	BDL	BDL	BDL
15	Total Alkalinity, mg/L	5	13	10	10
16	Chloride, mg/L	10	10	40	40

1.Kavvayi

Sl.no	Drain	Pollution load BOD July
1	Kotti thodu	2.2
2	School ground thodu	1.8
3	Kalikadapuram thodu	1.3
4	Koorikadavu	1.8
5	Ulliyathu kadavu	1.4
6	Kallatu kadavu	2.4
7	Muttathu kadavu	1.4
8	Vadipram thodu	4

CONSOLIDATED MONTHLY PROGRESS REPORT OF ACTION PLAN FOR POLLUTED RIVER STRETCHES AS PER NGT O.A NO.673/2018

PERUVAMBA RIVER – JULY 2020

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT- Compliance status	Progress for the month of July, 2020
1	Ensure 100% treatment of sewage at least in-situ remediation	31.03.2020	1. All houses have their own disposal facility 2. An STP is proposed at fish market Perumba	**1. Payyannur Municipality** DPR Stage
			Ensured 100% treatment of sewage in - situ	**2. Kunhimangalam Gp**
			Ensured 100% treatment of sewage in - situ	**3. Kankol-AlappadambaGp**
			Ensured 100% treatment of sewage in - situ	**4. RamanthaliGp**
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	2021	Proposed 10 KLD STP at fish market Perumba by Payyannur Municipality	DPR stage
3	Timeline for completing all steps of action plans	31.03.2022	All proposals by local body are in progress	

	including completion of setting up STPs and their Commissioning			
4	Chief Secretaries may set up appropriate monitoring mechanism at state level • 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 22.01.2020		
5	• Monitoring at State level must take place	Fortnightly Commencing 21.12.2019		
6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal	Monthly (preferably before 20th of every		

	Shakti • Member Secretary,CPCB	month)		
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in situ treatment.		Identified drains already cleaned before monsoon by harithakarmasena in Ramanthali GP and Kunhimangalam GP	**1. Payyannur Municipality**
				2. Kunhimangalam Gp
				3. Kankol-AlappadambaGp
				4. RamanthaliGp
	5. <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with	2021	Proposed by Payyannur Municipality	DPR STAGE

	completion timeline			
	6. Status of CETPs Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.		NIL	
	(iv) Status of Solid Waste Management & Details of Processing Facilities Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline		Disposal facilities for biodegradable wastes are distributing by all local bodies as every year project	**1. Payyannur Municipality**
				2. KunhimangalamGp For Disposal Of Biodegradable Waste From Source, Facilities Like Pipe Compost, Waste Pit, Ring Compost Etc Are Provided In Annual Plan And Nregs
		ongoing	Bio bins, Pit Compost, Bio gas Plant (2460 Nos)	**3. Kankol-AlappadambaGp**

				Completed
		ongoing	Ring Compost 1000 Nos, Compost Pit 2000 Nos, Bio gas plant 100 Nos	**4. RamanthaliGp** Ongoing
	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river		Attached with this report	
	(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.	2022	MCF and RRF	**1. PAYYANNUR MUNICIPALITY** Door to door collection of non bio degradable waste is doing by haritha karma sena and measures for disposal of biodegradable waste is practicing. All existing HCFs are disposing their BMW through CBMWTF
		ongoing	MCF	**2. KUNHIMANGALAM GP** Door to door collection of plastic waste periodically by

				Haritha karma sena ongoing. For storing plastic waste Panchayat constructed an MCF .For awareness of public conducted notice distribution and study class through Gramasabha
		ongoing	MCF	**3. KANKOL-ALAPPADAMBA GP** Completed
		2020	MCF	**4. RAMANTHALI GP** Completed(proposed 5 mini MCFs additionally)
		2022	Providing fencing on both side of Perumba bridge in payyannur Municipality.	**5 . IRRIGATION DEPT** DPR Submited to the CE (I&A) for FS to CE (I&A) Tvpm dt.7.11.19 vide Lr. No.D5-1429 Reju/19.(4)
	(vii)Ground water regulation	2021		1. KUNHIMANGALAM GP: Kollalithodu side protection-completed, Chalilthodu side protection-completed

				, Pallivayal-Anapettithodu side protection-completed, Mundathode side protection-completed, Kannadathode side protection-completed, Ammanthodu side protection-completed, Kayyil-Arakulamthodu side protection-completed, Thattanvayaltho du side protection-completed, Koyakkottuvaya lthode protection-Proposal submitted before irrigation dept, Cheratuvayaltho de protection-not started 2. IRRIGATION DEPT: DPR Submited to the CE (I&A) for FS to CE (I&A) Tvpm dt.7.11.19 vide

			Proposal given by Irrigation dept.for Desilting and reconstruction of salt water exclusion cross bar across perumbathodu in Payyannur Municipality and Desilting and repair of salt water exclusion cross bar across Koykottuvayalthodu in KunhimangalamPanchayath	Lr. No.D5-1429 Reju/19.(4)
	(viii) Adopting good irrigation practices			
	(ix) Protection and management of food plain Zones (FPZ),	2022	Proposal by Irrigation Dept. construction of marginal earthen bund at Moolakkadavu in cheruthazhampanchayath	DPR Submited to the CE (I&A) for FS to CE (I&A) Tvpm dt.7.11.19 vide Lr. No.D5-1429 Reju/19.(4)
	(x) Rain water harvesting,			

	(xi) Maintaining minimum Environmental flow of river		Proposal by Irrigation Dept 1. Desilting of Vannathipuzha at Chandapurakadavu and Paravoorkadavu in kattamballi-PanapuzhaPanchayath 2. Desilting & Reconstruction of Salt water exclusion cross bar across Perumbathodu in Payyannur Municipality	DPR Submited to the CE (I&A) for FS to CE (I&A) Tvpm dt.7.11.19 vide Lr. No.D5-1429 Reju/19.(4) DPR Submitted for FS
	(xii) Plantation on both sides of the river	2022	Planting trees on the bank of the river by Irrigation Dpt.	
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment			

