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KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004

പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004



KSPCB/322/2022-EE-3

Date: 24.01.2025

From

The Member Secretary

To

The Secretary

Ministry of Jal Shakthi,

Department of Water Resources, River

Development & Ganga Rejuvenation,

Shram Shakti Bhawan, Rafi Marg,

New Delhi- 110001

Sub:-Forwarding Monthly Progress Report for the month of December 2024 -reg.

Ref:-Order of the Hon'ble NGT in the matter of O.A.No.673/2018

Sir,

Kind attention is invited to the subject matter. The matter is reported for kind information. As per CPCB report on water quality 2022, 11 polluted river stretches were deleted and 8 new stretches were added and hence the number of polluted river stretches is currently 18. Considering the water quality data, CPCB was requested to delist 7 stretches. But the reply is yet to be received. As part of actions taken, samplings have been started in new rivers. The report prepared in revised format with respect to the progress in implementation of action plan of polluted river stretches, for the month of December 2024 is submitted herewith.

Yours faithfully,

Encl: As above

MEMBER SECRETARY

National Mission for Clean Ganga
Monthly Progress Report for the month of December 2024 in the NGT
Matter OA No. 673 of 2018 (in compliance to NGT order dated
24.09.2020)

For the State of Kerala

Overall status of the State:

I. Total Population: Urban Population & Rural Population separately:

As per Census 2011, Kerala has a population of 3,37,77,386. Rural population in Kerala is 2,58,40,501 and urban population in the state is 79,36,885. Population projected for 2024 is 3,56,40,084. The water consumption and wastewater generated are calculated based on the population projected for 2024.

• **Estimated Sewage Generation(MLD):**

Based on population projected for 2024, the estimated sewage and sullage generation is as given below:

- Estimated Sewage and Sullage generation in Urban area - 1018 MLD

Sewage = 305.4 MLD

Sullage = 712.6 MLD

- Estimated Sewage and Sullage generation in Rural area - 2981 MLD

Sewage = 894.3 MLD

Sullage = 2086.7 MLD

Total Sewage and Sullage generation – 3999 MLD

• **Details of Sewage Treatment Plant:**

- Existing no. of common STPs/CSTPs: 27 (common STPs and other STPs) and 4 common FSTPs and 1886 number of individual STPs
- No. of functional common STPs in the state: 14
- No. of functional common septage treatment plants in the state: 4
- Total sewage treatment capacity in the state through existing common STPs *: =138.31 MLD (Urban area = 129.596 rural=8.704MLD)
- Total septage treatment capacity in the state through existing common FSTPs: 0.22 MLD
- Sewage treatment capacity via individual STPs in establishments = 92.835 MLD
- In Kerala, individual houses have septic tank/ soak pits existing for toilets attached to them.
- Gap in treatment of sewage in terms of sewage treatment plant = 82.749 MLD (Urban)

- In Kerala, 48% highland (>75 m altitude); 41.76% midland (7.5-75m) and a low land (<7.5 m) of 10.24% (<https://kerenvis.nic.in>). Kerala has a rural-urban continuous settlement pattern. In Kerala, flats are less compared to individual households which are having septic tank /soak pit existing for toilets attached to them.

- Kerala is declared as open defecation Free State. A survey of liquid waste management was conducted in 2016 for 66.7 lakh residences (www.haritham.kerala.gov.in). The study revealed that in most of the household sullage from(kitchen, bathroom) is separated from sewage (toilet).
- Sullage which forms 70% of domestic waste water and sewage is only 30%.The major quantity of sullage, which is not contaminated with faecal coliform, is disposed through soak pit and for farming in their own premises.
- Sewage is discharged through septic tank/soak pit, common/ individual sewage treatment plant. The mixing of sewage and sullage occurs in the case of common sewage treatment plant and individual STPs. Based on the survey results retrofitting measures are also adopted in the State.
- Onsite sanitation is practiced in the majority of places, where septic tank, soak pit are provided. Septic tank, soak pit are already specified in CPHEEO manual and IS codes are available for their specification.
- Based on the instruction from Jalsakthi, Status of liquid waste management in all local bodies including panchayat have been called for by means of google spreadsheet. From the data received so far, the sullage which is not contaminated is disposed through soak pit and for farming in household premises is also reported.
- Asset mapping including septic tank and soak pit is completed in cities namely Kannur.
- Besides the above, Sanitation survey is conducted near the polluted drains, sources of pollution is identified and action is taken to stop any discharge of sewage/ sullage into the drain.
- In the thickly populated/ urbanized low land areas, action is taken to divert the sewage into common sewerage system/ retrofitting measures based on local condition.

Proposals submitted for NRCP fund

- DPR for sewerage system in cluster 1 comprising Attukal, Ambalathara, Kalady, Kalippankulam, Kamaleswaram was forwarded to Ministry of Jalsakthi vide letter dated 24.11.2022 for funding under NRCP. MoJS examined the proposal and requested KWA to prepare detailed project report in line with the guidelines of NRCP based on their observations. (Letter No.J-24025/1/2022-NRCD-II dated 07.12.2023). Board has requested KWA (Letter No. KSPCB/1852/2023-AE-13 dated 05.09.2024) to prepare detailed project report in line with the guidelines of NRCP and submit the same to MoJS through WRD. The same was intimated to Environment Department and Water Resource Department.
- As part of the Cochin Metro Rail Limited's Integrated water transported system project 4 STPs are proposed at Elamkulam, Vennala, Muttar, and Perandur for treating the water coming through drains and discharging treated water to water bodies. DPR for sewer line at Muttar, Perandoor, Vennala, Elamkulam was forwarded to Ministry of Jalsakthi on 31.01.2023 for funding under NRCP. MoJS was requested to release the fund via Letter No KSPCB/1852/2023-AE-13 dated 08.07.2024. Administrative approval and expenditure sanction received for projects proposed at Perandoor and Elamkulam

Further action taken

- Letter was issued to District Collector Thiruvananthapuram to complete the activities in Karamana action plan and copy of letter is enclosed. This includes following:
 1. Taking of urgent action for the full utilization of 5MLD plant of Medical College.
 2. DG sets in sewage pumping/lift stations are to be operated urgently,
 3. To stop discharge from sewage lift station of Plamoodu,
 4. Urgent corrective actions are to be taken to divert discharge waste water from Rajaji Nagar,
 5. Urgent action is to be taken for the rehabilitation of sewer networks
 6. Urgent action is to be taken for completion of construction of slaughter house at Kunnukuzhi
 7. Urgent action is to be taken to treat waste water in the market of Pangode, Kumarichanda
 8. Urgent action is to be taken for completion of sewer work in newly added areas (sewerage system from Block F to G, Block H to R, Block A to E).
 9. Urgent action is to be taken to provide 155 houses in Kurukuvilakom with septic and treatment system.
 10. The process on addressing gap of 107 MLD plant at Muttathara is to be reported.
 11. Urgent action is needed to finish the work of rehabilitation of 8150 families from the banks of river.
- Direction was given to district collectors to prepare action plan for new river stretches.
- Letter issued on 7.12.2024 to Chairperson DLTC (SEE, Irrigation) for the preparation action plan for new river stretches and regarding implementation action plan for existing stretches.

Non installation of STP at Ernakulam Junction railway station, South:-Notice was issued to railway Station, South Ernakulam for noncompliance of the Board's direction for installation of STP and for not providing treatment for the waste containing oil from locoshed. This has been brought to notice of CPCB vide letter dated 15.03.23. EC Notice issued to railway on 27/06/2023. Reply received on 17/07/2023 and hearing conducted on 07/09/2023. The decisions taken in hearing were to provide a temporary facility to treat sewage generated from toilets in South railway station and housing complexes and excess quantity shall be collected and transported to the common facility at Elamkulam within a period of one month. Also proper treatment facility shall be provided to the effluent and septage from bio toilets and residential complexes. Sewage treatment plant of 750KLD for Ernakulam South is reported to be completed by October 2024.

Inspection was conducted with Railway official on 08.02.2024. Presently, the sewage from the railway station and railway housing complexes are disposed through the septic tank located near the KSRTC bus stand, Ernakulam South. Sewage is collected in two pump houses near the railway

station and housing complexes and from there the sewage is pumped to the septic tank. Railway official informed that STP is proposed to be installed at the land near to the Railway housing complexes and the work can be started only after demolishing some housing complex buildings for clearing the land. The construction of STP has not started yet. Presently, the waste water is being disposed through the existing septic tank soak pit system.

Board has informed railway that, in spite of repeated direction; Railway has not taken proactive steps to install a permanent STP at Ernakulam South Railway Station even after 3 years from issue of consent. This lapse is viewed serious and Board is to take further action in case of violation of Board's direction. (Letter No. KSPCB/586/2023-EE-1 dated 28.06.2024)

Non installation of STP at Aluva station:- Principle approval for permanent STP of 50 KLD has been received and the proposal is under processing for final sanction.

Inspection was conducted by Board officials on 22.02.2024. Railway officials informed that they are not installing temporary STP and procedure for installation of permanent STP is going on. Currently waste water is being disposed to Septic tank-Soak pit system in 2 locations within the railway station compound. Board has informed railway that, inspite of repeated direction; Railway has not taken proactive steps to install a permanent STP at Aluva Railway Station even after 3 years from issue of consent. This lapse is viewed serious and Board is to take further action in case of violation of Board's direction. (Letter No. KSPCB/586/2023-EE-1 dated 28.06.2024)

Non installation of STP at Ernakulam North: Joint inspection was conducted along with railway officials on 08.02.2024. Railway officials informed that the construction of STP can be started only after completing the construction of the over bridge being constructed and relocating the current parking space. The temporary STP of capacity 10 KLD is installed. Temporary STP installed consists of Collection tank, anoxic tank, aeration tank, settling tank, filter units and finally to soak pit. The overflow of the soak pit is given to public drain. Board has informed railway that, inspite of repeated direction; Railway has not taken proactive steps to install a permanent STP at Ernakulam North Railway Station even after 3 years from issue of consent. This lapse is viewed serious and Board is to take further action in case of violation of Board's direction. (Letter No. KSPCB/586/2023-EE-1 dated 28.06.2024)

Lapses in remediation of oil contaminated area at Diesel Loco Shed, Southern Railway, Ernakulam:-Removal of oily sludge near the diesel locoshed and remediation of the area is in progress. The proposed cost of the work is Rs.22 lakhs.

The Railway started the work at February 2024. Inspection was conducted on 20.02.2024 and the remediation work was progressing at the time inspection. Nearly 2000 sqft area was demarcated for remediation. The land is a marshy land. The top soil containing oil was removed and spread out for drying. The water containing oil content from the remediation area was pumped in to a pit nearby and left open for drying. Inspections were conducted in every week since the commencement of remediation. Inspection was conducted by Board officials on 09.04.2024. Remediation work and filling of the land with red earth was seen completed. The excavated oil sludge will disposed to KEIL Even though there is large extent of affected water logged area, the railway have now completed remediation 2000sqm land area.

- Action is also being taken for providing temporary measures and NEERI, Nagpur furnished a proposal for the feasibility study on the development of process package of treatment of domestic sewage for meeting the environmental compliance at Edappally canal and Perandoor canal at Ernakulam and Pallikalar at Kollam district for an amount of Rs 45 lakhs and this proposal was approved by the Board and draft MOU has been signed. As per terms of payment in MoU, 1st installment of Rs 26,55,000/- including GST(Rupees Twenty Six Lakh Fifty Five Thousand Only) is

released to the account of CSIR NEERI, Nagpur, Maharashtra. The scientists from NEERI conducted site inspection and monitored different canals/drains in Kochi and Kollam from April 14–19, 2024 and a preliminary report was submitted on 12.09.2024. Second field visit was done from October 15-21, 2024 for further data collection.

- Instruction was also given for the full utilization of Common STP at Guruvayur and Kureepuzha and they are taking steps for registering of tankers and byelaw approval. Co-treatment tank is provided at Guruvayoor STP.
- Action is also taken for the rejuvenation of Amayizhinanthodu, Ulloorthodu, Pattomthodu in Karamana catchment. As per the meeting chaired by Chief Secretary on 05.09.2023. A sanitation survey on the drains reaching AkkulamVelilake and its watershed was done by Socio Economic Unit Foundation (SEUF). Along the buffer distance of 100 metre from each banks of Amayizhanchan thodu, Pattom thodu and Ulloor thodu, the assets mapped and the problem areas were identified and action plan was prepared. Based on major observations, instruction issued to TVPM corporation and KWA. A stake holder meeting was held with Trivandrum corporation, PCB, KWA, Irrigation Department and SEUF survey team
- In Kollam district, Manichithodu and Thoppilkadav are stretches where major pollution was reported. Sanitation survey was conducted and the problem areas were identified. Action plan based on sanitation survey findings were shared to stakeholder departments.

Besides above, the following actions were taken by LSGI for liquid waste management:

- Kollam Corporation has taken up a project of Rs. 87 Lakhs for providing biodigester toilets to BPL houses near Ashtamudi lake for replacing leach pits.
- District Level Inspection Committee for checking the feasibility of proposal for setting up FSTPs in degraded land was constituted as per GO (Rt) No. 2558/2022/LSGD dated 21.10.2022.
- FSTPs with land readily available - 16 nos (10 nos under SBM(G) and 6 nos under SBM(U) (DPR Prepared- 4 Nos, Tendering stage- 9 Nos, DPR to be prepared 3 nos) Timeline expected is 18 months
- Mobile Treatment Unit technology is developed by WASH Institute and recommended by Principal Scientific Advisor (Sanitation) under Innovative Technologies list. In order to cover the areas where centralized treatment facility coverage is not available. Work order issued to two Local Self Government Institutions.
- IEC campaign by way of Jalsabhas and transect walk by volunteers, students and local communities across water bodies to gauge pollution and develop community understanding of the dangers of inadequate liquid waste management to the health of water bodies was conducted in all local bodies, both rural and urban.
- The State has executed over 165 Information, Education, and Communication (IEC) and capacity-building (CB) programs throughout its regions, showcasing a concerted effort towards enhancing Liquid Waste Management (LWM) initiatives. Technical experts and agencies for Liquid Waste Management have been empanelled. Malam bhootham – intensive campaign to highlight the dangers of faecal contamination and the urgent in intervention, has been launched

- In situ expertise is being encouraged through capacity building of structural engineers and other motivated civil engineers within LSGD, so as to able to undertake the projects on their own.
- Self Help Groups. Micro enterprises are being mobilized and trained to take on the O&M of such projects.
- Liquid waste management projects have been included in the panel of projects for regular priority review by the Honorable CM, so as to resolve interdepartmental, financial and other policy issues in taking these projects forward expeditiously.
- **Condition Assessment and Management Plan for the Periyar River Basin**

Stakeholder Advisory (SAC) committee of the project CAMP for six river basins was convened by MoJS on 31.05.2024 and Periyar was one among the six river basins. The objective of the studies and management plan shall be to restore and maintain wholesomeness of the river ecosystem, improvement of ecological health, enabling rivers to perform its functions and to make the rivers Samarth supported on 5 pillars. – Unpolluted River Flow (Nirmal Dhara), Continuous River Flow (Aviral Dhara), River Conservation Synchronized Development, Connecting People and River Science & Management.

Earlier, in case of Ganga river basin, Ganga River Basin Management Plan (GRBMP) was prepared by the consortium of 7 IITs with IIT Kanpur as the lead partner. The centre for Ganga River Basin Management and studies (cGanga) has been established at IIT Kanpur to advise and providing continual scientific support to the Government for implementation and dynamic evolution of the Plan.

Similar methodology has been proposed for Periyar river basin by the consortium of IIT Palakkad and NIT Calicut with IIT Palakkad as lead institute.

- **Integrated Web Portal**

A unified web portal for implementation and monitoring of various activities related to Board. The key objective of the web portal includes analysis of water quality data from the National Water Monitoring Program, State Water Monitoring Program, Spatial mapping of all monitoring points and display of designated best use water, quality criteria-wise classes, Air Quality Index calculation, generation of Air & Water quality directory, Status of different solid and liquid waste treatment facilities in the State, Data of Industrial and Non-Industrial activities including Category, type, scale etc.

- **Lake Rejuvenation Projects by ULBs**

- For cleaning and upgrading the section from Manichithod to Ashtamudi Lake, a budget of Rs.1 Cr has been allotted. In addition to cleaning the canal, the project includes the installation of barricades at various places to prevent plastic waste from flowing in and the installation of nets on the side of the canal to prevent dumping of garbage. This work is in progress.

- Rs. 50,00,000/- (Fifty Lakhs) has been allocated through Development Fund of Kollam Municipal Corporation (Finance Commission Tied Grant) for the construction of toilets and septic tanks on the banks of Ashtamudi Lake and other coastal areas.
- Kollam Corporation along with 12 neighboring Panchayats have earmarked Rs. 4.20 Crores for Ashtamudi lake cleaning. This project includes cleaning, restoration and protection of various areas of the Kollam Corporation and nearby Panchayats on the banks of Ashtamudi Lake. This project is in progress. 48 jetties in the banks of Ashtamudi Lake have been cleaned under this project so far.

MGNREGS

In regions earmarked for the establishment of Fecal Sludge Treatment Plants (FSTPs), it is imperative to implement a comprehensive strategy for the effective management of grey water. To address this crucial aspect of decentralized wastewater management, a total of 53,662 household-level soak pits, with an investment of Rs. 48.295 crore, have been strategically constructed. Simultaneously, 3,392 community-level Grey Water Management (GWM) systems have been implemented at a cost of Rs. 10.17 crore under MGNREGS & SBM G. These endeavors signify a significant financial commitment to ensuring the separate and efficient treatment of greywater in areas where FSTPs are anticipated. The construction of household-level soak pits and community-level GWM systems not only aligns with environmental sustainability goals but also contributes to the overall improvement of decentralized wastewater infrastructure, reinforcing the state's commitment to holistic and efficient sanitation practices.

Progress in Action plans

STPs are being planned for Irinjalakkuda Municipality, Thripunithura Municipality, Thikkakkara Municipality, additional STP requirement for 60 crores for Thiruvananthapuram District and for Taluk Hospital by Mavelikkara Municipality (300KLD). Revamping of STPs at Elamkulam (including capacity enhancement), Adwaithasramam & Aluva Market in Ernakulam District and enhancement of capacity utilisation of 107 MLD plant at Muttathara, Thiruvananthapuram are also being proposed.

FSTPs are being planned for Irinjalakkuda Municipality, Chengannur Municipality and Thiruvalla Municipality

The following CSTPs / STPs were completed :-

- 5 MLD STP at Medical College, Thiruvananthapuram
- 5 MLD at Elamkulam with septage treatment facility at Kochi, Ernakulam
- 0.01 MLD FSTP at Mattampuram, Thrissur
- 3 MLD at Chakkamkandam, Guruvayur, Thrissur.
- 2 MLD STP at Kozhikode medical College.
- 1 MLD STP at Kozhikode medical College.
- 500 KLD STP at Kozhikode medical College
- 0.01 MLD FSTP at Kalpetta, Wayanad
- 1 MLD CSTP at Padanappalam, Kannur
- 240 KLD STP at General Hospital, Alappuzha

- 360 KLD STP at General Hospital, Thrissur
- STP of capacity 0.03 MLD at Tirur Municipal Bus Stand, Malappuram



500 KLD STP at Kozhikode medical College



1 MLD STP at Kozhikode medical College



360 KLD STP at General Hospital, Thrissur



1 MLD CSTP at Padanappalam, Kannur

Details of existing STPs/ Common STPs/ common Septage treatment plants in the State :

- 107 MLD STP in Thiruvananthapuram District at Muttathara (Activated Sludge with extended aeration process). The present sewerage system cover 43 out of 100 wards of Thiruvananthapuram corporation area either partly or fully. 75% of capacity of the 107 MLD STP is utilized. Completion of ongoing works will enhance the utilization by 15%. Co processing of septage is also taking place. Control room is available for tanker transportation of septage. Letter issued to KWA for full utilization of common STP in Thiruvananthapuram District at Muttathara. A total of Rs. 22.79 Crores has been utilized for the operation, maintenance of two plants at Muttathara and Septage treatment plant at Willington Island.
- Considering the contamination of Karamana river and for providing sewerage systems for the 19 wards on the bank of this river, DPR prepared and submitted to GoK on 16.10.2021 for issuing AS under RKI. DPR for the remaining 81 wards for the full capacity utilisation of 107 MLD STP is under preparation.
- Smart city mission has deposited Rs. 9.34 Crores to KWA for revamping of old sewer lines and laying new lines along the Smart city roads in TVPM. The work is progressing.

- A major project of 12 MLD capacity is being constructed at Kureepuzha, Kollam which is currently at 90% completion.
- 5 MLD STP at Elamkulam is functional. Dilution tank constructed and co treatment of septage started from 4/8/2023. AS received for extra network for 1.75 MLD for an amount of Rs. 63.91 crores under RKI.
- Medical College 5MLD STP: Works of 5MLD STP under AMRUT for Medical College, Thiruvananthapuram completed and started functioning from Sep 2021. This STP is exclusively for Thiruvananthapuram Medical college campus. Letter have been issued for full utilization of STP. The present load is 2.5 MLD and on connecting two buildings to this STP the load to 4 MLD.
- 3 MLD STP at Guruvayur (Activated sludge process)-The Guruvayoor Sewerage Project is planned to provide an effective sewerage system for the thickly populated area under Guruvayoor Municipality. It is functioning from September 2021. Length of network is approximately 7 km. Action is being taken for the complete utilization of STP. Dilution tank constructed for co treatment. Council has approved the proposal for upgradation of 3 MLD STP (at Chakkamkandam) to 5 MLD STP (septage co-treatment).

Sl. No.	STP location	STP Installed capacity	Utilization	Status
THIRUVANANTHAPURAM				
1	Common Sewage Treatment Plant, Muttathara, Trivandrum maintained by Kerala Water Authority (Co Processing facility for septage)	107 MLD (Activated Sludge Process)	80 MLD	• Operational (pH-7, TSS-17 mg/L, BOD- 6.9 mg/L, COD-28 mg/L, Oil and grease-BDL, Faecal Coliform- Nil as per analysis report dated 12.12.2024). • Action is being taken for preventing its exceedance. • Some quantity of treated water is used for irrigation, construction etc. • On completion of ongoing works and on implementation of DPR under preparation, full utilization of 107 MLD can be achieved. • Two DPRs submitted to GoK for AS. Directions issued to KWA for full utilization of plant
2	STP at Medical College, Thiruvananthapuram-Phase I & II (PRS)	5MLD(MBBR)	3 MLD	• Operational (pH-3.5, TSS-18 mg/L, BOD- 1.4 mg/L, COD- 64 mg/L, oil and grease-BDL, Total Coliform- Nil, FC – Nil, Bio-assay Test – 100% mortality occurred within 1 hour as per analysis report dated 12.12.2024). • The matter is being followed up.
PATHANAMTHITTA				
3	Sewage Treatment Plant at Sannidhanam (5MLD) Maintained by Travancore Devaswom	5 MLD (UASB and SBR)	3.5 MLD	• Operational (pH-6.9, oil and grease- 20.5 mg/l, Total coliform –Nil, Fecal Coliform - Nil as per analysis report dated 15.01.2025 after disinfection).

	Board			Letter issued to Travancore Devasom Board (Letter No. PCB/PTA/ICO/2781/2017 dated 30.07.2024)
4	Sewage Treatment Plant at Pamba(3.5 MLD) maintained by Travancore Devaswom Board	3.5 MLD (Coagulation & settling)	3.5 MLD	- Operational (pH-7.81, BOD-445 mg/l, TSS- 34.6 mg/l, as per analysis report dated 15.01.2025 before chlorination). - Action is being taken for preventing its exceedance.
ALAPPUZHA				
5	DEWATS system, Chathanad (For 50 houses in slum area)	25 KLD (Anaerobic Baffle Reactor)	25 KLD	Operational (pH – 6.9, BOD – 17.6 mg/l, SS – 10 mg/l, Oil and grease BDL as per the analysis report dated 16.01.2025)
6	STP at General Hospital	0.24 MLD	0.1 MLD	Electro coagulation.
KOTTAYAM				
7	STP for Houseboat (0.09 MLD)at Kumarakom maintained by DTPC, Kottayam	0.09MLD (Activated Sludge Process)	0.09 MLD	- Operational (pH- 7, BOD - 14 mg/l, SS - 18 mg/l, Oil & Grease-BDL a per the analysis report dated 08.11.2024). - The quality of effluent conforming to standards.
ERNAKULAM				
8	STP owned by Greater Cochin Development Authority, Marine drive, Kochi	0.9 MLD (Activated Sludge Process)	0.9 MLD Proposed to augment to 2 MLD	- Operational. - Analysis report dated 14.11.2024 (pH-7.2, TSS-18 mg/l, BOD-17.9 mg/l, oil & grease- BDL).
9	STP at Elamkulam, Kochi (AMRUT)	5 MLD(MBBR) with Co treatment 24 KLD	4 MLD	- Co-treatment is temporarily stopped due to choking in the plant. - NIIST has submitted the report to KWA. Three options provided. - Treatment Option II: possibility of co-treatment with septage was explored without compromising the hydraulic load but with the provision of additional infrastructure (MBBR tank). - Second option is selected based on discussion with concerned engineers. - Analysis report dated 19.10.2024 (pH-6.9, TSS-11 mg/l, nitrate -7.90 mg/l, phosphates- 1.4 mg/l, ammoniacal nitrogen- 3.88 mg/l, BOD-7.5 mg/l, COD- 16 mg/l, oil & grease- BDL, total Kjeldahl nitrogen- 4.48 mg/l).
10	STP owned by GCDA, International Stadium Kaloor	0.75MLD(Activated Sludge Process)	0.05 MLD	- Operational. - Analysis report dated 11.12.2.24 (pH-7.51, TSS-21.5 mg/l, BOD-4.6

				mg/l, oil & grease- 5 mg/l).
11	STP at Kalamassery, Market, Kalamassery Municipality (PRS)	10 KLD		Started operating
IDUKKI				
12	Sewage treatment Plant at Comfort station, Adimaly Grama Panchayat, Idukki	0.01 MLD		• STP was not working. • Show Cause Notice issued on 05.02.2024 • Inspection conducted on 15.07.2024 & direction will be issued
13	60 KLD STP at Taluk Hospital Adimaly, Adimaly Block Panchayat, Idukki	0.006 MLD		Operational MBBR
THRISSUR				
14	Sewage treatment Plant at Guruvayur, Thrissur District	3 MLD(Activated Sludge Process)	0.5MLD	• Operational. (pH-8.19, BOD-2 mg/l, COD -32 mg/l, Suspended solids-1.9 mg/l, Oil and grease- 4.0 mg/l, Faecal coliform- 80 cfu/100 ml as per Analysis report dated 03.01.2025) • Instructions given for full utilization of treated effluent and for utilizing treated water. • Planning to reuse the treated effluent for gardening and septage dilution. • Provided dilution tank. • AMRUT-2.0: Council has approved the proposal for upgradation of 3 MLD STP (at Chakkamkandam) to 5 MLD STP (septage co-treatment) • AMRUT-1.0: Specification of the vehicle to be modified by the ULB as per site conditions. • Septage treatment not started. • Vehicle for septage collection procure by Municipality. • No. of connection less due to reluctance by public for remitting money for connection and road cutting.
15	Revamping of 35 KLD STP at Kuriyanchira Slaughter House Corporation,	0.035MLD (MBBR)	0.035 MLD	Operational (pH – 7, BOD – 165.6 mg/l, COD – 524 mg/l, SS – 0.63 mg/l, oil & grease – 15.2 as per the analysis report dated 02.09.2024)

	Thrissur			Action is being taken for preventing exceedance.
16	STP at General Hospital, Thrissur (AMRUT-1.0)	0.36 MLD	0.2 MLD	Operational. Sample was collected on 20.07.2024
MALAPPURAM				
17	Sewage treatment Plant at Malappuram Municipal Bus stand	0.03MLD(MBBR)	0.03 MLD	Project proposal for maintenance work have been approved. ICE issued to the unit vide consent No.KSPCB/MA/ICE/10022893/2024 dated 24/01/2024 valid till 24/02/2024
18	STP at Municipal Bus Stand, Tirur (PRS)	0.05MLD(Biological)	Working	Operational (Ph – 6.6, BOD – 12.4 mg/l, COD – 48 mg/l, TSS – 24 mg/l, Oil and grease – BDL as per the analysis report on 12.08.2024) • Action is being taken for preventing its exceedance. • Sample was collected on 18.07.2024. Analysis being done in district laboratory.
KOZHIKODE				
19	STP at Kozhikode Medical College.	2 MLD Old plant.	Working	• Operational. • According to analysis report on 19.06.2024 the following values were observed. pH -7, SS- BDL, COD- 96 mg/l, Oil and Grease- BDL, BOD-29.07 mg/l, Turbidity – 17.4 mg/l and Ammoniacal – N 1.391 mg/l
20	STP at Kozhikode Medical College.	2 MLD With 100 KLD Co-treatment Facility	Commissioned on 05.10.2023	• Operational • According to analysis report on 18.10.2024 the following values were observed. pH -8, SS- BDL, COD- 8 mg/l, Oil and Grease- BDL, BOD-2.27, Turbidity – 4 mg/l and Ammoniacal – N 16.936 mg/l

21	STP at Kozhikode Medical College.	1 MLD	0.1 MLD	Operational • According to analysis report on 20.02.2024 the following values were observed. pH -7.3, SS- 12.4 mg/l, COD- 64 mg/l, Oil and Grease- BDL, BOD-26.8 mg/l, Turbidity – 17.4 mg/l and Ammoniacal – N - BDL mg/l
22	STP at Kozhikode Medical College	500 KLD		Operational • According to analysis report on 18.10.2024 the following values were observed. pH -9, SS- 4.4, COD- 8 mg/l, Oil and Grease- BDL, BOD-0.5, Turbidity – 10 mg/l and Ammoniacal – N – 0.134
23	Common Sewage Treatment Plant at Narayana nagaram, near stadium, Vatakara, Opp. New bus stand	0.1 MLD		A Show Cause Notice was issued (PCBRKD/17/2023-AE2 dated 20.07 2024), as the plant was found not operational and have not yet obtained Consent to Operate from the Board.
KANNUR				
24	Sewage treatment Plant at Taliparambu (0.5MLD) Taliparamba Municipality, Kannur	0.5MLD (Activated Sludge Process)	0.5MLD	• Operational. • pH -7.88, TSS – 18 mg/l, COD- 40 mg/l, BOD – 7 mg/l, Oil and Grease- 0.88 mg/l as per the analysis report dated 06.01.2025
25	STP at old age home Kannur	0.010	0.010	MBBR (Operational) • pH -8.21, TSS – 4 mg/l, BOD – 2.4 mg/l, COD -8 mg/l, Oil and Grease- 2.32 mg/l, as per the analysis report dated 31.12.2025
26	STP at Padannappalam	1 MLD	0.3 MLD	Operational Rotating Media Bio Reactor • pH -7.27, TSS – 12 mg/l, BOD – 21.9 mg/l, COD – 56 mg/l; Oil and Grease- 1.84 mg/l as per the analysis report dated 31.12.2025
WAYANAD				
27	Sewage Treatment Plant at Taluk Hospital,	0.14 MLD(MBBR)	0.05 MLD	• Operational

	Sulthan Bathery			pH -10.5, TSS – 13.7 mg/l, BOD – 15.24 mg/l, Oil and Grease- 2.08 mg/l, FC – Nil as per the analysis report dated 08.01.2025
Total Capacity			138.31 MLD	
FSTP				
ERNAKULAM				
1	Septage Treatment Plant at Brahmapuram, Kochi Corporation, Ernakulam	0.1MLD(MBBR)	0.1 MLD	- Inspection was conducted by Board on 11.06.2024 and some defects were noticed. A Show Cause Notice was issued regarding the same. - pH- 6.91 mg/L, BOD- 2.46 mg/L, COD- 4 mg/L, Oil and Grease- BDL, Total Suspended Solids – 80.6 mg/l, Phosphate – 0.29 mg/L, Nitrate- 0.98 mg/l, Sulphates – 7.73 mg/l, Sulphides – 7 mg/l, Ammoniacal Nitrogen – 1 mg/l, Phenolic Compounds - BDL, Faecal coliform – 20 cfu/ 100 ml, as per analysis report dated 17.12.2024
2	Septage Treatment Plant at Wellington Island, Kochi Corporation	0.1MLD(MBBR)	0.1 MLD	- Not working properly. - Site visit done by KSPCB on 18.01.2024. - Consent refusal intention notice issued.
THRISSUR				
3	FSTP at Mattampuram	0.01MLD(Biological)	Started functioning	pH – 7.25, BOD – 7 mg/l, COD – 44 mg/l, SS – 0.09, Oil & Grease – 0.02 mg/l, Ammoniacal Nitrogen – Nil, Total Nitrogen – 35.37 mg/l, Total Phosphorus – 0.63 mg/l, Faecal Coliform – Nil as per analysis report dated 11.11.2024
WAYANAD				
4	FSTP at Kalpetta	0.01MLD(Biological)	0.01 MLD	- Operational - pH – 7.23, TSS –4 mg/l, BOD – 11.196 mg/l, Oil and Grease- 4.04 mg/l as per the analysis report dated 08.01.2025
Total Capacity			0.22 MLD	
ETPs/CETPs				
IDUKKI				
1	Construction of 6 KLD ETP for Kumali Slaughter House Kumali GP, Idukki	0.06 MLD		Slaughter house is not functioning.
MALAPPURAM				
2	Effluent treatment Plant at Tirur (fish	0.045		Operational

	market)	MLD (Biological)		Ph- 6.3, BOD – 103 mg/l, COD – 330 mg/l, TSS – 64 mg/l, Oil & Grease – BDL as per analysis report dated 22.10.24 • Action is being taken for preventing its exceedance.
3	ETP in Fish Market, Pommundam GP, Malappuram	0.01MLD(Anaerobic)	Plant is working.	The unit has submitted ICE of the Board on 18.03.2023. Inspection was carried out on 12.05.2023. ETP is operational but sample could not be taken. STP file has been returned for clarification on 29.05.2023.
Total Capacity			0.115 MLD	

Details of under construction of major ETPs / STPs in the State

No.	Location	Implementing Agency	Capacity of the plant in MLD	Physical Progress in %	Status of I & D or House sewer connections/ Previous status	Incremental progress	Timeline of Completion
THIRUVANANTHAPURAM							
1	FSTP at Varkala Municipality, Thiruvananthapuram (IMPACT KERALA Ltd)	AMRUT	50 KLD FSTP	Work Awarded	• Work awarded after DBO tender. Design being vetted by Anna University.	• Legacy waste removal from the site has been completed. • Excavation for foundation works completed. • PCC work ongoing, steel works in progress	April 2025
KOLLAM							
2	STP at Kureepuzha, Kollam (AMRUT-1.0)	Kerala Water Authority/ AMRUT	12	92%	12471 sewer connections are envisaged under AMRUT-2.0. STP (AMRUT-1.0): Physical progress - 90%. FSTP (AMRUT-1.0): KWA retendered the work. Last date of submission was extended till 30.09.2024,	STP (AMRUT-1.0): In the meeting held at the ULB on 11.11.2024 by the Hon'ble Mayor, the contractor was directed to complete the STP works quickly so that the inauguration can be done in Dec-2024. Five electro-mechanical components to be	STP: 31.01.2025 FSTP: 31.05.2025 Sewer Network: 31.12.2026

				3 bids received & L1 is 48% above. KWA retendered the work on 19.10.2024 with 01.11.2024 as the last date of bid submission. Two bids received & L1 is 41% above. Decision on award of work to be taken by KWA.	supplied and installed, and admin building works to be completed by the contractor. FSTP (AMRUT-1.0): KWA retendered the work on 19.10.2024 with 01.11.2024 as the last date of bid submission. Two bids received. The tender committee of KWA decided to reject the L1 (41% above) as they didn't meet the required qualification criteria and to accept the L2 (49% above negotiated to 48% above). The KWA submitted a request to the ULB on 26.11.2024 for placing an agenda in the next SLTC for approval of tender excess. Matter to be placed in the SLTC/SHPSC and to be send to the Govt. for approval. Sewer Network (AMRUT-2.0): # Pallithottam-Thamarkkulam package - The contractor had filed a case (WPC No.32715/2024) against KWA for relieving them from the work. As per the judgment dated 13.09.2024, the MD, KWA has to consider	
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						the request of the firm and take a decision and inform the court within 2 months. A hearing was held by the MD, KWA on 22.10.2024 with the Contractor and further action is to be taken by KWA. # Iron Bridge, Vaady-Karumalil & Asramom packages - MoHUA's approval was received on 01.10.2024. The DPR of the project submitted by the ULB is to be placed in the next SLTC / SHPSC for approval of AS.	
3	STP at Chitumala Old Age Home. Chitumala BP, Kollam		0.015		Original contractor of the work was terminated in risk and cost, LB entrusted the accredited agency IRTC to do the rest of the work. The agency prepared proposal. SM scrutinized and suggested to submit detailed estimate. It shall contain repairs and maintenance of already installed equipment and proposed new works. Comparison chart is being prepared by the agency.	Joint inspection by the state technical officer and agency was arranged. The agency will submit a revised estimate along with new DPR.	