2. PERUVAMBA

Sl no	Parameters	Kacherikadavu	Mathamangalam	Chandapura	Kandakali
	Date of collection	**28/07/2020**	**28/07/2020**	**13/07/2020**	**28/07/2020**
1	pH	6.53	6.39	6.89	6.82
2	Electrical Conductivity, µs/cm	39.7	40.4	44.5	177.4
3	BOD, mg/L	0.53	0.8	1.07	2.4
4	Dissolved Oxygen, mg/L	7.86	5.33	7.67	5.33
5	Total coliform, cfu/100ml	120	120	240	300
6	Fecal coliform, cfu/100ml	40	40	80	120
7	Turbidity	0.1	0.1	1.5	1
8	Total Hardness, mg/L	15	11	14	29
9	Calcium Hardness, mg/L	1	2	4	6
10	Magnesium Hardness, mg/L	14	9	10	23
11	Ammonia-NO_3, mg/L	BDL	BDL	0	0.007313
12	Sulphate, mg/L	2.20779	BDL	BDL	0.701298
13	Phosphate, mg/L	BDL	BDL	BDL	BDL
14	Fluoride, mg/L	BDL	BDL	BDL	0.0106
15	Total Alkalinity, mg/L	7	13	12	13
16	Chloride, mg/L	14	10	8	37

2.Peruvamba

Sl.no	Drain	Pollution load BOD July
1	Naranga thodu	2.8
2	Perumba thodu	2.6
3	Valliohmthodu	2.6
4	Panapuzha thodu	1.4
5	Poomkottu Chal	1.6
6	Manjangottu Thode	1.2
7	Kannelamthodu	2.6
8	Appithodu	1.3
9	Mavullapoyil thodu	0.2
10	Kollali thodu	2.2
11	Kannada thodu	0.8
12	Koyakkotu thodu Thokadu	0.6
13	Cherottuvayal thodu	0.68
14	Kayyil arakulam thodu Kunjimagalam puzha	2.2
15	Tattanvayal thodu	0.4

CONSOLIDATED MONTHLY PROGRESS REPORT OF ACTION PLAN FOR POLLUTED RIVER STRETCHES AS PER NGT O.A NO.673/2018
RAMAPURAM RIVER-JULY 2020

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status	Progress for the month of July, 2020
1	Ensure 100% treatment of sewage at least in-situ remediation	31.03.2022	Proposed by Madayi GP Scientific Septic Tank and Soak pit (Around 20 Nos)	Project got approval
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.2022	NIL	
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2022		Being done
4	Chief Secretaries may set up appropriate monitoring mechanism at state level • 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 22.01.2020		
5	• Monitoring at State level must take place	Fortnightly Commencing 21.12.2019		

6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Monthly (preferably before 20th of every month)		
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in situ treatment.		Identified 10 illegal outlets in to drains	stopped the same by construction of soak pit by Madayi GP
	(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline		-	
	(III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.		-	

	(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline	2022	Bio bins, Pit Compost (100 Nos)	Started issuing facilities in Madayi GP
	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river		Attached with this report	
	(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.	Ongoing	1. Door to door collection of non bio degradable waste is doing by local body and measures for disposal of biodegradable waste is practicing. All existing HCFs are disposing their BMW through CBMWTF	ongoing

		2021	2. Proposal given by Irrigation Department for Providing fencing on Ramapurambridge across Ramapuramriver at Madayi GP	DPR Submited for FS to CE (I&A) Tvpm dt.7.11.19 (2) vide Lr. No.D5-1429 Reju/19.
	(vii)Ground water regulation (viii) Adopting good irrigation practices,		Proposal given by Irrigation Department for Desilting and repair of salt water exclusion cross bar at Ramapuram in cheruthazham GP	Agreement executed
	(ix) Protection and management of food plain Zones (FPZ),		Regualtingactivites in flood plain zone, protection and management of flood plain zone	DPR Submitted for FS
	(x) Rain water harvesting,			
	(xi) Maintaining minimum Environmental flow of river	2022	maintaining enviornmental flow of Ramapuram River from the d/s of Ramapuram SWECB in CheruthazhamPanchayath	DPR Submitted for FS

	(xii) Plantation on both sides of the river (xiii) Setting up biodiversity parks on flood plains by removing encroachment	2022		

3. RAMAPURAM

Sl no	Parameters	Kappugal	Athiyadam	Ramapuram	Vayalapra
	Date of collection	**24/07/2020**	**24/07/2020**	**13/07/2020**	**24/07/2020**
1	pH	6.57	6.64	6.64	7.45
2	Electrical Conductivity, µs/cm	46.1	47.9	1140	1491
3	BOD, mg/L	2	0.4	0.47	2.5
4	Dissolved Oxygen, mg/L	5.6	5.2	4.6	4.3
5	Total coliform, cfu/100ml	140	100	330	200
6	Fecal coliform, cfu/100ml	80	80	100	80
7	Turbidity	0.2	0.4	1.3	0.6
9	Total Hardness, mg/L	5	7	160	23
8	Calcium Hardness, mg/L	4	3	90	18
10	Magnesium Hardness, mg/L	1	4	70	5
11	Ammonia-NO_3, mg/L	BDL	BDL	0.001339	0.005459
12	Sulphate, mg/L	0.42054	13.2354	6.13	8.16054
13	Phosphate, mg/L	BDL	BDL	BDL	BDL
14	Fluoride, mg/L	BDL	BDL	0.10	BDL
15	Total Alkalinity, mg/L	5	13	41	21
16	Chloride, mg/L	4	8	360	360

3.Ramapuram thodu

Sl.no	Drain	Pollution load BOD July
1	Kapugal thodu	0.8
2	Chembali kundu	0.82
3	Kulapram kundan thodu Kavilavalapu thodu	4
4	Aduthila thodu	0.64
5	Ottayi thodu	3.22
6	Moolakadavu	3.62

CONSOLIDATED MONTHLY PROGRESS REPORT OF ACTION PLAN FOR POLLUTED RIVER STRETCHES AS PER NGT O.A NO.673/2018

KUPPAM RIVER – JULY 2020

Sl. no	Activity to be monitored	Time line	Submission of progress by state/UTCompliance status	Progress for the month of July, 2020
1	Ensure 100% treatment of sewage at least in-situ remediation		Scientific Septic Tank (Approx.100 Nos)	**1. UDAYAGIRI GP:** 62 Nos. completed, 10 Nos ongoing
				2. CHAPPARAPPADAVU GP:
				3. MADAYI GP: Ongoing –Estimate prepared for constructing Nine numbers of soak pit.
				4. THALIPPARAMBA MUNICIPALITY: All houses and establishments have their own disposal facilities
				5. **PATTUVAM GP:** All the Houses, Shops and institutions are directed to treat their solid liquid waste at the source itself

CONSOLIDATED MONTHLY PROGRESS REPORT OF ACTION PLAN FOR POLLUTED RIVER STRETCHES AS PER NGT O.A NO.673/2018

KUPPAM RIVER – JULY 2020

				6. PARIYARAM GP: Completed the work of 10 Nos of soak pit
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		No proposal	Common STP is working in Thalipparamba Municipality
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	31.03.2021		
4	Chief Secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose.			
5	• Monitoring at State level must take place			
6	Progress report may be furnished by the State/UTs	Monthly (preferably		

	to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	before 20th of every month)		
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in situ treatment.			**1. UDAYAGIRI GP:** Drains already cleaned before monsoon.
				2. CHAPPARAPPADAVU GP:
				3. MADAYI GP: drains already cleaned
				4. THALIPPARAMBA MUNICIPALITY: Identified drains already cleaned before monsoon by harithakarmaseena and santanition workers.
				5. **PATTUVAM GP:** Drains already cleaned by ward sanitation fund
				6. PARIYARAM GP:
	(II) Status of STPs, I&D and sewerage networks Details of Existing Infrastructure,Ga			

	p Analysis, Proposed along with completion timeline			
	(III) Status of CETPs Details of Existing CETP and ETP Infrastructure,Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.			
	(iv) Status of Solid Waste Management & Details of Processing Facilities Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline		Bio bins, Pit Compost, Bio gas Plant (As per the application from each ward)	**1. UDAYAGIRI GP:** Compost Pit – 74 Nos, Biogas Plant – 20 Nos
			Issued 154 pit compost	**2. CHAPPARAPPADAVU GP:**
				3. **MADAYI GP:** Order placed for 100 Numbers of Ring Compost to be issued to the 20 wards for bio degradable waste

				disposal, proposal for thumboormozhi is temporarly postponed due to non availability of land
				4. THALIPPARAMBA MUNICIPALITY: Ring compost, pipe compost, dung pits are distributing for biodegradable waste disposal in every year and a proposal for thumboormozhi in trenching ground karimbam,thaliparamba
			Ring Compost 150 pipe compost 600, Biogas plant 25, compost pit 100 Thumboormuzhi 1	**5. PATTUVAM GP:** Disposal facilities for biodegradable wastes are distributing by pipe compost 600, Biogas plant 19, compost pit 28

			Ring compost, Pipe Compost, Dung Pits (10050 Nos) , ThumboorMozhi (2 Nos)	**6. PARIYARAM GP:** Ring compost, Pipe Compost, Dung Pits (8012 Nos), Due to non availability of land proposal for thomboormozhi is reduced to one, which is submitted for TS
	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river		Attached with this report	
	(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.	2020	Door to door collection of non bio degradable waste is doing by local body and measures for disposal of biodegradable waste is practicing. All existing HCFs are disposing their BMW through CBMWTF	**1. UDAYAGIRI GP:** Completed the work of MCF **2. CHAPPARAPPADAVU GP:** Completed and started functioning of MCF **3. MADAYI GP:** Completed the work of MCF but not started functioning due to complaint frm local people

CONSOLIDATED MONTHLY PROGRESS REPORT OF ACTION PLAN FOR POLLUTED RIVER STRETCHES AS PER NGT O.A NO.673/2018

KUPPAM RIVER – JULY 2020

				4. THALIPPARAMBA MUNICIPALITY: non bio degradable waste is collecting through MCF and giving to Clean kerala Company
				5. **PATTUVAM GP:** Door to door collection of non bio degradable waste is collected through Harithakarmasena and giving to the registered agencies
				6. PARIYARAM GP: Door to door collection of non bio degradable waste is collected through Harithakarmasena and giving to the registered agencies
				7. IRRIGATION DEPARTMENT : Providing fencing on both sides of Kuppam bridge at Kuppam in ThaliparambaMunicipality and Pazhayangadi bridge at Pazhayangadi in MadayiGramaPanchayat

				h **(DPR Submitted for FS to the CE (I&A) Tvpm dt.7.11.19 (3) vide Lr. No.D5-1429 Reju/19.)**
	(vii)Ground water regulation			
	(viii) Adopting good irrigation practices,			
	(ix) Protection and management of food plain Zones (FPZ),	2022	Proposal given by Irrigation Department for Construction of Marginal Earthen Bund at peringeel In EzhomeGramaPanchayath	DPR Submitted for FS to the CE (I&A) Tvpm dt.7.11.19 (3) vide Lr. No.D5-1429 Reju/19.
	(x) Rain water harvesting,			
	(xi) Maintaining minimum Environmental flow of river	2022	Proposal given by Irrigation Department for Desilting of Kuppam river in Various Stretches in ChapparapadavuGramaPancha	DPR Submitted for FS to the CE (I&A) Tvpm dt.7.11.19 (3) vide Lr. No.D5-1429 Reju/19.

CONSOLIDATED MONTHLY PROGRESS REPORT OF ACTION PLAN FOR POLLUTED RIVER STRETCHES AS PER NGT O.A NO.673/2018

KUPPAM RIVER – JULY 2020

			yath	
	(xii) Plantation on both sides of the river			
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment			