4	190 KLD STP at Pathanapuram Market and Shopping Mall		0.190		38%	O&G trap and manhole construction completed. Construction hindered due to fund withdrawal issues.	31.12.2024
5	STP at Mayyand GP, Kollam	IMPACT KERALA Ltd	590KLD Co-treatment	Work Awarded	• Agreement executed with the Contractor M/s Enrec Engineers on 29.02.2024. • Contractor submitted vetted process design. Submitted to KWA and got approval.	• Base of 4 tanks at Thanni & Valiyavila completed, Dhawalakuzhy in progress. • Wall construction in progress at Thanni, Valiyavila & Dhawalakuzhy. • Network line and manhole installation in progress. • Office building work at Thanni & Valiyavila in progress	April 2025
ALAPPUZHA							
6	FSTP at Cherthala Municipality, Alappuzha	IMPACT KERALA Ltd	250 KLD Septage TP		Work on going at site. 95% of civil work completed.	Electro Mechanical Items reached site. Transformer installed. Electrical cabling works, solar panel installation and approval from KSEI pending.	February 2025
IDUKKI							
7	FSTP at Munnar, Idukki		50 KLD		5% work completed.	Due to a court case, work stopped temporarily District Collector Idukki has submitted report to Government for re-assigning the land to Munnar GP.	Under jurisdiction
KOCHI							
8	STP at Ambedkar Colony, Div-16,	Kochi Corporation/ AMRUT	1.1	51%	1500 sewer connections are envisaged.	Work in progress.	30.06.2025

	Edakochi South (AMRUT-1.0)						
THRISSUR							
9	Viyoor central jail STP (Thrissur)		0.05		65% work completed	Civil works completed. Electromechanical works 35% completed. Pipe laying works to be started	
10	Kunnumkulam, Thrissur		0.01		Completion stage and ready for commissioning		
11	STP at CHC Cherpu BP, Thrissur		0.01		Plant construction completed. Final bill is to be submitted by LB. Detailed estimate is under preparation.	The revised estimate has been prepared, received and is currently under verification by Suchitwa Mission.	
12	STP at Community Health Centre Pazhayannoor Block Panchayath, Thrissur		45 KLD		Work Started	Work in progress	31.03.2025
PALAKKAD							
13	STP at Ottappalam Municipality, Palakkad District	IMPACT KERALA Ltd	1.50ML D Co-treatment	Work Awarded	Railway NOC and KRFB demand note received. PWD NOC in process.	• Work in progress. • Preparation of pile cap work is in progress. • KRFB NoC- LB paid fee. • Railway NoC and PWD NoC – higher level meeting required. • Beneficiary meeting decided to be convened by Municipality on 16.12.2024 • First bill submitted to KIIFB for Rs. 1.55 Cr (excluding GST). Awaiting payment.	December 2025

14	FSTP at Yakkara, Palakkad Municipality (AMRUT-1.0)	Palakkad Municipality/ AMRUT	0.1	14%	Site clearance, electrical connection and temporary labor shed construction works are ongoing.	Work in progress.	31.03.2025
MALAPPURAM							
15	STP at Pambad Housing Colony Malappuram Municipality, Malappuram		0.110		99%		30.12.2024
KOZHIKODE							
16	Wastewater treatment plant at Kuttiyadi government taluk hospital, Kozhikode		0.080		90%	Physical work completed. Electrical work pending	30.12.2024
KANNUR							
17	Sewage Treatment Plant 20 KLD at Shopping Complex cum multiplex Theatre, Kallumutti, Irutti Payam, Grama Panchayathl, Kannur		0.02		Amount transferred to KWA on 26.02.2024. Tendering process will start soon.	Estimate prepared. Tendered with last date on 21.12.24 2 offers received. Tender under process.	31.12.2024
18	STP for Convention Centre, Pinarayi Grama Panchayath, Kannur		0.02	.		Now DPR correction progressing.	30.12.2024
19	FSTP at Chelora, Kannur Corporation (AMRUT-1.0)	Kannur Corporation/ AMRUT	100 KLD	50%	NA	Work in progress.	31.03.2025
WAYANAD							
20	Construction of 45 KLD		0.045		65% work completed.	Remaining works to be tendered	

	waste water treatment plant at Kalpetta Government Ayurveda Hospital DP , Wayanad				District panchayat Wayanad terminated existing agency M/S Ram biological confirmed implementation of projects.	after the spillover.	
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Details of proposed ETPs/ STPs in the State

No.	Location	Implementing Agency	Capacity of the STP proposed in MLD	Project status of Project (at DPR Stage/ DPR Approved/ AS issued/ TS issued/ Tendering Stage/ Tendered/ Work Awarded)	Status of Project (in Detail)	Incremental progress	Likely Date of Completion of DPR Preparation/ Tendering
THIRUVANANTHAPURAM							
1	ETP 10 KLD Capacity, Nedumangad Municipality, Thiruvananthapuram		0.01	Tendering Stage	TS issued. Tendered and agreement executed with agency. Work order given, but Agency not yet started the work. The agency is facing technical issues regarding the placing of the ETP unit, which is 7m high, and cannot be placed in the 5m height slaughter house. After the internal verification, it was decided to construct UASB for the anaerobic treatment. Intimation has been sent to municipality for further actions.	Work will start soon.	
KOLLAM							
2	CHC Sooranadu, Sasthancotta		0.028	At Tendering Stage		LSG planning to	

	Block Panchayath, Kollam					tender for DPR preparation . Tendering process for DPR preparation is in progress. Revision needed in the next DPC.	
3	Waste water Treatment (90 KLD) System for coastal housing and Tsunmai resettlement facility at karikuzhi, mayyanad Grama Panchayath , Kollam		0.09	At DPR Stage		Transferred to KIIFB	
PATHANAMTHITTA							
4	Taluk Hospital Thiruvalla , Thiruvalla Municipality, Pathanamthitta		0.225	Tendering stage	TS issued. Tendering process stopped due to political issues. Meeting proposed to be conducted in June by Municipal authorities so as to resolve the issue.	Tendering Documents submitted to State Suchitwa Mission for verification	
5	Taluk Hospital Thiruvalla ,Thiruvalla Municipality, Pathanamthitta		0.09	DPR Stage	Under technical scrutiny		
ALAPPUZHA							
6	STP with Septage Cotreatment Capability at Alissery, Alappuzha Municipality (AMRUT-2.0)	Kerala Water Authority/ AMRUT	5	DPR Approved	The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval. MoHUA's approval was received on 01.10.2024.	The DPR submitted by the ULB is to be placed in the next SLTC/ SHPSC for approval of AS. The next SLTC is scheduled on 07.01.2025 .	31.12.2026

7	Sewerage system for Haripad municipality(Kot tathara Zone) with STP of capacity 4.2 MLD		3.8		DPR Submitted to Government of Kerala and RKI for AS on 01.09.2022	AS expected from GoK/RKI and it is revising as per directon of SBM 2.0	
8	STP at Bhajanamadam Colony, Alappuzha Municipality (AMRUT-2.0)	AMRUT	0.012	DPR Stage	The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval. MoHUA's approval was received on 01.10.2024. The ULB will engage TAGS Forum as DPR preparation agency of the project only after the ownership of the land for the STP is transferred to the ULB by the Bhajanamadam Church.	The DPR to be submitted by the ULB for placing in the SLTC/SHP SC for approval of AS. The ULB will engage a DPR preparation agency only after the proposed land for the STP is relinquished by the Bhajanamadam Church. The church authorities are not willing to relinquish the land but they are willing to give NoC to the ULB for implementing the project.	31.12.2026
KOTTAYAM							
9	Taluk Hospital Pampady, Pampady Block panchayat, Kottayam		0.085	Tendering stage	TS received Tendering in progress. KSPCB consent to establish proceedings in progress.	Tendering will be done after the approval of spill over	-

					Tendering will be done after the approval of spill over projects by DPC	projects by DPC	
10	ETP at Kodimatha, Kottayam Municipality		0.030	At DPR Stage	• Process flow approved. • DPR to be modified by the agency.	DPR under verification by Suchitwa Mission.	
11	11 KLD effluent treatment plant at Kuravilangad Fish market, Kuravilangad Grama Panchayat, Kottayam		0.011	DPR stage	New project taken and DPC approved. Tendered for DPR preparation. But no offers have been received.	Tendered for DPR preparation . But no offers have been received.	
12	FSTP at Vellor GP			DPR stage	Draft Agreement Submitted by IRTC is under verification with the Local Body. Agency will submit the DPR within 10-15 days after the approval of agreement.		
13	FSTP at Manganam			DPR stage	Land proposed is of KWA. DPR under preparation.		
IDUKKI							
14	STP for Idukki district hospital and district Ayurveda hospital, Thodupuzha municipality, Idukki		0.205	Tendered	• Project modified as STP for Thodupuzha district hospital. SM verified the DPR DPR under verification by State Mission	DPR under correction by the agency after placing in Technical Committee	
15	STP at private bus station, Kothayikkunnu, Thodupuzha municipality Idukki		0.03	Tendering stage.	TS issued. Tendering works in progress.	TS issued for electrical works. Technical Sanction of mechanical items needs to be issued.	

ERNAKULAM							
16	4 STPs are coming up under the KMRL's Integrated Water transport System project at Elamkulam(17.5 MLD), Vennala(24MLD) Muttar(16.5 MLD) Perandur(19 MLD)		17.5+24+1 6.5+19 =77		Tendering stage Funding sanction for Rs 341.97 crores received from KIIFB on 07.06.2023 DBOT tender published on 17.10.2023. Technical bid opening on 08.01.2024 DPR submitted at KIIFB. Expected funding sanction in upcoming KIIFB meeting. Tendering will be commenced after funding and technical sanction.	DPR for sewerline at Muttar,Per andoor,Vennala, Elamkulam forwarded to Ministry of Jalasakthi vide letter dated 31/01/2023 for funding under NRCP. KIIFB issued provisional sanction for funding the project.	
17	STP with Septage Cotreatment Capability at Elamkulam, Kochi Corporation	AMRUT/Kerala Water Authority	5	To be Tendere d	The 5 th SHPSC held on 02/03/23 approved the issuance of AS and G.O dated 25/03/23 was issued.KWA split the work into 5 sub works and issued TS.Later the KWA decided to combine the proposals under AMRUT-2.0 & KMRL. In the meeting held by the Hon'ble Minister of LSGs on 24/07/24 the KWA was directed to go ahead with the proposal under AMRUT-2.0 instead of the combined proposal involving KMRL.	TS was issued by KWA for the STP package on 08.11.2024 and tender was floated on 02.12.2024 with 01.01.2025 as due date. TS is being revised by KWA for the network packages.	31.12.2026
18	ETP for slaughter house, Marakkadavu, Ernakulam		0.030	DPR Stage		DPR under correction by the agency. Consent from the	

						KSPCB is not yet to be received due to the less availability of land.	
19	CHC Kadayiruppu, Vadavucode Block Panchayat, Ernakulam		0.025	DPR Stage		LB preparing estimate in Price software. DPR under correction by the agency.	
20	FSTP at Brahmapuram, Kochi Corporation (AMRUT-2.0)	AMRUT/ Kochi Corporation	1	DPR Approved	The Tranche-3 proposals were discussed in the Apex Committee of MoHUA held on 23.09.2024 and approval is awaited. AS will be issued after getting MoHUA's approval. MoHUA's approval was received on 01.10.2024. The ULB has engaged IRTC to execute the work in DBOT mode.	The DPR to be submitted by the IRTC to the ULB for placing in the SLTC/SHP SC for approval of AS.	31.12.2026
21	STP at RAY Flats, Fort Kochi, Kochi Corporation (AMRUT-2.0)	Kochi Corporation	0.105	DPR Approved	The Tranche-3 proposals were discussed in the Apex Committee of MoHUA held on 23.09.2024 and approval is awaited. AS will be issued after getting MoHUA's approval. MoHUA's approval was received on 01.10.2024. The ULB has engaged IRTC to execute the work in DBOT mode.	The DPR to be submitted by the IRTC to the ULB for placing in the SLTC/SHP SC for approval of AS.	31.12.2026
THRISSUR							
22	STP Septage with	Kerala Water Authority/	5	DPR Approved	The Tranche-3 proposals were	There is public	31.12.2026

	Cotreatment Capability at Kottapuram, Thrissur Corporation (AMRUT-2.0)	AMRUT			discussed in the Apex Committee of MoHUA held on 23.09.2024 and approval is awaited. AS will be issued after getting MoHUA's approval. MoHUA's approval was received on 01.10.2024. The DPR of the project submitted by the ULB is to be placed in the next SLTC / SHPSC for approval of AS.	protest against the project and action in this regard is to be taken by the ULB (ie. resolve the public protest or find alternative land). The DPR submitted by the ULB is to be placed in the next SLTC/ SHPSC for approval of AS. The next SLTC is scheduled on 07.01.2025	
23	STP at Athani, Wadakkanchery Municipality, Thrissur (PRS)		350 KLD STP		Site identified. DPR under preparation	DPR approved by RKI	
24	STP at Kokkala, Thrissur Corporation (AMRUT-2.0)	Thrissur Corporation/ AMRUT	2.5	DPR Stage	The Tranche-3 proposals were discussed in the Apex Committee of MoHUA held on 23.09.2024 and MoHUA's approval was received on 01.10.2024. Way forward to be decided by the ULB (ie. get the approval of Agriculture Dept. or find alternative land).	Since the Agriculture Dept. rejected the ULB's request to convert the proposed land for the STP, way forward is to be decided by the ULB (i.e. get the approval of Agriculture Dept. or find alternative land). The DPR submitted by the ULB is to be	31.12.2026

						placed in the next SLTC/ SHPSC for approval of AS. The next SLTC is scheduled on 07.01.2025.	
25	STP at Wadakkanchery Municipality, Thrissur (PRS)	IMPACT KERALA Ltd		DPR Stage	Initially planned at Puramboke land. NOC to be obtained from district collector. Now municipality planning for decentralized plants at different locations which needs to be finalized in consultation with PCB. Municipality to submit DPR accordingly. Not yet submitted.		-
26	Pazhayanoor STP (Thrissur)		0.45 KLD	Work awarded	Design vetted by Sewerage Circle, Kochi. Work to be started by the contractor	Work to be started by the contractor	
27	General Hospital, Irinjalakuda Municipality, Thrissur (PRS)		0.150	DPR Stage		DPR correction in progress by the agency	
28	35 KLD STP at Ramavarma District ayurveda hospital, Thrissur		0.035	DPR Stage		DPC needs to be revised for changing the implementing officer.	
29	FSTP at Ramavarmapura m, Thrissur Corporation	Thrissur Corporation/ AMRUT	0.1	Work Awarded	Due to public protest the bridge work has been stopped on 03.07.2024 and the FSTP work couldn't be started. The Joint	A meeting chaired by DC is scheduled to be held on 01.01.2025 to discuss	30.06.2025

					Director, Thrissur, held a meeting with the public at the site on 28.10.2024	the way forward.	
30	STP at Ottuppara Market, Wadakkanchery Municipality, Trissur (IMPACT KERALA Ltd) (PRS)	IKL	18 KLD STP		DPR submitted to KIIFB as a part of the project "Modernisation of Ottuppara Market in Wadakkanchery Municipality"	Under design review by KIIFB	-
31	STP at Athani market, Wadakkanchery Municipality, Trissur (PRS) (IMPACT KERALA Ltd)	IKL	13.9 KLD STP		DPR submitted to KIIFB as a part of the project "Modernisation of Ottuppara Market in Wadakkanchery Municipality"	Under design review by KIIFB	-
32	Waste water treatment plant at K R Narayanan memorial hall, Adat GP		0.0065	DPR stage		TS issued. As AS amount is less, revised AS is needed.	
33	ETP of 2 KLD at Konnamkulam Milk Production Cooperative Society		0.002	DPR stage		Under technical scrutiny	
34	Augmentation of existing 3 MLD STP at Chakkamkandam to 5 MLD with Septage Cotreatment Capability, Guruvayur Municipality (AMRUT-2.0)	Kerala Water Authority/AMRUT	2	DPR stage	The Tranche-3 proposals were discussed in the Apex Committee of MoHUA held on 23.09.2024 and approval is awaited. AS will be issued after getting MoHUA's approval. MoHUA's approval was received on 01.10.2024.	The corrected DPR is expected to be submitted by KWA to the ULB by 15.01.2025 for placing in the SLTC/SHP SC for approval of AS	31.12.2026
PALAKKAD							
35	Sewerage scheme in Shornur Municipality consisting of sewage network and FSSM with		2.5 MLD	DPR stage		DPR Submitted to Govt and RKI for AS on 16.2.23 and now it is revising	

	2.5 capacity with treatment Palakkad MLD STP co-unit,					as per the direction of SBM 2.0, but ULB move for FSTP	
36	STP for Municipal Buildings, Palakkad Municipality (AMRUT-2.0)	Palakkad Municipality/AMRUT	0.030	AS to be Issued	The Tranche-3 proposals were discussed in the Apex Committee of MoHUA held on 23.09.2024 and approval is awaited. AS will be issued after getting MoHUA's approval. MoHUA's approval was received on 01.10.2024.	The DPR to be submitted by the ULB for placing the SLTC/ SHPSC for approval of AS. EoI to be called for by the ULB for executing the project in DBOT mode. Council approval in this regard is awaited.	31.12.2026
37	CHC Alathur, Alathur Block Panchayat, Palakkad		0.090	DPR Stage		Single agency only participated in tender within the stipulated time limit. Hence retendered, tender date closes on 15.07.2024. Tender opening on 19.07.2024	
38	FSTP at Shornur					Railway land to get. Application submitted.	
MALAPPURAM							
39	Sewage Treatment Plant and Sewerage System for Ponnani Municipality (Harbour Zone)		7.12		DPR in PRICE 3 Submitted to Govt and RKI for AS on 17.10.2022	DPR submitted to Gok for AS. But AS not received.	
40	Sewerage system		4.2		DPR Submitted to	AS	

	for Ponnani municipality(Kottathara Zone) with STP of capacity 4.2 MLD				Government of Kerala and RKI for AS on 20.10.2022	expected from GoK/RKI and it is revising as per direction of SBM 2.0	
41	STP at District Hospital Perunthalmanna, District Panchayath, Malappuram		0.200	DPR Stage		Even after multiple revised submissions, DPR is of inferior quality. Hence LB is going to find another competent agency. Necessary instructions were given to the LB.	
42	Eco-Friendly wastewater Treatment Plant (140 KLD) for Women and Children Hospital Ponnani Municipality, Malappuram		0.14	Tendering stage	Total fund deposited to KWA by the LB. Work yet to start. Land finalized.	Tendering procedure yet to start.	
43	DPR on STP at District Hospital, Tirur, Malappuram		0.5	TS issued		Tendered	
44	ETP at Tirur Municipality		0.060	DPR Stage		LB to submit the revised DPR with revised DPC form	29.07.2025
45	ETP at Tirur Municipality Slaughter house		0.030	Tendering Stage	Tender opened on 27.12.2023 and Work order given to an Agency.	Approval received from the council on 24.02.2024 .Work will start soon.	
46	Eco Friendly waste water Treatment plant 10 KLD in vettam Community Health centre , Tirur BP		0.01	DPR Stage		Agency selection completed. DPR under correction by agency.	

47	FSTP at Perinthalmanna	Aquatechnics Water Treatment Technologies Pvt. Ltd. Ernakulam				DPR under modification. Soil Testing will be completed by 14.06.2024.	
48	FSTP at Valancheri	IRTC- PIUMUNDUR				DPR placed on TC on 25.05.2024 at Suchitwa Mission. Process flow conditionally approved.	
KOZHIKODE							
49	STP with Septage Cotreatment Capability at Sarovaram, Kozhikode Corporation	AMRUT/ Kerala Water Authority	27	To be tendered	The 7 th SHPSC held on 14/12/23 approved the issuance of AS and G.O dated 08/01/24 was issued. TS was issued by KWA for the STP package in the 3rd week of Oct-2024 and tender is to be floated by KWA.	KWA issued combined TS for the STP and the sewer network packages. Tendering was kept on hold by the KWA as it was found in the CRZ mapping done by IRS, Chennai, that a portion of the proposed site for the STP (nearly 20 cents out of 2.6 Acres) falls under the CRZ-1 category. KWA had sought clarity from ULB regarding	31.12.2026

						the possibility of getting CRZ clearance as the reduction in the area available will lead to reduction in the STP capacity and reworking of the estimate. The ULB has directed KWA to go ahead with the project without reducing the STP capacity under the assumption that the permission will be obtained from the KCZMA as per the CRZ rules (as per the latest rules, public utilities are allowed in CRZ-1). A meeting in this regard is expected to be held shortly.	
50	STP at Avikkal thodu, Kozhikode Corporation (AMRUT-2.0)	Kozhikode Corporation/ AMRUT	7	DPR Stage	The Tranche-3 proposals were discussed in the Apex Committee of MoHUA held on 23.09.2024 and approval is awaited. MoHUA's approval was	Two offers received. The Council held on 21.12.2024 approved the formation of a	31.03.2027
51	STP at Kothi, Kozhikode Corporation (AMRUT-2.0)	Kozhikode Corporation/ AMRUT	6	DPR Stage			

					received on 01/10/24. An EoI for executing the work in DBOT mode was floated by the ULB on 30/10/24 with 20/11/24 as the last date of bid submission. The due date of EoI was extended till 10.12.2024 as per the request of the prospective bidders.	technical committee for scrutiny of bids. The SIDCO has objected the construction of the STP in the West Hill Industrial Estate saying that the land has to be used only for industry related purposes. In this regard the ULB has submitted a request to the Govt. on 20.12.2024 (Letter No. 2825110-2024) for permission to construct the STP at the location. Decision is awaited.	
52	Construction of 7ML D capacity Sewage Treatment Plant and Laying Sewerage Network to Vatakara Municipality, Kozhikode		7ML D	DPR stage	DPR Submitted to Govt and RKI for AS on 14/02/2023		
53	Kozhikkode corporation Zone F		4 MLD	DPR stage		Submitted to Govt and RKI for AS on 29.09.2022	
54	STP at Vadakara	IMPACT	0.5 MLD	DPR stage	G.O(MS)No.88/20	Land	-

	Municipality, Kozhikkode	KERALA Ltd	Sewage TP 20KLD FSTP 20KLD		24/AGRI dated 13.08.2024 received from Agriculture (NCA) Department regarding land conversion.	identified is wetland. Unnotified land conversion process ongoing. Consultant submitted modified DPR with TAR reply, submitted to KIIFB	
55	10 KLD Sewage Treatment Plant at EMS Memorial Municipal Town Hall, Koyilandy Municipality, Kozhikkode		0.01	Tendering Stage		Municipality to transfer the fund to KWA.	
56	ETP at Govt Ayurvedic Hospital, Talayad, Panangad Grama Panchayath, Kozhikkode		0.03	DPR Stage		DPR under correction by the agency after placing in Technical Committee	
KANNUR							
57	Thalassery, Kannur		22	DPR Stage		DPR Submitted to Govt and RKI for AS on 28/11/2022	
58	Kannur corporation Zone 1		13	DPR Stage		DPR Submitted to Govt and RKI for AS on 25/11/2022	
59	Payyannur, Kannur		13 MLD	DPR Stage	MoHUA's approval was received on 01.10.2024. The DPR of the project is expected to be submitted by 30.11.2024 for placing in the SLTC / SHPSC for approval of AS.	DPR Submitted to Govt and RKI for AS on 25/11/2022	
60	STP with Septage	Kerala Water Authority	5	AS to be Issued	The Tranche-3 proposals were	The modified	31.12.2026

	Cotreatment Capability at Maithanappally, Kannur Corporation (AMRUT-2.0)				discussed in the Apex Committee of MoHUA held on 23.09.2024 and approval is awaited. AS will be issued after getting MoHUA's approval. MoHUA's approval was received on 01.10.2024. The DPR to be submitted by the ULB for placing in the SLTC/SHPSC for approval of AS. The Council held on 16.11.2024 suggested certain modifications and the DPR is to be modified by KWA accordingly.	DPR is to be submitted by KWA for placing the SLTC/SHPSC for approval of AS. In the meeting held by the TM, KWA, on 10.12.2024, the SE, PPD, KWA, Kozhikode, was directed to submit the modified DPR by 15.01.2025.	
61	STP at Palayad, Taliparamba municipality, Kannur		1	DPR Stage		Valuation report has been approved by the Tahsildar. Decided to assigned revenue inspector for land registration process.	
62	200 KLD Sewage Treatment Plant - Mattannur Municipality – Reg		0.2	DPR Stage		M/s Ram Biologicals has attended the State Suchitwa Mission to discuss the corrections in DPR. DPR under correction by the agency.	
63	STP at hospital, Pazhayangadi, Kannur		0.120		At tendering stage	Project vetting completed. Agency	

						submitted a rough cost estimate for electrical components TS issued. Due to funding issues, new funding source needs to be found such as from urban agglomeration fund	
64	STP at old age home, Kannur		0.010		Tendering Stage	TS issued	
65	DPR for perumba fish market Payyanur Municipality, Kannur		0.01	Work tendered	New DPC project form taken and balance amount will be transferred to KWA from Municipality as they receive the fund. The fund will be dispersed after allotment of CFC fund. CFC fund was not allotted so far, so CFC was unable to transfer Work Awarded the fund. to IRTC. Council Decision not yet taken by ULB for work Agreement.	Estimate under preparation. Rs.66.5 lakhs deposited to KWA. Municipality to deposit the balance amount of Rs24 lakhs	
66	FSTP at Valliyayi, Mokeri GP				DPR under preparation. DPR will be submitted at SLTC on 06/06/2024 for approval.		
WAYANAD							
67	65 KLD Sewage Treatment Plant at Taluk Head Quarters Hospital Vythiri, Kalpetta Block Panchayat,		0.065	At DPR Stage	M/s Ram Biologicals attended Suchitwa Mission to discuss the corrections in DPR. Agency to submit the revised	DPR under verification by Local body	

	Wayanad				DPR to LB.		
68	Mananthavady, Wayanad		2 MLD	DPR Stage		Submitted to Govt and RKI for AS on 29/09/2022	
KASARGOD							
69	200 KLD Wastewater treatment plant at Tata Trust Govt Hospital, Kasargod		0.2	DPR Stage		Local body decided to hand over the work of DPR preparation to another agency	
70	Kasargod Zone 1		4 MLD		At DPR stage	Private land identified . Action to be taken from land aquisition	
71	Kasargod Zone 2		4 MLD		At DPR stage	DPR Submitted to Govt and RKI for AS on 23/11/2022	
72	Taluk Hospital , Neeleswaram Municipality Kasaragod		0.040		At tendering stage	The tender- qualified agency is unwilling to accept the work. Hence action for council approval is being taken for arranging the work through accredited agency.	
73	135 KLD Capacity decentralized sullage Treatment plant at Uppala Town Mangalpadi, Kasaragod		0.135	DPR Stage	• DPR have to be modified to include sewer networks • The sewer network survey has been completed and DPR has been prepared.	DPR has been prepared.	
74	CHC, Mangalpady, Manjeshwar Block		0.014	DPR tendering Stage	New project taken. Project revised as Mangalpady taluk hospital. DPC	DPR preparation delayed due to fund	

	Panchayath, Kasragod				approved. DPR preparation by the agency DPC approved. DPR preparation delayed due to fund ambiguity for STP at Gram Panchayats	ambiguity for STP at Gram Panchayats	
75	FSTP at Manjeswaram, Manjeswaram GP				DPR under preparation. Tendering process will start after the Election procedures.(06.06. 2024)		

Proposed Sewerage System

1	Sewerage system for Thiruvananthapu ram Corporation- Cluster 1 Attukal, Ambalathara, Kaladi, Kalipankulam & K amaleswaram		7.0(for utilizing exixsting 107 MLD)		DPR in PRICE 3 Submitted to Govt and RKI for AS on 15.10.2022		
2	Preparation of DPR for proposed sewerage system to the Madhippuram colony and surrounding areas near Vizhinjam Harbo ur, TVM		5				
3	Detailed Engineering Report for Sewerage Scheme in Neyyattinkara Zone I, TVM		2.5 MLD				
4	Detailed Engineering Report for the Sewerage scheme in Alappuzha Municipality with ST P – Phase 1		5 MLD		At DPR stage		
5	Detailed Engineering		2.6 MLD				

	Report for the Sewerage scheme in Haripad Municipality - Sewage Treatment Plant of Capacity 2.6 MLD- Phase 1 and Sewerage Network of Length 58km - Phase 2, Alapuzha						
6	Comprehensive sewerage scheme- Government medical college, Kottayam		5 MLD		At DPR stage		
7	Sewerage System for Kattappana Municipality		1.76		DPR Submitted to Government of Kerala and RKI for AS on 19/09/2022		
8	Detailed Engineering Report for Sewerage Scheme in Kalamassery Municipality-Phase-1, Kochi		2.6 MLD		At DPR stage		
9	Sewerage System for Aluva -Zone 1		1.72		DPR Submitted to Government of Kerala and RKI for AS on 19.09.2022		
10	Sewerage system for Pattambi municipality		5.4		DPR Submitted to Government of Kerala and RKI for AS on 06.08.2022		
11	Sewerage system for Ponnani municipality(Kottathara Zone) with STP of capacity 4.2 MLD		4.2		DPR Submitted to Government of Kerala and RKI for AS on 20.10.2022		
12	Decentralized Sewerage Scheme (STP at Kokkala), Thrissur Corporation (AMRUT-2.0)		2.5	AS to be Issued	Decision of SLMC on changing the category of the proposed land is awaited.	The 12 th SLTC held on 11.07.2024 has recommended the proposal to	31.12.2026

						the SHPSC and the same will be placed in the next SHPSC scheduled on 02.08.2024 . * It will be sent to MoHUA for approval after getting the approval of the SHPSC. AS will be issued after getting the MoHUA's approval.	
13	Sewerage System for Zone-A, Kozhikode Corporation (AMRUT 2.0)		13	AS to be issued:	Due to public protest and the ongoing court cases (there is a stay by the Munsiff Court regarding the Avikkalthodu STP work) the ULB has proposed to combine the Kothi & Avikkalthodu sewerage projects and has proposed a 13 MLD STP at a new location (West Hill Industrial Estate).The 12thSLTC held on 11/07/24recommended the proposal to the SHPSC	The Tranche-3 projects were finalized in the SHPSC held on 02.08.2024 . The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24.08.2024 for approval. AS will be issued after getting MoHUA's approval	

Mobile FSTP

No.	Location	Implementing Agency	Capacity of the STP	Status of Project	Incremental Progress - June (in	Likely Date of Completion	Date of DPR
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			proposed in MLD	Detail)		preparation/ Tendering
1	Mobile Treatment unit – Chalakudy – by BHOUMA ENVIROTECH PVT LTD		0.036	Operational		
2	Mobile Septage Units- 2 nos, Alappuzha Municipality (AMRUT-1,0)	Alappuzha Municipality/ AMRUT	0.02 (0.01 x 2 nos.)	Under Construction – 50%	One vehicle delivered. The other vehicle is to be delivered	31.01.2025
3	Mobile Treatment Unit - Kodungalloor, Neyyattinkara, Chirayinkeezhu, Kumarakam, Wadakkancherry			proposal stage		

IV.Details of Industrial Pollution:

- Total registered industrial and non industrial units –**129915**
- Total Effluent and Sewage & Sullage Generating units: 14422 (Large & Medium: 1298; Small: 13124)
- Quantity of Effluent and Sewage & Sullage generated from 14422 units = 178.36 MLD (Large & Medium: 156.3 MLD – mentioned in MPR for the month of Jan, 2021; Small: 22.059 MLD)
- Total Effluent Generating units: 11697 [11551 (As per Dossier: As on 2020) + 146 (As per online consent system)]
- Quantity of Effluent generated from 11697 units = 111.729 MLD [107.08 MLD + 4.649 MLD]
- 15095 consents issued in 2023. More industries are brought under consent purview
- OCEMS facility provided in 48 industries and is linked to the SPCB/CPCB servers. In case of exceedance follow up is done.
- Number of industrial units connected to CETP: As per the available data – 95 nos

Number and total capacity of CETPs (details of existing/under construction /proposed)

- 11 nos of CETPs are functional (Total Capacity – 9.545 MLD)
- Proposed CETPs –3 nos. (Total Capacity- 3.12 MLD).

Details of existing/under construction/proposed CETPs in the State						
CETP Name	Treatment Capacity	Operational Capacity	Status(Whether Operational or Non operational)	Number of member units	Number of complying units	Whether complying with parameters
Kinfra Apparel Park, St.Xavier's College P.O, Thumba, Thiruvananthapuram	4.5 MLD	4.5 MLD	Operational	10		pH- 7.3, TSS – 93 mg/l, BOD – 11.3 mg/l, COD – 120 mg/l, O & G – BDL, FC- Nil as per analysis report dated 04/12/2024.
CETP,KINFRA,Elamannoor, Pathanamthitta	0.22 MLD	30 Cubic metre per day	Operational	4	4	pH - 7, TSS - 80, BOD - 12, O&G - 1.2,COD-64 as per analysis report dated 19.12.2024
KSIDC Mega Food Park, Pallipuram, Cherthala, Alappuzha	2 MLD	0.5 MLD	Operational	6		pH-7.8 mg/L, BOD-10 mg/L, SS- 10 mg/L O&G-BDL , as per analysis report dated 16.01.2025
Sea Food Park (India) Ltd., Aroor, Alappuzha	0.3 MLD	0.3 MLD	Operational	10		pH-7.9 mg/L, BOD-4.2 mg/L, SS-BDL O&G-BDL , as per analysis report dated 16.01.2025
Kinfra Small Industries Park Nellad, Mazhuvanoor	0.4 MLD	0.4 MLD	Operational	15		pH- 7.09, COD-120 mg/L, Oil and Grease-BDL, Total Suspended Solids – 111.8 mg/l, Fluorides < 1 mg/L, Chlorides- 109.9 mg/L, Phosphate – 1.02 mg/L, Nitrate- 4.77 mg/L, Sulphates – 34.79 mg/L, Sulphides – 6.2 mg/l, Ammoniacal Nitrogen – 12.19 mg/l, 4 Phenolic

						Compounds - BDL, as per analysis report dated 18.12.2024 Action is taken for preventing exceedance. EE DO-2 is authorized to initiate legal actions as per letter No. KPCB/172/2024-EE-1 dated 20.02.2024 and action is being taken.
Rubber Park India Private Limited (New Plant), Common Effluent Treatment Plant, 2 A, Kaudileeyam, Rubber Park, Valayanchirangara, Ernakulam- 683556	0.25 MLD	0.25 MLD	Operational	17 Units Dormitory and Canteen		pH- 7.53, COD- 16 mg/L, Oil and Grease-BDL, Total Suspended Solids – BDL, TDS – 1962 mg/l, Chlorides- 24.9 mg/L, Sulphates – 64.68 mg/L, Sulphides - 38, Fluorides < 1 mg/L, Ammoniacal Nitrogen – BDL, Phenolic Compounds - BDL, Phosphates – 0.62 mg/l, Nitrate – 9.9 mg/l and Total Residual Chlorine - BDL as per analysis report dated 18.12.2024 Action is taken for preventing exceedance.
CSEZ, Kakkanad, Cochin Special Economic Zone Ernakulam	1 MLD		Operational	14		pH-7.1, TSS- BDL, TDS – 378 mg/l, Chloride – 29.7 mg/l, Residual Chlorine – 216 mg/l, phosphate-0.2 mg/l, sulphide- 10.88 mg/L, ammonical nitrogen – 0.4 mg/L, BOD- 2.2 mg/l,

						COD-20 mg/l, Sulphate – 15.4 mg/l, Oil & grease – BDL, Phenolic compounds – 0.001 mg/l, Copper- BDL, cadmium - BDL analysis report dated 27.08.2024 • Inspection conducted by Board on 14.02.2024. As per the analysis report dated 31.07.2023, all parameters except Nitrates and Phosphates exceeds the prescribed limit. • Meanwhile CSEZ operated a tertiary units (Softner, degaser, RO, MEE etc.) as trial run.
KinfraTechno Industrial Park, Kakkanchery Chelambara P.O, Malappuram	0.675 MLD	0.675 MLD	Operational	17	17	Parameters complied within limits pH – 7.5, BOD – 10 mg/l, COD – 44 mg/l, TSS – 38 mg/l, oil & grease – BDL as per report dated 09.02.2024
Kinfra Textile Centre, Nadukani, Pallivayal P.O, Thaliparambu, Kannur–670142	0.2 MLD	0.2 MLD	Operational	2	2	pH – 8.17, BOD – 8 mg/l, COD – 56 mg/l, Oil & Grease – 2.76 mg/l, TSS – 25 mg/l as per analysis report dated 06.01.2025
CETP- Proposed						

CETP, Industrial department, Aroor	1.5 MLD	Proposed	• GM issued proceedings on 08/01/2024 to resume the 1 acre land from JIS international • The time line now given to the unit for handing over the land to the Industries Department, if it does not start industrial activities in the land, is extended for 6 more months from 19.01.2024.			NA
CETP, Chandiroor	1.5 MLD	Proposed	• Not constructed (Land procured)	Sanctioned Rs. 10 crore in the 2024-25 annual budget for the construction CETP	ACCEPT Environment Solutions have submitted a project proposal.	
KINFRA Spices Park, Muttom, Idukki	0.120 MLD		• ICO issued. CETP is ready to operate		Industries have not started functioning.	

Effluent Treatment Plant

Sl. No.	Industry Name	Industry Type	Consumption of water in MLD	Effluent Quantity in MLD	Mode of disposal	ETP Units	Date of monitoring	Limiting Standard	Latest Analysis report	
KOLLAM										
1	Kollam	Dairy	0.2	0.12	Irrigation	Screen	19-08-	pH 5.5-9,	pH-8.5,	Para

	Dairy				and gardenin g	Chamber, Collection Sump, Anaerobic Reactor – I & II, Aeration Tank, Secondary Clarifier, Dual Media Filter, Sludge Drying beds, Treated water pond	2023	SS-100 mg/L, BOD-30, Oil&grease - 10mg/L	S.S-85.4, BOD-28, Oil&grease- 0.0317	meter s are withi n the limit
PATHANAMTHITTA										
1	Muthoot Honda ,Muthoor , TVLA ,PTA	Service Station				ETP	11.09.2024	pH-5.5 to 9, BOD-30,SS-100,O&G-10	pH-7.5,BOD-17,SS-82,O&G-7.6	Para meter s are withi n the limit
2	Maniyattu,Auditorium,Kumbanad, Thiruvalla	Auditorium				ETP	12.12.2024	pH-6.5 to 8.5, COD-150,SS-50,O&G-10	pH-6.8,COD-64,SS-12,O&G-5.6	Para meter s are withi n the limit
3	Kreem Foods PVT LTD ,Maroor P.O, Elamannoor	Food Processing Unit				ETP	19.12.2024	pH - 5.5 to 8.5, TSS - 100, BOD -30, O&G - 10	pH - 7.3, TSS - 68, BOD - 56, O&G - 9.2	Para meter s are withi n the limit
4	Indus Motors Co. Pvt. Ltd, Mithrapuram, Adoor	Automobile servicing				SETTLING TANK,OIL TRAP AND SOAK PIT	19.12.2024	pH - 5.5 to 9, SS - 100, O&G - 10, BOD-30	pH - 8.5, SS - 60, O&G - 4.4, BOD-12	Para meter s are withi n the limit

5	Believers Church Medical College (Laundry) , Thiruvalla					ETP	19.12.2024	pH-6.5 to 8.5,BOD-3, COD-50,SS-20,O&G-1,TC-230	pH-7.5,BOD-40, COD-96,SS-102,O&G-14,TC-10000	Parameters are within the limit
ERNAKULAM										
1	Fact Ltd., Petrochemical Division, Eloor, Udyogamandal	Petrochemical Unit	13.97	5.04	Periyar-downstream of Pathalam bund	Neutralisation, Equalisation, Bio pond, Guard pond, Final clarifier, Denitrification reactor	25/05/2024	pH - 6.5 - 8.0, nitrates - 20mg/l, free ammonia - 5 mg/l, TKN - 100mg/l, oil and grease - 10mg/l, phenolic compounds - 1mg/l, ammoniacal nitrogen - 50mg/l, SS-30mg/l, BOD - 30mg/l, COD - 250mg/l	pH - 6.67, nitrates - NA, free ammonia - NA, TKN - NA, oil and grease - BDL, phenolic compounds - NA, ammoniacal nitrogen - NA, SS-56, BOD - 12mg/l, COD - 80mg/l	Analyzed parameters are conforming to the standards.
MALAPPURAM										
1	ASPIN WALL PULLA NCODE	Chemical mixing	0.03	0.03	soakpit	screen chamber, oil and grease, trap collection tank, aeration tank, settling tank, filter feed tank, pressure sand filter, chlorination, activated carbon filter	06.10.2024	PH-6.5-8.5,BOD-30,COD-250,TOTAL SUSPENDED SOLIDS-100,OIL AND GREASE-12	PH-6.8,BOD - 42,COD-130,TOTAL SUSPENDED SOLID-34,OIL AND GREASE -BDL	

KASARAGOD										
1	Eram Motors (P) Ltd	Service Station	0.005	0.004	Cooling tower, boiler feed, vehicle washing, gardenin g and soak pit	ETP	26.09.2024	pH-6.5-8.5,BOD-30,TOTAL SUSPEND ED SOLIDS-100,OIL AND GREASE-10 ,COD-250	pH - 7.24, TSS - 8 mg/l, BOD - 22 mg/l, Oil and grease - 1.4 mg/l	

Solid Waste Management

- The state has taken strong measures to implement effective waste management systems and enforce regulations designed to streamline the operations. Acknowledging the urgent need for sustainable waste practices, a comprehensive strategy has been developed that encompasses infrastructure improvements, public education initiatives, and the establishment of strict policies. To support this, the Government of Kerala enacted Amendment Ordinances to the Kerala Municipality Act and the Kerala Panchayat Raj Act on December 8, 2023.
- Under the revised legislation, all citizens are required to submit segregated waste to their local body or to an authorized agency for proper scientific processing. Local bodies may also face fines for failing to act in accordance with state government directives. Furthermore, institutions and commercial establishments are now obligated to keep their premises litter-free and ensure that all waste generated is disposed of properly. These activities are closely monitored at both the local and state levels to ensure effective implementation.
- In the state, a total quantity of 10076.17 TPD waste is being generated as per present population, in which 3011.23 TPD of waste is produced in urban and 6561.12 TPD in rural areas, respectively, Approximately 73% of the waste generated is organic material and in the remaining portion, 22% is inorganic waste and 5% reject material. Out of 10076.17 TPD waste generated in the state, 7398.64 TPD is biodegradable waste, 2173.72 TPD is non biodegradable waste and 503.81 TPD is inert.

- The State's policy on biodegradable waste management adopts a decentralized approach, emphasizing source-level treatment of biowaste generated by households. This policy encourages the use of composting devices and biogas plants at the household level to process organic waste, thereby reducing the burden on centralized waste management systems. To address gaps where households may lack capacity, community facilities are implemented to manage surplus waste. This integrated approach promotes sustainability by minimizing transportation needs, reducing landfill waste, and fostering the production of renewable resources like compost and biogas, while also encouraging community participation and local solutions.
- Dry waste generated from households and institutions is collected and transported to Material Collection Facilities (MCFs) or Resource Recovery Facilities (RRFs), where it is segregated into recyclable and non-recyclable waste. The recyclable waste is sent to recycling units, while non-recyclable waste is directed to co-processing facilities, such as cement plants, for energy recovery. After separating biodegradable and non-biodegradable waste from the total waste generated, the remaining portion, known as inert waste, is utilized to fill low-lying areas, offering an environmentally sustainable method of disposal`

1. BIODEGRADABLE WASTE MANAGEMENT

For biodegradable waste management in the state, various composting devices and biogas units are utilized to manage wet waste at its source. The compost produced from household waste treatment is used as fertilizer for gardening in individual residences. Approximately 80% of the total biodegradable waste generated is managed at the source, while the remaining 20% is handled by community-level facilities operated by local bodies.