4. Kuppam

Sl no	Parameters	Velichankeel	Mangalasserry	Kuppam bridge	Variankottam	Vellavu	Kuttyerikkadavu
	Date of collection	**3/8/2020**	**3/8/2020**	**6/7/2020**	**3/8/2020**	**3/8/2020**	**3/8/2020**
1	pH	7.04	7.53	7.26	7.56	7.41	7.68
2	Electrical Conductivity, µs/cm	320	60.9	1200	80.4	72.3	58.6
3	BOD, mg/L	2.56	1.2	0.22	1.03	1.83	1.06
4	Dissolved Oxygen, mg/L	7	6.82	8	6.60	7.29	8
5	Total coliform, cfu/100ml	100	100	320	120	120	100
6	Faecal coliform , cfu/100ml	40	40		60	40	40
7	Turbidity	0.8	0.6	1.8	0.8	0.8	0.7
8	Total Hardness, mg/L	30	18	170	18	20	10
10	Calcium Hardness, mg/L	15	7	90	12	12	6
9	Magnesium Hardness, mg/L	15	11	80	6	8	4
11	Ammonia-NO_3, mg/L	0.009373	0.015862	0.0254	0.01411	0.009064	0.005562
12	Sulphate, mg/L	BDL	0.792207	6.3726	0.4155	0.2339	0.038961
13	Phosphate, mg/L	0.02074	BDL	0	BDL	BDL	BDL
14	Fluoride, mg/L	0.6813	0.0167	0.22	BDL	BDL	BDL
15	Total Alkalinity, mg/L	12	8	38	8	10	8
16	Chloride, mg/L	70	25	380	15	12	18

4.Kuppam

Sl.no	Drain	Pollution load BOD July
1	Karuvanchal	0.6
	Karthikapuram	0.4
	Near Udayagiri Bridge	0.26
	Mukkada Thodu	0.88
	Moonamkunnu Thodu	2
	Kuttaparamba-Neduvodu Thodu	0.42
	D/S of Alakode Hospital	0.64
	Pathayachira	2.26
	Near the houses on bank of main River (@ Pariyaram GP)	3.2
	Near House Boat @ Pariyaram GP	3.26
	Kavinmunabu	5.2
	Manja Thodu	2.2
	Sulthan Thodu	8.64
	Cheru thodu	1.08

CONSOLIDATED REPORT ON POLLUTION RIVER STRETCHES O.A. 673/2018

1. KECHERI RIVER

1. Pollution load in drains (by Choondal Panchayat)

Joint inspection was conducted by KSPCB, Kerala Irrigation Department, Kerala Water Authority and Suchitwa Mission. No drains which directly open into the Kechery river could be identified. The river flows in the midst of agricultural land in Choondal Grama Panchayath. But there are chances of dumping of solid waste and dumping of septage into the river from kechery bridge on Thrissur –Kuttippuram Highway.

The upstream of Kechery river, known as Wadakkanchery river is flowing through Wadakkanchery Municipal area. The municipal drains were seen emptied into the river. The BOD load of one such drain Chalippadam thodu was determined and it was found to be 0.1584 TPD. During inspection there was no flow in the river. But when there is a flow, there are chances of pollution in the downstream. Hence for the rejuvenation of Kechery river, rejuvenation of wadakkanchery river is essential. Hence one station may be included under SWMP for monitoring of Wadakkanchery river .

In 2018-19 Rs 4,00,000/- has been spent by Choondal Gramapanchayat for the protection of Kechery River In 2019-20 8.5 lakhs is sanctioned for protection of Kechery river , project name Punarjjani . In 2020-21 5.44 lakhs is sanctioned for the protection of Kechery river. The project includes removal of mud and wastes from the river which is dumped as a result of Flood during the year 2018,2019.

Short term plan(Kecheri river)

No.	Activity	Implementing agency	Cost (Rs. Cr)	Source of fund	Time line	Expected outcome
5.1	Installation of CCTV in different locations along river side	PWD electronic division	0.01	Plan fund	31/10/2020	Prevention of solid waste and septage dumping
5.2	Fixing Boards	Choondal Grama Panchayat	0.01	Own fund	31/08/2020	Prevention of solid waste and septage dumping
5.3	Surveillance to prevent flow of sewage /effluent to river	Choondal Grama Panchayat			31/08/2020	Prevention of solid waste and septage dumping
5.4	Stoppage of effluent from residential apartment(Shajan's flat) and pig farm into the river.	Choondal Grama Panchayat				As per Direction issued to units both firms stopped discharge of untreated Effluent to

						kechery river.

6.Long term Plan(Kecheri river)

	Long term measures proposed	Implementing agency	Amount Required (Rs.in Crore) and Source of fund	Time line	Remarks
4.1	Side protection by fixing coir geo nets	Choondal Grama Panchayat,	0.35 (Central Sponsored Fund of MGNREGS)	Estimate of 5 lakhs has been completed . work not started because of water .	Protection of Kechery river
4.2(i)	Survey process of Kechery river portion belong to Choondal Grama Panchayat to mark the boundary and encroachment.	Done by Revenue Department	0.04 (Choondal GP - Finance Grand)	completed	
4.2 (ii)	Laying of survey station	Choondal Grama Panchayat	0.02 (Choondal GP - Finance Grand)	completed	
4.2(iii)	Digital maping and seminar on pollution control and planting of Medicinal plants on river bank.	Forestry College, Vellanikkara	0.01 (Choondal GP – Plan fund)	Due to Lock down the project is not yet completed .	Project proposal is submitted to Kerala Agricultural Univerity for approval .

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)

KecheriRiver – July2020 – Submitted by Wadakkanchery Muncipality

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status	Progress for the month of July, 2020
1	Ensure 100% treatment of sewage at least in-situ remediation		DPR Submitted before KIIFB	DPR Submitted before KIIFB (Modern Market with STP at Wadakkanchery&Ottupara)
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		DPR Submitted before KIIFB	DPR Submitted before KIIFB (Modern Market with STP at Wadakkanchery&Ottupara)
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		DPR Submitted before KIIFB	DPR Submitted before KIIFB (Modern Market with STP at Wadakkanchery&Ottupara)
5	Chief Secretaries may set up appropriate monitoring mechanism at state level ● Specifying accountability of nodal authorities not below the Secretary level ● Chief Secretaries may have an accountableperson attached in their office		NA	

	for this purpose.			
	● Monitoring at State level must take place		NA	
6	Progress report may be furnished by the State/UTs to ● Secretary,Ministry of Jal Shakti ● Member Secretary,CPCB	Applicable at State level	NA	
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline (III) <u>Status of CETPs</u>		Illegal outlets were identified and notice was issued as per Kerala Municipal Act .In Further inspection outlets were found removed. Process on going 2 common STPs are proposed, One at Athani (350 MLD)and other at Ottupara(500MlD).	Polluting sources identified and preventive measures completed. Doing Regular inspection 2 common STPs are proposed, One at Athani (350 MLD)and other at Ottupara(500MlD). DPR

	Details of Existing CETP and ETP Infrastructure,Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.	March 2021	NA	under preparation
	(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline			**Bio-waste:**
	(v)Latest water quality ofpolluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	30.09.2020	Tender for installation of windrow composting at Kumbalangad completed.Work order issued.Non biodegradable wastes collected by Haritha karma sena. Biodegradable wastes by kudumbasree.	Presently using Bio gas plant. Construction of windrow compost plant 60% work completed. **Non-Bio waste:** Door to Door collection ongoing through Harithakarmasena. The

	(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.		collected waste handing over to Clean Kerala Company. Tributaries Akamala Ottupara Thodu Drains-2 wadakanchery &Ottupara. Water quality monitoring of polluted river stretch is done periodically, (Report attached.) Biomedical wastes collected by IMAGE.Two MRF were setup. Plastic waste handing over to Clean Kerala company every day by harithakarma sena.RCF(Cost of installing bailing machine and shredding machine remitted to Clean Kerala company). Construction of 1726 rain pits for ground water	Biomedical wastes collected by IMAGE. Two Material Recovery Centres(MRF)were setup. Plastic waste handing over to Clean Kerala company by Harithakarmasena.

	(vii)Ground water regulation		recharge are under progress	RRF (Resource Recovery facility centres) Cost of installing bailing machine remitted to Clean Kerala company.
	(viii) Adopting good irrigation practices,		Not yet started	Construction of 1726 rain pits for ground water recharge completed in the year 2019-2020 under Ayyankali urban Employment scheme. Good irrigation practices will implement in cooperation with Agriculture and irrigation department
	(ix) Protection and management of food plain Zones (FPZ),		Not yet started Guaranteed construction of Rain water harvesting	Irrigation canal cleaning completed after 2018 flood. Not yet started Guaranteed the construction of

	(x) Rain water harvesting,		facility for residential building above 150m^2 are under process.	Rain water harvesting facility for residential building above 150m2. Occupancy certificate issued only after verification of the above.
	(xi)Maintaining minimum Environmental flow of river		Not yet started	
	(xii) Plantation on both sides of the river		Planting bamboos on riversides. Work ongoing.	Bamboo planted along 6.5km of Wadakanchery river on both sides.
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment	30.03.2022		
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment	30.06.2022	Encroachment removal ongoing. Already recovered 10.5Acre of encroached land.	Recovered 10.5 Acres of encroached land. Will prepare Project for setting up of bio-diversity Parks

KECHERI RIVER - JULY 2020- ANALYSIS REPORT				
SL. NO.	PARAMETER	UNIT	VAD1	VAD2
1	pH		6.4	6.7
2	Electrical Conductivity	µ/cm	109	103
3	BOD	mg/L	2	0.7
4	DO	mg/L	6.4	7
5	COD	mg/L	4	8.1
6	TC	CFU/100ml	400	300
7	FC	CFU/100ml	200	100
VAD1 - WADAKKANCHERY PUZHA, KECHERY				
VAD2 - WADAKKANCHERY PUZHA, KECHERY				

2. KARUVANNUR RIVER

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)

Karuvannur River – July2020- Submitted by Irinjalakuda Muncipality

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT- Compliance status	Progress for the month of July, 2020
1	Ensure 100% treatment of sewage at least in-situ remediation		On progress	On progress
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		NA	NA
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		On Progress (proposal submitted before council)	On progress

5	Chief Secretaries may set up appropriate monitoring mechanism at state level ● Specifying accountability of nodal authorities not below the Secretary level ● Chief Secretaries may have an accountableperson attached in their office for this purpose.		NA	NA
	● Monitoring at State level must take place		NA	NA
6	Progress report may be furnished by the State/UTs to ● Secretary,Ministry of Jal Shakti ● Member Secretary,CPCB	Applicable at State level	NA	NA

6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline (III) <u>Status of CETPs</u> Details of Existing CETP and ETP Infrastructure,Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.	30.05.2021	Inspection conducted and no illegal outlets were identified. FSTP and STP for DPR	Inspection conducted and no illegal outlets were identified. Tendering process in [progress for preparation of DPR for ESTP and STP

	(IV) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline		NA	NA
	(V) Latest water quality ofpolluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		Windrow compost construction started. Aerobic compost unit-Thumburmuzhi model construction completed	Windrow compost plant construction completed. Will start functioning in September 2020. Fourteen Aerobic compost unit (Thumburmuzhi model) construction completed
	(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.		Water quality monitoring of	Water quality monitoring of polluted river stretch is done periodically.

	(vii)Ground water regulation (viii) Adopting good irrigation practices, (ix) Protection and management of food plain Zones (FPZ),		polluted river stretch is done periodically. (Report attached) Health squad is formed to prevent littering of waste in public places. Police department installed CCTV at Karuvanur bridge and Puthenthodu. Necessary steps are taken for installation of CCTV at Neerolithodu and Pinkilipadam areas.	Health squad is formed to prevent littering of waste in public places. Police department installed CCTV at Karuvanur bridge and Puthenthodu. Necessary steps are taken for installation of CCTV at Neerolithodu and Pinkilipadam areas.

	(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		Not yet started	Not yet started Work not started due to

			Work not started due to high water level	high water level Not started

KARUVANNUR RIVER -JULY 2020 - ANALYSIS REPORT								
SL. NO	PARAMETER	UNIT	KT	MRK	KND	MDK	THR	KRV
1	PH		6	5.7	6.3	5.8	6	6.3
2	EC	µ/cm	99	113	77	120	81	125
3	BOD	mg/L	1.3	1.3	0.9	1.4	1.3	1.1
4	DO	mg/L	4	3	6.5	3.4	5.4	3
5	COD	mg/L	12	8	8.2	8	4	4
6	TC	CFU/100ml	400	400	300	200	200	300
7	FC	CFU/100ml	200	200	100	100	100	100

KT - KANAKKAN KADAVU, KARUVANNUR
MRK - NEEROLI THODU, KARUVANNUR EEROLI THODE
KND - KANATHODU, KARUVANNUR
MDK - MUTTIKKAL DAM, KARUVANNUR
THR- THIRUKUZHI, KARUVANNUR
KRV - PAINKILIKAYAL THODU, KARUVANNUR