Depending on land availability, a range of medium-capacity decentralized composting facilities—such as aerobic compost units, organic waste converters, windrow plants, and biomethanation facilities—have been widely established across Kerala. The compost generated from community facilities is branded and marketed as fertilizer to local farmers through the Krishi Bhavans within the local body. Additionally, centralized facilities, like compressed biogas (CBG) plants, are being planned and implemented to manage waste more economically. Construction of a CBG plant in Ernakulam district has already begun, and six

other projects are in the planning stages.

Table 1. Biodegradable Waste Management Facilities in the State

District Name	Total BDW Generation (TPD)	Total capacity of Compost plants (TPD)	Total capacity of Bio-methanation plants (waste to energy in TPD)	Total Rendering Capacity (TPD)	Total BDW Processing Capacity (TPD)
01 Thiruvananthapuram	774.83	750.68	90.87	0.00	841.54
02 Kollam	567.14	347.93	67.28	15.00	430.21
03 Pathanamthitta	224.92	159.62	27.97	30.00	217.60
04 Alappuzha	424.15	410.21	62.08	0.00	472.29
05 Kottayam	393.31	325.35	31.12	27.00	383.47
06 Idukki	208.38	260.04	17.86	0.00	277.90
07 Ernakulam	779.34	571.42	72.48	242.00	885.90
08 Thrissur	691.90	530.48	92.47	6.50	629.45
09 Palakkad	601.79	424.06	99.66	93.25	616.97
10 Malappuram	968.70	534.50	126.00	278.50	938.99
11 Kozhikode	744.15	742.64	63.67	30.00	836.31
12 Wayanad	170.56	184.52	14.40	12.00	210.92
13 Kannur	564.81	477.63	57.91	54.00	589.54
14 Kasaragod	284.68	190.41	27.99	110.00	328.40
Grand Total	7398.64	5909.49	851.74	898.25	7659.48

For managing the 7398.64 TPD of biodegradable waste generated, there is a facility of 7659.48 TPD across the state and hence there are no existing gaps. In order to account for the future generation, the state is taking steps to strengthen the source level treatment system in rural areas and to establish centralized facilities in urban areas. With the available financial support from central and state, 2926.39 TPD capacity bio waste management facilities have already been installed at household, institutional and community levels in urban areas.

2. NON-BIODEGRADABLE WASTE MANAGEMENT

For managing dry waste, women's self-help groups known as Harita Karma Sena collect primarily segregated dry waste from households and establishments, transferring it to Material Collection Facilities (MCFs) and Resource Recovery Facilities (RRFs) for further sorting and processing. At these facilities, after secondary segregation, recyclable waste is sent to recycling units, while non-recyclable waste is transported to co-processing facilities, such as cement plants, where it is used as Refuse-Derived Fuel (RDF) for energy recovery. Both government and private agencies ensure the safe transportation of waste.

Table 2: Details of Solid Waste Management facilities in the state

Facility	Up to March 2023	Up to Oct 2024
RRF	93 Nos	167 Nos
MCF	1182 Nos	1272 Nos
Mini MCF	9357 Nos	19156 Nos
Godown facility	16 Nos	67 Nos
Godown Area	85,250 Sqft	481548 Sqft
Container storage facility		198 No.s

The state has made significant investments in infrastructure for the storage of dry waste. Currently, there are 167 Resource Recovery Facilities (RRF), 1272 Material Collection Facilities (MCF), 19156 Mini Material Collection Facilities (Mini MCF), and 67 storage godowns covering an area of 4,81,548 square feet. Additionally, 198 used shipping containers have been repurposed for waste storage, facilitating easier transportation of waste.

Table 3. Non Biodegradable Waste Management Facilities in the State

District Name	Total NBDW Generation	Facilities in Local Bodies (TPD)	CKCL Godown Facility (TPD)	Pvt agency Godown facility (TPD)	Total NBDW processing Capacity (TPD)
01 Thiruvananthapuram	239.67	127.68	87.36	23.20	238.24
02 Kollam	166.30	124.43	92.94	6.25	223.61
03 Pathanamthitta	63.41	61.87	29.74	28.98	120.59
04 Alappuzha	121.05	137.13	44.61	4.00	185.74
05 Kottayam	111.78	108.09	74.35	2.00	184.44
06 Idukki	57.58	58.77	89.22	0.46	148.44
07 Ernakulam	239.46	151.45	78.07	10.50	240.02
08 Thrissur	203.75	212.45	44.61	3.00	260.06
09 Palakkad	169.08	132.62	31.23	9.00	172.85
10 Malappuram	278.08	166.42	102.60	14.60	283.63
11 Kozhikode	226.63	127.07	29.74	49.96	206.77
12 Wayanad	48.43	29.10	37.17	5.00	71.28
13 Kannur	168.45	164.94	118.96	2.45	286.35
14 Kasaragod	80.06	84.46	74.35	1.00	159.81
Grand Total	2173.72	1686.48	934.94	160.40	2781.83
Kerala Enviro Infrastructure Ltd (KEIL)					16.00
Grand Total (TPD)					2797.83

All local bodies have developed comprehensive plans for the movement of vehicles to collect waste from households and transport it to processing facilities. The implementation of these plans is monitored at both the district and state levels through the Harithamithram App, ensuring efficient waste collection without accumulation and adequate availability of vehicles for waste management. To enhance oversight, all waste-transporting vehicles are required to have GPS tracking, and the Kerala State Pollution Control Board has set up a web portal for

real-time monitoring of waste-carrying vehicles, both within and across state borders.

Efforts are also underway to equip Material Collection Facilities (MCFs) and Resource Recovery Facilities (RRFs) with the necessary tools for effective waste management, such as conveyor belts and baling machines. To enable easier transportation and reduce the reliance on landfills, the generated reject waste can be converted into Refuse Derived Fuel (RDF). In line with this, four RDF plants have been established in the Thiruvananthapuram and Cochin Corporations. Additionally, the government is working with local bodies to implement interventions for setting up cluster-level facilities across the state. RDF plants help divert non-recyclable waste from landfills, which reduces the volume of waste that needs to be disposed of, extending the lifespan of landfills and reducing the associated environmental hazards.

Additionally, Information, Education, and Communication (IEC) initiatives have been intensified to discourage open littering. Local Self-Government Institutions (LSGIs), as well as public and private sector entities, are being ranked based on their performance in waste management and cleanliness. To enforce regulations and prevent illegal dumping, 23 enforcement squads were established in March 2023 to carry out inspections and ensure compliance. Furthermore, control rooms are being set up at the district and local self-government levels to closely monitor waste collection and ensure its proper disposal.

3. LEGACY WASTE MANAGEMENT

Legacy dump sites are remediated through biomining, a process that utilizes microorganisms and natural methods to excavate, treat, segregate, and recover valuable materials from long-accumulated waste dumps. These legacy wastes consist of organic matter, plastics, metals, and other materials that have been compacted and decomposed over many years. The soil produced from biomining is utilized to fill low-lying areas at various locations. This process effectively sorts the waste into various categories, including soil, stones, RDF, glass, plastic, tires, wood, and footwear.

A total of 59 dump sites have been identified across the state, consisting of the previously reported 44 sites and 15 newly identified sites. Bioremediation has been completed at 24 sites, while work is currently ongoing at 10 sites. The remediation process is set to commence at 25 additional sites. The quantities of processed and unprocessed waste are detailed in the table

below.

Table 4. Details of processed quantity of biomining sites

	Number of Sites	Processed quantity (MT)	Unprocessed quantity (MT)
Total Reported sites	44 Nos.	17,61,871.98 T	
Completed Sites	19	345793.15 T	
Work in progress	10	461367.00 T	644157.16 T
Not yet started	15		310554.19 T
Total		807160.15 T	954711.35 T
Newly identified sites after 2018	15 Nos.	129486.19 T	
Completed Sites	5	12,485.4 T	
Not yet started	10		117001.19 T

Remediation Completed Sites

	Name of Districts	Name of Local Body	Legacy waste site (district wise)	Quantity of waste (in MT) in each site
1	Thiruvananthapuram	Thiruvananthapuram Corporation	Palayam market	4804
2	Thiruvananthapuram	Thiruvananthapuram Corporation	Erumakuzhi, near chala market	900
3	Kollam	Kollam Corporation	Kureepuzha	83926
4	Pathananmthitta	Pathanamthitta Municipality	Near Mini stadium, PTA	800
5	Pathananmthitta	Adoor Municipality	Kaimalapara, Ward no. 2, Adoor	500
6	Pathananmthitta	Pandalam Municipality	Near RRF Unit, pandalam	400
7	Ernakulam	Kalamassery Municipality	Kalamasseri	35000
8	Thrissur	Kodungalloor Municipality	Pullut, Chappara, Kodungalloor	26000

9	Thrissur	Guruvayur Municipality	Choolpuram, Guruvayoor	20000
10	Thrissur	Kodungalloor Municipality	T.K.S. Puram, Kodungalloor	607
11	Palakkad	Pattambi Municipality	Pattambi, Sankara mangalam	1041.15
12	Malappuram	Malappuram ulb	Puliyettummal,Near Inkel city, Malappuram	5079
13	Malappuram	Tirur ulb	Trenching ground, Ottilathara	3079
14	Malappuram	Perinthalmanna Municipality	Perinthalmanna, Kunnappalli	200
15	Malappuram	Manjeri Municipality	Vettekkode, Manjeri	13902
16	Kozhikkode	Kozhikkode Municipal Corporation	Kalliyi, ward-56, beside the river	15
17	Kozhikkode	Koyilandy Municipality	Koyilandi	40
18	Kozhikkode	Kozhikkode Municipal Corporation	Njaliyan parambu	130,000
19	Thrissur	Thrissur Corporation	Laloor	19500
		Total		345793.79

Remediation work in progress

Sl No.	Name of Districts	Name of Local Body	Legacy waste site (district wise)	Quantity of waste (in MT) in each site
1	Thiruvananthapuram	Attingal Municipality	Attingal, Chudukad	11365
2	Kottayam	kottayam municipality	Vadavathoor, Kottayam	80943.2
3	Ernakulam	Kothamangalam Municipality	Kumbalathumuri, Kothamangalam	19146
4	Idukki	Thodupuzha Municipality	Parakadavu, Thodupuzha	28000
5	Ernakulam	Kochi Corporation	Brahmapuram, Kochi	843000
6	Thrissur	Chavakkad	Chavakkad	5000

		Municipality		
7	Thrissur	Wadakkanchery Municipality	Kumbalangad	21063
8	Palakkad	ottapalam municipality	Panamanna, Ottappalam	37600
9	Kannur	Kannur Corporation	Chelora	43727.32
10	Kannur	Mattannur Municipality	Mattannur, Karithurparamba	15680
		Total		1105524.16

Remediation Work about to start

SL No.	Name of Districts	Name of Local Body	Legacy waste site (district wise)	Quantity of waste (in MT) in each site
1	Alappuzha	Kayamkulam Municipality	Murikkummoodu, Kayamkulam	6567.04
2	Alappuzha	Alappuzha Municipality	Sarvodayapuram	57200
3	Kottayam	Changanassery Municipality	Fathimapuram, Changanassery	7300
4	Kottayam	Erattupetta Municipality	Erattupettah, Thevarrupara	8000
5	Idukki	Kattappana Municipality	Kattappana, Puliyanmala	12000
6	Ernakulam	Muvattupuzha Municipality	Kurianmala, Muvattupuzha	44589
7	Thrissur	Irinjalakuda Municipality	Iringalakkuda, Mangadikunnu, Porathissery	14000
8	Palakkad	Palakkad Municipality	Koottupatha, Kodumba	73827
9	Wayanad	Kalpetta Municipality	Vellaramkunnu, Kalpetta	9485.375
10	Kannur	Thalassery Municipality	Thalassery, Punnoolpetty	45430.4
11	Kannur	Iritty Municipality	Iritty, Athithattu	1618.49
12	Kannur	Payyannur Municipality	Payyannur, Moorikkovval	2100
13	Kannur	Kuthuparamba Municipality	Palapparamba, Kuthuparambu	12081.6
14	Kasaragod	Kasaragod Municipality	Kelugudde, Kasaragod	12873.6
15	Kasaragod	Kanhangad Municipality	Kanjhangad, Trenching Ground Chemmattamvayal	3481.69
				310554.195

Newly identified sites

Sl. No.	Name of Districts	Name of Local Body	Legacy waste site (district wise)	Quantity of waste (in MT) in each site
1	Thiruvananthapuram	Thiruvananthapuram Corporation	Vizhijam	3177.1
2	Kollam	Kottarakara Municipality	Ugrankunnu, Kottarakkara	6596
3	Alappuzha	Mavelikkara Municipality	Puthiyakavu, Mavelikkara	2880
4	Kottayam	Mundakkayam Grama Panchayat	Mundakkayam	4000
5	Kottayam	Erumeli Grama Panchayat	Erumeli	1500
6	Idukki	Munnar Grama Panchayath	Munnar	18163
7	Ernakulam	Koothattukulam Municipality	Town-Ward 15, Koothattukulam	1346
8	Ernakulam	North Paravoor Municipality	Vedimara, North Paravoor	18666
9	Thrissur	Chalakkudy Municipality	Near Cosmos Club, Chalakkudy	6769
10	Thrissur	Wadakkanchery Municipality	Wadakkanchery, Kumblangad	16152
11	Palakkad	Alathur Grama Panchayat	Alathur	1824
12	Palakkad	Vadakkancheri Grama Panchayat	Vadakkanchery	1520
13	Palakkad	Nemmara Grama Panchayat	Nemmara	3641.4
14	Kozhikode	Vatakara Municipality	Puthiyappu, Vadakara	30693.6
15	Kasaragod	Mangalpady Grama Panchayat	Kubanoor	12557.6
		Total		129486.19

- Total number of Urban Local Bodies (6 Corporation and 87 Municipalities) : 93 Urban
- Total Urban Population : 79,36,885 (As per 2011 Census)
- Current Municipal Solid Waste Generation : 3011.23 TPD (Urban local bodies- Based on population)
- Processing Capacity : 3870.35 TPD

- Gap in Municipal Solid Waste Management : 0 TPD
- The following projects are completed and functioning:
 - Black soldier plant 50 TPD Brahmapuram, Ernakulam by ZIGMA
 - Black soldier plant 50 TPD Brahmapuram, Ernakulam by FABCO

Online Vehicle Tracking Portal

Rule 16 (6) of Solid Waste Management Rules, 2016 and on the order of Hon'ble NGT board developed an online vehicle tracking portal through ULCCS to monitor inter-state waste movement. GPS/ Mobile tracking through app can be implemented through this portal.

Clearing and beautification of Garbage Vulnerable Points

With active public participation in a mass campaign, garbage vulnerable points were pinpointed. These 1983 locations underwent clearing and beautification efforts, with students and environmentalists playing a crucial role. The once unsightly wayside waste heaps transformed into attractive gardens, conveying a significant message on cleanliness to the public. The operation and maintenance (O&M) of each of these parks are scheduled to be carried out with the support of LSGIs, Resident Welfare Associations, trade unions, NGOs, etc.

Sanitary Waste Management

Following satisfactory monitoring of its operation, new plants are now being proposed in all districts. The total number of planned projects for implementation in the state is 27. These plants will have a cumulative capacity of 23.05 TPD.

Community Level Sanitary Waste Incinerator Projects taken in local bodies			
Sl No.	Name of District	Total Projects taken up in districts	Capacity (TPD)
1	Thiruvananthapuram	2	2
2	Kollam	7	5
4	Alappuzha	1	1
5	Kottayam	2	2
6	Idukki	1	1
7	Ernakulam	1	3
8	Thrissur	4	0.55
9	Palakkad	1	1
10	Kannur	4	2.5
11	Kasargod	4	5
TOTAL		27	23.05

Local bodies, with the assistance of women's self-help groups known as Harita Karma Sena, manage the collection of dry waste from households and establishments. Subsequently, the collected waste undergoes segregation at Material Collection Facilities (MCFs) and Resource Recovery Facilities (RRFs). Recyclable waste is sent to recycling units, while non-recyclable waste is directed to co-processing facilities, such as cement plants, as Refuse-Derived Fuel (RDF) for energy recovery. To address specific waste components like sanitary waste, e-waste, construction & demolition waste, and hair waste, private partnerships are encouraged. Continuous monitoring of projects in this sector is conducted to ensure the effective maintenance of the system. The reject waste generated statewide in households/shops is segregated at MCFs and is sent to cement factories for onward utilization for energy generation.

Quantity of Reject Waste disposed off

	Reject Quantity (TPD)
From LB Facility	403.37
From CKCL facility	337.08
From Private Facility	59.89
TOTAL	800.34

In order to manage the waste generated including the future requirements, projects have been planned & proposed in local bodies. Projects worth ₹ 45.2 cr have been taken up in local bodies for wet waste management and ₹18.54 cr have been taken up in local bodies for dry waste management. For clearing the existing legacy dumpsites, projects worth ₹120 cr have been taken up under KSWMP and projects worth ₹56 cr taken up under other funds.

Details of Projects Undertaken by LSGI's for solid waste management (Excluding Word Bank)

Name of Districts	Waste Management Projects		
	No. of Projects	Fund Earmarked (in Cr.)	Fund Expended
Thiruvananthapuram	1449	158.32	3.77

Kollam	1357	114.93	2.84
Pathanamthitta	870	47.03	1.3
Alappuzha	1192	92.64	4.42
Kottayam	1187	80.4	3.27
Idukki	765	53.52	2.13
Ernakulam	1483	129.11	4.65
Thrissur	1400	134.3	7.38
Palakkad	1251	80.85	4.61
Malappuram	1446	103.75	9.49
Kozhikode	1271	131.74	5.31
Wayanad	397	34.69	1.48
Kannur	1066	110.31	7.11
Kasargod	692	54.22	2.45
Total	15829	1325.81	60.21

Details of World Bank funded projects

World Bank funded					
No	KSWMP - World Bank funded SWM Project Components	Total Outlay in Rs. Cr	FY 2022-23 & FY 2023-24 till date (31/01/24)		Projected expenses till 31/03/25 in Rs. Cr
			Committed expenditure in Rs. Cr	Firm Contracts / Actual expenditure in Rs. Cr	
I	Component 1				

1	Planning, Execution, Admn Expenses & Capacity Building	320	96.88	56.82	154.82
II	Component 2				
2	ULB level Investments (procurement of SWM Goods & Works)	1,200.00	284	2.85	79.85
III	Component 3				
3	Dumpsite Remediation	120	61	0.28	62
4	Regional Infrastructure	760			82.28
	Total	2,400.00	441.88	59.95	378.95

Similarly, as part of KSWMP funded by World Bank a total outlay of 2400 cr has been earmarked for capacity building, procurement of SWM goods, dumpsite remediation and regional infrastructure.

Rendering plants

Meat rendering plants process animal by-product materials for the production of tallow, grease, and high-protein meat and bone meal. Plants operate in conjunction with animal slaughterhouses or poultry processing plants. The Government of Kerala developed guidelines for the operation of rendering plants which led to the standardization of facilities. The facilities use wastes as an input material to create valuable products as new outputs. The aim of resource-recovery is to reduce the amount of waste generated and optimize the values created from waste. Here, the newly functioning plants lead to the management of around **1068** TPD of poultry waste which would have ended-up as waste and created a menace to the people.

Details of Existing Rendering Plants

District	No. of plants	Plant Capacity (TDP)
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Thiruvananthapuram	0	0
Kollam	1	185
Pathanamthitta	1	30
Alappuzha	0	0
Kottayam	0	0
Idukki	0	0
Ernakulam	7	242
Thrissur	2	6.5
Palakkad	6	93.25
Malappuram	16	305.5
Kozhikode	1	30
Wayanad	1	12
Kannur	2	54
Kasargod	2	110
	39	1068.25

Rendering plants are available in 10 districts and the wastes from other 4 districts are also processed through these plants.

Status of proposed Waste- to- Energy Plants

Status report of Waste to Energy Plant				
Sl. No.	Waste to Energy plant	Land Identified	Procured	Status
1	Kozhikode Njaliyanparambu (450 TPD)	Kozhikode corporation	(Govt. land) 12.67 acre at Njaliyanparambu	• Concessionaire not achieved financial closure. • Recommended for termination
2	Kannur Chelora	Kannur Corporation	(Govt. Land) 9.7 acres at Chelora	• Work of - plant can be started only after the work of biomining is carried out. WtE plant is proposed in 9.7 acres of land after clearing the legacy waste. • Tendering completed and DPR prepared by Blue planet. Consent application is yet to be received. • For biomining, volume of legacy waste – 1,22,844 m³ (NIT). First given to Zonta and they asked to revise the amount of biomining. Again retendered and identified a suitable contractor, Jan-AdharSevabhaviSanstha. Bio mining already started. • Agreement to be executed Biomining is already started (6500) cum is biominced (50%).
3.	Palakkad Kanjikode	Palakkad Municipality		• Concession awarded. • DPR approved. • Financial closure achieved. • Statutory clearances obtained • Construction of plant to commence on September 2024.
4	Kollam Kureepuzha	Kollam Corporation	7.05 acres at	• Concessionaire not achieved financial closure. • Recommended for

			Kureepuzha (Govt. land)	termination
5	Ernakulam Brahmapuram	Kochi corporation		• Construction of CBG Plant ongoing
6	Thrissur	Thrissur corporation		Land is yet to be Identified.
7	Malappuram	Malappuram munciplaity	8.09 acres of land at Kurumbathoor village in Tirur Taluk	• 8.09 acres of land identified by District Administration at Kurumbathur village. Tirur taluk forsetting up of WtE plant. The land is under possession of KSIDC. Details of this are reported to be submitted to Government already by LR Deputy Collector.
8	Thiruvananthapuram	Thiruvananthapuram Corporation		• Land is not yet identified.

Other interventions taken by the State in Solid Waste Management

Door-to-Door Waste Collection

In the fiscal year 2023–2024, there has been a significant increase in door-to-door waste collection coverage across the State. 100% door to door collection is ensured by special interventions at LSGI level. Haritha Mithram app facilitated developing systematic and professional approach on customized strategies for increasing the D2D coverage, user fee collection, segregated material movement, and scheduled transportation of waste from door steps to disposal facilities.

Registration of Unauthorized Dealers

Scrap dealers are pivotal in the non-biodegradable waste management process in Kerala, contributing significantly to the collection and processing of waste. They engage in collecting, sorting, and processing diverse scrap materials, such as metals, paper, plastics, and electronics, contributing to the reduction of waste reaching the mainstream. Efforts are underway to register them officially and evaluate the volume of waste they manage.

Lifting Plan and Forward Linkage

The transfer of waste from mini MCF to MCF and RRFs faced inefficiencies due to insufficient vehicle resources and a lack of professionalism. Through the assistance of Haritha Sahayasthapanams, a systematic plan for waste lifting has been devised and implemented. Additionally, a seamless disposal process for segregated waste has been established by identifying appropriate disposal facilities and recycling markets. To efficiently handle non-recyclable rejects, plans are underway to propose RDF plants at the district level.

Non-recyclable plastic waste is shredded in the MCF/RRFs and is used for the tarring of PWD and LSGD roads. During the period 2016-2024, Clean Kerala Company Limited (CKCL) has produced 3617 MT of shredded plastics and given to various agencies (NHAI - 13.93 MT, PWD - 1635.25 MT, LSGI - 1710.64 MT). The total length of polymerized road constructed during this period using shredded plastic is 5925.78 km.

GPS Tracking Facility

To control the illegal dumping of waste, GPS tracking systems have been mandated for vehicles transporting waste. The Kerala State Pollution Control Board has created a web portal for real-time monitoring of waste-carrying vehicles, both interstate and intrastate. Additionally, vehicles involved in the transfer of non-bio waste have been equipped with security stickers embedded with holograms.

Enforcement Action

To enforce waste management regulations and prevent open dumping, 23 squads were established in March 2023 to undertake enforcement actions. Single-use items constitute a significant portion of the waste discarded on roadsides. The enforcement team has conducted 46,906 inspections to date, identifying 12,409 violations and punishment actions have been taken. A fine amounting to Rs. 1,56,76,606/- has been collected. Additionally, approximately 172,535.409 kgs of single-use plastic items have been seized as a result of these enforcement efforts.

Control rooms have been decided to be set up at the District and Local Self-Government levels to closely monitor the existing collection of waste and their proper disposal. Control rooms are functioning effectively in 650 local self-government bodies, on date.

IEC Interventions

IEC initiatives have been intensified to improve door-to-door waste collection and eliminate open littering.

- An incentive program has been instituted to encourage public engagement in identifying Garbage Vulnerable Points.
- Technical assistance has been provided to BWGs to strategize and establish waste management facilities independently.
- For effective waste management, private partnership has been ensured
- Ranking of LSGIs based on their performance on waste management
- Ranking of public and private sector institutions based on cleanliness index
- 100% User Fee challenge among LSGIs

Sanitary landfill

The non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive inert waste and preprocessing rejects and residues from waste processing facilities shall only go to sanitary landfill and its specifications are given in zi of Rule 15 of the Solid Waste Management Rules, 2016.

In the State, for a Regional Sanitary Landfill 25 acre of land has been earmarked by KINFRA at site of FACT at Ernakulam and action is being carried out to set up. Another secured landfill is under construction in Attingal Municipality.

VI. Bio-medical Waste Management:

As per Annual Report in the whole state for the year 2023-24:

- Total Bio-medical generation: 68122.53 kg/day
- No. of Hospitals and Health Care Facilities: 24196
- Existing Total Bio- Medical treatment capacity (captive and CBMW) : 71.8 TPD
- Total Bio-Medical waste treated : 62.33 TPD (Common- 60.97 kg/D + Captive- 1.36 TPD)

Board has entrusted Council of Scientific and Industrial Research organization , National Institute for Interdisciplinary Science and Technology (CSIR-NIIST) for conducting a detailed assessment of healthcare facilities in the Kerala state. The works include field inspection, field data collection, estimation of gap and for projected/ extrapolated requirements of CBWTF'S for next ten years and entered into an agreement.

VII. Hazardous Waste Management:

As per Annual Report in the whole state for the year 2023-24:

- Total Hazardous Waste generation: 44915.3351 Metric Tonne/year

- Total hazardous waste recycled: 2727.8695 Metric Tonne/year
- Total hazardous waste utilized: 54.165 Metric Tonne/year
- No. of Industries generating Hazardous waste: 2302
- Treatment Capacity of all TSDFs in the State: 27,50,000 MTA for 45 years
- Total hazardous waste treated (captive and Common) : 57451.16 Tonne/year

VIII . Plastic Waste Management:

- Total Plastic Waste generation: 71000 TPA (as per annual report in the whole state for the year 2023-24).
- Material Collection Facility – 17699 nos.; Resource Recovery Facility-136 nos.
- Gap between current status and desirable level : 2317.266 TPA

Prevention of Marine Littering

- The Govt. of Kerala along with German Company Plastic Fischer, initiated the Trivandrum Project in 2022, aiming to combat marine plastic pollution. By deploying TrashBoom systems in the identified locations, Plastic Fischer successfully collected and managed a total of 257 tons of plastic material from rivers, riverbanks, and beach cleanups until the end of 2023. Plastic Fischer obtained the required government permits and deployed 18 TrashBoom systems. Out of the total collected plastic material, 12 tons of plastic were recycled while 245 tons of non-recyclable material were sent to co-processing at cement plants.
- On 1 June 2023, "No More Beach Cleanups" was officially launched along the coastal line of city of Thiruvananthapuram in participation with GIZ to demonstrate behavioral change focused on awareness and action, beach clean- ups, youth mobilization, community engagement and promotion of plastic alternatives in selected locations. In participation with GIZ, at 8 beach locations, 44 beach cleanup drives were conducted in Trivandrum involving 2831 volunteers and 11.15 tonnes of waste were removed.
- Under the GIZ project, NCSCM joined hands in G20 beach clean-up. The clean-up drive was conducted at three beaches in Kerala-Trivandrum, Alappuzha, and Fort Kochi in Kerala (More than 500 volunteers across three beaches collected litter weighing around 1710 kg).

IX. Details of Alternate Treatment Technology being adopted by the State/UT:

- Decentralized Wastewater Treatment System (DEWATS) system coupled with Phyto-remediation was provided in a slum area, Chathanad in Alappuzha, Kerala. The system consists of Anaerobic baffle reactor, planted gravel filter. Waste water from the houses in the colony is collected through pipe line and then it enters the anaerobic baffle reactor and then it is passed through planted gravel filter and treated sewage is discharged into drain
- The Hon'ble NGT issued directions for bioremediation/ phytoremediation for the treatment of sewage. In OA 673/2018, the Oversight Committee submitted suggestions for controlling pollution due to sewage.
- Centre for Water Resources Development and Management, Kozhikode submitted “proposal for the study of sewer infiltration into water resources via isotopic tracing and treatment of liquid waste by constructed wetland” submitted to Indian National Committee on Ground Water(INCGW) on 25-10-2021, a response is awaited from the INCGW.
- Demonstration projects regarding phyto remediation at a relatively much lower cost with the help of environment experts so that these proposed projects could be realistically remodelled.
- There is lack of expertise on phyto remediation projects. Though there are model project on phytoremediation in other states such as at Golf Links, Hyderabad, such models shall be showcased and action is highly needed for transfer of technology of such projects and to strengthen the environmental experts in our State. Online Presentation by NEERI was conducted on 13.03.2023 and site visit by NEERI officials conducted from 11/05/2023 to 13/05/2023. Proposal for feasibility study submitted by NEERI and order issued. NEERI ,Nagpur then furnished a proposal for the feasibility study on the development of process package of treatment of domestic sewage for meeting the environmental compliance at Edappally canal and Perandoor canal at Ernakulam and Pallikalar at Kollam district for an amount of Rs 45 lakhs and this proposal was approved by the Board and draft MOU has been submitted.
- FSTP at Madakkathara, Thrissur is funded by UNICEF. The unit consists of Anaerobic Stabilization Reactor, Tiger Bio-filter, Intermediate Tank, PSF, ACF, Chlorination unit and Treated water tank.



- As per MPRs in compliance to the Order of Hon'ble NGT in O.A.673/2018, the State requests for expertise aid in in-situ treatment.

X. Identification of polluting sources including drains contributing to river pollution and action as per Hon'ble NGT order on in-situ treatment:

- Polluting sources including drains contributing to river pollution were already identified and according to that action plans were prepared and submitted to CPCB. STPs were proposed in the action plans wherever necessary. Measures for management of waste were also incorporated in the action plans. In situ primary treatment were proposed for the river stretches Bharathapuzha and Pamba in the action plans.

XI . Details of Nodal Officer appointed by Chief Secretary in the State/UT:

- Vide G.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.

XII. Details of meetings carried under the Chairmanship Chief of Secretary in the State/UT:

- Regarding OA 514/2019 (Solid Waste Management) Chief Secretary convened meetings on 22.09.2020 and 25.09.2020 Regarding OA 804/17 (Implementation of Hazardous and Other Waste Management Rules, 2016) Chief Secretary convened meeting of 16/10/2020. Additional Chief Secretary Labour Department had convened 1st meeting on the same for Chief Secretary on 09/10/2020. Meeting of State Level Advisory Committee (SLAC) on Waste Management, chaired by Chief Secretary is being conducted in the State regularly to discuss the various matters. 38 such meetings were conducted in Kerala so far. Last SLAC meeting was conducted on 12.02.2021.
- Meetings were held by the Chief Secretary on 11-12-2020, 30-03-2021 and 05-04-2021 with the Stake holder Departments/ Authorities, to review the progress in implementation of the projects taken up on the basis of orders of the Hon'ble National Green Tribunal in O.A. No. 673 of 2018(PZ).
- RRC Meetings were held on 28/05/2021 and 23/06/2021 and Review meeting was held by the Chief Secretary on 31-05-2021. RRC meeting convened on 22.07.2021. Review meeting was held by the Chief Secretary on 27.07.2021. RRC meeting convened on 02.09.2021 and Review meeting was held by Chief Secretary on 09.09.2021. RRC meeting convened on 01.10.2021 and Review meeting was convened by Chief Secretary on 23.10.2021. RRC meeting convened on 29.11.2021 and Review meeting was convened by Chief Secretary on 16.12.2021. RRC meeting convened on 13.01.2022 and Review meeting was convened by Chief Secretary on 27.01.2022. RRC meetings convened on 23.02.2022, 01.04.2022, 15.07.2022, 13.10.2022, 2/12/2022, 08.02.2023, 13.04.2023, 20.05.2023, 11.08.2023, 11.10.2023, 27.12.2023, 17.02.2024, 23.03.2024, 12.06.2024, 01.08.2024 and 21.11.2024
- Review meetings were convened by Chief Secretary on 31.03.2022, 19.04.2022, 26.5.2022, 21.6.2022, 15.07.2022 & 23.08.2022, 18/10/2022 & 21.12.2022, 09.02.2023, 31/07/2023, 06.11.2023, 25.03.2024, 08.07.2024

XIII. Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river:

Latest Monthly Progress Report and Analysis report of Polluted River Stretches are attached as Annexure I.

XIV. Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring:

1176 notices under the provisions of Water Act has been issued from the Board to apartments/ hotels/houseboats/ industrial units as having no valid consent from the Board/ no sewage treatment plant / non functional sewage treatment plant so far. In Alappuzha district a total of 790 notices were issued including Closure Intention Notice and Consent Withdrawal Intention Notice were issued to 624 houseboats, 112 Closure Intention Notices and 54 Show Cause Notices were issued other units including peeling shed/ resorts/ hotels for illegal discharge(unauthorized units) coming into the water bodies and to Vembanad lake. A total of 167 apartments/ restaurants are served notice in Ernakulam district. In Kottayam notices were issued to 215 units including 106 house boats and 109 apartments/ hotels/restaurants/ auditorium/ lodge/ service station/ nursing homes. In Kollam district 2 Closure Intention Notice and 2 show cause notices were issued to units functioning without Consent. Direction was also issued Neendakara secretary as wastewater discharge noticed from fish peeling sheds in Neendakara. Show cause notice issued to 2 corporations & 7 municipalities for isolations under Water Act and show cause notice for not imposing environmental compensation was issued to 2 corporations and 6 municipalities and hearing conducted on 07/09/2023.

XV. Ground water regulation:

As per the consolidated report submitted in O.A.No.496/2016,the Ground water Department is implementing a “Scheme for Ground water Conservation and Recharge”. Under this scheme, rain water collected from the roof-top is harvested for recharging the aquifer through dug wells and recharge pits. The recharging of deep aquifers through bore wells is also being experimented. The total budget outlay during the period 2019- 2020 was 450 lakhs. It is estimated that there are about 65Lakhs dug wells in Kerala and the ground water extractions by means of traditional dug wells are prevalent source of fresh water. There are number of public dug wells left abandoned and needs renovation. These dug wells can be considered as suitable stretches to recharge ground water. The Central Groundwater Board has prepared a Block wise master plan in 2015 to take up artificial groundwater recharge to groundwater. The same can be used as a guideline to stream line groundwater recharge activities of the Department.

The State Government has enacted the Kerala Groundwater (Control and Regulation) act 2002 to provide for the conservation of groundwater and for the regulation and control for its

extraction and its use in Kerala. The State Groundwater Authority has been constituted on 16.01.2004 to notify the area where groundwater abstraction is to be regulated. As per the Act Groundwater User' refers to the person who are using ground water from a pumping well (> 1.5 HP for Open dug wells and > 3 HP for BW/TW) for any purpose including domestic purpose. In notified blocks of the state, permission required for the construction of new groundwater abstraction structures.

The Groundwater Department has been conducting mass awareness programmes to public., students, people's representatives, government officials etc. on groundwater conservation and management in all Districts under the Plan Scheme "Control and Regulation of Groundwater Exploitation for the effective groundwater management. During the last 4 years, the department has conducted more than 100 numbers of awareness programs across the State.

The Ministry of Water Resources, River Development & Ganga Rejuvenation (Central Groundwater Authority) has recently issued a new guide lines to regulate and control groundwater extraction in the country in pursuance of the directions of Hon'ble National Green Tribunal and the powers conferred under section 5 of the Environment (Protection) act, 1986 (29 of 1986) dated 24th December 2020.

XVI. Good Irrigation practices being adopted by the State:

Irrigation in Kerala is classified into two schemes.

- Major Irrigation and Medium Irrigation
- Minor Irrigation

The Irrigation department develops and maintains major and medium irrigation schemes/projects across the state. The primary activity of the Department is providing irrigation facility to the farmers of the State through its system comprising reservoirs, main canals, branch canals, feeder canals and other related infrastructure. The department maintains water distribution through the canal system. Water distribution is being carried out based on the cropping pattern of a particular area and a water distribution calendar prepared and approved by a committee headed by the District Collector with members of farming community, other stake holders and department officials. For proper distribution and maintenance of the canals Water Users Association (WUA)/ Farmers Association plays an important role.

Major Irrigation and Medium Irrigation

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1. Minor Irrigation

- Minor Irrigation schemes are divided into Class-I and Class-II depending on the ayacut served. Schemes serving above 50Ha up to 2000Ha are classified as MI Class-I. Lift irrigation schemes are also Minor irrigation schemes serving at least 40Ha. Aims to Construct RCBs, SWEGBs, ponds, VCBs, check dams, salt water barriers, storage weirs, cross bars, and protection works etc.
- MI Class-I schemes Minor works like improvements to tanks and rivulet, construction of check dams, sluices, regulators, bunds, vented crossbars, salt water barriers, layout of channels and drainage structures etc are usually undertaken under MI Class-I schemes.
- MI Class-II Schemes Minor irrigation works including construction of vented cross bars, canals, improvements to natural drains etc are taken up under this scheme.

Lift Irrigation

- Lifting of water is required for irrigating fertile land at a higher elevation where gravity flow of stored water is not possible. Although mechanical lifting is required, these schemes are very useful and serve the marginal farmers of the State.
- Optimum utilization of water by supplying designed quantity
- Works involving lifting of water with a command area not less than 40 hectares come under this category.

- This will increase in the ground water table in high altitude areas, Ensure water availability to farmers before the cropping period.
- This will reduce agricultural loss in high altitude areas due to water scarcity, their by reducing distress to farmers.
- At present the Irrigation Department has under its control 450 Lift Irrigation Scheme (LI schemes) with a total Ayacut of 43170ha.
 - Micro Irrigation
- Micro-irrigation system is a modern method of irrigation in which water is delivered slowly. Usually in the form of discrete droplets, continuous drops, streams, etc. Micro-irrigation system is popular these days for its low cost and water-efficiency.
- The benefits of micro irrigation and precision farming are well demonstrated with an average increase in yield by three times. Pepper as a case in point shows enhancement from 1.9 kg/wine to 6/wine on precision agriculture. Coconut also shows increase in productivity to 150 nuts per plant as against 45 without precision irrigation support.
- In the coming year department is planning to implement atleast one micro irrigation scheme in each district with the coordination of line departments and farmers. Steps are initiated to identify the location as well as crops in coordination with the agriculture department.

XVII. Rain Water Harvesting:

In compliance with the Hon'ble NGT Order dated 11.09.2019 in O.A. No. 496/2016, the consolidated report of Kerala State regarding the present status of the implementation and action plans on rain water Harvesting for conservation of water was submitted by the Kerala State Government on 27.11.2019.

The State Groundwater Department has been implementing a scheme for Groundwater Conservation and Recharge under plan fund made available since 2004-05. The project

component includes roof top rainwater harvesting for groundwater recharge through dug wells, recharge pits, bore wells and recharge shafts and construction of subsurface dykes and small check dams on micro water shed basis. The recharge schemes are being implemented as a long term measures to achieve sustainable groundwater development in the State. The Department is engaged in recharging groundwater through roof top rain water harvesting in public buildings and government schools and giving priority to implement such structures in notified blocks. The Department has successfully implemented roof top rainwater harvesting through recharge pits to enhance groundwater levels of dug wells in the Kattakkada Constituency of Thiruvananthapuram District. The Constituency was officially declared in November 14th 2019 as the first assembly constituency in Kerala to implement artificial groundwater recharging structures in all Government schools and offices. The State Groundwater Department has implemented 169 nos of recharge pit/direct dug well recharge schemes, 4 check dams and one sub surface dyke during the 12th plan period. In the 13th plan period as on October 2020, the Department has completed 370 nos of recharge pit/dug well recharge schemes and 18 nos of bore well recharge schemes.

The Department has also taken initiatives to implement roof top rainwater harvesting structures in order to replenish the aquifer system in Chittur (Over-Exploited), Malampuzha and Kasaragod (Critical) blocks under Jal Shakti Abhiyan Programme by Ministry of Jal Shakti Government of India.