3. PUZHAKKAL RIVER

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)

Puzhakkal River – July2020 – Submitted by Thrissur Corporation

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT- Compliance status	Progress for the month of July, 2020
1	Ensure 100% treatment of sewage at least in-situ remediation	31.03.2020	On Progress	
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.2020	NA	
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		On progress (Proposal Submitted Before Council	1. STP Completed at Mattampuram. 2. Tendered and awarded STP at District Hospital (330 MLD)
5	Chief Secretaries may set up appropriate monitoring mechanism at state level ● Specifying accountability of nodal authorities not below the Secretary level ● Chief Secretaries may have an accountableperson attached in		NA	

	their office for this purpose.			
	• Monitoring at State level must take place		NA	
6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Applicable at State level	NA	

6.1	Progress Report may be comprised of details along with completion timelines on: (IV) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment. (V) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline (VI) <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.	30.05.2021	Illegal outlets 91530 houses and 122 establishments)were identified and notice issued. Work tendered and selection memo issued. Agrement not executed. Reminder letter sent	

			70 percentage of industries installed ETPs. Notice were issued to remaining establishments	
	(iv) <u>Status of Solid Waste Management & Details of Processing Facilities</u> Details of Existing Infrastructure,Gap Analysis, Proposed along with completion timeline			
	(v)Latest water quality ofpolluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;			<u>Exixting infrastructure</u>

	(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. (vii)Ground water regulation		Water quality monitoring of polluted river stretch is done periodically, (Report attached.) .	1. 10 mcf 2. 2 rrf 3. 2 OWC Plant having capacity of 12 tpd. 4. 8 Biogas plant 5.20 Vehicles (2 truck,2tractors, 8 ommercial utilty vehicles, 8 pettiauto) 6.10 units of aerobic bins 7.13 o.s o Harithakarmasena groups (140 members) 8.Door to Door collection from 40000 houses & 15000 commercial institutions

	(viii) Adopting good irrigation practices, (ix) Protection and management of food plain Zones (FPZ), (x) Rain water harvesting, (xi)Maintaining minimum			<u>New proposals</u> 1.5 nw Harithakarma sena will be formed 2.New Owc plant (Kovilakathumpadam) under construction 3.2 MRF uner construction 4.3 No.s of commerial utility vehicle purchased for door to door collection 5.New Bailing machine for RRF will be purchased 6.Nw building for segregation yard is planned and worth Rs:40 Lakhs are year mark 7.100% door to door collection can b achieved within 3

	Environmental flow of river (xii) Plantation on both sides of the river (xiii) Setting up biodiversity parks on flood plains by removing encroachment		Riverside protection work for a stretch of 500m has been completed. Construction of second stretch of 450m is ongoing.	months. VI 1.To prevent dumping Corporation is indenting to collect the waste from 100% door. 2.No.of dumping site could be reduced by the continuous monitoring & observations 3.Biomedical waste is processed by image .This year Corporation yearmark Rs.1 crore for the construction of new biomedical incinerator at corporation hospital. 4. Plastic waste are collected segregated

				and sent to recycling system. Multi layer plastics are shredded and used for road construction through clean kerala company. Non recyclable plastic wastes are sent to KEIL through Clean Kerala company. Corporation made a negotiation with ACC cement factory for co-processing of non recyclable plastic waste. 5. Bulk waste generators (hotels and Asrams) process their wastes in their own premises. They use biogas plant for aerobic compost bin.

PUZHAKKAL RIVER - JULY 2020 - ANALYSIS REPORT

SL. NO	PARAMETER	UNIT	SBA	KTH	PTU	MP
1	pH		6.3	6.3	6.2	6
2	Electrial Conductivity	µ/cm	143	231	299	129
3	BOD	mg/L	2.4	1.4	0.3	1.7
4	DO	mg/L	5	4	3	6
5	COD	mg/L	12	12	8	8
6	TC	CFU/100ml	200	200	300	300
7	FC	CFU/100ml	100	100	200	100

SBA - NEAR SOBHA CITY, KIZHAKKUMMURI ROAD , PUZHAKKAL
KTH - KURINJAKKAL THODU, PUZHAKKAL
PTU - PANCHIKKAL THODU, PUZHAKKAL
MP - MUPPUZHA, PUZHAKAL

RIVER CHITHRAPPUZHA
(Priority-V)
Submission of Monthly Progress Report-July 2020 by States/UTs (Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)

Sl. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		Major units have own treatment facility.
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		Not reported any progress by Thripunithura Municipality
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		Not reported any progress by Thripunithura Municipality
4	Chief Secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose.		
5	• Monitoring at State level must take place		District level committee monitoring regularly

6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Monthly (preferably before 20th of every month)	
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment.		Notices has been issued by the Thrippunithura Municipality to Hotels and Flat owners regarding the removal of sewage pipes / drainage pipes to the water bodies / public ponds passing through the municipal area under Kerala Municipality Act 340A; Action taken by Kochi Corporation is attached- Annexure-II

	(II) Status of STPs, I&D and sewerage networks Details of Existing Infrastructure,Gap Analysis,proposed along with completion timeline		Submitted earlier
	(III) Status of CETPs Details of Existing CETP and ETP Infrastructure,Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.		Submitted earlier
	(iv) Status of Solid Waste Management& Details of Processing Facilities Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline		Steps have been taken to conduct a sanitation survey by Thripunithura Municipality; Door to Door collection is ongoing
	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		- Analysis Report by KSPCB is attached (Annexure-I)