XVIII. Demarcation of Floodplain and removal of illegal encroachment:

Kerala receives about 90% of the annual rainfall during the monsoon months from June to August and from October to November. The remaining period from December to May is practically dry. Most of the rain water received during monsoon period flows to sea within 48 hours of rainfall due to the character of the geographic terrain of the state.

- State Disaster Management plan 2016 was prepared by National Centre for Earth Science Studies in 1:50,000 scale using satellite images.
- Based on the request of central water commission, Government of Kerala constituted Regional Committee for scientific assessment of Flood prone areas in Kerala.

- Flood-level marking for the flood affected rivers has been carried out. Steps have been taken for conducting the studies regarding Flood plain Zoning. Due to the peculiar topography and dense population, evacuation of people from these zones is difficult.

Flood plain zoning is considered as an effective measure for flood management. As far as Kerala is concerned, the topography and total number of rivers, major lakes and other water bodies are entirely different compared to other states. Since Kerala has 44 rivers, except three rivers, all are west flowing; that is about every 14 km (average) there is a river. It may please be noted that the width of Kerala varying from roughly 30 to 120 km, and the total geographical area is 38863 km². Kerala is the 21st largest Indian state by area. As per census of 2011 the density of population per square kilometer is 859. By considering the above facts, implementation of zonation and demarcation of priority areas/non development zones will affect the populace of Kerala or leads to displacement from their ancestral settlement. This is why the Model Bill of 1975 issued by CWC has not been implemented in Kerala. However intensive contour may delineate and notification of limits of flood plains through LSGIs is a possible way out as far as Kerala is concerned to avoid future developmental activities in such area, for which a policy decision is necessary.

Desilting:- Flood havoc in 2018& 2019 very much affected the storage capacity of several regulators and check dams due to the accumulation of silt/ sand and other debris. In some cases, the proper functioning of the regulators become halted due to the accumulation of the above said materials.

Vide G.O (Rf) No.50/2019/WRD dt 08-11-2019 Government issued AS for desilting of 6 structures, namely:-

Cheruthuruthy check dam

Changanamkunnu regulator

Manjummel regulator

Purappallikavu regulator

Velliyankallu regulator cum bridge

Pookkottumana regulator cum bridge

The work for desilting of 6 regulators/ check dams were tendered and the works are in different stages.

Along with irrigation structures action were taken to desilt the dams as a pilot project to enhance the storage capacity which results more outflows and ground water recharge. Mangalam dam, Chuliyar dam, Meenkara dam and Walayar dam are the four dams listed. Apart from the above Irrigation department has initiated action to prepare an inventory of the present status of all the rivers in Kerala by entrusting the job to Executive Engineers. The primary objective is to find out the obstructions to free flow in rivers. It is expected to complete the process within a month and draft reports/ status reports were also be ready. As a follow up, the department intends to desilt the river stretches which need urgent action to avoid flooding in the vicinity; by utilising the amount announced in the Budget.

Encroachments can be assessed after detailed survey with the help of Revenue Department. Executive Engineers entrusted with ownership of rivers have been directed to identify the encroachments along rivers and prepare a list at the earliest Public Grievance report form has been developed in department website. 300 petitions were forwarded to the revenue officials for remedial action. 133 petitions also received since then are also forwarded to the concerned.

XIX. Maintaining minimum e-flow of river:

- As per order of the Hon'ble NGT Order in OA no.498/2015 it is mandatory to maintain 15%-20% of average lean season flow in the river. E-flow can be assessed in many ways. Hydrological methods and holistic methods are generally used for this purpose. A good Hydrological data is maintained at IDRB Chief Engineers office at VikasBhavan. Steps have been initiated to collect last 25 years average flow details of all 44 rivers during summer season, ie from January to May.
- Ministry of Water resources, RD& Ganga Rejuvenation issued a notification (SO.5195 (E) dated 9.10.2018) to maintain e-flow in River Ganga. Hon'ble NGT order has given some relaxation to status , which are unable to adhere to the average percentage fixed as e-flow CE (I&A),&CE (IDRB) made discussion in this regard and action has been

taken by IDRIB to compile the last 25 years discharge of rivers. As per the report of Kerala State Disaster Management Authority (KSDMA) nearly 15% of the land area of the state prone to flood. On two (2) occasions, GOI (CWC) and Ministry of Environment Forest and climate change had circulated model bill on (i) Flood Plain Zoning (1975) (II) River Regulation Zone (2015). Considering the already enacted regulations vizi) Forest area ii) Coastal Regulation Zone (CRZ), the topography of the state, high population density , and number of rivers, Government has not yet taken a policy decision in this matter. The State Government has sent the apprehension of the State to GOI with regard to River Regulation Zone Bill.

- As per the direction of the Additional Chief Secretary (WRD), meetings were conducted with Chief Engineer, IDRIB to discuss the availability of historical data. To carry forward the study of e-flow a training was arranged on 12.09.2021 to the engineers entrusted for e-flow calculation. A review meeting in this regard was also conducted on 01.10.2021 and in the meeting it was decided to calculate e-flow of the rivers, Meenachil and Manimala as pilot project. Data collection for Manimala river completed. Data collection for Meenachil, Kadalundi, Karamana and Vamanapuram is in progress.
- It was decided in the last RRC meeting that an expert committee to be constituted to recalculate the e-flow. Accordingly an initial discussion of the technical committee has been convened and it has been decided to recalculate the e-flow for the rivers on the revised methodology. Secretary WRD directed (08/2023) to conduct a meeting with KSEB authorities, to collect required data for the e Flow calculation. Also details of dam, ground water, amount of water ejected out from hydro electric projects in various seasons are to be collected for the calculation of flow. For these, the Expert committee framed for vetting e Flow needs to be restructured to include representatives from KSEB, Fisheries, Environmental Scientists, etc. Hence we have requested to the above departments to nominate suitable officials from their department /institution who have expertise in e-flow analysis/who can contribute to the same to be included in the Expert Committee. Follow-ups are going on. Based on the direction from the Administrative Department, an Expert committee was constituted for vetting the same. The first meeting of the committee is scheduled to be held on 10.01.2024. The present e flow

calculation was done in line with the old methodology as per the direction of NGT. As per the existing NGT order the minimum E flow calculation required is 15-20. Since it is based on the flow of Himalayan fed rivers, the same method cannot be applied to Southern states which are monsoon fed. Hence a new methodology is required. An interdepartmental Expert Committee has been constituted for calculation of e-flow. 3 Meetings of the committee have been convened, and as per decision of the committee, Kuttiyadi river was selected as pilot project for arriving the new methodology for e flow calculation, and CWRDM is assigned with carrying out same.

- Fisheries data for Kuttiyadi river was obtained from the Fisheries Department and data collection regarding cross section of river from the Hydrographic survey wing is in progress. Reconnaissance survey for 14.6 Km has been conducted by Hydrographic survey wing and detailed estimate submitted to Head office for approval. The methodology for E flow calculation of Meenachil river was carried out by IDRb. The methodology in this regard is under review. The methodology was presented in the 4th meeting of the Expert committee 06.06.2024

As per the action plan for Kallai River, a bio park in Kozhikode district is proposed by Irrigation Department and as per the action plan of Karamana river, Bio diversity park at Karamana is implemented by Irrigation Department and 96% work is now completed and remaining work is in progress. Also, for other action plans of polluted river stretches, proposals are submitted by Irrigation Department and action is initiated. As stipulated by the Biological Diversity Act 2002, Biodiversity Management Committees (BMC) are mandated with conservation of Biodiversity in their localities. In Kerala BMCs has being established at all 3 tiers of local bodies. As part of the 13th five year plan, KSBB had started a project to empower Local Self Government Biodiversity Management Committee (BMC) as Model BMC to conserve Biodiversity by providing a minimal assistance of Rs 5.00 lakh. The lists of various projects relating to river bank conservation by planting suitable species/ biodiversity parks in the river banks being undertaken by BMCs during the last two years are given below:

- Ayiroor Grama panchayat, Pathanamthitta– Planting of Homonoiariparia along the banks of Pamba River
- Ayarkunnam Grama panchayat, Kottayam - Conservation of Homonoiariparia along the banks of Meenachil River.

- Mariyapuram Grama panchayat, Idukki - Harithapuram park- Eco restoration and conservation of Periyar River bank severely damaged due to flood.
- Kottur Grama panchayat, Kozhikode - (a) Establishment of Biodiversity Park near Kuttiyadi river (b) Biodiversity gardens (50 units)
- Vanimel Grama panchayat, Kozhikode - Conservation of Vanimel riverbank
- Kurumathur Grama panchayat, Kannur – (a) Afforestation along tributaries of river banks of Kuttikol river, Valapattanam river (b) Planting of Pandanus along canal banks
- Muzhakunnu Grama panchayat, Kannur – Puzhayora Oushada Sughandha Udyanam along the banks of Aralam river.

As part of Rebuild Kerala Initiative a project on Riverine Biodiversity Rejuvenation of Pamba for an amount of Rs 200 crore is being undertaken. The project aims at Protecting riverbanks and conservation of riparian vegetation using locally available plants. The major activities on going are:

- Restoration of riparian vegetation on degraded river banks in selected 10 Grama Panchayats (Ayiroor, Cherukol, Kozhenchery, Ranni- Angadi, Ranni- Pazhavangadi, Ranni, Ranni-Perunad, Vadasserikkara, Vechoochira and Naranammoozhi) belonging to three Block Panchayats viz., Elanthoor, Koipuram and Ranni in Pathanamthitta district
- About 77,000 saplings of 93 species of riparian plants are being planted along a stretch of 93km.
- Ensure sustainable livelihood for the local people through providing training for developing microenterprises and establishing nursery of native species. Develop a sustainable community based management model of conservation of aquatic ecosystems.
- To create awareness and sensitize local population and students for promotion of riparian ecosystem services.

XXII. Reuse of Treated Water:

Possibility of utilizing the treated effluent for irrigation, gardening, industries, construction and recharge are being explored. A 5 MLD tertiary treatment plant is proposed and the work is awarded for treatment of effluents of STP at Muttathara. The same is in the design stage.

XXIII. Model River being adopted by the State & Action proposed for achieving the bathing quality standards:

Tirur-Ponnani River, Malappuram

XXIV. Status of Preparation of Action Plan by the 13 Coastal States:

As per the NGT order in O.A 829/2019 dated 22.06.2020 r

egarding the remedial action to restore sea water quality along the Indian Coastal areas, the Hon'ble NGT ordered that "All States/UTs through their concerned departments such as Urban/Rural Development, Irrigation & Public Health, Local Bodies, Environment, etc. may ensure formulation and execution of plans for sewage treatment and utilization of treated sewage effluent with respect to each city, town and village, adhering to the timeline as directed by Hon'ble Supreme Court. STPs must meet the prescribed standards, including fecal coli form . CPCB may further continue efforts on compilation of River Basin-wise data. Action plans be firmed up with Budgets/Financial tie up." In compliance with the order, CPCB instructed that the State PCB shall associate National Centre for Coastal Research, Chennai under Ministry of Earth Science for monitoring and assessment of coastal water within the jurisdiction of the Kerala State up to 5 km from shore and to evolve strategies for protection of the coastal areas in association with Coastal Zone Management Authority in the State and Prepare time bound comprehensive action plan along with implementing agency in consultation with Kerala State Coastal Zone Management Authority for control of coastal pollution in Kerala State. Also the State Government has instructed the Board to prepare action plan by consulting CUSAT .Based on this, the Member Secretary of Kerala State Pollution Control Board has conducted meeting with officials of CUSAT, National Centre for Coastal Research, Kerala State Coastal Zone Management Authority and also with the field level officers through video conferencing.. The Action plan was forwarded to CPCB. CPCB put forward some suggestions and requested to modify the action plan upon concurrence with River Rejuvenation Committee. So, the Coastal Action Plan prepared has been forwarded to the concerned Stakeholder Departments for their remarks. Meetings in this regard convened on 23.07.2021 and 02.08.2021. The modified Coastal Action Plan was approved by RRC and the same has been submitted before State Govt. for approval. The Coastal Action Plan was submitted to CPCB with the approval of State Govt.

XXV. Regulation of Mining Activities in the State/UT:

Indian parliament has enacted the Mines & Minerals (Development & Regulation) Act, 1957 and it stipulates for the conservation, prudent and discriminate exploitation of minerals with a view to secure maximum benefit to the community. In exercise of powers conferred by section 13 of Mines and Minerals (Development & Regulation) Act 1957, the Central Government has framed the Mineral concession Rules, 1960. The Central Government has also framed the Mineral Conservation and Development Rules, 1988 in exercise of the powers conferred by section 18 of the Act. These Rules are applicable to all minerals except coal, atomic minerals and minor minerals. The powers of framing rules for minor minerals have been delegated to the State under section 15 of the mines Act. In exercise of the powers conferred by section 15 (1) of the Act the State has framed the Kerala Minor Mineral Concession Rules 2015 and Kerala Minerals (Prevention of Illegal Mining, Storage and Transportation) Rules 2015 for the regulation and extraction of minor minerals. The Central Government in exercise of powers conferred by section 18 of the Act has also framed the Granite Conservation and Development Rules, 1999 for conservation & systematic development and scientific mining of the granite resources. The grant of reconnaissance permit, prospecting license or mining lease are governed by the central Act. The State with the prior approval of the Government of India grants permission for reconnaissance permit, prospecting license or mining lease for major minerals. The state Government issue quarrying permits and leases for minor Minerals based on the Kerala Minor Mineral Concession Rules, 2015. Other Acts and Rules which govern the mineral administration of India applicable to the State are the following:

- The Mines Act, 1952 (Act 35 to 1952)
- The Mines Rules, 1955 (35 of 1952)
- The Metalliferous Mines Regulations, 1961
- The Mines Rescue Rules, 1985
- Mines Vocational Training Rules, 1966
- Payment of wages (Mines Rules , 1966)
- Payment of undisbursed wages (mines rules, 1989)
- The Indian Explosive Act, 1884

- Air (Prevention & Control of Pollution) Act, 1981(14 of 1981)
- Environment (protection) Act, 1986 (29 of 1986)
- Indian Registration Act, 1908 (Central Act of Act 16 of 1908)
- Kerala Protection of River Banks and Regulation of Removal of Sand Act, 2001
- Kerala paddy field and wetland conservation Act, 2008.
- Kerala Panchayath Act.

There is no large scale mining activity in Kerala as in other parts of the country. Almost all the mines are open cast and limited in areal extent. The important mines of major minerals are china clay, laterite/bauxite, limestone and lime shell. Mineral sands and silica sand are excavated by scooping and quartz is being extracted by taking trenches and pits. The important minor minerals in the state are granite, building stones, dimension stone, laterite, tile/brick clay and ordinary sand. The state owns mineral deposits like placers, china clay (kaolin), limestone, silica sand, bauxite, graphite, iron ore, granite etc.

The major mineral based industries like Indian Rare Earths Ltd. (Chavara), Kerala Minerals and Metals Ltd. (Chavara), Malabar cements (Walayar), Travancore cements Ltd. (Kottayam), Kerala ceramics (Kundara) Travancore Titanium products Ltd. And English Indian Clays Ltd, Thiruvananthapuram, Excel Glass Industry, Alappuzha, KeralaClays and Ceramic Products Ltd. (Pazhayangadi) are some of the mineral based industries working in the State since several years. A number of tile based industries are also functioning mainly in Thrissur and Kozhikode districts.

In exercise of the powers conferred by section 15(1) of the Mines and Mineral (Development & Regulation) Act, 1957, the State has framed the Kerala Minor Mineral Concession Rules 1967 for regulating the extraction of minor minerals. The State with prior approval of the Govt. of India grants permission for reconnaissance permit, prospecting license or mining lease for the first schedule minerals on first cum first served basis. In addition to EIA requirements as stipulated by the Central Govt, an EIA report is insisted on all mining activities before granting mining lease. No quarrying permits or leases are granted in the State unless there is a Mining plan duly approved by the competent authority. Afforestation of the reclaimed areas is promoted. Environment Rehabilitation is insisted in all mining projects.

The Kerala District Mineral Foundation Rules 2018 has been formed with an objective to work for the interest and benefit of persons and area affected by mining related operations.

Bhavani- at Palakkad, Kutiyadi-Kozhikode, Kecheri, Karuvannur, Puzhakkal- at Thrissur

- Due to improvement in water quality priority class of the following 4 rivers has been shifted to lower priority class. No priority I and II rivers in Kerala now.

Karamana, at Thiruvananthapuram- Priority III (from Priority-I)

Manimala at Alappuzha – Priority V (from Priority IV)

Pamba at Pathanamthitta – Priority V (from Priority IV)

Kadambrayar at Ernakulam –Priority V (from PriorityIV)

Shree A J

MEMBER SECRETARY

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

RIVER KARAMANA, THIRUVANANTHAPURAM

ACTION PLAN FOR RIVER KARAMANA, KERALA

-MONTHLY PROGRESS REPORT- Dec 2024

1. Short term Plan

Maintenance and de-bottlenecking of existing sewerage network

No.	Activity	Implementin g agency	Time line	Progress in the month of June2024	Progress in the month of July 2024	Progress in the month of Aug2024	% works completed	Details of works remaining
2.1.1	Pumping lines from the terminal pumping stations namely Kuriyathi, Pattoor, Kannammoola and Enchakkal pumping stations are to be connected directly to STP at Muttathara	Kerala Water Authority	May 2019				100%	Kuriathy Work Completed. DPR for pumping main from Pattoor, Kannanmoola and Enchakkal is under preparation.
2.1.2	Rehabilitation/upgradation of Thaliyal and Aranoor Sewerage Pump house by rehabilitation of existing well, construction of new well and grit chamber, installation of new pump Sets	Kerala Water Authority	May 2020				100%	a) Completed
				Arannoor0 %	5%		100%	b) Work completed
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May 2020				100%	Work Completed.

2.1.4	Installation of adequate pumps in Mudavanmughal and Enchakkal pumping stations.	Kerala Water Authority	March 2020				100%	Work Completed.
2.1.5	DG sets in all lift and pumping stations – Mudavanmughal, Aranoor, Thaliyal, Kuriyathi, Pattoor, Kannammola, Pattom, Murinjapalam and Enchakkal	Kerala Water Authority	May 2020				100%	Work Completed.
2.1.6	Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhancha- nthodu, control storm water entry into sewer to avoid overflow in Thampanoor area. Sewage generated in Rajaji Nagar shall be diverted to main sewer line. Sewage generated in Thoppil area shall be diverted main sewer line	Kerala Water Authority	Dec 2020				100%	Work completed.
2.1.7	Discharge of sewage in Parayilkadavu shall be stopped as there is overflow of sewage reaches in houses having sewerage connection and this may lead to discharge of sewage into River Karamana	Kerala Water Authority	Completed				100 % completed	Works Completed.

2.1.8	Divert the sewer line from the School compound of Government Karamana High School	Kerala Water Authority	completed				100% completed	Work mentioned is same as the above work which is completed.
2.1.9	Rehabilitation by laying new lines increasing size of undersized main and reconstruction by dilapidated manholes for the last 3 years Total work completed (76No.) Works dropped (2No.)	Kerala Water Authority	May 2020	0.5%	.5%	1.5%	100%	Works completed – 76No. (Rs. 15.41cr) AMRUT-45, State plan-28 MLA ADF/SDF-3 Two works dropped due to not getting road cutting sanction
2.1.10	Extension of sewer network wherever technically feasible in new areas of existing blocks In progress/Ongoing (24No.) Tendering/ To be arranged (1No.) Land acquisition -1 In progress-3	Kerala Water Authority	May 2020	0.5%	0.5%	.5%	99%	Works completed - 24 No. (Rs. 17.21 cr.) AMRUT-12, State plan-11 MLA ADF/SDF-1
						To be arranged	Land Acquisition completed for all works	AS obtained for arranging the work under State Plan 22-23 and one work arranged and one tendered. Agreement Executed, pipe was supplied and work in progress – 48% completed. Killi River Crossing permission obtained for Box culvert work , culvert portion, 26% completed. Overall progress of this work is 83%. Work in Chithra Nagar is not progressing and strict directions were given to finish the work.

2.1.11	Procurement of sewer cleaning machines and equipment maintenance	Kerala Water Authority	Mar 2020				100%	Work completed.
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2. Long Term Plan

Sewerage Network

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

								M/s REPL filed a complaint against KWA in the Hon'ble High court of Kerala (WP(C) No 26031 of the year 2022) and obtained a stay against KWA at first up to 22.08.22 which is then got extended up to 14.09.22 against taking any coercive actions. DPR preparation of sewerage system to the uncovered areas of TMC is now being carried out internally by KWA. The total wards were divided in to 10 clusters. Cluster 1 comprises of 5 wards - Attukal, Kalady, Kallipankulam, Ambalathara and kamaleswaram wards – The DPR for Cluster 1 was submitted on 13/10/2022 for AS. Later as per the direction of Secretary Thiruvananthapuram Corporation the DPR for Cluster 1 was revised including Zone 1&5 for Rs 91.00 Cr and Zone 3&4 for Rs 66.50 Cr and was submitted to Corporation on 28.12.2023 for getting AS under UIDF. AS recived for this work and work tendered – opening date 18/1/25. Cluster 3, which was originally consisting of Thiruvallam, Poonkulam and Vellar is the second in the priority list and was taken up.
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								This Cluster is then modified by adding more wards and is divided into 3 zones. Zone 1 of cluster 3 is consisting of Puthenpally and Part of Muttathara (until STP) was taken up on priority based on the demand of Thiruvananthapuram Corporation. DPR of Cluster 3 Zone 1, Puthanpalli ward of 1.5 MLD Sewerage network with 5 year O&M and without centage submitted to Corporation under AMRUT2.0 on 11/1/23.The DPR of Cluster 3 Zone 2 and Zone 3 is prepared and submitted on 21.01.2023. The DPR for cluster 2 is submitted on 27.02.2023 and is verified and kept in Shelf. The DPR for cluster 4 (Thirumala Thrikkannapuram and Punnakkamughal wards) is prepared and submitted on 30.03.2023. and as suggested for identifying Corporation / Govt lands for the collection well and STP proposed is being done and after obtaining sanction of the puramboke land identified there will be changes in the design network and there by changes will be made in the DPR . DPR for Cluster IX
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								(priority wards (Vizhinjam and Harbour area) completed and submitted on 29.09.2023. Land for STP identified and the confirmation of land not yet received. DPR of cluster X comprising of wards Shangumugham, Vettucaud, Vallakadavu, Beemapalli (part), Beemapalli East (part), Valiyathura and Kadakampally is under preparation. DPR for Cluster 3 Zone 1 is under revision based on the direction of Corporation.
	Total Amount required :		5000Crores					

Signed by
Asha Raj N
Chief Engineer (Sewerage PPD & WASCON)
Date: 06-01-2025 13:03:12

ACTION PLAN FOR RIVER KARAMANA, KERALA- DECEMBER 2024

1. Short term Plan

Maintenance and de-bottlenecking of existing sewerage network

No.	Activity	Implementing Agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
2.1.1	Pumping lines from the terminal pumping stations namely Kuriyathi, Pattoor, Kannammoola and Enchakkal pumping stations are to be connected directly to STP at Muttathara	Kerala Water Authority	May-19				100%	Kuriathy Work Completed. DPR for pumping main from Pattoor, Kannammoola and Enchakkal is under preparation.
	Kuriyathi Pumping line							
2.1.2	Rehabilitation/upgradation of Thaliyal and Aranoor Sewerage Pump house by rehabilitation of existing well, construction of new well and grit chamber, installation of new pump sets	Kerala Water Authority	May-20				100%	a)Completed.
	Arannoor			0%	5%		100%	b)Work completed.
2.1.3	5 MLD sewage treatment plant at Medical College	Kerala Water Authority	May-20				100%	Work Completed on 8/8/21
2.1.4	Installation of adequate pumps in Mudavanmughal and Enchakkal pumping stations	Kerala Water Authority	Mar-20				100%	Work Completed.

No.	Activity	Implementing Agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
2.1.5	DG sets in all lift and pumping stations - Mudavanmughal, Aranoor, Thaliyal, Kuriyathi, Pattoor, Kannammola, Pattom, Murinjapalam and Enchakkal	Kerala Water Authority	May-20				100%	Work Completed.
2.1.6	Reconnect sewer at Rajaji Nagar, stop outflow of sewage into Amayizhanchanthodu, control storm water entry into sewer to avoid overflow in Thampanoor area Sewage generated in Rajaji Nagar shall be diverted to main sewerline Sewage generated in Thoppil area shall be diverted main sewerline	Kerala Water Authority	Dec-20				100%	Work Completed.
2.1.7	Discharge of sewage in Parayilkadavu shall be stopped as there is overflow of sewage reaches in houses having sewerage connection and this may lead to discharge of sewage into River Karamana	Kerala Water Authority	Completed				100%	Work Completed.
2.1.8	Divert the sewer line from the School compound of Government Karamana High School	Kerala Water Authority	Completed				100%	Work Completed.
2.1.9	Rehabilitation by laying new lines increasing size of undersized main and reconstruction by dilapidated manholes for the last 3 years	Kerala Water Authority	May-20				100%	Works completed – 76No.(Rs.15.41cr) AMRUT-45, State plan-28 MLA ADF/SDF-3 In progress – 1No. (Rs. 3.cr.) AMRUT-1, State plan-0 Two Amrut work short closed due to non obtaining of Road cutting sanction.

No.	Activity	Implementing Agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
	Total works in progress/Completed (76 No.) Works dropped (2No.)					Dropped – 2 No. (Rs. 1.52cr.) State plan-2		Two works dropped due to not getting offers on repeated tenders and expiry of AS.
2.1.10	Extension of sewer network wherever technically feasible in new areas of existing blocks	Kerala Water Authority						Works completed -24 No.(Rs.17.21 cr.) AMRUT-12, State plan-11nos, Ongoing MLA ADF/SDF-1
	Tendering/ To be arranged (1No.) Land acquisition -1 In progress-3		May-20	0.10%	0.50%	0.10%	99.5% Land Aquisition in progress-1No .	Land will be available within 3 months. Lands are notified.
2.1.11	Procurement of sewer cleaning machines and equipment maintenance	Kerala Water Authority	Mar-20				100%	Work completed

No.	Activity	Implementing Agency	Time line		Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
Solid Waste Management Action Plan									
	Activity	Implementing Agency	Unit	Time for Completion	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of work remaining
2.2.1	Slaughter house and poultry waste	Thiruvananthapuram Corporation	Rendering Plant	Dec-22	2%	0%	0%	95%	Slaughter House- Slaughter house kunnukuzhy- Work started for construction of retaining wall, work ongoing for construction of security cabin and visitors lounge. Security cabin , roof slab casting completed, visitors lounge, structure completed, roof slab casting on progress. Work under progress. It will be completed on Dec 2024. poultry waste- TMC has started collecting poultry waste coming under jurisdiction of 25 HI Office from 1st November 2019 with online tracking of vehicles. The entire poultry waste generated in whole Corporation area is collected and sent to rendering plant at Elloor. Collected and send to Ernakulam plant.
2.2.2	Sanitation facility and Treatment of waste water in the markets of Pangode, Kumarichanda	Thiruvananthapuram Corporation	Treatment Plant Portable Aerobic bins	Dec-23	0%	0%	0%	100%	Kumarichanda: Market Renovation completed. Pilot project implemented for treatment of wastewater. Pangode: DPR submitted by the agency . Forwarded for getting technical sanction.

No.	Activity	Implementing Agency	Time line		Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
2.2.3	Provide facility for the treatment of sewage, sullage and	Thiruvananthapuram Corporation	1. Moonnathumukku 2. Poonthura-HI Office 3. Cheriyamuttam-Poonthura 4. Beemapally Compound	Mar-24	0%	0%	0%	50%	Only 13 Locations work completed out of 28Nos. This area will be covered in the master plan for providing sewer line for the full capacity utilization of CSTP at Muttathara and by providing Decentralized STP where there is land availability- KWA
	garbage generated in the poonthura slum area between Karamana river and sea		6. Mother Theresa Colony 7. Kumari Chantha 8. Poonthura Marker 9. Moonnathumukku bridge 10. Ambalathara- Nilama 11. Fishermen Flat- Muttathara 12. Perunalli Market Road 13. Poundkadam old market 14. Market						

No.	Activity	Implementing Agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
			15. Tsunami Colony near 110 KV tower (Poundkadav) 16. Near Valiyavila Veli St. Thomas Church (Poundkadavu) 17. NearKamales shwaram HSS 18. Valiya veetil Residence associati on 19. Near Arannoor Govt. S					
			21. Kumarapuram Thamara bhagam (near comfort station) 22. Near Kannam moola Bridge 23. Mannant hala Market 24. Santhi Nagar Residents associati on 25. Alanthar a Kattayil 26. UlloorMarket 27. Museum RKV Road 28. New Nalantha road					

No.	Activity	Implementing Agency	Time line		Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
2.2.4	The discharge of waste water from the surrounding houses to the pond at Jagathy is to be stopped	Thiruvananthapuram Corporation	Pond desilting						meeting was conducted on 30-07-21, convened by the Public Work Standing Committee Chairperson with KWA Officials, Tvp Corporation officials and councillors ward to discuss this concern. This area will be covered in the master plan for providing sewer line for the full capacity utilization of CSTP at Muttathara and by providing Decentralized STP - included in KWA master plan.
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						2441810 rupees fine collected from 2019 to till date.
2.2.6	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Bio- Composter		82%	82%	82%	82%	Installed 65,080 bins in total.
2.2.7		Thiruvananthapuram Corporation	Thumboormuzhi aerobic bins		60%	60%		65%	Total 154 locations, Total 550 bins installed in 57 location.
2.2.8		Thiruvananthapuram Corporation	Community biogas		0%	0%	0%	65%	27 nos installed, Only 2 in working condition
2.2.9		Thiruvananthapuram Corporation	Ring compost		3%	0%	0%	78%	Installed 350 units.
2.2.10		Thiruvananthapuram Corporation	RRF		4%	0%	0%	100%	Work completed
2.2.11		Thiruvananthapuram Corporation	Plastic Recycling unit						Site not yet identified. Project dropped

No.	Activity	Implementing Agency	Time line		Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
2.2.12	Biodegradable waste (DPR)	Thiruvananthapuram Corporation	Solar electrical cart		Part bill submitted			100%	Work completed
2.2.13		Thiruvananthapuram Corporation	Swaps shops		3%	0%	0%	98%	Work completed. Revised estimate approved by council. Final part bill will be issued soon.
2.2.14		Thiruvananthapuram Corporation	Community level unit Napkin destroyer		10%	0%	0%	10%	158 Nos purchased and installed at various locations
2.2.15		Thiruvananthapuram Corporation	Upgradation of present facilities		0%	0%	0%	100%	Completed
2.2.16		Thiruvananthapuram Corporation	Capacity Building & IEC						A training programme was conducted for HI/JHI on 2024 January 22,23,24,25 & 2024 September 23,24 .
2.2.17		Thiruvananthapuram Corporation	Viability gap Fund						Issue of the Seventh Phase of VGF to Haritha Karma Sena completed.
2.2.18	Prevent entry of Stormwater into sewer line along with KWA	Thiruvananthapuram Corporation	KWA is authorized to prepare and implement proper sewerage lines						Close monitoring is done by health Squad all health Inspectors are directed to issue notice and prosecution.
2.2.19	Take steps to prevent the solid wastes in sewer line as reported by KWA	Thiruvananthapuram Corporation	Squad and Fines Special squad is formed at Corporation level. Health inspectors are authorized for regularly monitoring and preventing the wasted charge						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 places Corporation collected an amount of Rs.25024000/- as fine from 01.01.2022

Monitoring

No.	Activity	Implementing Agency	Time line		Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
	Activity	Implementing Agency	Time line		Water quality in August/ Pre-monsoon		Water quality in August / Monsoon		Water quality in Post monsoon
2.3.1	River water quality monitoring - Killiyar, Karamana, Parvathiputhanar, Akkulam-Veli lake	Kerala State Pollution Control Board	Ongoing; monthly						1 Establishment of real time water quality monitoring station is going to install in Karamana river 2 Work order has been issued to access nano technology private Ltd.
2.3.2	Storm drains monitoring - Amayizhanchanthodu, Ulloorthodu, Pattomthodu, Kannamoolathodu, Thekkanakkara canal	Kerala State Pollution Control Board	Ongoing Seasonal monitoring- Pre-monsoon, monsoon, Post-monsoon						Monitoring going on
2.3.3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc in Thiruvananthapuram Corporation area	Kerala State Pollution Control Board	Ongoing Interval; Red - 0 month Orange -10 month Green - 5 month						

2. Long term Plan

Sewerage Network

	Long Term measures proposed	Implementing Agency	Amount Required (Rs. In Crore)	Time Line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of work remaining
3.1.1	Extension of sewerage system to Block F to G coastal belt	Kerala Water Authority	200						Consultant appointed for preparing Detailed Project Report for uncovered wards of the Thiruvananthapuram Corporation and Rehabilitation of existing system was terminated from the contract due to breach of contract by the firm vide Proceedings No. KWA/SE/SEW/EOI/REPL/338/2020-2021 of the
3.1.2	Extension of sewerage system to Block H to R	Kerala Water Authority	700						
3.1.3	Extension of sewerage system to Newly added	Kerala Water Authority	300						

No.	Activity	Implementing Agency	Time line		Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
3.1.4	Providing sewerage system in Block A to E	Kerala Water Authority	100	Three years					Superintending Engineer, Sewerage Circle, Kerala Water Authority Thiruvananthapuram dated 31.05.2022 to arrange the balance work at their risk and cost. As discussed in the Chief Secretary, GoK' s meeting dated 21/06/2022 the work of Preparation of DPRs has to be done internally. Mean while the terminated firm M/s REPL filed a complaint against KWA in the Hon'ble High court of Kerala (WP(C) No 26031 of the year 2022) and obtained a stay against KWA at first up to 22.08.22 which is then got extended up to 14.09.22 against taking any coercive actions. DPR preparation of sewerage system to the uncovered areas of TMC is now being carried out internally by KWA. The total wards were divided in to 10 clusters. Cluster1 comprises of 5 wards - Attukal, Kalady,Kallipankulam, Ambalathara and kamaleswaram wards - The DPR for Cluster 1 was submitted on 13/10/2022 for obtaining AS. DPR of Cluster 1 Zone 1 & 2 for Rs 99 Crores and DPR of Cluster 1 Zone 3&4 for Rs.58.50 submitted to the Secretary WRD on 13/04/23.Later as per the direction of Secretary Thiruvananthapuram Corporation the DPR for Cluster 1 was revised including Zone 1&5 for Rs 91.00 Cr and Zone 3&4 for Rs 66.50 Cr and was submitted to theSecretary Thiruvananthapuram Corporation on 28.12.2023 for getting AS under UIDF.Cluster 3, which was originally consisting of Thiruvallam,Poonkulam and Vellar is the second in the priority list and was taken up. This Cluster is then modified by adding more wards and is divided into 3 zones. Zone 1 of cluster 3 is consisting of Puthenpally and Part of Muttathara (until STP) was taken up on priority based on the demand of Thiruvananthapuram Corporation. The DPR for Cluster 3 Zone 1 is prepared consisting of Puthenpally and Muttathara (Part) Wards and submitted to CE on 02.12.22. DPR of Cluster 3.1.7 AdditionalSTP requirement KWA/WASCON/AEEII/NGT-PR/2024I/54473/20243 Zone 1,Puthanpalli ward of 1.5 MLD Sewerage network with 5 year O&M and without centage submitted to Corporation under AMRUT2.0 on 11/1/23.The DPR of Cluster 3 Zone 2 and Zone 3 is prepared and submitted on 21.01.2023. The DPR for
3.1.5	Rehabilitation of existing Network and pump house in block A toE	Kerala Water Authority	100						
3.1.6	Procurements of equipments for maintenance sewerage system	Kerala Water Authority	10						
3.1.7	Additional STP requirement	Kerala Water Authority	60						

No.	Activity	Implementing Agency	Time line		Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
	Total Amount required		5000 Crores						

* Out of the 100 wards in Thiruvananthapuram Corporation, 43 wards (Blocks A to E) are fully/Partially covered with sewerage facility. For 35 Wards (Blocks F to R) design of sewerage network is available but this needs modification in lieu of the change in demography and for the balance 22 wards new designs are to be prepared. The long term measures are envisaged to cover the entire wards in the Thiruvananthapuram Corporation. For preparing DPR/DER for rehabilitation of existing sewerage system and for establishing sewerage system for uncovered areas of Thiruvananthapuram Corporation, AS has been obtained under RKI (Govt. of Kerala) and preparation of DPR in progress.

Solid Waste Management

	Long Term measures proposed by Thiruvananthapuram	Implementing Agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining	
3.2.1	Acquire 58 acres of land and rehabilitate 8150 families from the banks of River	Thiruvananthapuram Corporation	5 Years					Dropped	
3.2.2	SDM 2.0 Action plan prepared and submitted.								
3.2.3	KSWMD 5.14Crore works submitted to DPC.								

Desilting and Development

3.3.1	Development package for ParvathyPuthanar	Irrigation department included in KIFB by KWIL includes cleaning of canal	3 Years	100%	100%		100%	Phase I (First half) removal of water hyacinth completed Veli to Kadinamkulam Kayal (Ch 16.00 to Ch27.00).Executed by Inland Navigation . Aakkulam to Monnattumukku cleaning works 100% completed- by KWIL - for an amount of 45 Lakhs (3 Months) Now department work is started for clearing.	
3.3.2	De-silting and development of AmayizhanchanThodu		1.5 Years				80%	On going	

No.	Activity	Implementing Agency	Time line		Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
3.3.3	Improvements to Thekkenekara canal and de-silting-	Irrigation Department	1 Year						Flood mitigation work completed
3.3.4	Karimadam tank improvements, de-silting sheet piling/under preparation and providing fencing		1.5 Years				20%		Flood mitigation works ongoing
3.3.5	Development of Karamana basin		1.5 Years						Desiltation of river completed. E-flow statement is submitted.

SUPERINTENDING ENGINEER

No.	Activity	Implementing Agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% Works Completed	Details of works remaining
3.3.2	De-silting and development of AmayizhanchanThodu	Irrigation Department	1.5 Years			80%	On going	
3.3.3	Improvements to Thekkenekara canal and de-silting-		1 Year				Flood mitigation work completed	
3.3.4	Karimadam tank improvements, de-silting sheet piling/under preparation and providing fencing		1.5 Years			20%	Flood mitigation works ongoing	
3.3.5	Development of Karamana basin		1.5 Years				Desiltation of river completed. E-flow statement is submitted.	

SUPERINTENDING ENGINEER


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ANALYSIS REPORT OF RIVERS INCLUDED IN THE LIST OF POLLUTED RIVER STRETCHES - 2022 OF CPCB FOR THE MONTH OF DECEMBER 2024

SL NO	PARAMETER	RIVER-NEYYAR		RIVER- KARAMANA		RIVER- MAMOM	RIVER- AYIROOR	RIVER- VAMANAPURAM
		Amaravila	Aruvippuram	Aruvikkara	Moonnattumukku	Mamom	Ayiroor	Vamanapuram
1	Temperature, °C	29	29	28	29	28	29	28
2	Dissolved Oxygen, mg/l	6.1	6.1	8.8	0.3	5.5	5.6	6.7
3	pH	6.8	7.0	6.9	6.6	6.7	6.8	6.9
4	Conductivity, µmhos/cm	93	87	119	343	145	122	99
5	BOD, mg/l	1.7	1.0	0.7	9.9	0.9	0.6	0.6
6	Nitrate-N, mg/l	BDL	BDL	BDL	1.3	BDL	BDL	BDL
7	Turbidity, NTU	0.9	1	1.2	2.9	1	1.2	0.5
8	Phenolphthalein Alkalinity, mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9	Total Alkalinity, mg/l	16	24	36	120	36	36	28
10	Chloride, mg/l	24	16	32	40	32	28	20
11	COD, mg/l	4	4	4	32	4	4	4
12	TKN, mg/l	BDL	BDL	ND	3.4	BDL	BDL	BDL
13	Ammoniacal-N, mg/l	BDL	BDL	BDL	1.5	BDL	BDL	BDL
14	Hardness as CaCO ₃ , mg/l	16	16	20	84	28	32	20
15	Calcium as CaCO ₃ , mg/l	12	12	16	80	24	24	16
16	Magnesium as CaCO ₃ , mg/l	4	4	4	4	4	8	4
17	Sulphate, mg/l	BDL	BDL	BDL	6.4	BDL	BDL	BDL
18	Calcium (Ca ²⁺), mg/l	4.8	4.8	6.4	32	9.6	9.6	6.4
19	Magnesium (Mg ²⁺), mg/l	1.0	1.0	1.0	1.0	1.0	1.9	1.0
20	Sodium, mg/l	13.5	11.8	19.6	29	20.1	15.7	13.2
21	Total Dissolved Solids, mg/l	63	53	92	214	98	84	62
22	Total Fixed Solids, mg/l	36	32	42	112	54	40	37
23	Total Suspended Solids, mg/l	22	15	20	67	21	16	23
24	Phosphate, mg/l	BDL	BDL	BDL	0.11	BDL	BDL	BDL
25	Boron, mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26	Potassium, mg/l	8.3	5.1	11.3	18.6	11.5	6.4	4.5
27	Fluoride, mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28	Total Coliform, MPN/100 ml	3000	2800	1800	14000	2200	2300	1300
29	Fecal Coliform, MPN/100 ml	1900	1500	1100	9400	1300	1100	1000
30	Fecal Streptococcus, MPN/100 ml	NIL	NIL	NIL	NIL	NIL	NIL	Nil
31	% SODIUM	52.5	53.3	55.3	36.6	50.6	45.9	52.7
32	SAR	1.5	1.3	1.9	1.4	1.7	1.2	1.3

National Mission for Clean Ganga

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

RIVER PAMBA, PATHANAMTHITTA

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		Kadapra Grama Panchayat id totally open defection free. All the sewage generated in the households and other places and inistutions have 100% treatment of sewage-situ
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		

6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment. (II) <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 (v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river; (vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic	Kadapra Grama Panchayat is totally open defecation free. All the sewage generated in the households and other places and institutions have 100% treatment of sewage-situ No STP in Mannar Panchayath NO CEPT & ETP in Mannar Panchayath Plastic waste is collected by HarithaKarma Sena
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	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) (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		
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ACTION PLAN FOR RIVER PAMBA, KERALA

[illegible]

		Kadapra Panchayath		report	reported		
				The Panchayat has resloved to identify all polluting invloved in pollution of river resources and iniation of penal against them	The Panchayat has resloved to identify all polluting invloved in pollution of river resources and iniation of penal against them		
C	Establishment of Material Collection Facility	Mannar	31.03.2021	Roofing completed	NIL	86%	14%

		Niranam		Details not reported			
		Kadapra Panchayath		Material Collection Facility id fully funcational in Kadapra Grama Panchayat			
C	Resource Recovery Facility	Mannar	31.03.2021	NO RRF IN PANCHAYATH	NO RRF IN PANCHAYATH	NA	NA

		Niranam		Not submitted the report	Details not reported		
		Kadapra		Resource Recovery Facility due to non-availability of space	Resource Recovery Facility due to non-availability of space		
C	Installing household and community level solid waste management units	Mannar Panchayat	31.03.2021	PLASTIC WASTE COLLECTION	PLASTIC WASTE COLLECTION		

C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.03.2021	76%	72%	72%	28%
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Parumala Town	Kadapra Panchayat	31.12.2020	The Panchayat considered that sewage treatment plants are currently not need with in Panchayat area around Parumala	The Panchayat considered that sewage treatment plants are currently not need with in Panchayat area around Parumala		
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Mannar Town	Mannar Panchayat	31.12.2020	All house hold toilets have individual septic tank and no outlets to pamba river	All house hold toilets have individual septic tank and no outlets to pamba river		
C	Construction of compound wall with fencing	Irrigation department	31.03.2021	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government	Details not reported		
C	Removing light jungle and muddies from river courses	Irrigation department	31.03.2021	Detailed project report for the Holistic rejuvenation	Details not reported		

				of the reaches is prepared and submitted to Government			
C	Electrical-Light arrangements and Surveillance cameras	Irrigation department	31.03.2021	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government	Details not reported		
C	Regualting activites in flood plain zone, protection and management of flood plain zone	Irrigation department	31.03.2021	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government	Details not reported		
	Greenery developmentPlantation plan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment	Irrigation department	31.03.2021	Detailed project report for the Holistic rejuvenation of the reaches is prepared and submitted to Government	Details not reported		
C (b) (ii)	Green Protocol implementation in all Offices institution & Public function	Mannar	31.05.2020	100% Green protocol has implemented in			

		Kadapra		in public offices Green protocol has implemented in public officers Kadapa Grama Panchayat			
		Niranam		Not submitted the report			
D(a)	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department	30.11.2020				
D (b)	Irrigation practices	Irrigation department	30.04.2020				

E	Awareness programmes for sections of public	Kerala State Pollution Control Board	31.05.2020				
C	Management of municipal, plastic, hazardous, biomedical and electrical waste	LSGD	31.03.2021				Plastic is collected by harithakar masena every month & e-waste once in an year

ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries	NOC has not been issued to industries for Ground Water extraction during	1 NOC& 1 Number of renewal of NOC has been issued to	Demand based	1.As per the GEC estimation all the blocks in the District has been categorized

		particularly in over exploited as critical zones/blocks	November 2024	industries for Ground Water extraction during December 2024		as SAFE. 2.Provisions of GW (control &Regulation) Act 2002 is implementing strictly for regulating extraction of GW resource in the district
2	B(ii)	Ground water recharging / rain water harvesting	Artificial Recharge Structure was Technical Sanction for pond rejuvenation at 2 sites in PandalamThekkekkara Grama Panchayath received and work tendered	Artificial Recharge Structure Thevarukunnel Kulam, Pandalam Thekkekkara Grama Panchayath Pond Rejuvenation Work order Issued & Work Started.	Demand based	All the blocks in the district is categorized as SAFE as per GEC estimation. Kadapra-Niranam Area is not feasible for Ground Water Recharge. However, GW recharging programme is taken up in some pockets in the midland area including Manimala basin. Where seasonal GW level fluctuation is noticed.
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps	Groundwater sample collection during the month of August 2024 for the selected monitoring wells (borewells and	Groundwater sample collection during the month of November 2024 for the monitoring wells	Periodical assessment(Regular programme) Chemical analysis result of	(i)Maintaining a network of observation wells in various hydrogeomorphic units throughout the district from which

			open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis	for General & Iron analysis (borewells and open wells) collected and sent to Analytical Lab Thiruvananthapuram for chemical analysis.	groundwater samples received from Analytical Lab, Trivandrum upto December 2023	water level and water samples have been collected periodically and analysed. (ii)generally groundwater quality is good and potable
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.	Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.	Borewell/ tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose.	i)Borewell/tube well construction is regulated in the district by insisting permit of local bodies based on the feasibility report of GWD ii) Promoting conjunctive use of groundwater and surface water for irrigation purpose. iii)Awareness programmes organised to the public to adopt rainwater harvesting measures

National Mission for Clean Ganga

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

RIVER PAMBA, PATHANAMTHITTA -December

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		NA
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		NA
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		NA
5	Chief Secretaries may set up appropriate monitoring mechanism at state level • 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 in-situ 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 (v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river; (vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic		NO STP NO CEPT AND ETP PLASTIC WASTE IS COLLECTED BY HARITHAKARMA SENA
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	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) (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		
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ACTION PLAN FOR RIVER PAMBA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining
A(a)	No industries	-	-					
A(a)	Monitorng of river water quality	Kerala State Pollution Control Board	Continuing project					
C(ii)	Establishment of de- centralized solid waste treatment facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021	THUMBOORMOOZHI AEROBIC COMPOST4 IN PANCHAYATH&2 IN PRIVATE BUS STAND	THUMBOORMOOZHI AEROBIC COMPOST4 IN PANCHAYATH&2 IN PRIVATE BUS STAND	THUMBOORMOOZHI AEROBIC COMPOST4 IN PANCHAYATH&2 IN PRIVATE BUS STAND	100%	
C	Establishment of Material Collection Facility	Mannar Panchayat, Kadapra/ Niranam Panchayath	31.03.2021		ROOFING COMPLETED	nil	86%	14%
C	Resource Recovery Facility	Mannar Panchayat, Kadapra/ NiranamPanchayath	31.03.2021	nil	nil	nil		
C	Installing household and community level solid waste management units	Mannar Panchayat	31.03.2021	PLASTIC WASTE COLLECTION	PLASTIC WASTE COLLECTION	PLASTIC WASTE COLLECTION		

C	Door to door collection and transportation of municipal solid waste	Mannar Panchayat	31.03.2021	84%	76%	72%	72%	28%
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Parumala Town	Kadapra Panchayat	31.12.2020					All house hold toilets have individual septic tank.no outlets to pamba river
C	Construction of small sewage treatment plant with screening, septic tank and disinfection to the storm water drain of Mannar Town	Mannar Panchayat	31.12.2020					All house hold toilets have individual septic tank.no outlets to pamba river
C	Construction of compound wall with fencing	Irrigation department	31.03.2021					
C	Removing light jungle and muddies from river courses	Irrigation department	31.03.2021					
C	Electrical-Light arrangements and Surveillance cameras	Irrigation department	31.03.2021					
C	Regualtingactivites in flood plain zone, protection and management of flood	Irrigation department	31.03.2021					

	plain zone							
	Greenery development Plantation plan. Plantation on both sides of the river, setting up biodiversity parks on flood plains by removing encroachment	Irrigation department	31.03.2021	100%	100%0	100%	100%	0
C (b) (ii)	Green Protocol implementation in all Offices institution & Public function	Mannar, Kadapra/ Niranam Panchayat	31.05.2020					
D(a)	Issues relating to E-flow, maintaining minimum environmental flow of river (by having watershed management provisions)	Irrigation department	30.11.2020					
D (b)	Irrigation practices	Irrigation department	30.04.2020					
E	Awareness programmes for sections of public	Kerala State Pollution Control Board	31.05.2020					
C	Management of municipal, plastic, hazardous, biomedical and electrical waste	LSGD	31.03.2021					

ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

Analysis Result of Drains Joining to Mannar-Thakazhi Stretch of Pamba River (DEC -2024)																
Sl. No	Name of Drain	Parameters														
		pH			Electrical Conductivity(µS/cm)			BOD(mg/l)			TC(Nos/100ml)			FC		
	Months	OCT	NOV	DEC	OCT	NOV	DEC	OCT	NOV	DEC	OCT	NOV	DEC	OCT	NOV	DEC
1	Parumala Drain	Nil	Nil	NIL	Nil	Nil	NIL	Nil	Nil	NIL	Nil	Nil	NIL	Nil	Nil	NIL
2	MannarTown Drain	Nil	Nil	NIL	Nil	Nil	NIL	Nil	Nil	NIL	Nil	Nil	NIL	Nil	Nil	NIL
3	Kuriyathkadavu Thodu	8.3	7.6	7.9	108.6	42.1	48.89	4.4	4	0.5	4000	1000	1000	3200	600	600
4	Karuvelil Thodu	8.3	7.7	7.9	103.5	43.7	46.06	4	3.8	1.6	700	1200	1400	400	200	1000
5	Nochithodu	8.4	7.7	7.9	42.06	39.63	45.72	2	1.8	1.6	2300	1000	1000	1600	200	800
6	Pattaparambil Thodu	8.4	7.6	7.9	41.76	44.41	49.63	3.4	4.8	1.8	3500	2600	2000	2000	1900	800
7	Kappiyarisseri Thodu	8.3	7.5	7.9	41.06	62.45	69.18	2.4	5.6	1.4	2800	1000	3200	1400	400	2400
8	Kombankery Thodu	8.4	7.5	7	39.86	41.15	47.84	1.2	1.2	2.3	4400	2800	1800	2000	1000	800
9	Perackalthodu	8.2	7.4	7.8	234.3	215.9	391.3	3.4	3.4	4.5	3500	2600	2200	2000	1400	600
10	Erathodu	8.3	7.3	7.1	41.2	41.8	52.49	1.7	1.8	0.9	2500	1400	2600	1200	600	1200
11	Kolarayaru	8.5	7.6	7	34.33	36.05	48.09	1.7	2	0.1	1000	1400	1600	600	800	400

National Mission for Clean Ganga

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

RIVER MANIMALA, ALAPPUZHA

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation	31.03.2021	NIL
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.2020	Since Large Land holding by local residents on the bank, No
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning	22.01.2020	Such issues arises, no need of steps since
5	Chief Secretaries may set up appropriate monitoring mechanism at state level • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose	22.01.2020	No industry/commercial activity
	• Monitoring at State level must take place	22.01.2020	NIL
6	Progress report may be furnished by the State/UTs to • Secretary, Ministry of Jal Shakti • Member Secretary, CPCB	22.01.2020 Fortnightly commencing	NIL

6. 1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment. (II) <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 (v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river; (vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic	21.12.2019 2020-2021 2019-2020 2020-2021 2020-2021	Drains contributing to river pollution were identified. The drains are seasonal and water quality is above the required limit, no in situ. Proposal for setting up an FSTP by Chengannur municipality is initiated. Since the area does not contain any industry, no requirement of any CETP, this action. Plan revised. The adjoining local bodies are in the stage of developing and establishing adequate solid waste management facilities also the solid waste during issues were not identified in the stretch during field visit held during past 1 year. Water quality analysis result of the stretch up to DECEMBER 2023 is enclosed. Awareness campaigns initiated. No groundwater pollution is noted in the area action yet to be initiated.
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ACTION PLAN FOR RIVER PAMBA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of Oct 2024	Progress in the month of Nov 2024	Progress in the month of Dec 2024	% works completed	Details of works remaining
A(a)	Monitoring of river water quality	Kerala State Pollution Control Board	Continuing project				100%	NIL
A(b)	Rendering Plant at Eraviperoor or Thiruvalla	Eraviperoor/ Thiruvalla local body	31.03.2021				0%	Work to be initiated
C(ii)	Fencing of bridges, desilting, dredging and protection works, surveillance cameras at vantage points	Irrigation department	31.03.2021				0%	Work to be initiated
C	Preventing illegal discharge of septage and other waste water into the river. Formation of River Protection Group	Panchayath, Police , KSPCB	31.05.2020.				0%	Work pending due to COVID pandemic
C	Greenery development Plantation on both sides of the river, setting up biodiversity parks in flood plains and removing encroachment	Irrigation department in association with panchayath	31.03.2021				0%	Yet to be initiated
C(b)(ii)	Green Protocol implementation in all offices, institution & public functions	Kalloopara, Eraviperoor, Puramattom, Kaviyoor, Peringara, Kuttoorpachayaths	31.03.2020				100%	0

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

ACTION BY GROUND WATER DEPARTMENT

Sl. No	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Timeline	Progress in the month of Oct 2024	Progress in the month of Nov 2024	Progress in the month of Dec 2024	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks	31.03.2021					
2	B(ii)	Ground water recharging / rain water harvesting in Govt offices	31.03.2021					
3	NGT order in O.A no.496/2016 Identification of illegal bore wells in the catchment area.	NGT order in O.A no.496/2016 Identification of illegal bore wells in the catchment area.	31.03.2021					

WATER QUALITY DATA OF POLLUTED RIVER STRETCHES DECEMBER-2024**DISTRICT OFFICE, PATHANAMTHITTA****Date of Sampling: 4.12.2024**

Sl. No	PARAMETERS	THAKZHY	EDATHUA	MANNAR
1	Temperature, °C	25	28	26
2	pH	6.3	6.2	6.3
3	Conductivity, µmhos/cm	94	112	135
4	Turbidity, NTU	3.1	1.9	4.1
5	Phenolphthalein Alkalinity, as CaCO ₃	Nil	Nil	Nil
6	Total Alkalinity, as CaCO ₃	26	11	29
7	Chloride, mg/l	13	15	18
8	COD, mg/l	10	7.4	6.4
9	TKN, mg/l	NIL	NIL	NIL
10	Ammoniacal-N, mg/l	BDL	BDL	BDL
11	Hardness, as CaCO ₃ mg/l	22	24	28
12	Calcium, as CaCO ₃ mg/l	12	12	12
13	Magnesium as CaCO ₃ , mg/l	10	12	16
14	Sulphate, mg/l	2.5	2.2	2.8
15	Sodium, mg/l	9.1	8.1	9.7
16	Total Dissolved Solids, mg/l	67	63	75
17	Total Fixed Solids, mg/l	34	15	41
18	Total Suspended Solids, mg/l	48	19	56
19	Phosphate, mg/l	BDL	BDL	BDL
20	Boron, mg/l	BDL	BDL	BDL
21	Potassium, mg/l	2.3	1.2	2.5
22	BOD, mg/l	5	3.7	3.2
23	Fluoride, mg/l	BDL	BDL	BDL
24	Dissolved Oxygen, mg/l	5.7	4.2	4.2
25	Nitrate-N, mg/l	3.6	3.8	4.1
26	Total Coliform, CFU/100 ml	2800	3100	4000
27	Faecal Coliform, CFU/100 ml	1700	1600	3400
28	SAR	0.8	0.7	0.8
29	% of sodium	44.2	40.8	40.3
30	Faecal Strepto Coccus, CFU/100 ml	Nil	Nil	Nil

WATER QUALITY DATA OF POLLUTED RIVER STRETCHES DECEMBER-2024**DISTRICT OFFICE, PATHANAMTHITTA****Date of Sampling: 4.12.2024**

Sl. No	PARAMETERS	THAKZHY	EDATHUA	MANNAR
1	Temperature, °C	25	28	26
2	pH	6.3	6.2	6.3
3	Conductivity, µmhos/cm	94	112	135
4	Turbidity, NTU	3.1	1.9	4.1
5	Phenolphthalein Alkalinity, as CaCO ₃	Nil	Nil	Nil
6	Total Alkalinity, as CaCO ₃	26	11	29
7	Chloride, mg/l	13	15	18
8	COD, mg/l	10	7.4	6.4
9	TKN, mg/l	NIL	NIL	NIL
10	Ammoniacal-N, mg/l	BDL	BDL	BDL
11	Hardness, as CaCO ₃ mg/l	22	24	28
12	Calcium, as CaCO ₃ mg/l	12	12	12
13	Magnesium as CaCO ₃ , mg/l	10	12	16
14	Sulphate, mg/l	2.5	2.2	2.8
15	Sodium, mg/l	9.1	8.1	9.7
16	Total Dissolved Solids, mg/l	67	63	75
17	Total Fixed Solids, mg/l	34	15	41
18	Total Suspended Solids, mg/l	48	19	56
19	Phosphate, mg/l	BDL	BDL	BDL
20	Boron, mg/l	BDL	BDL	BDL
21	Potassium, mg/l	2.3	1.2	2.5
22	BOD, mg/l	5	3.7	3.2
23	Fluoride, mg/l	BDL	BDL	BDL
24	Dissolved Oxygen, mg/l	5.7	4.2	4.2
25	Nitrate-N, mg/l	3.6	3.8	4.1
26	Total Coliform, CFU/100 ml	2800	3100	4000
27	Faecal Coliform, CFU/100 ml	1700	1600	3400
28	SAR	0.8	0.7	0.8
29	% of sodium	44.2	40.8	40.3
30	Faecal Strepto Coccus, CFU/100 ml	Nil	Nil	Nil

**ANALYSIS REPORT OF DRAINS OF MANIMALA BETWEEN KALLOOPARA AND THONDRA
DEC -2024**

SI NO	BOTTLE NO.	Name of Drains	PH	BOD	TC	FC
1	TK1	Panayampalathodu	7.1	1	1000	600
2	TK2	PadathupalamThodu	7.9	1.2	3900	600
3	TK3	Thottappuzha	NIL	NIL	NIL	NIL
4	TK4	Kuttapuzha under Kattodubridge	7.9	0.9	600	200
5	TK5	Kadavumbara	7.9	4.6	1400	1000
6	TK6	Drain under Varappalam Bridge	NIL	NIL	NIL	NIL
7	TK7	Drain under kallupalam Bridge	7.8	0.4	1400	1000
8	TK8	Komalamthodu	7.9	0.7	3600	2400
9	TK9	Vennikulam Valiyathodu	7.1	0.6	2400	1200
10	TK10	Paduthodu	7	2.7	2000	1400
11	TK11	Mallappally Valiyathodu	7.9	2.6	2800	2600

National Mission for Clean Ganga

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

RIVER PERIYAR. ERNAKULAM

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		
5	Chief Secretaries may set up appropriate monitoring mechanism at state level ● 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		

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. <u>(II) Status of STPs, I&D and sewerage networks</u> Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline <u>(III) Status of CETPs</u> Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status <u>(iv) 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, 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		
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	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) (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		
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ACTION PLAN FOR RIVER PERIYAR, KERALA

SHORT TERM MEASURES

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month Of September 2024	Progress in the month Of October 2024	Progress in the month Of November 2024	% works complete d	Details of works remaining

A(b)	Augmentation and Revamping of existing STP at near Adwaita Ashramam and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	Dec 2019	The Committee observed that there was no time bound progress in the renovation of STP at Advaita Ashram. In connection with the upgrade mechanical works of STP are yet to be completed and only electrical civil works have been completed. At present untreated sewage is discharged into the river	The Committee observed that there was no time bound progress in the renovation of STP at Advaita Ashram. In connection with the upgrade mechanical works of STP are yet to be completed and only electrical civil works have been completed. At present untreated sewage is discharged into the river	It was reported that the mechanical works of the STP related to the renovation are yet to be completed and the electrical work and civil work are almost completed. As per the inspection of the STP by the municipality officer, it was found that new Filter, Clarifier and aerator need to be installed. Once the tender process for the mechanical work is completed, the STP can be made operational within 2 months. The capacity of the Advaita Ashram STP is 300 KLD. This is not enough to completely treat the sewage generated in the city. 1 acre of land has been requested from the Irrigation		
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						Department to establish a new STP (1.72 MLD) in the Thottakkattukara area. The KWA Estimate has been prepared for this despite the allocation of funds of Rs. 118 crore from the Suchitha Mission. A meeting was held under the chairmanship of the Collector to get the land. It needs to be obtained.		
A(b)	Augmentation and Revamping of existing STP at Aluva Market and to increase the capacity of STP so as to treat more sewage generated in the municipality	Aluva Municipality	2021	There are currently 3 projects, so master layout needs to be prepared. A detailed report of the current progress will be sent by mail. But the report has not been submitted	There are currently 3 projects, so master layout needs to be prepared. A detailed report of the current progress will be sent by mail. But the report has not been submitted	received administrative approval for the reconstruction of Aluva General Market for Rs. 48 crore under PMSSY, and DPR has been prepared. The reconstruction of Market includes a high-capacity ETP. Since the high-capacity ETP is		

						being established, the proposal for a low-capacity ETP proposed only for the fish market will be discarded. An application has been submitted for the Pollution Control Board's Consent to Establish for the construction work of the market. The work will be completed within one year.		
A(b)	Discharge of sewage from township to the River through drain near Periyar Hotel shall be stopped.	Aluva Municipality	2020	Final DPR for setting up 5 KLD ETP at Aluva Fish Market has been submitted by IRTC. But PMSSY's Rs 48 crore for reconstruction of Aluva General Market has been recieved. ETP with increased capacity is also included in market reconstruction. The proposal of low capacity ETP which is	Final DPR for setting up 5 KLD ETP at Aluva Fish Market has been submitted by IRTC. But PMSSY's Rs 48 crore for reconstruction of Aluva General Market has been recieved. ETP with increased capacity is also included in market	A special squad has been formed for inspection. The outlets coming into the streams and Periyar are being inspected and fines are being collected.		

				proposed only for fish market is being excluded as the ETP with higher capacity will be set up. For the reconstruction activities of the market, Board's Consent to establish application will be submitted and the works will be completed within 1 year.	reconstruction. The proposal of low capacity ETP which is proposed only for fish market is being excluded as the ETP with higher capacity will be set up. For the reconstruction activities of the market, Board's Consent to establish application will be submitted and the works will be completed within 1 year.			
A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain and to collect fine based	Aluva Municipality, KSPCB	2020	A special squad has been formed for the inspection. Inspections were conducted in the outlets which joins periyar and other canals.	A special squad has been formed for the inspection. Inspections were conducted in the outlets which joins periyar and other canals.	A special squad has been formed for inspection. The outlets coming into the streams and Periyar are being inspected and fines are being collected.		

	on polluter pay principle							
A(a)(iv)	Periodical inspection in the Industries, Flats, hotels monitoring of STP,ETP	KSPCB	Periodical	ONGOING	ONGOING	ONGOING		
C(ii)	Installation of modern abattoirs	Aluva Municipality	March 2021	On 12.07.2024, the Council approved the preparation of a Detailed Project Report (DPR) and the subsequent steps for the construction of a modern slaughterhouse. Action is now underway to move forward with this project	On 12.07.2024, the Council approved the preparation of a Detailed Project Report (DPR) and the subsequent steps for the construction of a modern slaughterhouse. Action is now underway to move forward with this project	It was reported that the DPR for inviting the construction and preparation of a modern slaughterhouse has been approved by the Council on 12.07.2024 and further steps are being taken. This is included in the DPR for the new general market.		
A(b)	Procurement of sewer cleaning machines and equipment maintenance	Aluva Municipality	March 2020	Drainage cleaning activities are done every day. JCBs are also used for carry out the waste. The excavated waste is then disposed in	Drainage cleaning activities are done every day. JCBs are also used for carry out the waste. The excavated waste	The cleaning of the canals is being carried out every day. JCB, Hitachi etc. are being used on an annual contract basis. Equipment for	100	

				Thumboormuzhi compost. The equipment needed to clean the canals has been purchased.	is then disposed in Thumboormuzhi compost. The equipment needed to clean the canals has been purchased.	cleaning the canals has been purchased.		
E	Installation of cameras at the waste dumping spots	Aluva Municipality	2020	For monitoring the dumping sites, 66 cameras has been installed.all cameras are in working condityion. A fine of Rs. 2.75 lakhs was imposed on violators during 39 inspections, and a fine of Rs. 49,000 was levied for illegal dumping. A project to install additional cameras has been initiated.	For monitoring the dumping sites, 66 cameras has been installed.all cameras are in working condition. A fine of Rs. 2.75 lakhs was imposed on violators during 39 inspections, and a fine of Rs. 49,000 was levied for illegal dumping. A project to install additional cameras has been initiated.	As part of monitoring the dumping sites (places where waste is deposited), 66 cameras have been installed. All are working. Rs. 15 lakh has been allocated for installing new cameras. They will be installed this financial year. Information regarding Fines collected:- Illegal Outlet: 3.1 lakhs Illegal Dumping: 1.4 lakhs Single use Plastic : 40,000		

						A joint inspection (discharging sewage) was conducted with PWD and a hotel was closed		
A(b)	Construction of retaining wall with HDPE liner at Kalamassery dumping yard in order to prevent the leachate discharge from the yard to ThoombungalThodu	Kalamassery Municipality	Sept 2019	NA	NA	NA	100%	
C(ii)	Installation of plastic shredding unit	Kalamassery Municipality	June 2019	NA	NA	NA	100%	
A(a)(iv)	Constitution of squads for night surveillance for finding the unauthorized dumping of sewage at NAD wet lands Kalamassery	Kalamassery Municipality, Police department	2020	NAD not provided CCTV. Night squad fine Rs. 2171940	NAD not provided CCTV. Night squad fine Rs. 2281940	NAD not provided CCTV. Night squad fine Rs. 2281940	NA	

A(b)	Installation of common STP for Kalamassery Municipality and ETP at Municipal Market. Obtain a consent from Pollution Control Board	Kalamassery Municipality	December 2019	75 cents land identified at North Kalamassery for sewage and septage treatment plant New ETP will be installed after the reconstruction of market according to the capacity needed for the same SSTP Septage & sewage treatment plant of 2.6 mld work will started after biomining contract was awarded to SMS limited for 9.02 cr. The work will start this month & planning to complete the works within 6 months. New MCF of 8000 square feet will be functional next month for non bio waste management. New project were submit in DPC for construction of STP at	75 cents land identified at North Kalamassery for sewage and septage treatment plant. New ETP will be installed after the reconstruction of market according to the capacity needed for the same SSTP Septage + sewage treatment plant of 2.6 mld work will started after biomining	75 cents land identified at North Kalamassery for sewage and septage treatment plant New ETP will be installed after the reconstruction of market according to the capacity needed for the same SSTP Septage come sewage treatment plant of 2.6 mld work will started after biomining contract was	NA	
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				Kalamassery Townhall & Kanagarappady Mini Townhall contract was awarded to SMS limited for 9.02 cr. The work will start this month & planning to complete the works within 6 months. New MCF of 8000 square feet will be functional next month for non bio waste management. New project were submit in DPC for construction of STP at	awarded to SMS limited for 9.02 cr. The work will start this month & planning to complete the works within 6 months. New MCF of 8000 square feet will be functional next month for non bio waste management. New project were submit in DPC for construction of STP at Kalamassery Townhall & Kanagarappady Mini Townhall	
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				Kalamassery Townhall & Kanagarappady Mini Townhall					
A(a)(iv)	Monitoring and surveillance of industries in Kalamassery Industrial Estate in order to prevent unauthorized discharges to Muttar River	KSPCB	2019						
C(ii)	Installation of modern abattoirs including poultry and meat rendering plants.	Kalamassery Municipality, Industries Department (for land allotment)	2021	A letter dated 03.10.22 has forwarded to the govt. for allotment of land for the construction of modern abattoirs	A letter dated 03.10.22 has forwarded to the govt. for allotment of land for the construction of modern abattoirs	A letter dated 03.10.22 has forwarded to the govt. for allotment of land for the construction of modern abattoirs	N A		
A(b)	Identification of the establishments/commercial	Kalamassery Municipality	2020	Inspection conducted on 24/09/2020, 22/07/2021,	Inspection conducted on 24/09/2020,	Inspection conducted on 24/09/2020,	N A		

	complexes/flats/houses/hotels etc who is discharging the sewage to the public drain			13/08/2021, 01/01/2022, 10/01/2022, 11/01/2022, 12/01/2022 & notice issued to 49 persons. 12 persons cleared violations. Second notice issued to 2 persons and rectified the defect. Inspection conducted on 28.07.2022, fresh notice issued to 5 persons, 1 person cleared violation. Inspection conducted on 15.09.2022, fresh notice issued to 1 person . Inspection conducted on 29.12.2022, 5 persons cleared violation . Inspection conducted on 16.02.2023, 1 person fresh notice issued. 7 outlet of houses, 3 outlet of	22/07/2021, 13/08/2021, 01/01/2022, 10/01/2022, 11/01/2022, 12/01/2022 & notice issued to 49 persons. 12 persons cleared violations. Second notice issued to 2 persons and rectified the defect. Inspection conducted on 28.07.2022, fresh notice issued to 5 persons, 1 person cleared violation. Inspection conducted on 15.09.2022, fresh notice issued to 1 person . Inspection conducted on 29.12.2022, 5 persons cleared violation . Inspection conducted on 16.02.2023, 1	22/07/2021, 13/08/2021, 01/01/2022, 10/01/2022, 11/01/2022, 12/01/2022 & notice issued to 49 persons. 12 persons cleared violations. Second notice issued to 2 persons and rectified the defect. Inspection conducted on 28.07.2022, fresh notice issued to 5 persons, 1 person cleared violation. Inspection conducted on 15.09.2022, fresh notice issued to 1 person . Inspection conducted on 29.12.2022, 5 persons cleared violation . Inspection conducted on 16.02.2023, 1 person fresh notice		
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				establishment in may 2023	person fresh notice issued. 7 outlet of houses, 3 outlet of establishment in may 2023	issued. 7 outlet of houses, 3 outlet of establishment in may 2023		
E	Installation of cameras at the waste dumping spots	Kalamassery Municipality	2020	Camera installed on 10 locations. 2 portable (mobile) camera has installed for identifying waste dumping spot. Rs 36560 /- levied till date	Camera installed on 10 locations. 2 portable (mobile) camera has installed for identifying waste dumping spot. Rs 36560 /- levied till date	Camera installed on 10 locations. 2 portable (mobile) camera has installed for identifying waste dumping spot. Rs 36560 /- levied till date		
A(b)	Identification of sources of sewage discharged to drain near Pathalam bridge and action to stop the discharge which reach river Periyar from hotels, labor camps etc In case the quantity of sewage generated is assessed to be more STP need to be installed	Eloor Municipality, KSPCB (for monitoring)	2020	Inspections are conducted from time to time. Dumping of garbage was not observed during the inspection period.	Inspections are conducted from time to time. Dumping of garbage was not observed during the inspection period.	Inspections are being conducted from time to time. Arrangements have been made to drain the sewage discharged from shopping complexes, shops, etc. into the soak pit and the problem has been resolved.		

E	Installation of cameras at the waste dumping spots	Eloor Municipality	2020	Keltron cameras have been installed in the vicinity of the aerobic bin near the HIL company and the bin near Manjummal Arattukadavu. Also, in the plan 2023-24, money has been allocated for installing cameras in various areas of the municipality and as per 2 projects (Rs. 40,00,000/-) 84 cameras have been installed.	Keltron cameras have been installed in the vicinity of the aerobic bin near the HIL company and the bin near Manjummal Arattukadavu. Also, in the plan 2023-24, money has been allocated for installing cameras in various areas of the municipality and as per 2 projects (Rs. 40,00,000/-) 84 cameras have been installed.	84 cameras have been installed. A fine of Rs. 1000/- was collected last month.		
A(a)(iv)	Periodical inspection in the Industries, Flats, hotels for monitoring of STP,ETP located in Cochin corporation	KSPCB	periodical					
A(a)	Inventory of sources of pollution through a rapid study/Study	Kochi Municipal Corporation	3 months	The work of fencing and beautification of Aryanpadam thodu is	The work of fencing and beautification of	A squad consisting of Engineering & Health has been formed. 4		

	for identification of pollution sources at Edappally thodu			recommended to include in the 2025-2026 year budget. The work of fencing along MeenchiraThodu in Division 35 has completed. De-silting activities for the year 2023 was completed. About 74 small drains and 173 big drains were cleaned project cost was Rs.12,20,99,397/-. The Own fund de-silting and pola payal 4 removal works are going on. Desilting work in Div 36 (from the starting of Edappally thodu upto a distance of 4 KM to the civil lane) is completed	Aryanpadam thodu is recommended to include in the 2025-2026 year budget. The work of fencing along MeenchiraThodu in Division 35 has completed. De-silting activities for the year 2023 was completed. About 74 small drains and 173 big drains were cleaned project cost was Rs.12,20,99,397/-. The Own fund de-silting and pola payal 4 removal works are going on. Desilting work in Div 36 (from the starting of Edappally thodu upto a distance of 4 KM to the civil lane) is completed	squads are conducting regular inspections. Desilting and water hyacinth removal work is underway. Night squad is conducting inspections. Special inspection is being conducted regarding septage. Details of fines collected SUP inspection- Rs. 10000 Garbage dumping - Rs. 1.95 lakh A total of 1.32 crore fines have been collected so far this financial year		
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E	issuing notice to the defaulters	Kochi Municipal Corporation	4 months			Notices have been sent to 5 establishments for discharging sewage. Proper inspections are being carried out at establishments near the river. 317 bottle booths have been installed.		
A(a)(iv)	Periodical inspection in the flats, hotels, shops located along the river	Kochi Municipal Corporation	periodical	Inspections are being carried out regularly in establishments near the river. 317 boat booths have been set up. Container (AMC) has been set up in 74 wards. Fines of around 88 lakhs have been collected till mid-March of this financial year	Inspections are being carried out regularly in establishments near the river. 317 boat booths have been set up. Container (AMC) has been set up in 74 wards. Fines of around 88 lakhs have been collected till mid-March of this financial year	Notices have been sent to 5 establishments for discharging sewage. Proper inspections are being carried out at establishments near the river.		

A(b)	Identification of natural drains/thodu reaching river Periyar and cleaning of weeds, grasses etc	Irrigation department	2 years	<u>Minor irrigation</u> 23 drains have been cleaned in Eloor Municipality. It was a 2 crore project . Agreement of Kunnukara and Alangad gram panchayat and Karumallur has been submitted. Tender procedures are completed, agreement is implemented and started works. Valiachal canal works have been completed, The Eerazhchal site has been handed over, and work is currently in progress. <u>Major irrigation</u> 1. Kuthuthodu (IRR/IA/EST/8495/2022_5_8_7) Rs. 74.40 lakh	<u>Minor irrigation</u> 23 drains have been cleaned in Eloor Municipality. It was a 2 crore project . Agreement of Kunnukara and Alangad gram panchayat and Karumallur has been submitted. Tender procedures are completed, agreement is implemented and started works. Valiachal canal works have been completed, The Eerazhchal site has been handed over, and work is currently in progress. <u>Major irrigation</u> 1. Kuthuthodu (IRR/IA/EST/8495	<u>Minor irrigation</u> 23 streams have been cleaned in Elur Municipality (2023-2024). This was a project of 2 crores. There are 40 streams in Karumallur, Kunnukara, Alangad, Kadungallur grama panchayats for desilting. Out of which 8 have been completed. (2023-Agreement, done in 2024) The work of Valiyachal stream has been completed. <u>Major irrigation</u> The site has been handed over (Eerezhuchal Punjathodu). Since there are		
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				2.Edathodu (IRR/IA/EST/8495/2022_5_11_10) Rs. 9/- lakh These works have not been approved. Works of Valiyachal thod completed.	/2022_5_8_7) Rs. 74.40 lakh 2.Edathodu (IRR/IA/EST/8495/2022_5_11_10) Rs. 9/- lakh These works have not been approved. Works of Valiyachal thod completed.	complaints from the residents regarding encroachment, the a letter to the Paravur Tahsildar for boundary demarcation 1. Kuthuthodu (IRR/IA/EST/8495/2022_5_8_7) Rs. 74.40 lakh 2.Edathodu (IRR/IA/EST/8495/2022_5_11_10) Rs. 9/- lakh These works have not been approved.		
C(iii)	Clearing of weeds, grasses at the river bank in order to ensure the smooth flow of water	Irrigation department	3 years	Almost all the works have been completed for the year 2024-2025	Almost all the works have been completed for the year 2024-2025	Almost all the works have been completed for the year 2024-2025		
D(a)	Maintaining of Minimum flow in river during lean period and periodical operation	Irrigation department	3 years	Periodically maintained for the minimum flow of water by operating the shutter properly at pathalam lock	Periodically maintained for the minimum flow of water by operating the shutter properly	The shutters are being opened and operated at regular intervals. A protocol for operating the		

	of Regulators at River in-order to maintain minimum flow.			cum regulator	at pathalam lock cum regulator	shutters has been prepared and sent to CEE.		
A(b)	Common Effluent Treatment Plant at Edayar Industrial Estate	Industries department	2022	x	x	Based on the minutes of the Environment-Chief Secretary's monthly review meeting with RRC/ Stake holder Departments/ Authorities held on 9.2.2023 it is recorded as "The CETP project may be dropped and all the units may be advised to have their own facilities for treatment of effluent. The fund allotted for the project may be utilized for any other liquid waste treatment project."		
A(b)	Construction of internal roads and proper drainage in Edayar industrial estate	Industries department		Completed the constructed roads and drainage works in the locality of Edayar which comes	Completed the constructed roads and drainage works in the locality of Edayar	Road drainage works worth Rs. 9.47 crore have been completed in the Edayar Industrial Area under		

				under the project of MSE-CDP and costed 9 crore. 6.54 crore rupees has been sanctioned to PWD for works to be completed and construction of 34 lakh rupees drainage is under progress. 50% of work is completed. Process for the construction of internal road which worth Rs 6.20 crore is in progress. The work of 3 roads namely Seva Road, Sherin Highfab Road and Malaya Rub Road has been completed out of the allocation to Public Works Department. 3 pending out of which 30% completed Drainage upstream of Sunrise ISR is partially	which comes under the project of MSE-CDP and costed 9 crore. 6.54 crore rupees has been sanctioned to PWD for works to be completed and construction of 34 lakh rupees drainage is under progress. 50% of work is completed. Process for the construction of internal road which worth Rs 6.20 crore is in progress. The work of 3 roads namely Seva Road, Sherin Highfab Road and Malaya Rub Road has been completed out of the allocation to	the MSE CDP project and 48% of the drainage works have been completed out of the Rs. 34 lakhs allocated to the Public Works Department for the drainage works in the Edayar Industrial Area. Out of the Rs. 6.20 crore allocated to the Public Works Department for the maintenance and repair of internal roads, the work of 3 roads namely sevana Road, Sherin High Fab Road and Malaya Rub Road has been completed. Work has been started on 3 of them. Road work is progressing. The drainage of Sunrise TSR upstream has been partially completed. Therefore, it is not connected to		
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				completed and hence not connected to main drainage. Work has not started. It was suggested in the committee meeting to speed up the construction of canal.	Public Works Department. 3 pending out of which 30% completed Drainage upstream of Sunrise ISR is partially completed and hence not connected to main drainage. Work has not started. It was suggested in the committee meeting to speed up the construction of canal.	the main drainage. Work has been started in this regard. A joint inspection will be conducted with DIC, PCB and PWD in the Eloor Edayar area to make changes in the drainage system as suggested in the PCB's letter. The inspection will be conducted as soon as the date is received from the PWD.		
A(b)	Installation of common discharge pipe line at downstream of Pathalam Regulator Bridge	Industries department, Irrigation department	3 years	-	-	Based on the minutes of the Environment-Chief Secretary's monthly review meeting with RRC/ Stake holder Departments/ Authorities held on 9.2.2023 it is		

						recorded as "The CETP project may be dropped and all the units may be advised to have their own facilities for treatment of effluent. The fund allotted for the project may be utilized for any other liquid waste treatment project."		
E	Installation of Night vision surveillance cameras at the River Bank side	KSPCB	2020	Installation Completed	Installation Completed	Installation Completed	1 0 0	
A(a)(iv)	Periodical Monitoring of Eloor, Edayar, Kalamassery Industrial belts	KSPCB	2020	Routine inspection is going on. Night Surveillance also carried out continuously	Routine inspection is going on. Night Surveillance also carried out continuously	Routine inspection is going on. Night Surveillance also carried out continuously	1 0 0	
A(a)(iv)	Monitoring of quality of water at various intake point	Kerala Water Authority	2020					
A(a)(iv)	Installation of additional continuous online River water	KSPCB	2022	New water monitoring station has been set up at the Upstream side	New water monitoring station has been set up at the	New water monitoring station has been set up at the Upstream side	1 0 0	

	monitoring station			of the Pathalam bund. The online data of water monitoring is available in the office. Quality of water at upstream is satisfactory	Upstream side of the Pathalam bund. The online data of water monitoring is available in the office. Quality of water at upstream is satisfactory	of the Pathalam bund. The online data of water monitoring is available in the office. Quality of water at upstream is satisfactory		
A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Kadungallur Panchayath	2020	Waste discharging units are been identifies. It has been suggested to check whether there are establishments dumping garbage in Onjithodu	Waste discharging units are been identifies. It has been suggested to check whether there are establishments dumping garbage in Onjithodu	Notice given to the establishments identified and fine imposed and closed the outlet	50%	
E	Installation of cameras at the waste dumping spots	Kadungallur Panchayath	2020	33 Cameras installation works is being carried out. Works will be completed within 2 months.	33 Cameras installation works is being carried out.	Already 12 camera installed, instalation project for 33 cctv on camera going on	50%	Places identified for camera installation

A(b)	Identification of the establishments/commercial complexes/flats/houses/hotels etc who is discharging the sewage to the public drain	Choornikkara Panchayath	2020	10 Inspections have been done. Notices were given to 10 people. A fine of Rs 40,000 has been levied (August month) 10 Inspections have been done. Notices were given to 10 people. A fine of Rs 40,000 has been levied .	10 Inspections have been done. Notices were given to 10 people. A fine of Rs 40,000 has been levied (August month) 10 Inspections have been done. Notices were given to 10 people. A fine of Rs 40,000 has been levied .	inspection was conducted and notices were issued to 6 people. A fine of Rs. 10,000 has been collected.		
E	Installation of cameras at the waste dumping spots	Choornikkara Panchayath	2020	Cameras have been installed at 11 locations. A letter has been sent to KSEB to get electricity connection. Works will be completed within 1 month.	Cameras have been installed at 11 locations. A letter has been sent to KSEB to get electricity connection. Works will be completed within 1 month.	53 cameras have been installed. 13 more will be installed using KMRL CSR funds.		