	(vi)Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from several establishments		Monitoring ongoing by KSPCB; Instruction was given to local bodies by KSPCB to install Surveillance cameras on major waste dumping places; Monitoring on going by Thripunithura Municipality; Surveillance cameras have been installed in various parts of Tripunithura Municipality to detect people who are dumping garbage into public water. Procedures are being taken, including fines. Protective fencing is installed on both sides of the river to prevent dumping of waste in public water bodies
	(vii)Ground water regulation		Ground Water Department: As per Groundwater resources of Kerala, 2017 estimate a total number of 3 blocks (Edapally,Vadavukodu, Vazhakkulam) comes under the Chithrapuzha river basin. All the

			blocks in the river stretch are safe with stage of groundwater extraction ranges from 25.38% to 56.63%
	(viii) Adopting good irrigation practices		Enclosed as Annexure-II (by Irrigation Dept w.r.t action plan); Rejuvenation works of River Konothupuzha, Andhakarathodu is on going by Minor Irrigation Dept and Thrippunithura Municipality; Spent Rs.1 Lakh for the cleaning of 'Kochupaalam Thodu' reaching Chithrappuzha by Tripunithura Municipality; Ground Water Department: The total irrigation draft in the area ranges from 172.32 - 1028.5 ha.m.
	(ix)Protection and management of flood plain Zones (FPZ),		Not reported any progress by Irrigation Department
	(x)Rain water harvesting		Insisting for major units by KSPCB as consent condition; Ground Water Department : The average groundwater level ranges from

			1.85mbgl -9.2 mbgl. Groundwater Department not yet proposed any recharge structures in this area.
	(xi)Maintaining minimum Environmental flow of river		Not reported any progress by Irrigation Department
	(xii) Plantation on both sides of the river		Not reported any progress by Irrigation Department and Thripunithura Municipality
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment		Not reported any progress by Revenue Department, Irrigation Department and Thripunithura Municipality

ANNEXURE-I(KSPCB)

Analysis Report(JULY 2020)

Sl. No.	Parameters	Irumpanam
1	Temperature, ^{0}C	27
2	pH	6.5
3	Conductivity, µmhos/cm	209
4	Turbidity, NTU	11.6
5	Total Alkalinity, as CaCO3	22
6	Chloride, mg/l	29
7	COD, mg/l	12
8	TKN, mg/l	2.13
9	Ammoniacal-N, mg/l	0.16
10	Hardness, as CaCO3 mg/l	36
11	Calcium, as CaCO3 mg/l	6
12	Magnesium as CaCO3, mg/l	30
13	Sulphate, mg/l	27.6
14	Sodium, mg/l	20.3
15	Total Dissolved Solids, mg/l	130
16	Total Fixed Solids, mg/l	110
17	Total Suspended Solids, mg/l	35
18	Phosphate, mg/l	2.43
19	Boron, mg/l	0.09
20	Potassium, mg/l	3.04
21	BOD, mg/l	3.2
22	Fluoride, mg/l	0.6
23	Dissolved Oxygen, mg/l	2.7
24	Nitrate-N, mg/l	1.76
25	Total Coliform, MPN/100 ml	4300
26	Fecal Coliform, MPN/100 ml	3100
27	Fecal Streptococci	250

ANNEXURE-II (IRRIGATION DEPARTMENT)

	Irrigation Section Champakkara - Works Included in Chithrappuzha Action plan				
SL No.	Name of work	Price ID	Amount in Lakhs	Timeline (Duration of Work)	Present Status
	Short Term Works				
1	IWT Works - Desilting of Chithrapuzha River near Kochin Refinery from Mamala bridge to Chithrapuzha bridge in Ernakulam District - Reach I	2020/618/IA	49.18	One year	Work Tendered
2	IWT Work - Desilting of Chithrapuzha River from Chithrapuzha bridge to Railway bridge in Ernakulam District - Reach II	2020/735/IA	77.20	One year	Estimate submitted to SE
3	IWT Work- Desilting of Chithrapuzha River from Railway bridge to Kozhichira bund in Ernakulam District- - Reach III	2020/740/IA	88.95	One year	Estimate submitted to SE
	Long Term works				
4	NGT- IWT Works - Soil Investigation works for the construction of Walk way along Chithrapuzha River from Mamala to Champakkara canal	2020/1243/IA	17.74	Nine Months	Estimate submitted to SE (As a preliminary step Soil investigation estimate is submitted)
	Total		233.07		

(KOCHI CORPORATION)

Sl. No.	Activity	Implementing agency	Cost (Rs. Cr)	Source of fund	Wheather project formulated (Y/N)	DPC approved	Started/ Not started	Remarks/STATUS
1	Restricting seepage of leachate of plastic dumped in the dumping yard	KSIDC, Government of Kerala	22	Govt fund	Yes	NA	Not started	Government took over the work of bio-mining from Kochi Corporation Vide G.O(Ms) No.8/2020/DMD dated 05/03/2020 assigning KSIDC to tender the work. Work was tendered on 20/03/2020.2 Bids received. None of them found qualified. KSIDC has now re-tendered the work on 24/06/2020 with last date for submission of bids on 04/09/2020.

Sl. No.	Activity	Implementing agency	Cost (Rs. Cr)	Source of fund	Whether Project formulated (Yes/ No)	DPC approved	Present status not started/ongoing
1	Provide proper facilities for restricting the seepage of leachate	Kochi Corporation	0.22	Plan fund	Yes	Yes	**Construction of leachate Collection tank completed**
2	Provide proper facilities for collecting and treating leachate	Kochi Corporation	1.27	Plan fund	Yes	Yes	Not started
3	Solid waste treatment facility at Brahmapuram/Waste to Energy plant	Kochi Corporation	300	PPP project	YES	NA	Govt. cancelled the contract with the concessionaire vide G.O (Rt)No. 805/2020/LSGD dated 30/4/2020 KSIDC has floated tender on 24/06/2020 with last date for submission of tenders on 27/08/2020

EDAPALLY THODU(The thodu is reaching downstream of polluted river stretch. Not included in the action plan)

Sl No	Activity	Implementing agency	Cost (Rs.)Cr	Source of fund	Project Formulated (Yes/ NO)	DPC approved	REMARKS
1	Study for identification of pollution sources at Edappally thodu	Cochin Corporation	0.03	Plan/Own	Yes	-	Will be undertaken together with the civil work
2	Periodical inspection in the Industries, Flats, hotels for monitoring of STP, ETP located in Cochin corporation.	Cochin Corporation, KSPCB	-	-	-	NA	BEING CARRIED OUT.List of shops/establishments who were given notice are separately listed below.
3	Fencing the banks of the river to prevent dumping/throwing of wastes into the river	Kochi Corporation	0.20	Plan fund	YES	Pending approval	Plan fund 20-21 proposed for the work

Notice given to the following shops and establishments:

1. *Samia residency* Edapally
2. *Rajeev K.R,Car ROB service brett makers polishing and service Samrithi nagar* Edapally
3. *P A Jamal, Prestige Agencies Cement bricks manufacturing unit Samrithi Nagar Edapally*
4. *Freezeon foods, Samrithi Nagar road Edapally*

(TRIPUNITHURA MUNICIPALITY)

- The Secretary, Tripunithura Municipality informed that the progress of works mentioned in the action plan is behind the schedule because of the circumstances arised due to Covid-19 Pandemic.