LONG TERM MEASURES

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of september 2024	Progress in the month of october 2024	Progress in the month of november 2024	% works comple ted	Detail of work remain ing
A(b)	Construction of walkway, ring roads etc at the Periyar River bank at industrial belt.	Irrigation department	4 years	Completed soil investigation work for the construction of dyke wall. The survey works are still pending. The dyke wall design can be finalized after considering the investigation report and availability of space.	Completed soil investigation work for the construction of dyke wall. The survey works are still pending. The dyke wall design can be finalized after considering the investigation report and availability of space.	FS has been obtained for the construction of surveillance road and dike wall along the industrial belt. Soil investigation work is complete.. Survey work will start next week.		
C(i)	Fencing of the river banks along the stretches of waste disposal (Edamula stretch)	Cochin Municipal Corporation	1-2 years	Explanation will be given in next meeting	This work is put up in budget, will be commenced after election declaration.	Fencing works have been included in the budget. Beautification works are being carried out using own funds. Almost everything has		

C(iii)	Beautification of the river stretches (Edamula stretch)	Cochin Municipal Corporation	1-2 years	Explanation will be given in next meeting	This work is put up in budget, will be commenced after election declaration.	been completed. Work is underway to install about 300 cameras.		
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ACTION BY GROUND WATER DEPARTMENT

Sl. No.	Ref para item nos as per NGT Order no.673/2018 dated 20.09.2018	Activity	Progress in the month of september 2024	Progress in the month of october 2024	Progress in the month of november 2024	% works completed	Details of works remaining
1	B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks					
2	B(ii)	Ground water recharging / rain water harvesting					
3	B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps					
4	B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices					

Analysis report of polluted river stretches-R Periyar, R- Chithrapuzha,R-Kadambrayar, R-Chalakudy For the month of DECEMBER 2024							
STNCode	Sampling Date	Sampling Time	StnName	Type Of Water Body	Name Of Water Body	River Basin	
17	18.12.2024	11:00	Periyar at Eloor	River	Periyar River		
1338	3.12.2024	11:30	Periyar at SDP Aluva	River	Periyar River		
2334	11.12.2024	12:20	Periyar at Pathalam	River	Periyar River		
2335	11.12.2024	10:30	Periyar at Kalamassery	River	Periyar River		
3468	3.12.2024	11:50	Periyar at KWA Aluva	River	Periyar River		
2337	4.12.2024	10:45	Kadambrayar At Brahmapuram	River	Kadambrayar River		
2338	4.12.2024	10:15	Kadambrayar At Manackakadavu	River	Kadambrayar River		
1573	4.12.2024	11:35	Chithrapuzha At Irumpanam	River	Chithrapuzha River		
1154	3.12.2024	1:35	Chalakudy at Pulikkakadavu	River	Chalakudy River		

Sl. No.	Parameters	Values								
		Station Code								
		17	1338	2334	2335	3468	2337	2338	1573	1154
1	Temperature, °C	26	26	28	27	26	26	26	26	27
2	Dissolved Oxygen, mg/l	7.2	6.9	7.1	7.4	6.9	1.7	1.5	1.3	6.8
3	pH	7.7	7.6	6.8	7.1	7.3	6.8	6.7	6.6	7.4
4	Conductivity, µmhos/cm	878	66	244	57	60	174	90	130	52
5	BOD, mg/l	3.4	0.4	0.6	0.4	2	2.4	1.7	2.3	1.5
6	Nitrate-N, mg/l	0.32	0.72	0	0	0.43	0.32	0.11	0.5	0.27
7	Turbidity, NTU	0.7	2.3	2.9	2.6	2	6.8	9.4	8.7	4.9
8	Phenolphthalein alkalinity	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9	Total Alkalinity, as CaCO3	19	20	20	18	18	39	21	17	15
10	Chloride, mg/l	350	6.5	52	5.5	5.5	18	11.5	15	5
11	COD, mg/l	10.4	1.8	1.8	1.8	6.4	7.2	5.6	6.4	4.5
12	TKN, mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Ammoniacal-N, mg/l	0	0	0.16	0	0	0	0	0.08	0
14	Total Hardness, as CaCO3 mg/l	120	14	52	13	13	44	20	23	11
15	Calcium, as CaCO3 mg/l	51	10	47	9	9	38	15	19	7
16	Magnesium as CaCO3, mg/l	69	4	5	4	4	6	5	4	4
17	Sulphate, mg/l	18.2	0	13	0	0	12.5	0	14.9	0
18	Sodium, mg/l	228	5	32	3.3	3.9	11.7	7.5	9.9	3.25
19	Total Dissolved Solids, mg/l	661	40	139	32	35	96	52	73	29
20	Total Fixed Solids, mg/l	528	32	111	26	28	77	42	58	23
21	Total Suspended Solids, mg/l	12	7	13	8	15	10	8	11	9
22	Phosphate, mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.46	BDL
23	Boron, mg/l	0.121	0.029	0.028	0.122	0.016	0.033	0.018	0.023	0.025
24	Potassium, mg/l	10	1.9	6.00	1.2	1.5	3	1.8	2.1	1
25	Fluoride, mg/l	0.008	0.001	0.007	0.004	0.003	0.024	0.004	0.005	0.013
26	Total Coliform, MPN/100 ml	1500	700	N.A	7900	2700	3500	1500	2200	7000
27	Feecal Coliform, MPN/100 ml	1200	490	N.A	3400	920	1400	920	580	3800
28	Feecal Streptococci, MPN/100ml	430	220	N.A	430	310	200	700	430	1100

National Mission for Clean Ganga
Format for Submission of Monthly Progress Report by States/UTs
(Hon'ble NGT in the matter of OA No.673/2018 dated 06.12.2019)
RIVER TIRUR, MALAPPURAM

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		STP Repairing project DPC approved and sent to TS
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		Action plan prepared
5	Chief Secretaries may set up appropriate monitoring mechanism at state level • 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		

6.1	Progress Report may be comprised of details along with completion timelines on: - I Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment. - II <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 (v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;		Last updated report submitted was on December 21,2024 (i) Identified 17 drains out of which 9 were additionally identified on 11.07.2019 (ii) Tirur Fish Market STP - 45 KLD- working condition. Inspection was conducted by pollution control board and repairing works has been done as per the suggestions of pollution control board (ii) Tirur municipal Bus Stand STP-50 KLD – Repairing works under going. Inspection was conducted by pollution control board and STP sample collected and laboratory analysis has been done. iii) NIL (iv) De centralized treatment facilities, Disposal using sanitary landfills, composting operations, MRF, MCF etc. Slaughter house- completed civil work. Electrical installation works started. (v) Attached as Annexure II-Analysis report during the month of December 2024 (vi) Actions are being initiated to prevent illegal waste dumping. BMW are being disposed scientifically through IMAGE. Municipality have MRF, MCF facilities (vii) NA
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	(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), (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		viii) Complying (ix) NA (x) Complying (xi) Complying (xii) NA (xiii) Reported that encroachment survey is completed and now the process of laying survey stones is in progress.
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ACTION PLAN FOR RIVER TIRUR, KERALA

1	IRRIGATION DEPARTMENT							
No.	Activity	Implementing agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining
1.1.1	Strengthening the right side bund of Tirur-Ponnani puzha at Porur, ward no.I Tirur Municipality	Irrigation Department	6 Months	100%	100%	100%	100%	NIL
1.1.2	Cleaning and development of old Ponnani thodu at Thazhepalam	Irrigation Department	6 Months	100%	100%	100%	100%	NIL
1.1.3	Repair and Rehabilitation of Koottayi Regulator cum Bridge across Thirur-Ponnani Puzha in Mangalam Grama	Irrigation Department	18 Months	8%	8%	8%	8%	Cracks on girders and settlement of 4 piers towards right bank has seen on 18/11/2023. So the work can be continued only

	panchayatin Malappuram Dist							after addressing these issues. While preparing the estimate based on the study report from KERI Peechi, the solution for the new issues also has to be finalised. Meeting held on 29-11-2023 at the office of CE I&A in the presence of CE IDRB concluded to conduct a detailed technical study by an expert team. A Technical committee has been formed as per order number സ. ഉ (സാധാ) നം. 488/2024/WRD dated 28-06-2024.
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								Technical committee team visited the site on 08-08-2024 and suggested for hydro graphic survey at the site. Hydro graphic survey wing has completed the survey work for an amount of 1.34662/- lakhs . The hydrographic chart,Reduced level chart and Cad files submitted by Hydro graphic survey wing are submitted to CE I&A ,Tvm.
	2 TIRUR MUNICIPALITY – SHORT TERM ACTION PLAN							
No.	Activity	Implementing agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining

1.2.1	Provide septic tank for nearest houses	Tirur Municipality	Dec 2019	completed	completed	completed	100	NIL
1.2.2	Establishment of Solid waste Treatment Plant ThumboorMozhi Model Aerobic Bin	Tirur Municipality	March 2020	completed	completed	completed	100	NIL
1.2.3	Establishment of Non Degradable waste treatment Plant Resource Recovery facility Centre Plastic Shredding Unit Segregation shed	Tirur Municipality	March 2020			DPR under preparation		
1.2.4	Slaughtering House	Tirur Municipality	December 2020	On progress	On progress	Project tendered Agreement executed	90	NIL
1.2.5	Fencing on Bridgeside Thalakkadathur Bridge	Tirur Municipality	December 2020	completed	completed	completed	100%	NIL
1.2.6	Installation of CCTV Camera near the river Bank Thalakkadathur Bridge	Tirur Municipality	May 2020	Project has been submitted	No progress	Project ongoing		
1.2.7	Planting of Bamboo seedlings on the river bank (Thazhepalam)	Tirur Municipality	June 2020	Completed	Completed	Action taken		
1.2.8	Renovation of Effluent treatment plant at fish Market AMC Granted ETP with Aeorobic System	Tirur Municipality Tirur Municipality	June 2019	Completed	Completed	Completed	100%	NIL

1.2.9	Setting up of STP at Private Bus stand	Tirur Municipality	June 2020	Completed	Completed	Completed	100%	NIL
1.2.10	Setting up of a new drain after demolishing the old one. The old one was the hub of the waste water outlet of the shops and other establishments. The proposed drain is constructing in the middle of the road so as to avoid intrusion of pipes from outside	Tirur Municipality	June 2020	Completed	Completed	Completed	100%	NIL
1.2.11	Identification of illegal outlets into storm water drains and fine shall be imposed on such units	Tirur Municipality				Fine imposing mechanism going on		
	3	3	Cheriyamundam Grama panchayat					
No.	Activity	Implementing agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining
1.3.1	Fencing on bridge side Thalakkadatur	Cheriyamundam Grama panchayat	March 2020	completed	completed	completed	100%	NIL
	4.Kerala State Pollution Control Board							

[illegible]

No.	Activity	Implementing agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining
1.5.1.	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier status : As per Groundwater resources of Kerala, 2017 estimate a total number of 2 blocks (Tirur and Kuttippuram) comes under the Tirur river basin. These two blocks are semi-critical blocks and the stage of groundwater extraction ranges from 77.75 % to 77.92%)	Ground water Department		NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT		
1.5.2	Ground water recharging / rain water harvesting (Earlier status : The average pre -monsoon groundwater level ranges from 6.14mbgl - 8.49 mbgl.)			NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT		

1.5.3	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or handpumps (Earlier status : No observation well along the river stretches)			NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT		
1.5.4	For regulating use of ground water for irrigation purpose, adopting good irrigation practices (Earlier status : The total irrigation draft in the area ranges from 49.14 - 870.97 ha.m.)			NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT	NO ACTION INCLUDED UNDER THIS PLAN FOR GROUND WATER DEPARTMENT		

6. ACTION PLAN BY VARIOUS GRAMA PANCHAYATHs- Thalakkad, Vettom, Mangalam

No.	Activity	Implementing agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining
1.6.1	Protection of Thirur Ponnani River	Thalakkad grama panchayath handover fund to District Panchayat	31.03.2020	Completed	Completed	Completed	100%	NIL

1.6.2	Installation of CC TV camera on Yetterikadavu Kunjulikkadavu Mangattiri Bridge, Aikkanchiri Bridge, Paravanna Bridge	Vettom - KS SECURITY SYSTEM	Spill over due to lack of fund		Project for installation of cctv camera with high specification is decided to include 2024-25 annual projects			
1.6.3	Installation of CC TV camera	Mangalam grama panchayath Win Plus Agency, Kondotty	Completed	Completed	Completed	Completed	100%	NIL
1.6.4	Haritha Keralam Thirur-Ponnani puzha protection	Mangalam grama panchayath Nirmithi Kendra, Kozhikkodu	31.03.2020	Completed	Completed	Completed	100%	NIL

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RIVER KADALUNDI, MALAPPURAM

S. No.	Activity to be monitored	Timeline	Submission of progress by state/UT-Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		STP Repairing project DPC approved and sent to TS
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		Action plan prepared
5	Chief Secretaries may set up appropriate monitoring mechanism at state level • 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		

6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment. (II) <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 (v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river; (vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic waste and decentralizing waste processing, including waste generated from hotels, Ashrams, etc.	I) Identified 3 drains on 10/12/2018 at the Hajiyarpally stretch. Already Screen Net installed to both side of the doing. (ii) Malappuram municipality – 30KLD. Kerala State Pollution Control Board granted consent for the revamping activities. Revamping activities not yet started as funds were unavailable due to the prevailing election code of conduct Action plan prepared through KWA (iii) NIL (iv) Activities progressing with decentralised source level treatment method and 2506 devices are distributed. New Project approved for 6000 Ring compost unit. Project Approved .Got T.S.E. Tender. (v) Attached Analysis Report for the month of December 2024. More activities are progressing under the “Thelineer Ozhukum Navakeralam“ scheme (vi) Actions being initiated to prevent illegal waste dumping. Bio-Medical Waste collecting through IMAGE. Municipality has one MRF and 3 MCF’s. Dry Waste Collecting through HKS and stored in these facilities from where recyclable materials are handed over to authorised recyclers and rejects, to KEIL through Clean Kerala Company.
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	(vii)Ground water regulation (viii) Adopting good irrigation practices, (ix) Protection and management of food plain Zones (FPZ), (x) Rain water harvesting, (xi)Maintaining minimum Environmental flow of river (xii) Plantation on both sides of the river (xiii) Setting up biodiversity parks on flood plains by removing encroachment		(vii)NA (viii)Complying ix)NA (x)Complying (xi)Complying
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ACTION PLAN FOR RIVER KADALUNDI, MALAPPURAM, KERALA

	2. Malappuram Municipality - Short Term Solid & Liquid Waste Management Action Plan							
No.	Activity	Implementing agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% of works completed	Details of works remaining
1.1	Slaughter house and Poultry house	Malappuram Municipality	July 2010	No progress	No progress	No progress	0	No progress
1.2	Valiyathodu Cleaning - 8 Km length	Malappuram Municipality	Completed	Completed	Completed	Completed	100%	Completed
1.3	Installation of screening net in the Valiyathode	Malappuram Municipality	December 2019	Completed	Completed	Completed	100%	Completed
1.4	Identification of polluting points in Kadalundi river & awareness campaign - River walk(puzha	Malappuram Municipality	Completed	Completed	Completed	Completed	100%	Completed

	nadatham – 15 km length)							
1.5	Sanitation facility and treatment of waste water in the markets - Treatment plant	Malappuram Municipality	Completed	Completed	Completed	Completed	100%	Completed
1.6	The discharge of waste water from the surrounding houses to the Valiyathodu - Blocking of discharge of liquid waste	Malappuram Municipality	Completed	Completed	Completed	Completed	100%	Completed
1.7	Identification of illegal outlets into storm water drains and fine imposed on such units.	Malappuram Municipality	Ongoing	Completed	Completed	Completed	100%	Completed
1.8	Biodegradable waste Bio bins – 176 Bucket compost – 269 Thumboormuzhi Aerobic bins - 4 Biogas plant -55	Malappuram Municipality	March 2020 March 2020 March 2020	Completed	Completed	Completed	100%	Completed

			March 2020					
1.9	Non biodegradable waste MCF Plastic shredding and Bailing Echo Kiosk	Malappuram Municipality	March 2020 Completed March 2020	Completed In progress	Completed 40 mini MCF has been approved	Completed Completed	Completed Completed	Completed Completed
1.10	Identification and monitoring of illegal activities CC tv Network installation	Malappuram Municipality	March 2020	No progress	No progress	No progress	No progress	No progress
	2.Kerala State Pollution Control Board							
No.	Activity	Implementing agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining
2.1	River water quality Monitoring-	KSPCB	Ongoing; Monthly frequenc			Ongoing; Monthly frequency		

	Thirurangadi, Hajiyarpally National Water Quality Programme(NWMP)		y					
2.2	River water quality Monitoring - Thirurangadi, Kooriyad, Manikut, Hajiyarpally, Anakkayam, Oravambrum - State Water monitoring programme (SWMP)	KSPCB	Ongoing; Seasonal - Pre - monsoon, monsoon, post - monsoon			Ongoing; Monthly frequency		
2.3	Inspection and effluent quality monitoring of the flats, industrial units, service stations, hospitals, hotels etc. in Malappuram	KSPCB	Ongoing ; Interval; Red – 1 month,			Ongoing; Monthly frequency		

	Municipal area		Orange- 3 months, Green- 6 months					
	3.Ground Water Department							
No.	Activity	Implementing agency	Time line	Progress in the month of October 2024	Progress in the month of November 2024	Progress in the month of December 2024	% works completed	Details of works remaining
3.1.	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones/blocks (Earlier status : As per Groundwater resources of Kerala, 2017	Ground water Department		No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department		

	estimate a total number of 3 blocks (Mankada, Vengara and Malappuram) comes under the Kadalundi river basin. Out of three blocks Malappuram and Vengara are semi-critical blocks and the rest is a safe one, stage of groundwater extraction ranges from 69.43 % to 79.84%)							
3.2	Ground water recharging / rain water harvesting (Earlier status : The average pre - monsoon groundwater level ranges from 7.59mbgl - 13.57 mbgl. Groundwater	Ground water Department		No action included in the approved action plan to be performed by Ground Water Departme	No action included in the approved action plan to be performed by Ground Water Departme	No action included in the approved action plan to be performed by Ground Water Departme		

	Department has implemented 3 no of roof top rain water recharging through recharge pit schemes in Vengara block.)			nt	nt	nt		
3.3	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/bore wells or hand pumps (Earlier status : Groundwater Department has 6 observation dug wells and 14 bore wells in the river stretch. (report attached) (Map No: 7 attached))	Ground water Department		No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department	No action included in the approved action plan to be performed by Ground Water Department		
3.4	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	Ground water Department		No action included in the approved action plan to be performed by Ground	No action included in the approved action plan to be performed by Ground	No action included in the approved action plan to be performed by Ground		

	(Earlier status : The total irrigation draft in the area ranges from 979.683 - 1857.49 ha.m.)			Water Department	Water Department	Water Department		
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ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN TIRUR RIVER

FOR THE MONTH OF DECEMBER 2024

SI NO	Name of point	PARAMETERS				
		pH	DO (mg/l)	BOD (mg/l)	COD (mg/l)	FC(cfu/100ml)
1	Drain near Tirur Railway station	7.2	4.3	1.6	5.2	1040
2	Thazhepalam drain	7.3	5.4	2.5	6.5	2480
3	Naduvilangadi drain (old ponnanihodu)	Dried				
4	Annassery drain	Dried				
5	Canal at CV Land	Dried				
6	Canal at Mangalam thuruth	7.3	4.3	1.13	5.8	2160
7	Canal at Pullooni	7.3	4.3	2.2	6.6	160
8	Drain near Mangattiri bridge	Dried				
9	Drain near Ettirikkadavu bridge	7.6	4.7	1.5	5.4	60
10	Epothingal	7.1	4.3	1.2	5.3	1280
11	Asarikkadav	6.8	4.8	1.4	5.8	3440
12	Kandanathkadav	Dried				
13	Pancharamoola	Dried				
14	Kakadav	7.7	5.3	2.2	6.8	60
15	Kanathkadav	6.7	4.6	0.5	2.48	540
16	Drain near tirur railway station	Dried				
17	Payyanangadi (kadayithodu)	7.4	2.6	1.3	5.8	1280


ASSISTANT SCIENTIST

**ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN KADALUNDY RIVER
DECEMBER 2024 ALONG WITH HAJIYARPALLY**

Sl.No	Name of point	PARAMETERS				
		pH	DO (mg/l)	BOD(mg/l)	COD (mg/l)	FC (cfu/100 ml)
1	Valiyangadi drain	7.1	6.8	1.2	5	300
2	Valiyangadi bypass drain	Dried				
3	Valiyathod drain	7.1	6.2	1.4	5.5	520
4	Hajiyarpally	6.8	6.8	8.9	12.8	760



ASSISTANT SCIENTIST

ACTION PLAN FOR RIVER KALLAYI , KERALA

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.673/2018dated6/12/2018) For

the month of DECEMBER 2024– Kallayi polluted river stretch

Sl.No.	Activity to be monitored	Timeline	Submission of progress by state/UT-compliance status
1	Ensure 100%treatment of sewage at least in-situ remediation		
2	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STP must be ensured.		
3	Timeline for completing all steps of action plans including completion of setting up STP and their commissioning		
4	Chief secretaries may setup appropriate monitoring mechanisms at the 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 the state level must take place		

5	Progress report may be furnished by the state/UTs to ● Secretary,ministry of Jal Shakti ● Member secretary,CPCB		
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 in situ treatment. (ii) <u>status of STPs,I&D and sewage 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 (v) Latest water quality of polluted river,its tributaries,drains with flow details and ground water quality in the catchment of polluted river; (vi) preventing dumping of waste and scientific waste management including bio-medical waste plastic waste and decentralizing waste processing,including waste		

	generated from hotels,ashrams etc. (vii) Ground water regulation (viii) Adopting good irrigation practices (ix) protection and management of flood plain zones(FPZ), (x) Rainwater harvesting (xi) Maintaining minimum environmental flow of river (xii) Plantation on both sides of the river (xiii) Setting up bio diversity parks on flood plains by removing encroachment		Monthly progress report enclosed
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KOZHIKODE CORPORATION

No.	Activity	Implementing agency	Time line	Progress in the month of OCTOBER 2024	Progress in the month of NOVEMBR 2024	Progress in the month of DECEMBER 2024	% works completed	Details of works remaining
1	Identification of illegal outlets into storm water drain and issue Notice to such units	Kozhikode Corporation	30.12.2020			Continuing random inspections and imposing fine regularly	Continuing random inspections and imposing fine regularly	On going
2	Waste to energy project proposed at Njeliyamparamba	KSIDC	30.06.2021			Project dropped		
3	Establishment of Aerobic compost units	Kozhikode Corporation	Completed and functioning			Completed and functioning	100%	
4	Segregation of solid waste at source-level and treatment of household wastes	Kozhikode Corporation	30.06.2019			Completed	100% Coverage	

5	Setting up of rendering treatment plant for chicken stall wastes	Kozhikode Corporation	30.06.2019			Rendering plant installed in Thamarassery Panchayath(Fresh cut rendering plant).Chicken waste generated from chicken stalls under Kozhikode corporations are being transported to rendering plant at Thamarassery. 217chicken stall handed over the chicken waste in in to fresh cut rendering plant	100% Coverage	Functioning
6	Implementation of Green protocol unit	Kozhikode Corporation	30.06.19			On going		Ongoing
7	Setting up of common STP of (13MLD) (6 MLD At Kothibridge)&(7 MLD At Avikkal	Kozhikode Corporation	31.03.2020			Project dropped due to Public protest and court cases..	Project dropped	

8	Implementation of 27 MLD STP at Kottoli(Sarovaram)					After receiving Council approval, the project was submitted to the Government for Administrative sanction. The AS was deferred and directed to revise the proposal to increase the number of connections. KWA is revising the proposal. The administrative sanction for constructing a 27MLD STP at Kottoli(Sarovaram) was received on 08.01.2024. Technical sanction is pending with the KWA		27 MLD STP with 220 KLD FSTP as co-treatment with 54 km network
9	Cleaning of Canoli canal	Kozhikode Corporation	Periodical			Periodical cleaning		Continuous - seasonal

10	Purchasing of Solar Boat for Canoli canal cleaning	Kozhikode Corporation	31.03.2020			Project dropped		Project dropped
11	Installation of CCTV Camera for the Identification and monitoring of illegal activities	Kozhikode Corporation				On going		On going
12	Establishment of Mobile Septage Units	Kozhikode Corporation	31.03.2020			Project dropped		Project dropped
13	Action taken against dumping of wastes into river and public places	Kozhikode Corporation	On going action			Continuing random inspections and imposing fine regularly	Continuing random inspections and imposing fine regularly	Continuous
14	Cleaning of B.K canal	Kozhikode Corporation	31.03.2020			Completed	100%	
15	Establishment of treatment plant at Medical college (3MLD plant) 15.1-2 MLD plant proposed 15.2-1 MLD plant proposed	Kozhikode Corporation	31.03.2020			Completed and functioning.	100%	Functioning

16	Construction of drains at Y.M.RC Ayyankarcolony	Kozhikode Corporation	31.03.2020			70% coverage	70%	Progressing
17	Provide facility for MRF,RRF,Super MRF Three units existing 17.1 Njeliyanparamb 17.2 Industrial estate 17.3 Mayor Bhavan jayanthi nagar colony	Kozhikode Corporation				3.MRFand 5.MCFare already existing. New project going on.		New project under consideration
18	Identification of illegal outlets from house to storm water drain and issue Notice to such Houses	Kozhikode Corporation				On going – Continuous process	On going - Continuous process	Continuous
19	Establishment of Plastic shredding unit	Kozhikode Corporation				Project started		
20	Establishment of slaughtering unit	Kozhikode Corporation				Project under Consideration	Project under Consideration	Not reported

21	Cleaning of drains in Kozhikode Town	Kozhikode Corporation				On going - Continuous process		Continuous
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Perumanna Grama Panchayath

No .	Activity	Implementing agency	Progress in the month of SEPTEMBER 2024	Progress in the month of October 2024	Progress in the month of November 2024	% works completed	Details of works remaining
1	Outlets into storm Water drain and issue notice	Perumanna Panchayat, kozhikode			Inspection conducting regularly	Continuous	
2	Establishment of six aerobic compost units in panchayat	Perumanna Panchayat , Kozhikode through MGNREGS			Work completed(100% coverage)	100% coverage	Completed
3	Collection and segregation of solid waste in the river	Perumanna Panchayat			Work completed	Completed	
4	Setting up of 360 soak pit plant in all houses near the river area and panchayat	Perumanna Panchayat through MGNREGS			Progressing 70% completed	70% completed	Progressing
5	Implementation of 360 compost unit near river side and panchayat	Perumanna Panchayat , Kozhikode through MGNREGS			70% completed Progressing	70% completed	Progressing
6	Implementation of water flow project (Aluvangal Thazham Perumbatta Elamanapadam, Valiyapadam. Mampuzhthode	Perumanna Panchayat			Technical sanction obtained. Tender procedure completed.		

	Naveekarana, project no 260/2021 project cost 16.67 Lakhs).						
8	Cleaning of Mambuzha river (project name : Mambuzha water flow restoration, project no 01/2018-19	District Panchayat , Kozhikode			Work has been completed by District Panchayat, Kozhikode	Completed	
9	Establishment of 18 nos of mini MCF in different wards including Payyadi methal where the river is flowing	Perumanna Panchayat , Kozhikode through MGNREGS			Completed.	Completed.	
10	Collection of plastic Waste from the river	Perumanna Panchayat			Process will be done every year	Continuous	Continuous

Peruvayal Grama Panchayath

No .	Activity	Implementing agency	Time line	Progress in the month of OCTOBER 2024	Progress in the month of NOVEMBER 2024	Progress in the month of DECEMBER 2024	%works completed	Details of works remaining
1	Outlet in storm water drain and issued notice	Peruvayal G P	Continuous process			Ongoing		Continuous
2	Establishment of 56 units anaerobic composed unit in panchayat.	Peruvayal GP through MGNREGS	04/2023 to 03/2021			Ongoing	Ongoing	Continuous process
3	Setting up of 379 soak pit plant in all houses	Peruvayal G P	04/2023 to 03/2024			Completed	Completed	Completed
4	Cleaning of Mambuzha river (Mambuzha renovation) project no :190/2017-18	District panchayat Kozhikode	2017-2018			Completed	Completed	

5	Establishment of 8 numbers of mini MCF	Peruvayal GP through MGNREGS	04/2023 TO 03/2024			80% completed	80% completed	No further progress reported
6	Collection of plastic waste from the river	Peruvayal GP	Continuous process			Work completed	100% coverage	
7	Collection and segregation of solid waste in the river	Peruvayal GP	Continuous process			Ongoing	Ongoing	Continuous process
8	Establishment of Bio gas plant	Peruvayal GP	2023-24			Work completed (70% coverage)	70% coverage	No further progress reported
9	Well recharge	Peruvayal GP through MGNREGS	2023-24			Work completed (60% coverage) .	60% coverage	No further progress reported

Mavoor Grama Panchayat

No.	Activity	Implementing agency	Time line	Progress in the month of OCTOBER 2024	Progress in the month of NOVEMBER 2024	Progress in the month of DECEMBER 2024	%Work completed	Details of work remaining
1	Transportation of waste management to refinement unit	Konnari Advanced Polymers Limited	2022-23			Completed	100%	
2	Cleaning of Cherupuzha (Kuniyakadav to Thenghilakadav)	Mavoor GP	2022-23			Completed	100%	
3	Valayannor Thodu cleaning	MGNREGS	2022-23			Completed		
4	Arayancode kalchira Thodu Cleaning	MGNREGS	2022-23			Completed		
5	Vellaram Kandi Chirakkal thazham thodu	Mavoor GP	2023-24			Completed	100%	
6	Ring compost	Mavoor GP	2023-24			Completed		
7	Kadayan thodu	MGNREGS	2023-24			Completed	100%	
8	Chalippadam Punchappadam thodu	MGNREGS	2023-24			Completed	100%	
9	Puthiyottil thazham Elaram thodu	MGNREGS	2023-23			Completed	100%	

OLAVANNA GRAMAPANCHAYAT

No	Activity	Implementing Agency	Time line	Progress in the month of OCTOBER 2024	Progress in the month of NOVEMBER 2024	Progress in the month of DECEMBER 2024	% Works Completed	Details Of Remaining
1	Collection of plastic waste from the river	Olavanna Gramapanchay at	Continuous process			Completed	Completed	
2	Collection of segregation of solid waste in the river	Olavanna Gramapanchay at	Continuous process			Completed	Completed	
3	Cleaning of Mambuzha river	Olavanna Gramapanchay at	Continuous process			Process continuing	96% completed	Continuous
4	Well recharge	Olavanna Gramapanchay at through MGNREGS	4/2023 To 3/2024			Completed	100%	
5	Setting up of soak pit in houses	Olavanna Gramapanchay at through MGNREGS	4/2022 To 3/2024			Completed	100%	
6	Action taken against dumping of waste in to river	Olavanna Gramapanchay at	Continuous process			Process continuing	95% coverage	Continuous
7	Collection of non-biodegradable waste	Harith karma sena	Throughout the year			Process continuing	Process continuing	Continuous

IRRIGATION DEPARTMENT

N o	Activity	Implementing Agency	Timeline	Progress in the month of OCTOBER 2024	Progress in the month of NOVEMBER 2024	Progress in the month of DECEMBER 2024	% Works Completed	Details Of Remaining Work
1	Desilting of Kallayi river from Kaduppini to Kothi in Kozhikode Corporation	Irrigation department	31.03.2021	Kozhikode municipal corporation deposited Rs. 790 lakhs for desilting Kallai river under urban agglomeration scheme on 06.03.2021.SHO on 12.09.2024 and survey work started.				
2	Provide fencing on the sides of the Bridge	Irrigation department	31.03.2021	SHO on 22.08.2024 for provididng chain linked fencing on Kothi bridge(Work in progress 10% completed) & SHO on 20.07.2024 for provididng chain linked fencing for Mooriyad road bridge(Work in progress 32% completed)				
3	Dredging , Desilting & removal of weeds from E K canal (11.21 km)	Irrigation department	31.07.2019	Work entrusted to Kerala Waterways & Infrastructure Ltd (KWIL)				
4	Bio park in Kozhikode District	Irrigation department		Land for the proposed bio park is to be demarcated by the Revenue authorities after necessary boundary survey and subsequent bio cover works are to be done by the Social Forestry Department				
5	Flood prone mapping in Kozhikode District	Irrigation department		Action to be taken by the Hydrology Wing of Irrigation Department as this needs data collection, scientific analysis and modelling skills				

Kerala State Pollution Control Board

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of OCTOBER 2024	Progress in the month of NOVEMBER 2024	Progress in the month of DECEMBER 2024	% works completed	Details of works remaining
1	River water quality monitoring-Kallayi river National Water Quality Monitoring Programme (NWMP)	KSPCB	Ongoing ; monthly frequency			Process continuing		
2	River water quality monitoring-Kallayi rivers State Water Monitoring Programme,KSPCB fund(SWMP)	KSPCB	Ongoing. Seasonal monitoring- pre-monsoon , monsoon , post-monsoon			Process continuing		
3	Inspection and effluent quality monitoring of the flats,industrial units,service stations, hospitals, Hotels etc. In Malappuram Municipal area	KSPCB	Ongoing Interval: Red- 1 month. Orange-3months. Green-6months.			Process continuing		

Suchitwa Mission

No. (as per Action Plan)	Activity	Implementing agency	Timeline	Progress in the month of OCTOBER 2024	Progress in the month of NOVEMBER 2024	Progress in the month of DECEMBER 2024	% works completed	Details of works remaining
1	Board displaying messages against dumping to be placed in river banks	Suchitwa Mission	15.07.19			Process continuing		

Action Plan by Ground Water Department

No. (as per Action Plan)	Activity	Implementing agency	Time line Progress in the month of OCTOBER 2024	Progress in the month of NOVEMBER 2024	Progress in the month of DECEMBER 2024	% works completed	Details of works remaining
B(i)	Ground Water resources and regulation of ground water extraction by industries particularly in over exploited as critical zones / blocks	Ground Water Department			As per Ground water resources of Kerala,2017 estimate, Kozhikode Block comes under the Kallai river basin and the block is safe with stage of ground water Extraction 68.49%		
B(ii)	Ground water recharging/ rain water harvesting	Ground Water Department			The average pre - monsoon ground water level is 7.23 mbgl. Ground water Department has implemented 3 no of dug well recharge schemes at Kozhikode block		
B(iii)	Periodic ground waste quality assessment and remedial actions in case of contaminated ground water tube wells/ bore wells or hand pumps	Ground Water Department			Ground water Department has 1 observation Piezometer (BW) in the river stretch.)		
B(iv)	For regulating use of ground water for irrigation purpose, adopting good irrigation practices	Ground Water Department			The total irrigation draft in the Block area is 488.76 ha.m.)		

Action plan by irrigation Department

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of OCTOBER 2024	Progress in the month of NOVEMBER 2024	Progress in the month of DECEMBER 2024	% works completed	Details of works remaining
E	Dredging and desilting	Irrigation Department	3 years			Rs.790 lakhs deposited by kozhikode corporation for desilting of kallayi river under urban agglomeration on 06.03.2021. SHO on 12.09.2024 and survey work started		
E	E-flow (by micro water shed management)	Irrigation Department	3 years			Action to be taken by the hydrology wing of irrigation department as this needs data collection, scientific analysis and modeling skills. The matter has been communicated to the Hydrology wing Assistant Engineer at Kozhikode.		
E	Flood plain zone (protection and management)	Irrigation Department	3 years			Action to be taken by the hydrology wing of irrigation department. The matter has been communicated to the Hydrology wing.		
E	Greenery development (plant in trees on the banks)	Irrigation Department	3 years			Not reported		Not reported



KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

കോഴിക്കോട് റീജണൽ ഓഫീസ്
REGIONAL OFFICE, KOZHIKODE

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

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



ANALYSIS REPORT OF RIVER WATER

Report No.	K	R	O	S	5	3	6	3	/	1 to 5	Date:	0	9	0	1	2	0	2	-	5	
Date of Sample Collection	2	1	1	2	2	0	2	4			Date of receipt of the sample	2	1	1	2	2	0	2	4		
Sampled by:	RL,KKD										Sample ID	KL1, KL2, KL3, KL5,& KL6									
Sampling Method	APHA1060B,a										Sample Lab Code	KROS :5363/1-5									
Sample container	PC 2.5 L										Ref.letter No.	PCB/KKD/DO/ Polluted River Stretch/2018 Vol. IV, Dated 21.12.2024									
Source:	KALLAI RIVER WATER										Received from:	EE,DO,KKD									
Specific sampling location:	KALLAI POLLUTED RIVER STRETCH										Period of analysis:	21.12.2024-04.01.2025									
Sample preservation:	Ice box										No. of samples	5									
											Analysed by:	SNS/NSS/PVH/MT/AKR									
											Method:Standard Methods for the examination of Water and Wastewater, APHA AWWA WEF (22 nd Ed.)										
sl no	Parameters				unit	Method No.					SAMPLE ID										
											KL 1	KL 2	KL 3	KL 5	KL 6						
1	pH				-	APHA 4500-H+,B					7.14	7.17	7.19	7.4	6.96						
2	CONDUCTIVITY				µmhos /cm	APHA 2510B					2580	10370	13840	192500	50000						
3	BOD				mg/L	IS3025 (Part 44)					4.2	5	5.4	5.4	3.2						
4	DISSOLVED OXYGEN				mg/L	APHA 4500-O,C					2.9	2.9	2.3	2.3	2.7						
5	TOTAL COLIFORM,				CFU/100ml	APHA 9222B					880000	100000	100000	140000	140000						
6	FECAL COLIFORM				CFU/100ml	APHA 9222D					60000	60000	20000	60000	120000						
7	FECAL STREPTOCOCCUS				CFU/100ml	APHA 9230 C					200	1700	1000	700	800						
8	TEMPERATURE				°C	APHA 2550B					28	27	28	28	27						

Test method variation: None

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

KL1-KALLAI RIVER AT PALATHUMKANDI BRIDGE,POKKUNNU,KL2-KALLAI RIVER AT KADUPPINI BRIDGE, K.L3- KALLAI RIVER AT MANKAVU BRIDGE, KL5- KALLAI RIVER AT KALLAI BRIDGE & KL6- KALLAI RIVER AT KOTHI BRIDGE, THEKKEPURAM .

[Signature]

Scientist in charge

AE/10

80
15/1/25

National Mission for Clean Ganga

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

RIVER UPPALA, KASARGOD

S. No.	Activity to be monitored	Timeline	Submission of progress by State/UT- Compliance status
1	Ensure 100% treatment of sewage at least in-situ remediation		
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured		
2	Timeline for completing all steps of action plans including completion of setting up STPs and their Commissioning		
5	Chief Secretaries may set up appropriate monitoring mechanism at state level • 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		

6.1	Progress Report may be comprised of details along with completion timelines on: (I) Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment. (II) <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 (v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river; (vi) Preventing dumping of waste and scientific waste management including bio-medical waste, plastic		
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	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) (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		
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ACTION PLAN FOR RIVER UPPALA, KERALA

No. (as per Action Plan)	Activity	Implementing agency	Time line	Progress in the month of October2024	Progress in the month of November2024	Progress in the month of December2024	% works completed	Details of works remaining
C(ii)	Material collection facility. Operation	Mangalpady Grama Panchayath	2019				100 %	Completed.Kubanoor plant is working
C	Waste management including purchase of vehicle tocollect waste.	Mangalpady Grama Panchayath	2019- 2020					Approval of purchase of vehicle not sanctioned from government
E	Installation of camera	Mangalpady Grama Panchayath	March 2020					
C	Electrification of material collection facility	Manjeshwaram Grama Panchayat	2019- 2020	Electrified	Electrified	Electrified	100 %	Completed
C	Transportation of collected waste	Manjeshwaram Grama Panchayat	March 2020	16812 Kg Rejected Waste transported	27530 Kg Rejected Waste transported	1081 Kg Rejected Waste transported	100 %	Completed

E	Installation of camera	Manjeshwaram Grama Panchayat	March 2020	CCTV installed at 4 places by KELTRON, connected to police station and panchayath office 50% advance payment done to KELTRON for installation of 14 CC Camera	CCTV installed at 4 places by KELTRON, connected to police station and panchayath office 50% advance payment done to KELTRON for installation of 14 CC Camera	CCTV installed at 4 places by KELTRON, connected to police station and panchayath office 50% advance payment done to KELTRON for installation of 14 CC Camera. installation of 10 cameras, ongoing	100 %	Completed
C	Tying of net on both sides of the bridge	Irrigation Department	2019-20			A letter has sent to The Project Director Project implementation Unit NHAI Kannur for including fencing on both sides of bridges		

						across uppala river which are under construction as part of NH 66 widening.		
E	Continuous vigil on waste dumping on roads	Police Department						
A(a)	Water quality monitoring	KSPCB	Being done regularly					

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		18.12.2024
Nature and flow of the river		Moderate flow, water level increased
Sl.No	Parameters	Uppala Bridge
1	Temperature, °C	28
2	Dissolved Oxygen, mg/l	7.2
3	pH	6.8
4	Conductivity, µmhos/cm	1978.6
5	BOD, mg/l	1.6
6	Nitrate-N, mg/l	1.5646
7	Turbidity, NTU	1.72
8	Phenolphthalein Alkalinity, mg/l	
9	Total Alkalinity, mg/l	33
10	Chloride, mg/l	1000
11	COD, mg/l	5
12	TKN, mg/l	
13	Ammoniacal-N, mg/l	0.4
14	Total Hardness as CaCO ₃ , mg/l	38
15	Calcium as CaCO ₃ , mg/l	16
16	Magnesium as CaCO ₃ , mg/l	22
17	Sulphate, mg/l	5
18	Calcium (Ca ²⁺), mg/l	6.413
19	Magnesium (Mg ²⁺), mg/l	5.346
20	Sodium, mg/l	619.8
21	Total Dissolved Solids, mg/l	1750.3
22	Total Fixed Solids, mg/l	1400
23	Total Suspended Solids, mg/l	74
24	Phosphate, mg/l	0.3707
25	Boron, mg/l	0.613
26	Potassium, mg/l	6.88
27	Fluoride, mg/l	2.206
28	Total Coliform, cfu/100 ml	500
29	Fecal Coliform, cfu/100 ml	300
30	Fecal Streptococcus, cfu/100 ml	0
31	% SODIUM	96.6
32	SAR	43.74

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			18.12.2024
Nature and flow of the river			Water level increased, moderate flow
Sl.No	Parameters	Unit	Uppala River Near Bhagavathi Temple (Bhagavathi Gate)
1	Temperature	° C	26.5
2	pH	-	6.92
3	Conductivity	µmhos/cm	105.3
4	Turbidity	NTU	1.26
5	BOD	mg/l	2.8
6	Dissolved Oxygen	mg/l	7.1
7	Total Coliforms	cfu/100ml	400
8	Feecal Coliforms	cfu/100ml	200
9	Feecal Streptococcus	cfu/100ml	0
10	Chlorides	mg/l	22
11	Total Alkalinity	mg/l	33
12	Total Hardness	mg/l	44
13	Calcium Hardness	mg/l	12
14	Magnesium Hardness	mg/l	32
15	Calcium	mg/l	4.81
16	Magnesium	mg/l	7.780
17	Total Dissolved Solids	mg/l	84.592
18	Sodium	mg/l	13.08
19	Potassium	mg/l	1
20	Nitrate	mg/l	1.2315

Sd/-
Assistant Scientist

Monthly Analysis report of river -Pullur- December 2024		
Sampling Date: 16/12/2024		
Station Name		RIVER PULLUR AT PULLUR BRIDGE
Type of Water body		RIVER
Sl.No	Determinants	Values
1	Temperature, 0C	27
2	Dissolved Oxygen, mg/l	7.66
3	pH	6.07
4	Conductivity, μ mhos/cm	92.7
5	BOD, mg/l	1
6	Nitrate-N, mg/l	1.0111
7	Turbidity, NTU	1.11
8	Phenolphthalein Alkalinity, mg/l	–
9	Total Alkalinity, mg/l	19
10	Chloride, mg/l	13
11	COD, mg/l	5
12	TKN, mg/l	–
13	Ammoniacal-N, mg/l	0.4
14	Total Hardness as CaCO ₃ , mg/l	20
15	Calcium as CaCO ₃ , mg/l	14
16	Magnesium as CaCO ₃ , mg/l	6
17	Sulphate, mg/l	11.83
18	Calcium (Ca ²⁺), mg/l	5.611
19	Magnesium (Mg ²⁺), mg/l	1.458
20	Sodium, mg/l	9.85
21	Total Dissolved Solids, mg/l	70.128
22	Total Fixed Solids, mg/l	56.1024
23	Total Suspended Solids, mg/l	10
24	Phosphate, mg/l	0.5556
25	Boron, mg/l	1.578
26	Potassium, mg/l	1
27	Fluoride, mg/l	1.9505
28	Total Coliform, MPN/100 ml	300
29	Fecal Coliform, MPN/100 ml	200
30	Fecal Streptococcus, MPN/100 ml	100
31	% SODIUM	50.2
32	SAR	0.96

Sd/

ASSISTANT SCIENTIST

POLLUTED RIVER STRETCH MONITORING PROGRAM (AUGUST - 2024)												
Station Name		RIVER KORAYAR AT KANJIKODE										
Type of Water body		RIVER										
Completed by		DO, PALAKKAD										
Agency		Kerala State Pollution Control Board										
1	Station Code	2	3	2	6							
2	Date and time of sample taken (DD/MM/YY, HH/MM)	8/5/2024										
3	Weather	1	1	:	3	6						
4	Approximate depth of main stream	Cloudy		Clear √		Windy		Raining				
5	Color & Intensity	< 50 cm		50 – 100 cm √		>100 cm		Flood				
6	Odour	Clear √		Turbid		Green		Brown				
7	Floating Matter	1 = Light		2 = Moderate √		3 = High		Other				
8	Visible effluent discharges in proximity	None √		Fishy		H ₂ S		Other				
9	Human activities around the station	Floating Algae		Floating sludge		Oil & Grease		Water Hyacinth				
10	Location details	Industrial		Municipal sewage		None √						
11	Flow rate	Cattle wading √		Tourism spot		Fishing		Bathing √		Other		
12	Major polluting source	U/s of town or		D/s of town or		Pilgrim center/Bathing		None				
13	Uses of water in downstream	20 m ³ /s		Industrial effluent		MSW		PW		None √		
		Irrigation		Drinking water source √		Fishing		Domestic				
		Organized water source		Cultivation		Bathing Ghat		Others				

Sl.No	Determinant	Value
1	Temperature, °C	30
2	Dissolved Oxygen, mg/l	7.2
3	pH	8.01
4	Conductivity, µmhos/cm	770
5	BOD, mg/l	1.4
6	Nitrate-N, mg/l	0.68
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	139
10	Chloride, mg/l	125.4
11	COD, mg/l	4.2
12	TKN, mg/l	0.004
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	240
15	Calcium, as CaCO ₃ mg/l	198
16	Magnesium as CaCO ₃ mg/l	42
17	Sulphate, mg/l	62
18	Calcium (Ca ²⁺), mg/l	79.2
19	Magnesium (mg ²⁺), mg/l	10.2
20	Sodium, mg/l	54
21	Total Dissolved Solids, mg/l	462
22	Total Fixed Solids, mg/l	300.62
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.06
25	Boron, mg/l	BDL
26	Potassium, mg/l	6
27	Fluoride, mg/l	0.31
28	Total Coliform, MPN/100 ml	600
29	Fecal Coliform, MPN/100 ml	400
30	Fecal streptococci , MPN/100 ml	40
31	% Sodium	32.15
32	SAR	1.52

POLLUTED RIVER STRETCH MONITORING PROGRAM (AUGUST - 2024)												
Station Name		KALPATHYPUZHA AT KALPATHY										
Type of Water body		RIVER										
Completed by		DO, PALAKKAD										
Agency		Kerala State Pollution Control Board										
1	Station Code	3	4	6	0							
2	Date and time of sample taken (DDMMYY, HHMM)	8/5/2024										
		1	0	:	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		H ₂ S		Other				
7	Floating Matter	Floating Algae		Floating sludge		Oil & Grease		Water Hyacinth				
8	Visible effluent discharges in proximity	Industrial		Municipal sewage √		None						
9	Human activities around the station	Cattle wading √		Tourism spot		Fishing		Bathing √		Other		
10	Location details	U/s of town or		D/s of town or		Pilgrim center/Bathing		None				
11	Flow rate											
12	Major polluting source	Industrial effluent		MSW √		PW		None		Other		
		Irrigation		Drinking water source √		Fishing		Domestic				
13	Uses of water in downstream	Organized water source		Cultivation		Bathing Ghat		Others				

Sl.No	Determinant	Value
1	Temperature, °C	29
2	Dissolved Oxygen, mg/l	6.8
3	pH	7.9
4	Conductivity, µmhos/cm	732
5	BOD, mg/l	0.4
6	Nitrate-N, mg/l	0.04
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	164
10	Chloride, mg/l	117.94
11	COD, mg/l	1.2
12	TKN, mg/l	BDL
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	200
15	Calcium, as CaCO ₃ mg/l	163
16	Magnesium as CaCO ₃ mg/l	37
17	Sulphate, mg/l	38.7
18	Calcium (Ca ²⁺), mg/l	65.2
19	Magnesium (mg ²⁺), mg/l	8.99
20	Sodium, mg/l	68
21	Total Dissolved Solids, mg/l	425
22	Total Fixed Solids, mg/l	263.5
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.02
25	Boron, mg/l	BDL
26	Potassium, mg/l	5
27	Fluoride, mg/l	0.29
28	Total Coliform, MPN/100 ml	600
29	Fecal Coliform, MPN/100 ml	400
30	Fecal streptococci , MPN/100 ml	60
31	% Sodium	41.73
32	SAR	2.09

POLLUTED RIVER STRETCH MONITORING PROGRAM (SEPTEMBER- 2024)												
Station Name		RIVER KORAYAR AT KANJIKODE										
Type of Water body		RIVER										
Completed by		DO, PALAKKAD										
Agency		Kerala State Pollution Control Board										
1	Station Code	2	3	2	6							
2	Date and time of sample taken (DD/MM/YY, HH/MM)	9/3/2024										
3	Weather	Cloudy										
4	Approximate depth of main stream	< 50 cm										
5	Color & Intensity	Clear √										
6	Odour	None √										
7	Floating Matter	Floating Algae										
8	Visible effluent discharges in proximity	Industrial										
9	Human activities around the station	Cattle wading √										
10	Location details	U/s of town or										
11	Flow rate	20 m3/s										
12	Major polluting source	Industrial effluent										
13	Uses of water in downstream	Irrigation										
		Organized water source										

Sl.No	Determinant	Value
1	Temperature, °C	30
2	Dissolved Oxygen, mg/l	6.7
3	pH	7.3
4	Conductivity, µmhos/cm	789
5	BOD, mg/l	3
6	Nitrate-N, mg/l	0.32
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	168
10	Chloride, mg/l	131.93
11	COD, mg/l	9
12	TKN, mg/l	0.006
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	203
15	Calcium, as CaCO ₃ mg/l	170
16	Magnesium as CaCO ₃ mg/l	33
17	Sulphate, mg/l	38.7
18	Calcium (Ca ²⁺), mg/l	68
19	Magnesium (mg ²⁺), mg/l	8.01
20	Sodium, mg/l	76
21	Total Dissolved Solids, mg/l	490
22	Total Fixed Solids, mg/l	294
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.91
25	Boron, mg/l	BDL
26	Potassium, mg/l	9
27	Fluoride, mg/l	0.28
28	Total Coliform, MPN/100 ml	1000
29	Fecal Coliform, MPN/100 ml	900
30	Fecal streptococci , MPN/100 ml	420
31	% Sodium	43.50
32	SAR	2.32

POLLUTED RIVER STRETCH MONITORING PROGRAM (SEPTEMBER - 2024)												
Station Name		KALPATHYPUZHA AT KALPATHY										
Type of Water body		RIVER										
Completed by		DO, PALAKKAD										
Agency		Kerala State Pollution Control Board										
1	Station Code	3	4	6	0							
2	Date and time of sample taken (DD/MM/YY, HH/MM)	9/3/2024										
3	Weather	Cloudy										
4	Approximate depth of main stream	< 50 cm										
5	Color & Intensity	Clear √										
6	Odour	None √										
7	Floating Matter	Floating Algae										
8	Visible effluent discharges in proximity	Industrial										
9	Human activities around the station	Cattle wading √										
10	Location details	U/s of town or										
11	Flow rate	20 m3/s										
12	Major polluting source	Industrial effluent										
13	Uses of water in downstream	Irrigation										
		Organized water source										

Sl.No	Determinant	Value
1	Temperature, °C	30
2	Dissolved Oxygen, mg/l	7.5
3	pH	8.2
4	Conductivity, µmhos/cm	682
5	BOD, mg/l	3.3
6	Nitrate-N, mg/l	0.39
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	166
10	Chloride, mg/l	107.99
11	COD, mg/l	9.9
12	TKN, mg/l	0.006
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	199
15	Calcium, as CaCO ₃ mg/l	124
16	Magnesium as CaCO ₃ mg/l	75
17	Sulphate, mg/l	35.7
18	Calcium (Ca ²⁺), mg/l	46.8
19	Magnesium (mg ²⁺), mg/l	18.22
20	Sodium, mg/l	55.2
21	Total Dissolved Solids, mg/l	410
22	Total Fixed Solids, mg/l	246
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.19
25	Boron, mg/l	BDL
26	Potassium, mg/l	6.8
27	Fluoride, mg/l	0.28
28	Total Coliform, MPN/100 ml	700
29	Fecal Coliform, MPN/100 ml	500
30	Fecal streptococci , MPN/100 ml	200
31	% Sodium	37.40
32	SAR	1.7

POLLUTED RIVER STRETCH MONITORING PROGRAM (OCTOBER - 2024)												
Station Name		RIVER KORAYAR AT KANJIKODE										
Type of Water body		RIVER										
Completed by		DO, PALAKKAD										
Agency		Kerala State Pollution Control Board										
1	Station Code	2	3	2	6							
2	Date and time of sample taken (DD/MM/YY, HH/MM)	10/4/2024										
3	Weather	1	1	:	4	5						
4	Approximate depth of main stream	Cloudy		Clear √				Windy		Raining		
5	Color & Intensity	< 50 cm		50 – 100 cm √				>100 cm		Flood		
6	Odour	Clear √		Turbid				Green		Brown		
7	Floating Matter	1 = Light		2 = Moderate √				3 = High				
8	Visible effluent discharges in proximity	None √		Fishy				H ₂ S		Other		
9	Human activities around the station	Floating Algae		Floating sludge				Oil & Grease		Water Hyacinth		
10	Location details	Industrial		Municipal sewage				None √				
11	Flow rate	Cattle wading √		Tourism spot				Fishing		Bathing √		
12	Major polluting source	U/s of town or		D/s of town or				Pilgrim center/Bathing		None		
13	Uses of water in downstream	20 m ³ /s		Industrial effluent				MSW		PW		
		Irrigation		Drinking water source √				Fishing		Domestic		
		Organized water source		Cultivation				Bathing Ghat		Others		

Sl.No	Determinant	Value
1	Temperature, °C	28
2	Dissolved Oxygen, mg/l	7.8
3	pH	8.2
4	Conductivity, µmhos/cm	779
5	BOD, mg/l	2.2
6	Nitrate-N, mg/l	0.18
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	205
10	Chloride, mg/l	120
11	COD, mg/l	6.6
12	TKN, mg/l	0.005
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	235
15	Calcium, as CaCO ₃ mg/l	152
16	Magnesium as CaCO ₃ mg/l	83
17	Sulphate, mg/l	36.9
18	Calcium (Ca ²⁺), mg/l	60.8
19	Magnesium (mg ²⁺), mg/l	20.16
20	Sodium, mg/l	60
21	Total Dissolved Solids, mg/l	510
22	Total Fixed Solids, mg/l	331
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.17
25	Boron, mg/l	BDL
26	Potassium, mg/l	7.2
27	Fluoride, mg/l	0.3
28	Total Coliform, MPN/100 ml	500
29	Fecal Coliform, MPN/100 ml	300
30	Fecal streptococci , MPN/100 ml	20
31	% Sodium	34.81
32	SAR	1.7

POLLUTED RIVER STRETCH MONITORING PROGRAM (OCTOBER - 2024)												
Station Name		KALPATHYPUZHA AT KALPATHY										
Type of Water body		RIVER										
Completed by		DO, PALAKKAD										
Agency		Kerala State Pollution Control Board										
1	Station Code	3	4	6	0							
2	Date and time of sample taken (DD/MM/YY, HH/MM)	10/4/2024										
3	Weather	1	0	:	3	5						
4	Approximate depth of main stream	Cloudy		Clear √				Windy		Raining		
5	Color & Intensity	< 50 cm		50 – 100 cm				>100 cm√		Flood		
6	Odour	Clear √		Turbid				Green		Brown		
7	Floating Matter	1 = Light		2 = Moderate √				3 = High				
8	Visible effluent discharges in proximity	None √		Fishy				H ₂ S		Other		
9	Human activities around the station	Floating Algae		Floating sludge				Oil & Grease		Water Hyacinth		
10	Location details	Industrial		Municipal sewage √				None				
11	Flow rate	Cattle wading √		Tourism spot				Fishing		Bathing √		
12	Major polluting source	U/s of town or		D/s of town or				Pilgrim center/Bathing		None		
13	Uses of water in downstream	20 m ³ /s		Industrial effluent				MSW √		PW		
		Irrigation		Drinking water source √				Fishing		Domestic		
		Organized water source		Cultivation				Bathing Ghat		Others		

Sl.No	Determinant	Value
1	Temperature, °C	28
2	Dissolved Oxygen, mg/l	5.6
3	pH	8.2
4	Conductivity, µmhos/cm	445
5	BOD, mg/l	2.6
6	Nitrate-N, mg/l	0.18
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	179
10	Chloride, mg/l	35.98
11	COD, mg/l	7.8
12	TKN, mg/l	0.006
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	180
15	Calcium, as CaCO ₃ mg/l	122
16	Magnesium as CaCO ₃ mg/l	58
17	Sulphate, mg/l	11.3
18	Calcium (Ca ²⁺), mg/l	48.8
19	Magnesium (mg ²⁺), mg/l	14.09
20	Sodium, mg/l	20.8
21	Total Dissolved Solids, mg/l	290
22	Total Fixed Solids, mg/l	475
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.11
25	Boron, mg/l	BDL
26	Potassium, mg/l	6.1
27	Fluoride, mg/l	0.3
28	Total Coliform, MPN/100 ml	800
29	Fecal Coliform, MPN/100 ml	500
30	Fecal streptococci , MPN/100 ml	100
31	% Sodium	19.40
32	SAR	0.67

POLLUTED RIVER STRETCH MONITORING PROGRAM (DECEMBER - 2024)												
Station Name	RIVER KORAYAR AT KANJIKODE											
Type of Water body	RIVER											
Completed by	DO, PALAKKAD											
Agency	Kerala State Pollution Control Board											
1 Station Code	2	3	2	6								
2 Date and time of sample taken (DD/MM/YY, HH/MM)	12/2/2024											
3 Weather	1	0	:	5	5							
4 Approximate depth of main stream	Cloudy			Clear √			Windy			Raining		
5 Color & Intensity	< 50 cm			50 – 100 cm √			>100 cm			Flood		
6 Odour	Clear √			Turbid			Green			Brown		
7 Floating Matter	1 = Light			2 = Moderate √			3 = High			Other		
8 Visible effluent discharges in proximity	None √			Fishy			H ₂ S			Water Hyacinth		
9 Human activities around the station	Floating Algae			Floating sludge			Oil & Grease			None √		
10 Location details	Industrial			Municipal sewage			Fishing			Bathing √		
11 Flow rate	Cattle wading √			Tourism spot			Pilgrim center/Bathing			None		
12 Major polluting source	U/s of town or			D/s of town or			Industrial effluent			Other		
13 Uses of water in downstream	20 m ³ /s			Irrigation			Drinking water source √			Fishing		
	Organized water source			Cultivation			Bathing Ghat			Others		

Sl.No	Determinant	Value
1	Temperature, °C	26
2	Dissolved Oxygen, mg/l	7.13
3	pH	7.36
4	Conductivity, µmhos/cm	1078
5	BOD, mg/l	1.6
6	Nitrate-N, mg/l	0.5
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	176
10	Chloride, mg/l	184
11	COD, mg/l	4.4
12	TKN, mg/l	0.004
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	261
15	Calcium, as CaCO ₃ mg/l	194
16	Magnesium as CaCO ₃ mg/l	67
17	Sulphate, mg/l	90
18	Calcium (Ca ²⁺), mg/l	77.6
19	Magnesium (mg ²⁺), mg/l	16.28
20	Sodium, mg/l	102
21	Total Dissolved Solids, mg/l	710
22	Total Fixed Solids, mg/l	426
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.24
25	Boron, mg/l	BDL
26	Potassium, mg/l	15
27	Fluoride, mg/l	0.3
28	Total Coliform, MPN/100 ml	400
29	Fecal Coliform, MPN/100 ml	200
30	Fecal streptococci , MPN/100 ml	40
31	% Sodium	44.17
32	SAR	2.75

POLLUTED RIVER STRETCH MONITORING PROGRAM (DECEMBER - 2024)												
Station Name	KALPATHYPUZHA AT KALPATHY											
Type of Water body	RIVER											
Completed by	DO, PALAKKAD											
Agency	Kerala State Pollution Control Board											
1 Station Code	3	4	6	0								
2 Date and time of sample taken (DD/MM/YY, HH/MM)	12/2/2024											
3 Weather	1	0	:	0	0							
4 Approximate depth of main stream	Cloudy			Clear √			Windy			Raining		
5 Color & Intensity	< 50 cm			50 – 100 cm			>100 cm√			Flood		
6 Odour	Clear √			Turbid			Green			Brown		
7 Floating Matter	1 = Light			2 = Moderate √			3 = High			Other		
8 Visible effluent discharges in proximity	None √			Fishy			H ₂ S			Water Hyacinth		
9 Human activities around the station	Floating Algae			Floating sludge			Oil & Grease			None		
10 Location details	Industrial			Municipal sewage √			Fishing			Bathing √		
11 Flow rate	Cattle wading √			Tourism spot			Pilgrim center/Bathing			None		
12 Major polluting source	U/s of town or			D/s of town or			Industrial effluent			Other		
13 Uses of water in downstream	20 m ³ /s			Irrigation			Drinking water source √			Fishing		
	Organized water source			Cultivation			Bathing Ghat			Others		

Sl.No	Determinant	Value
1	Temperature, °C	24
2	Dissolved Oxygen, mg/l	6.26
3	pH	7.25
4	Conductivity, µmhos/cm	381
5	BOD, mg/l	0.8
6	Nitrate-N, mg/l	0.5
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	114
10	Chloride, mg/l	50
11	COD, mg/l	2
12	TKN, mg/l	BDL
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	120
15	Calcium, as CaCO ₃ mg/l	85
16	Magnesium as CaCO ₃ mg/l	35
17	Sulphate, mg/l	7
18	Calcium (Ca ²⁺), mg/l	34
19	Magnesium (mg ²⁺), mg/l	8.5
20	Sodium, mg/l	33.3
21	Total Dissolved Solids, mg/l	215
22	Total Fixed Solids, mg/l	129
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.15
25	Boron, mg/l	BDL
26	Potassium, mg/l	6
27	Fluoride, mg/l	0.3
28	Total Coliform, MPN/100 ml	400
29	Fecal Coliform, MPN/100 ml	200
30	Fecal streptococci , MPN/100 ml	100
31	% Sodium	36.18
32	SAR	1.32

POLLUTED RIVER STRETCH MONITORING PROGRAM (NOVEMBER - 2024)												
Station Name		RIVER KORAYAR AT KANJIKODE										
Type of Water body		RIVER										
Completed by		DO, PALAKKAD										
Agency		Kerala State Pollution Control Board										
1	Station Code	2	3	2	6							
2	Date and time of sample taken (DD/MM/YY, HH/MM)	11/1/2024										
		1	2	:	0	0						
3	Weather	Cloudy		Clear √		Windy		Raining				
4	Approximate depth of main stream	< 50 cm		50 – 100 cm √		>100 cm		Flood				
5	Color & Intensity	Clear √		Turbid		Green		Brown				
		1 = Light		2 = Moderate √		3 = High						
6	Odour	None √		H ₂ S		Other						
7	Floating Matter	Floating Algae		Floating sludge		Oil & Grease		Water Hyacinth				
8	Visible effluent discharges in proximity	Industrial		Municipal sewage		None √						
9	Human activities around the station	Cattle wading √		Tourism spot		Fishing		Bathing √		Other		
10	Location details	U/s of town or		D/s of town or		Pilgrim center/Bathing		None				
11	Flow rate	20 m ³ /s										
12	Major polluting source	Industrial effluent		MSW		PW		None √		Other		
13	Uses of water in downstream	Irrigation		Drinking water source √		Fishing		Domestic				
		Organized water source		Cultivation		Bathing Ghat		Others				

Sl.No	Determinant	Value
1	Temperature, °C	28
2	Dissolved Oxygen, mg/l	6.8
3	pH	8.26
4	Conductivity, µmhos/cm	596
5	BOD, mg/l	2.94
6	Nitrate-N, mg/l	0.21
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	136
10	Chloride, mg/l	78.2
11	COD, mg/l	8.82
12	TKN, mg/l	0.01
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	186
15	Calcium, as CaCO ₃ mg/l	127
16	Magnesium as CaCO ₃ mg/l	59
17	Sulphate, mg/l	44.5
18	Calcium (Ca ²⁺), mg/l	50.8
19	Magnesium (mg ²⁺), mg/l	14.33
20	Sodium, mg/l	47.9
21	Total Dissolved Solids, mg/l	390
22	Total Fixed Solids, mg/l	234
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.19
25	Boron, mg/l	BDL
26	Potassium, mg/l	9.4
27	Fluoride, mg/l	0.2
28	Total Coliform, MPN/100 ml	300
29	Fecal Coliform, MPN/100 ml	200
30	Fecal streptococci , MPN/100 ml	100
31	% Sodium	34.46
32	SAR	1.53

POLLUTED RIVER STRETCH MONITORING PROGRAM (NOVEMBER - 2024)												
Station Name		KALPATHYPUZHA AT KALPATHY										
Type of Water body		RIVER										
Completed by		DO, PALAKKAD										
Agency		Kerala State Pollution Control Board										
1	Station Code	3	4	6	0							
2	Date and time of sample taken (DD/MM/YY, HHMM)	11/1/2024										
3	Weather	1	0	:	3	0						
4	Approximate depth of main stream	Cloudy		Clear √		Windy		Raining				
5	Color & Intensity	< 50 cm		50 – 100 cm		>100 cm√		Flood				
6	Odour	Clear √		Turbid		Green		Brown				
7	Odour	1 = Light		2 = Moderate √		3 = High		Other				
8	Odour	None √		Fishy		H ₂ S		Other				
9	Floating Matter	Floating Algae		Floating sludge		Oil & Grease		Water Hyacinth				
10	Visible effluent discharges in proximity	Industrial		Municipal sewage √		None						
11	Human activities around the station	Cattle wading √		Tourism spot		Fishing		Bathing √		Other		
12	Location details	U/s of town or		D/s of town or		Pilgrim center/Bathing		None				
13	Flow rate											
14	Major polluting source	Industrial effluent		MSW √		PW		None		Other		
15	Uses of water in downstream	Irrigation		Drinking water source √		Fishing		Domestic				
		Organized water source		Cultivation		Bathing Ghat		Others				

Sl.No	Determinant	Value
1	Temperature, °C	28
2	Dissolved Oxygen, mg/l	6.53
3	pH	8.1
4	Conductivity, µmhos/cm	556
5	BOD, mg/l	3.46
6	Nitrate-N, mg/l	0.18
7	Turbidity, NTU	BDL
8	Phenolphthalein Alkalinity, as CaCO ₃ mg/l	BDL
9	Total Alkalinity, as CaCO ₃ mg/l	112
10	Chloride, mg/l	85
11	COD, mg/l	10.38
12	TKN, mg/l	0.03
13	Ammoniacal-N, mg/l	BDL
14	Hardness, as CaCO ₃ mg/l	130
15	Calcium, as CaCO ₃ mg/l	75
16	Magnesium as CaCO ₃ mg/l	55
17	Sulphate, mg/l	40
18	Calcium (Ca ²⁺), mg/l	30
19	Magnesium (mg ²⁺), mg/l	13.36
20	Sodium, mg/l	64
21	Total Dissolved Solids, mg/l	364
22	Total Fixed Solids, mg/l	218
23	Total Suspended Solids, mg/l	BDL
24	Phosphate, mg/l	0.13
25	Boron, mg/l	BDL
26	Potassium, mg/l	5.3
27	Fluoride, mg/l	0.2
28	Total Coliform, MPN/100 ml	400
29	Fecal Coliform, MPN/100 ml	200
30	Fecal streptococci , MPN/100 ml	80
31	% Sodium	50.43
32	SAR	2.44

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KERALA STATE POLLUTION CONTROL BOARD

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DISTRICT OFFICE, THIRUVANANTHAPURAM
ജില്ലാ ഓഫീസ്, തിരുവനന്തപുരം

T. C. 12/96 (4,5), PLAMOODU JN., PATTOM P.O, THIRUVANANTHAPURAM - 695 004

ടി.സി. 12/96 (4,5), പ്ലാമൂട് ജംഗ്ഷൻ, പട്ടം പി.ഒ, തിരുവനന്തപുരം - 695 004



ANALYSIS REPORT

No: 202712

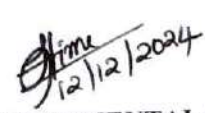
Date: 12/12/2024

Source		STP Muttathara, Thiruvananthapuram		
Sample Received From		JSA1 & JSA2	Date of sample collection	04/12/2024
Date of Receipt		04/12/2024	Sample ID	34
Sl. No.	Parameter	Unit	Value	Permissible Limit
1	pH	-	7.0	6.5 - 9.0
2	Total Suspended Solids	mg/L	17	< 50
3	BOD (3 days @ 27°C)	mg/L	6.9	20
4	COD	mg/L	28	-
5	Oil & Grease	mg/L	BDL	-
6	Fecal Coliform	cfu/100ml	Nil	< 1000

Remarks: BDL - Below Detection Level

Verified by  12/12/2024

Scientist-in-Charge of Analysis

 12/12/2024

ASSISTANT ENVIRONMENTAL SCIENTIST

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ജില്ലാ ഓഫീസ്, തിരുവനന്തപുരം

T. C. 12/96 (4,5), PLAMOODU JN., PATTOM P.O, THIRUVANANTHAPURAM - 695 004

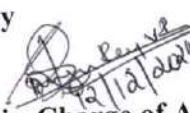
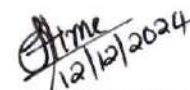
ടി.സി. 12/96 (4,5), പ്ലാമൂട്ട് ജംഗ്ഷൻ, പട്ടം പി.ഒ, തിരുവനന്തപുരം - 695 004



ANALYSIS REPORT

No: 202710

Date: 12/12/2024

Source		Medical College Hospital, Thiruvananthapuram.		
Sample Received From		JSA 1& JSA 2	Date of sample collection	04/12/2024
Date of Receipt		04/12/224	Sample ID	43 (STP Outlet)
Sl. No.	Parameter	Unit	Value	Permissible Limit
1	pH	-	3.5	6.5 - 8.5
2	Total Suspended Solids	mg/L	18	10
3	BOD (3 days @ 27°C)	mg/L	1.4	3
4	Oil & Grease	mg/L	BDL	1
5	Bio-assay Test	-	100% mortality occurred within 1 hour.	90% survival of fish after 96 hours in 100% effluent prior to disinfection.
6	COD	mg/L	100	-
7	Total Coliform	cfu/100ml	Nil	-
8	Fecal Coliform	cfu/100ml	Nil	-
Remarks: BDL-Below Detection Level				
Verified by				
 Scientist-in-Charge of Analysis				
 ASSISTANT ENVIRONMENTAL SCIENTIST				

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ജില്ലാ ഓഫീസ്, തിരുവനന്തപുരം

T. C. 12/96 (4,5), PLAMOODU JN., PATTOM P.O., THIRUVANANTHAPURAM - 695 004

ടി.സി. 12/96 (4,5), പ്ലാമൂട് ജംഗ്ഷൻ, പട്ടം പി.ഒ, തിരുവനന്തപുരം - 695 004

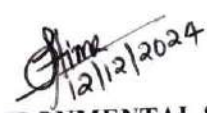


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ANALYSIS REPORT

No: 202711

Date: 12/12/2024

Source	Kinfra, Pallithura, Thiruvananthapuram.			
Sample Received From	JSA-1&JSA-2	Date of sample collection	04/12/2024	
Date of Receipt	04/12/2024	Sample ID	48	
Sl. No.	Parameter	Unit	Value	Permissible Limit
1	pH	-	7.3	6.5 - 8.5
2	Total Suspended Solids	mg/L	93	100
3	BOD (3 days @ 27°C)	mg/L	11.3	30
4	COD	mg/L	120	250
5	Oil & Grease	mg/L	BDL	10
6	Fecal Coliform	cfu/100ml	Nil	--
Remarks: BDL - Below Detection Level				
Verified by 				
Scientist-in-Charge of Analysis			 12/12/2024 ASSISTANT ENVIRONMENTAL SCIENTIST	



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KERALA STATE POLLUTION CONTROL BOARD
DISTRICT OFFICE, ALAPPUZHA



എസ്.എൻ.വി.സദനം, ന്യൂ ചാത്തനാട്, ഹെഡ് പോസ്റ്റ് ഓഫീസ്, ആലപ്പുഴ - 688001

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E-mail: alpy.pcb@gmail.com Telephone : 0477 - 2235384 web: www.keralapcb.nic.in

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ANALYSIS REPORT (WATER/EFFLUENT/SOLID WASTE)		No.213	Date: 16/1/2025
Source	Chathanad STP		
Date of sample Collection	30/12/24	Sample received from	AE3
Ref.No.		Period of analysis	
Date of Receipt	30/12/24		
Scientist-in-charge of analysis		ASSISTANT SCIENTIST	

Sl.no	Parameter	Unit	Value			
			Sample No.			
			CH			Limit
1	pH	-	6.9			6.5-8.5
2	Suspended Solids	mg/L	10			100
3	BOD	mg/L	17.6			30
4	Oil and grease	mg/L	BDL			10
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
Details of samples:						
Remarks:						


6/1/25
AJIS MARIA
ASSISTANT SCIENTIST



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KERALA STATE POLLUTION CONTROL BOARD
DISTRICT OFFICE, ALAPPUZHA

എസ്.എൻ.വി.സദനം, ന്യൂ ചാത്തനാട്, ഹെഡ് പോസ്റ്റ് ഓഫീസ്, ആലപ്പുഴ - 688001

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ANALYSIS REPORT (WATER/EFFLUENT/SOLID WASTE)		No. 215	Date: 16/1/2025
Source	KSIDC Mega Food Park, Pallipuram, Cherthala		
Date of sample Collection	4/12/24	Sample received from	AE4
Ref.No.		Period of analysis	
Date of Receipt	4/12/24		
Scientist-in-charge of analysis		ASSISTANT SCIENTIST	

Sl.no.	Parameter	Unit	Value				
			Sample No.				Limit
			MFP				
1	pH	-	7.8				6.5 – 8.5
2	Suspended Solids	mg/L	10				100
3	BOD	mg/L	10				30
4	Oil and grease	mg/L	BDL				10
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
Details of samples							
Remarks:							


16/1/25

AJIS MARIA
ASSISTANT SCIENTIST



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ANALYSIS REPORT (WATER/EFFLUENT/SOLID WASTE)		No. 214	Date: 16/1/2025
Source	Sea Food Park ,Aroor, Cherthala		
Date of sample Collection	21/12/24	Sample received from	AE4
Ref.No.		Period of analysis	
Date of Receipt	21/12/24		
Scientist-in-charge of analysis		ASSISTANT SCIENTIST	

Sl.no	Parameter	Unit	Value			
			Sample No.			Limit
			SFP			
1	pH	-	7.9			6.5-8.5
2	Suspended Solids	mg/L	BDL			100
3	BOD	mg/L	4.2			30
4	Oil and grease	mg/L	BDL			10
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Details of samples:

Remarks:

16/1/25

AJIS MARIA
ASSISTANT SCIENTIST

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DISTRICT OFFICE, KOTTAYAM, Sreenivasa Iyer Road, Kottayam-686001



“ഭരണഭാഷ - മാതൃഭാഷ”

Analysis Report

Analysis Report No.	2304	Date	08/11/2024	Format No: nil
Application No		Date of collection		24/10/2024
Received From	AE1	Date of Receipt		24/10/2024
No. Of Sample	1	Period of Analysis		24/10/24 - 07/11/2024
Source	CSTP house boat at kumarakom	Scientist in charge		JYOTSNA BABY
Sample Condition	Fit for analysis	Sample Type		Water
Sample Collected By	AE1	Sample volume & container type		2 L Plastic container
Sample Preservation	AS per APHA/IS:3025(Part-1)			

Sample ID: CSTP house boat at kumarakom

Sl No	Parameters	Unit	Filter out	Test Method	Limit
1.	pH	----	7	IS Part 44	5.5-9.0
2.	BOD	mg/L	14	APHA,5220 B,5-18 to 5-19	30
4.	SS	mg/L	18	APHA 2540D	100.0
5.	Oil and Grease	mg/L	BDL	APHA 5520B	10.0

Checked by

Authorised by

Assistant Scientist



KERALA STATE POLLUTION CONTROL BOARD
CENTRAL LABORATORY

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ബോർഡ്

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TC 8525

TEST REPORT

Analysis Report No.	PCB/CL/629/2024-25	Date	11.12.2024	Format No.	PCB/CL/CH/F-7
Ref. No.	PCB/EKM/DO-1/ Dated 09.08.2024	Date of Collection	09.08.2024		
Received From	Environmental Engineer	Date of Receipt	09.08.2024		
No. of Sample	01	Period of Analysis	11.08.2024 – 02.10.2024		
Source	CSTP of GCDA at JNI.	Scientist-in-charge	Dr. Josemin		
Sample Condition	Fit for analysis	Sample Type	Water Samples		
Sample collected by	The Environmental Engineer, District Office, Ernakulam	Sample volume & container type	Plastic Can		
Sample preservation	As per APHA/IS:3025 (Part-1)	Type of Test	Chemical		

SAMPLE ID: GCS

Sl. No	Parameters	Unit	Value	Test Method	Lowest Detection Limit
1	pH	---	7.51	APHA, 4500-H+B, 24 th Ed., 2023	1
2	Total Suspended Solids	mg/L	21.5	APHA, 2540-D, 24 th Ed., 2023	10 mg/L
3	BOD	mg/L	4.6	IS 3025 Part(44): 1993	1 mg/L
4	Oil & Grease	mg/L	5	APHA, 5520-B, 24 th Ed., 2023	5 mg/L

--End of Report--

Checked By

Sowmya T M
Assistant Scientist

Authorised By

Dr. JOSEMIN
Environmental Scientist

Note: The test results relate only to the sample submitted for analysis and it shouldn't be reproduced except in full without the written permission of the authorised signatory of the lab.