RIVER –
KADAMBRAYAR
(Priority IV)
Submission of Monthly Progress Report-July 2020 by States/UTs (Hon'ble

NGT in the matter of OA No.673/2018 dated 06.12.2019)

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.
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	3 years(final)	Not reported any progress by Thrikkakkara Municipality
3	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	-do-	-do-
4	Chief Secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose.		
5	• Monitoring at State level must take place		District level committee monitoring regularly

6	Progress report may be furnished by the State/UTs to • Secretary,Ministry of Jal Shakti • Member Secretary,CPCB	Monthly (preferably before 20th of every month)	
6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment.		Ongoing by KSPCB and Thrikkakkara Municipality
	(II) <u>Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure,Gap Analysis,proposed along with completion timeline		Submitted earlier
	(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.		Submitted earlier

	(iv) <u>Status of Solid Waste Management& Details of Processing Facilities</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline		Not submitted progress details by Thrikkakkara Municipality;
	(v)Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		Analysis report by KSPCB is attached (Annexure-I)
	(vi)Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from establishments		Monitoring on going; Instruction was given to local bodies by KSPCB to install Surveillance cameras on major waste dumping places; C.C.T.V Cameras are installed by Vadvucode Puthencruz Gramapanchayat;

			The Kadambrayar 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 cameras provided with the CSR aid of Wonderla Amusements Park. Also the Police is conducting routine surveillance operation so as to 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.

	(vii)Ground water regulation		Ground Water Department: As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (mulanthuruthi and vadavakkodu) comes under the kadambrayar river basin. All the blocks in the river stretch are safe with stage of groundwater extraction ranges from25.38% to 68.01%
	(viii) Adopting good irrigation practices		Enclosed as Annexure-II (by Irrigation Dept w.r.t action plan); As per the letter dated 10.08.2020, cleaning work Athikali Thodu joining kadambrayar is on going by Thrikkakkara Municipality; Ground Water Department: The total irrigation draft in the area ranges from 531.54 to 745.74 ha.m.
	(ix)Protection and management of food plain Zones (FPZ),		Not submitted progress details by Irrigation Department

	(x)Rain water harvesting		Insisting for major units by KSPCB as consent condition; The pre-monsoon groundwater level of the area ranges from 4.43 to 5.38 mbgl. Groundwater Department has not yet proposed any recharge structures in this area.
	(xi)Maintaining minimum Environmental flow of river		Not reported any progress by Irrigation Department
	(xii) Plantation on both sides of the river		Not reported any progress by Thripunithura Municipality
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment		Not reported any progress by Revenue Department, Irrigation Department and Thripunithura Municipality

ANNEXURE-I(KSPCB)

Analysis Report(JULY 2020)

Sl. No.	Parameters	Brahmapuram	Manackakadavu
1	Temperature, ^{0}C	28	27
2	pH	6.4	6.4
3	Conductivity, µmhos/cm	118	99
4	Turbidity, NTU	9.5	10.9
5	Total Alkalinity, as CaCO3	26	23
6	Chloride, mg/l	15	14
7	COD, mg/l	12	6.4
8	TKN, mg/l	0.21	0.53
9	Ammoniacal-N, mg/l	0.05	0.11
10	Hardness, as CaCO3 mg/l	21	20
11	Calcium, as CaCO3 mg/l	12	9
12	Magnesium as CaCO3, mg/l	9	11
13	Sulphate, mg/l	13.8	12.32
14	Sodium, mg/l	11.6	9.2
15	Total Dissolved Solids, mg/l	76	66
16	Total Fixed Solids, mg/l	65	52
17	Total Suspended Solids, mg/l	26	30
18	Phosphate, mg/l	0.01	0.05
19	Boron, mg/l	0.08	0.06
20	Potassium, mg/l	2.56	2.57
21	BOD, mg/l	3.6	2.5
22	Fluoride, mg/l	0.1	0.1
23	Dissolved Oxygen, mg/l	2.5	3.8
24	Nitrate-N, mg/l	0.13	0.26
25	Total Coliform, MPN/100 ml	4900	4900
26	Fecal Coliform, MPN/100 ml	2200	3500
27	Fecal Streptococci	200	270

ANNEXURE-II

(IRRIGATION DEPARTMENT)

SL No.	Name of work	Price ID	Amount in Lakhs	Timeline (Duration of Work)	Present status
	Short Term Works				
1	Removal of water hyacinth from Kadambrayar upstream ecotourism to Kozhichira bund	2020/828/IA	48.57	One Year	Estimate submitted to CE
2	Desilting of Padathikkara Thodu near Infopark Phase II in Vadavucode puthencruz Panchayath	2020/741/IA	15.43	One Year	Estimate submitted to CE
3	Removal of water hyacinth from Edachira thodu from Brahmapuram bridge to Edachira road in Thrikkakara Muncipality	2020/829/IA	9.36	One Year	Estimate submitted to CE
4	Desilting of Athikkaly Thodu from Kalangad road to Champakkara canal in Thrikkakara Muncipality	2020/742/IA	38.94	One Year	Estimate submitted to CE
	Long Term works				
5	NGT- Soil Investigation Works for the construction of Walk way along Kadambrayar from Manakkakadavu bridge to Kozhichira bund	2020/1242/IA	16.25	Nine Months	Estimate submitted to CE (As a preliminary step Soil investigation estimate is submitted)
	Total		128.55		

(THRIKKAKKARA MUNICIPALITY)

- The Secretary, Thrikkakkara Municipality informed that the progress of works mentioned in the action plan is behind the schedule because of the circumstances arised due to Covid-19 Pandemic.