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0008



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കേന്ദ്ര പരീക്ഷണശാല



TC 8525

TEST REPORT

Analysis Report No.	PCB/CL/674/2024-25	Date	19.10.2024	Format No. PCB/CL/CH/F-7
Ref. No.	PCB/EKM/DO-1 Dated 23.08.2024	Date of Collection	22.08.2024	
Received From	Environmental Engineer	Date of Receipt	23.08.2024	
No. of Sample	01	Period of Analysis	27.08.2024 – 20.09.2024	
Source	Elamkulam CSTP. Out to drain.	Scientist-in-charge	Dr. Josemin	
Sample Condition	Fit for analysis	Sample Type	Water Samples	
Sample collected by	The Environmental Engineer, District Office, Ernakulam	Sample volume & container type	Plastic Can	
Sample preservation	As per APHA/IS:3025 (Part-1)	Type of Test	Chemical	

SAMPLE ID: ESTP Out

Sl. No	Parameters	Unit	Value	Test Method	Lowest Detection Limit
1	pH	---	6.9	APHA, 4500-H+B, 24 th Ed., 2023	1
2	Total Suspended Solids	mg/L	11	APHA, 2540-D, 24 th Ed., 2023	10 mg/L
3	Phosphates	mg/L	1.4	APHA, 4500-P E. 24 th Ed., 2023	0.01mg/L
4	Ammonia as Nitrogen	mg/L	3.88	APHA-4500 NH3-C, 24 th Ed., 2023	0.02 mg/L
5	BOD	mg/L	7.5	IS 3025 Part(44): 2023	1 mg/L
6	COD	mg/L	16	APHA, 5220-B, 24 th Ed., 2023	4 mg/L
7	Oil & grease	mg/L	BDL	APH, 5520-B, 24 th Ed., 2023	5 mg/L
8	Nitrates as Nitrogen	mg/L	7.90	APHA, 4500-NO3, 24 th Ed., 2023	0.01 mg/L
9	Nitrite as Nitrogen	mg/L	0.911	APHA, 4500-NO2-B, 24 th Ed., 2023	0.02 mg/L
10	Total Kjeldahl Nitrogen	mg/L	4.48	APHA, 4500-N.org B, 24 th Ed. 2023	0.2 mg/L

*N.Total = TKN + Nitrate as Nitrogen + Nitrite as Nitrogen = 13.291

Sowmya
22/10/24
Checked By

--End of Report--

Josemin
Authorised By
Dr. JOSEMIN
Environmental Scientist

Sowmya T M
Assistant Scientist

Note: The test results relate only to the sample submitted for analysis and it shouldn't be reproduced except in full without the written permission of the authorised signatory of the lab.

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Certified for OHSMS (ISO 45001:2018)



0008



**KERALA STATE POLLUTION CONTROL BOARD
CENTRAL LABORATORY**

**കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ
ബോർഡ്**

കേന്ദ്ര പരീക്ഷണശാല

An Environmental Laboratory recognised under E(P)A 1986



TC 8525

TEST REPORT

Analysis Report No.	PCB/CL/812/2024-25	Date	14.11.2024	Format No.	PCB/CL/CH/F-7
Ref. No.	PCB/EKM/DO-1/ Dated 01.10.2024	Date of Collection	01.10.2024		
Received From	Environmental Engineer	Date of Receipt	01.10.2024		
No. of Sample	01	Period of Analysis	04.10.2024 – 06.11.2024		
Source	GCDA, Common Sewage Treatment Plant, Marine drive.	Scientist-in-charge	Dr. Josemin		
Sample Condition	Fit for analysis	Sample Type	Water Samples		
Sample collected by	The Environmental Engineer, Disrtict Office,Ernakulam	Sample volume & container type	Plastic Can		
Sample preservation	As per APHA/IS:3025 (Part-1)	Type of Test	Chemical		

SAMPLE ID: GMD

Sl. No	Parameters	Unit	Value	Test Method	Lowest Detection Limit
1	pH	---	7.2	APHA, 4500-H+B, 24 th Ed., 2023	1
2	Total Suspended Solids	mg/L	18	APHA, 2540-D, 24 th Ed., 2023	10 mg/L
3	BOD	mg/L	17.9	IS 3025 Part(44): 1993	1 mg/L
4	Oil & Grease	mg/L	BDL	APHA, 5520-B, 24 th Ed ., 2023	5 mg/L

Checked By

Sowmya T M
Assistant Scientist

--End of Report--

Authorised By

Dr. JOSEMIN
Environmental Scientist

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0008

KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്



DISTRICT OFFICE (ERNAKULAM-II), PERUMBAVOOR

ജില്ലാകാര്യാലയം (എറണാകുളം-2) പെരുമ്പാവൂർ

PMC. 20/733, Near Kallumkal Auditorium, Perumbavoor - 683 542

പിഎംസി 20/733, കല്ലങ്കൽ ഓഡിറ്റോറിയം സമീപം, പെരുമ്പാവൂർ - 683 542

☎ 0484-2593747

e-mail: pcbdo2ekm@gmail.com

web: www.keralapcb.nic.in

Date: 18.12.2024

PCB/PBR/LAB/1/2013



ANALYSIS REPORT

Source : COMMON ETP OF KINFRA SMALL INDUSTRIES PARK NELLAD
Sample Point : FINAL OUT
Date of sampling : 26.11.2024
Date of receipt : 03.12.2024
Collected by : NAMP-II
Sample ID : PCB/PVR/3516/2024

Sl. No.	Parameters	Unit	Value	Test Method	KSPCB Limit
1	pH		7.09	APHA, 4500 H ⁺ B 23 rd Edition 2017.	6.0-9.0
2	COD	mg/L	120	APHA 5220 B, 23 rd Edition 2017	250
3	TOTAL SUSPENDED SOLIDS	mg/L	111.8	APHA 2540 D, 23 rd Edition 2017	100
4	OIL AND GREASE	mg/L	BDL	APHA, 5520 B, 23 rd Edition 2017	10
5	FLUORIDES	mg/L	<1	APHA, 4500-F ⁻ C, 23 rd Edition 2017	2
6	CHLORIDES	mg/L	109.9	APHA, 4500-Cl ⁻ B, 23 rd Edition 2017	1000
7	SULPHATES	mg/L	34.79	APHA, 4500-SO ₄ , 23 rd Edition 2017	1000
8	SULPHIDES	mg/L	6.2	APHA-4500-S ²⁻ D 23 rd Edition 2017	2
9	PHOSPHATES	mg/L	1.02	APHA, 4500-P, 23 rd Edition 2017	5
10	AMMONIACAL NITROGEN	mg/L	12.19	APHA, 4500-NH ₃ -F, 23 rd Edition 2017	50
11	PHENOLIC COMPOUNDS	mg/L	BDL	APHA, 5530 C, 23 rd Edition 2017	1
12	NITRATES	mg/L	4.77	APHA 4500-NO ₃ -E 23 rd Edition 2017	10

BDL- BELOW DETECTION LIMIT

Note: BOD not done as the machine was out of order.

ASHNA SHAJI
ASSISTANT SCIENTIST

KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്



DISTRICT OFFICE (ERNAKULAM-II), PERUMBAVOOR

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web: www.keralapcb.nic.in



PCB/PBR/LAB/1/2013

Date: 18.12.2024

ANALYSIS REPORT

Source : CETP RUBBER PARK, IRAPURAM

Sample Point : ACF OUTLET

Date of sampling : 30.11.2024

Date of receipt : 03.12.2024

Collected by : NAMP II

Analysed by : JSAI & JSII

Sample ID : PCB/PVR/3517/2024

Sl. No.	Parameters	Unit	Value	Test Method	KSPCB Limit
1	pH		7.53	APHA, 4500 H ⁺ B 23 rd Edition 2017.	6.0-9.0
2	COD	mg/L	16	APHA, 5220 B, 23 rd Edition 2017	250
3	Oil and Grease	mg/L	BDL	APHA, 5520 B, 23 rd Edition 2017	10
4	Total Suspended Solids	mg/L	BDL	APHA, 2540-D, 23 rd Edition 2017	100
5	TDS	mg/L	1962	APHA 2540-C, 23 rd Edition 2017	2100
6	Ammoniacal Nitrogen	mg/L	BDL	APHA 4500-NH3-F, 23 rd Edition 2017	50
7	Sulphides	mg/L	38	APHA, 4500-S ²⁻ F, 23 rd Edition 2017	2
8	Fluorides	mg/L	<1	APHA, 4500-F ⁻ C, 23 rd Edition 2017	2
9	Chlorides	mg/L	24.9	APHA, 4500-Cl ⁻ B, 23 rd Edition 2017	1000
10	Sulphates	mg/L	64.68	APHA, 4500-SO ₄ , 23 rd Edition 2017	1000
11	Phenolic Compounds	mg/L	BDL	APHA, 5530 C, 23 rd Edition 2017	1
12	Phosphate	mg/L	0.62	APHA-4500 P-E 23 rd Edition 2017.	5
13	Nitrate	mg/L	9.9	APHA 4500-NO ₃ -E 23 rd Edition 2017	10
14	Total Residual Chlorine	mg/L	BDL	APHA, 4500-Cl ⁻ B, 23 rd Edition 2017	1

BDL- BELOW DETECTION LIMIT

Note: BOD not done as the machine was out of order.

ASHNA SHAJI
ASSISTANT SCIENTIST

KERALA STATE POLLUTION CONTROL BOARD

കേരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്



DISTRICT OFFICE (ERNAKULAM-II), PERUMBAVOOR

ജില്ലാകാര്യാലയം (എറണാകുളം-2) പെരുമ്പാവൂർ

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പിഎംസി. 20/733, കല്ലുകൽഓഡിറ്റോറിയംസമീപം, പെരുമ്പാവൂർ - 683 542



☎: 0484-2593747 e-mail: pcbdo2ekm@gmail.com web: www.keralapcb.nic.in

PCB/PBR/LAB/1/2013

Date: 17.12.2024

ANALYSIS REPORT

Source : SEPTAGE TREATMENT PLANT, BRAHMAPURAM

Sample Point : FILTERED EFFLUENT TANK

Date of sampling : 25.11.2024

Date of receipt : 26.11.2024

Collected by : NAMP-I

Analysed by : JSAI & JSA II

Sample ID : PCB/PVR/3507/2024

Sl. No.	Parameters	Unit	Value	Test Method	KSPCB Limit
1	pH		6.91	APHA, 4500 H ⁺ B 23 rd Edition 2017.	5.5-9.0
2	BOD	mg/L	2.46	APHA, 5210 B, 23 rd Edition 2017	30
3	COD	mg/L	4	APHA, 5220 B, 23 rd Edition 2017	250
4	OIL AND GREASE	mg/L	BDL	APHA, 5520 B, 23 rd Edition 2017	10
5	TOTAL SUSPENDED SOLIDS	mg/L	80.6	APHA, 2540-D, 23 rd Edition 2017	100
6	PHOSPHATES	mg/L	0.29	APHA-4500 P-E 23 rd Edition 2017	5
7	NITRATES	mg/L	0.98	APHA 4500-NO ₃ -E, 23 rd Edition 2017	10
8	SULPHATES	mg/L	7.73	APHA, 4500-SO ₄ , 23 rd Edition 2017	1000
9	SULPHIDES	mg/L	7	APHA-4500-S ²⁻ D 23 rd Edition 2017	2
10	AMMONIACAL NITROGEN	mg/L	1	APHA, 4500-NH ₃ -F, 23 rd Edition 2017	50
11	PHENOLIC COMPOUNDS	mg/L	BDL	APHA, 5530 C, 23 rd Edition 2017	1
12	FAECAL COLIFORM	cfu/100mL	20	APHA 9222 D, 23 rd Edition 2017	<1000

BDL - BELOW DETECTION LIMIT

NOTE: Faecal Streptococcus detection not done due to lack of continuous power supply.

1235
18/12/24

ASHNA SHAJI
ASSISTANT SCIENTIST



കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

മണ്ണിക് സ്ക്വയർ, മൂത്താ തിരു, പാവട്ടാതി, ഒല്ലൂക്കര പി.ഒ., തൃശ്ശൂർ-680655

KERALA STATE POLLUTION CONTROL BOARD

Majestic Square, 3rd Floor, Paravattani, Ollukkara P.O., Thrissur-680655

ANALYSIS REPORT (WATER/EFFLUENT/SOLID WASTE)		No: TAS 1314 Date:11.12.2024	
Source	KWA, Chakkamkandam		EE, THRISSUR
Date of Sample Collection	21.11.2024		
Ref. No.	PCB/TSR/IC/487/07 Dated 22.11.2024	Period of analysis	22.11.2024-11.12.2024
Date of Receipt	22.11.2024		
Scientist – in –charge of analysis		DHANYA O G	

SI No	Parameter	Unit	Value
			CHK (STP Outlet)
1	pH	---	7.84
2	Biochemical Oxygen Demand	mg/l	1.00
3	Chemical Oxygen Demand	„	64
4	Suspended solids	„	0.1
5	Oil & Grease	„	0.12
6	Faecal Coliforms	CFU/100ML	NIL

AE₃

Q
11/12

Dhanya O.G.

Dhanya O.G.
Assistant Scientist



Telephone No: 0487 - 2374939

E-mail: kspcbtsr@gmail.com

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

മെജസ്റ്റിക് സ്ക്വയർ, മൂന്നാം നില, പരവട്ടാനി, ഒല്ലൂക്കര പി.ഒ., തൃശ്ശൂർ-680655

KERALA STATE POLLUTION CONTROL BOARD

Majestic Square, 3rd Floor, Paravattani, Ollukkara P.O., Thrissur-680655

ANALYSIS REPORT (WATER/EFFLUENT/SOLID WASTE)		No: TAS 1333 Date:03.01.2025	
Source	KWA, Chakkamkandam		EE, THRISSUR
Date of Sample Collection	11.12.2024		
Ref. No.	PCB/TSR/IC/487/07 Dated 17.12.2024	Period of analysis	17.12.2024-03.01.2025
Date of Receipt	17.12.2024		
Scientist – in –charge of analysis		DHANYA O G	

SI No	Parameter	Unit	Value
			CHA (STP Outlet)
1	pH	---	8.19
2	Biochemical Oxygen Demand	mg/l	2.00
3	Chemical Oxygen Demand	..	32
4	Suspended solids	..	1.9
5	Oil & Grease	..	4.0
6	Faecal Coliforms	CFU/100ML	80

AE₃

3/1

Dhanya
03.01.2025
Dhanya O. G.
Assistant Scientist

**KERALA STATE POLLUTION CONTROL BOARD****DISTRICT OFFICE****RUBCO HOUSE, 6TH FLOOR, SOUTH BAZAR,****KANNUR-670002****Telephone: 0497-2711621****ANALYSIS REPORT**

Report No:	KNR-1606	Date:	31-12-2024		
Date of sample	21-12-2024	Date of receipt:	21-12-2024		
Sample received from:	The Environmental	Sample ID:	EFF:696		
Source:	Effluent	Ref. Letter.No.	PCB/KNR/DO/295/2022		
Sample container:	PC 2.5L	Sampled by:	AE-3		
Sample type:	Effluent	Period of Analysis:	21/12/2024 to 30/12/2024		
Specific sampling location:	Treated effluent from Government Old Age Home, Moonnunarath, Chal Road, Azhikode North, Kannur-670009	Analysed by:	JSA 1		
Sample Preservation:	As per APHA/IS:3025	No. of Samples:	1		
Scientist -in-Charge of Analysis :	Asst.Scientist	Method: Standard methods for the examination of Water and Waste Water, APPA AWWA WEF (22nd Ed)			
Sl.No.	Parameters	Unit	Sample ID		
			EFF-696		
1	pH		8.21		
2	BOD (3 days at 27 ⁰ C)	mg/L	2.4		
3	COD	mg/L	8		
4	Oil and Grease	mg/L	2.32		
5	TSS	mg/L	4		

BDL- Below Detection Limit**ND- Not Detectable****Sample Details:**

EFF:696- Treated effluent from Government Old Age Home, Moonnunarath, Chal Road, Azhikode North,

This test results is restricted for the water sample(s) collected by Assistant Engineer Dt on 21/12/2024 only

Scientist in charge**Dr. VIJAYTHA VIJAYAKUMAR**
ASSISTANT SCIENTIST

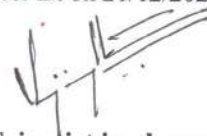
**KERALA STATE POLLUTION CONTROL BOARD****DISTRICT OFFICE****RUBCO HOUSE, 6TH FLOOR, SOUTH BAZAR,****KANNUR-670002****Telephone: 0497-2711621****ANALYSIS REPORT**

Report No:	KNR-1607	Date:	31-12-2024	
Date of sample	21-12-2024	Date of receipt:	21-12-2024	
Sample received from:	The Environmental	Sample ID:	EFF:697	
Source:	Effluent	Ref. Letter.No.	PCB/KNR/DO/MSW/904/2023	
Sample container:	PC 2.5L	Sampled by:	AE-3	
Sample type:	Effluent	Period of Analysis:	21/12/2024 to 30/12/2024	
Specific sampling location:	Treated water from Kannur Corporation Common STP, PB No-39, SPCA Road, Talap-670001	Analysed by:	JSA 1	
Sample Preservation:	As per APHA/IS:3025	No. of Samples:	1	
Scientist -in-Charge of Analysis :	Asst.Scientist	Method: Standard methods for the examination of Water and Waste Water, APPA AWWA WEF (22nd Ed)		
Sl.No.	Parameters	Unit	Sample ID	
			EFF-697	Acceptable limit
1	pH		7.27	6.5-9
2	BOD (3 days at 27 ⁰ C)	mg/L	21.9	<10
3	COD	mg/L	56	<50
4	Oil and Grease	mg/L	1.84	<10
5	TSS	mg/L	12	<10

BDL- Below Detection Limit**ND- Not Detectable****Sample Details:**

EFF:697- Treated water from Kannur Corporation Common STP, PB No-39, SPCA Road, Talap-670001

This test results is restricted for the water sample(s) collected by Assistant Engineer Dt on 21/12/2024 only


Scientist in charge**Dr. VIJAYTHA VIJAYAKUMAR**
ASSISTANT SCIENTIST



KERALA STATE POLLUTION CONTROL BOARD
DISTRICT OFFICE
RUBCO HOUSE, 6TH FLOOR, SOUTH BAZAR,
KANNUR-670002

Telephone: 0497-2711621

ANALYSIS REPORT

Report No:	KNR-1610	Date:	06-01-2025		
Date of sample	24-12-2024	Date of receipt:	24-12-2024		
Sample received from:	The Environmental	Sample ID:	EFF:700		
Source:	Effluent	Ref. Letter.No.	PCB/KNR/DO/2003/2024		
Sample container:	PC 2.5L	Sampled by:	PA		
Sample type:	Effluent	Period of Analysis:	24/12/2024 to 04/01/2025		
Specific sampling location:	Treated water from CETP Kinfra Park, Taliparamba, Nadukani	Analysed by:	JSA 1		
Sample Preservation:	As per APHA/IS:3025	No. of Samples:	1		
Scientist -in-Charge of Analysis :	Asst.Scientist	Method: Standard methods for the examination of Water and Waste Water, APPA AWWA WEF (22nd Ed)			
Sl.No.	Parameters	Unit	Sample ID		
			EFF-700		
1	pH		8.17		
2	BOD (3 days at 27 ⁰ C)	mg/L	8		
3	COD	mg/L	56		
4	Oil and Grease	mg/L	2.76		
5	TSS	mg/L	25		

BDL- Below Detection Limit

ND- Not Detectable

Sample Details:

EFF:700- Treated water from CETP Kinfra Park, Taliparamba, Nadukani

This test results is restricted for the water sample(s) collected by Project Assistant dt on 24/12/2024 only


Scientist in charge

Dr. VIJAYTHA VIJAYAKUMAR
ASSISTANT SCIENTIST



KERALA STATE POLLUTION CONTROL BOARD
DISTRICT OFFICE
RUBCO HOUSE, 6TH FLOOR, SOUTH BAZAR,
KANNUR-670002
Telephone: 0497-2711621

ANALYSIS REPORT

Report No:	KNR-1611	Date:	06-01-2025		
Date of sample	24-12-2024	Date of receipt:	24-12-2024		
Sample received from:	The Environmental	Sample ID:	EFF:701		
Source:	Effluent	Ref. Letter.No.	PCB/KNR/DO/2003/2024		
Sample container:	PC 2.5L	Sampled by:	PA		
Sample type:	Effluent	Period of Analysis:	24/12/2024 to 04/01/2025		
Specific sampling location:	Treated water from Taliparamba Municipality Common STP	Analysed by:	JSA 1		
Sample Preservation:	As per APHA/IS:3025	No. of Samples:	1		
Scientist -in-Charge of Analysis :	Asst.Scientist	Method: Standard methods for the examination of Water and Waste Water, APPA AWWA WEF (22nd Ed)			
Sl.No.	Parameters	Unit	Sample ID		
			EFF-701		
1	pH		7.88		
2	BOD (3 days at 27 ⁰ C)	mg/L	7		
3	COD	mg/L	40		
4	Oil and Grease	mg/L	0.88		
5	TSS	mg/L	18		

BDL- Below Detection Limit

ND- Not Detectable

Sample Details:

EFF:701- Treated water from Taliparamba Municipality Common STP

This test results is restricted for the water sample(s) collected by Project Assistant dt on 24/12/2024 only


Scientist in charge

Dr. VIJAYTHA VIJAYAKUMAR
ASSISTANT SCIENTIST



KERALA STATE POLLUTION CONTROL BOARD

CAMP OFFICE, ROOM NO 320, MARAMATH COMPLEX, PAMPA.

Phone - 04735 203383

ANALYSIS REPORT OF STP AT SANNIDHANAM

Analysis Report	PCB/PTA/PAMPA	Date	15/01/2025
Received From	Camp office, Pampa	Date of Collection	12/01/2025
No. of Sample	2	Date of Receipt	12/01/2025
Source	STP SANNIDHANAM	Period of Analysis	3 Days
Sample Condition	Fit for analysis	Scientist in Charge	Dr. Josemin
Sample collected by	The Environmental Engineer, Camp office, Pampa	Sample Type	Water Samples
Sample preservation	As per APHA/IS:3025(Part-1)	Sample volume & container type	300 ml Sterilized glass bottle & 2L Plastic Can
		Type of Test	CHEMICAL/ MICROBIOLOGY

Sl.No	PARAMETERS					
	pH	TSS (mg/L)	BOD (mg/L)	OIL&GREASE (mg/L)	TC (CFU/100 ml)	FC (CFU/100 ml)
1 (Before Disinfection)	6.5	15.6	30.1	22.6	--	--
2 (After Disinfection)	6.9	--	--	20.5	NIL	NIL

ENVIRONMENTAL SCIENTIST

Dr. JOSEMIN
Environmental Scientist



KERALA STATE POLLUTION CONTROL BOARD

CAMP OFFICE, ROOM NO 320, MARAMATH COMPLEX, PAMPA.

Phone - 04735 203383

ANALYSIS REPORT OF STP AT PAMPA

Analysis Report	PCB/PTA/PAMPA	Date	15/01/2025
		Date of Collection	12/01/2025
Received From	Camp office, Pampa	Date of Receipt	12/01/2025
No. of Sample	2	Period of Analysis	3 days
Source	STP, PAMPA	Scientist in Charge	Dr. Josemin
Sample Condition	Fit for analysis	Sample Type	Water Samples
Sample collected by	The Environmental Engineer, Camp office, Pampa	Sample volume & container type	300 ml Sterilized glass bottle & 2L Plastic Can
Sample preservation	As per APHA/IS:3025(Part-1)	Type of Test	CHEMICAL/ MICROBIOLOGY

Sl.No	PARAMETERS				
	pH	TSS (mg/L)	BOD (mg/L)	TC (CFU/100 ml)	FC (CFU/100 ml)
Before Chlorination	7.81	34.6	445	-----	-----
After Chlorination	-----	-----	-----	Nil	Nil

ENVIRONMENTAL SCIENTIST

Dr. JOSEMIN
Environmental Scientist



കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

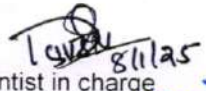
DISTRICT OFFICE, WAYANAD

ജില്ലാ ഓഫീസ്, വയനാട്
Jasam Complex, Pinangode Road, Kalpetta, 673121

ജാസം കോംപ്ലക്സ്, പിണങ്ങോട് റോഡ്, കൽപ്പറ്റ

ANALYSIS REPORT

WATER/EFFLUENTS/ SOLID WASTE		No.	FSTP December		08/01/25	
Source		FSTP Kalpetta				
Date of sample collection		19/12/2024		Sample received from		E E ,D O,WND
Date of Receipt		19/12/2024		Period of Analysis :		19/12/2024-07/01/2025
Scientist- in charge of Analysis						
SI No.	Determinant	unit	Value		KSPCB Limits	
1	pH	—	7.23		6.5-9	
2	Total Suspended Solids	mg/l	4		100	
3	BOD for 3 days @ 27 oC	mg/l	11.196		30	
4	Residual Chlorine	mg/l	Yes			
5	Oil & Grease	mg/l	4.04		10	


Scientist in charge
HARSHA. V
ASSISTANT SCIENTIST



കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

DISTRICT OFFICE, WAYANAD

ജില്ലാ ഓഫീസ്, വയനാട്
Jasam Complex, Pinangode Road, Kalpetta, 673121

ജാസം കോംപ്ലക്സ്, പിണങ്ങോട് റോഡ്, കൽപ്പറ്റ

ANALYSIS REPORT

WATER/EFFLUENTS/ SOLID WASTE		No.	STP December	08/01/25
Source		STP-Thaluk hospital Sulthan Bathery		
Date of sample collection		12/09/24	Sample received from	E E ,D O,WND
Date of Receipt		12/09/24	Period of Analysis :	09/12/2024-07/01/2025
Scientist- in charge of Analysis				
Sl No.	Determinant	unit	Value	KSPCB Limits
1	pH	-	10.5	6.5-9
2	Total Suspended Solids	mg/l	13.7	100
3	BOD for 3 days @ 27 oC	mg/l	15.24	30
4	Oil & Grease	mg/l	2.08	10
5	Bioassay		100% survival	90% survival of fish in 100% treated effluent
6	FC		NIL	<1000

Remarks: pH value permissible limit exceeded


Scientist in charge

HARSHA. V
ASSISTANT SCIENTIST

National Mission for Clean Ganga
Format for submission of Monthly Progress Report in the NGT Matter OA No. 673 of 2018
(In compliance to NGT order dated 24.09.2020)

Status of Sewage & Septage Plants Being Implemented Under AMRUT in Kerala (as on 31.12.2024)

Details of Completed ETPs / STP in the State

No.	City / Town	STP Location	Status	Installed Capacity	Utilization Capacity	Process
1	Thiruvananthapuram	Medical College (AMRUT-1.0)	Completed & commissioned	5 MLD	3 MLD	MBBR
2	Kochi	Elamkulam (AMRUT-1.0)	Completed & commissioned	5 MLD	4 MLD	MBBR
3	Kannur	Padannapalam (AMRUT-1.0)	Completed & commissioned	1 MLD	0.6 MLD	RMBR
4	Alappuzha	General Hospital (AMRUT-1.0)	Completed & commissioned	0.24 MLD	0.1 MLD	Electro-coagulation
5	Kozhikode	Medical College (AMRUT-1.0)	Completed & commissioned	2 MLD	0.7MLD	Electro-coagulation
6	Kozhikode	Medical College (AMRUT-1.0)	Completed & commissioned	1 MLD	0.35 MLD	Electro-coagulation
7	Thrissur	General Hospital (AMRUT-1.0)	Completed & commissioned	0.36 MLD	0.2 MLD	MBBR

Details of Under Construction ETPs / STPs in the State

No.	Location	Capacity of the plant in MLD	Physical Progress in%	Status of I & D or House Sewer Connections	Incremental Progress	Completion Timeline
1	STP at Kureepuzha, Kollam Corporation(AMRUT-1.0)	12	92%	12471 house sewer connections are envisaged(AMRUT-2.0).	Work is progressing slowly. There is delay due to the contractor.	31.01.2025
2	Decentralized Sewerage System (STP at Ambedkar Colony) – Div-16, Edakochi South, Kochi Corporation(AMRUT-1.0)	1.1	51%	1500 sewer connections are envisaged.	Work in progress.	30.06.2025
3	FSTP at Chelora, Kannur Corporation (AMRUT-1.0)	0.1	50%	NA	Work in progress.	31.03.2025
4 & 5	Mobile Septage Units - 2 nos, Alappuzha Municipality (AMRUT-1.0)	0.02 (0.01x2 nos.)	50%	NA	One vehicle delivered. The other vehicle is to be delivered.	31.01.2025
6	FSTP at Yakkara, Palakkad Municipality (AMRUT-1.0)	0.1	14%	NA	Work in progress.	31.03.2025

Details of Proposed ETPs/ STPs in the State

No.	Location	Capacity of the plant in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Incremental Progress	Likely Date of Completion
1	FSTP at Ramavarmapuram, Thrissur Corporation(AMRUT-1.0)	0.1	Not started: Agreement dated 04/01/24 was executed. The bridge work (for access to the site) was started on 18/06/24. The bridge work was stopped on 04/07/24 due to public protest. FSTP works could not be started due to public protest. The Joint Director, Thrissur, held a meeting with the public at the site on 28.10.2024.	A meeting chaired by the District Collector is scheduled to be held on 01.01.2025 to discuss the way forward.	30.06.2025
2	STP with septage co-treatment at Elamkulam, Kochi Corporation(AMRUT-2.0)	5	Tendered: The 5 th SHPSC held on 02/03/23 approved the issuance of AS and G.O dated 25/03/23 was issued. KWA split the work into 5 sub works and issued TS. Later the KWA decided to combine the proposals under AMRUT-2.0 & KMRL. In the meeting held by the Hon'ble Minister of LSGs on 24/07/24 the KWA was directed to go ahead with the proposal under AMRUT-2.0 instead of the combined proposal involving KMRL. TS was issued by KWA for the STP package.	Tender was floated by KWA for the STP package on 02.12.2024 with 01.01.2025 as the due date. TS of the sewer network package is being revised by KWA.	31.12.2026
3	STP with septage co-treatment at Sarovaram(AMRUT-2.0)	27	To be tendered: The 7 th SHPSC held on 14/12/23 approved the issuance of AS and G.O dated 08/01/24 was issued. TS was issued by KWA for the STP package. TS for the network package is to be issued by KWA.	KWA issued combined TS for the STP and the sewer network packages. Tendering was kept on hold by the KWA as it was found in the CRZ mapping done by IRS, Chennai, that a portion of the proposed site for the STP (nearly 20 cents out of 2.6 Acres) falls under the CRZ-1 category. KWA had sought clarity from ULB regarding the possibility of getting CRZ clearance as the reduction in the area available will lead to reduction in the STP capacity and reworking of the estimate. The ULB has directed KWA to go ahead with the project without reducing the STP capacity under the assumption that the permission will be obtained from the KCZMA as per the CRZ rules (as per the latest rules, public	31.12.2026

No.	Location	Capacity of the plant in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Incremental Progress	Likely Date of Completion
				utilities are allowed in CRZ-1). A meeting in this regard is expected to be held shortly.	
4	Sewerage System for Zone-A (STP at West Hill Industrial Estate), Kozhikode Corporation(AMRUT-2.0)	13	AS to be issued: Due to public protest and the ongoing court cases (there is a stay by the Munsiff Court regarding the Avikkalthodu STP work) the ULB combined the Kothi & Avikkalthodu sewerage projects proposed a 13 MLD STP at a new location (West Hill Industrial Estate). The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval. The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals. MoHUA's approval was received on 01/10/24. An EoI for executing the work in DBOT mode was floated by the ULB on 30/10/24 with 20/11/24 as the last date of bid submission. The due date of EoI was extended till 10/12/24 as per the request of the prospective bidders.	Two offers received. The Council held on 21.12.2024 approved the formation of a technical committee for scrutiny of bids. The SIDCO has objected the construction of the STP in the West Hill Industrial Estate saying that the land has to be used only for industry related purposes. In this regard the ULB has submitted a request to the Govt. on 20.12.2024 (Letter No. 2825110-2024) for permission to construct the STP at the location. Decision is awaited.	31.03.2027
5	Decentralized Sewerage Scheme (STP at Kokkala), Thrissur Corporation(AMRUT-2.0)	2.5	AS to be issued: * The proposed land falls under paddy land category. Hence the clearance of the SLMC is required. Request for clearance was submitted by the ULB to the SLMC vide letter dated 02/08/23. The SLMC (Agriculture Dept.) rejected the ULB's request to convert the proposed land for the STP on 25.10.2024 (via G.O No. 917/2024/AGRI dated 29.09.2024). * The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval. The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals. MoHUA's approval	Since the Agriculture Dept. rejected the ULB's request to convert the proposed land for the STP, way forward is to be decided by the ULB (i.e. get the approval of Agriculture Dept. or find alternative land). The DPR submitted by the ULB is to be placed in the next SLTC/ SHPSC for approval of AS. The next SLTC is scheduled on 07.01.2025.	31.12.2026

No.	Location	Capacity of the plant in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Incremental Progress	Likely Date of Completion
			was received on 01/10/24. The ULB has submitted the DPR for approval of AS but way forward to be decided by the ULB since the SLMC has rejected the ULB's request to convert the proposed land.		
6	STP with septage co-treatment at Kottappuram, Thrissur Corporation (AMRUT-2.0)	5	AS to be issued: The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval. The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals. MoHUA's approval was received on 01/10/24. The DPR of the project submitted by the ULB is to be placed in the next SLTC / SHPSC for approval of AS. There is public protest against the project and action in this regard is to be taken by the ULB.	There is public protest against the project and action in this regard is to be taken by the ULB (i.e. resolve the public protest or find alternative land). The DPR submitted by the ULB is to be placed in the next SLTC/ SHPSC for approval of AS. The next SLTC is scheduled on 07.01.2025.	31.12.2026
7	STP with septage co-treatment at Alissery, Alappuzha Municipality (AMRUT-2.0)	5	AS to be issued: The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval. The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals. MoHUA's approval was received on 01/10/24. The DPR of the project submitted by the ULB is to be placed in the next SLTC/ SHPSC for approval of AS.	The DPR submitted by the ULB is to be placed in the next SLTC/ SHPSC for approval of AS. The next SLTC is scheduled on 07.01.2025.	31.12.2026
8	Decentralized Wastewater Treatment for Bhajanamadom settlement in Kidangamparambu Ward, Alappuzha Municipality (AMRUT-2.0)	0.012	AS to be issued: The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval. The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals. MoHUA's approval was received on 01/10/24. The ULB will engage a DPR preparation agency only after the	The DPR to be submitted by the ULB for placing in the SLTC/ SHPSC for approval of AS. The ULB will engage a DPR preparation agency only after the proposed land for the STP is relinquished by the Bhajanamadom Church. The church authorities are not willing to relinquish the land but they are willing to give NoC to the ULB for implementing the project.	31.12.2026

No.	Location	Capacity of the plant in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Incremental Progress	Likely Date of Completion
			ownership of the land for the STP is transferred to the ULB by the Bhajanamadom Church.		
9	FSTP at Brahmapuram, Kochi Corporation(AMRUT-2.0)	1	AS to be issued: The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval.The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals.MoHUA's approval was received on 01/10/24.The DPR to be submitted by the ULB for placing in the SLTC/SHPSC for approval of AS.The ULB has engaged IRTC to execute the work in DBOT mode.	The DPR to be submitted by the IRTC to the ULB for placing in the SLTC/SHPSC for approval of AS.	31.12.2026
10	STP for RAY flat, Fort Kochi, Kochi Corporation(AMRUT-2.0)	0.105	AS to be issued: The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval.The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals.MoHUA's approval was received on 01/10/24.The DPR to be submitted by the ULB for placing in the SLTC/SHPSC for approval of AS.The ULB has engaged IRTC to execute the work in DBOT mode.	The DPR to be submitted by the IRTC to the ULB for placing in the SLTC/ SHPSC for approval of AS.	31.12.2026
11	Augmentation of existing 3 MLD STP at Chakkamkandam to 5 MLD (20 KLD septage co-treatment), Guruvayur Municipality (AMRUT-2.0)	2	AS to be issued: The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval.The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals.MoHUA's approval was received on 01/10/24.Certain changes are required in the DPR submitted by KWA. The corrected DPR to be submitted by KWA for placing in the SLTC/SHPSC	The corrected DPR to be submitted by KWA for placing in the SLTC/ SHPSC for approval of AS. In the meeting held by the Technical Member, KWA, on 10.12.2024, the SE, PPD, KWA, Kochi, was directed to submit the modified DPR by 15.01.2025.	31.12.2026

No.	Location	Capacity of the plant in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Incremental Progress	Likely Date of Completion
			for approval of AS.		
12	STP for Municipal Buildings, Palakkad Municipality(AMRUT-2.0)	0.030	AS to be issued: The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval.The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals.MoHUA's approval was received on 01/10/24.	The DPR to be submitted by the ULB for placing in the SLTC/ SHPSC for approval of AS. An Expression of Interest (EoI) is to be called for by the ULB for executing the project in the DBOT mode.	31.12.2026
13	STP with septage co-treatment at Maithanapalli, Kannur Corporation (AMRUT-2.0)		AS to be issued: The Tranche-3 projects were finalized in the SHPSC held on 02/08/24. The Tranche-3 proposals inclusive of this proposal were submitted to MoHUA on 24/08/24 for approval.The Apex Committee of MoHUA held on 23/09/24 scrutinized the Tranche-3 proposals.MoHUA's approval was received on 01/10/24.The Council held on 16.11.2024 suggested certain modifications in the DPR.The DPR to be corrected by KWA for placing in the SLTC/SHPSC for approval of AS.	The modified DPR is to be submitted by KWA for placing in the SLTC/SHPSC for approval of AS. In the meeting held by the TM, KWA, on 10.12.2024, the SE, PPD, KWA, Kozhikode, was directed to submit the modified DPR by 15.01.2025.	31.12.2026

IMPACT Kerala Ltd – STP/FSTP/UGSTP projects as on 03.01.2025

Sl No.	Projects	Status
FSTP Projects		
1	250 KLD Septage Treatment Plant at Cherthala Municipality (RKI Project) Revised AS received on 26.09.2022 for an amount of Rs. 7.83 Cr (Contract amt. 6.56 Cr)	• Work on going at site. • 93% of civil work completed. • Electro Mechanical Items reached site. • Transformer installed. Electrical cabling works, solar panel installation and approval from KSEI pending. Expected Date of Completion: February 2025
2	50 KLD Varkala Septage Treatment Plant (RKI Project) AS received on 28.02.2022 for an amount of Rs. 4.70 Cr (Contract amt. 2.64 Cr)	• Work on going at site. • Legacy waste removal from the site has been completed. • Excavation for foundation work completed. • PCC work ongoing, steel works in progress. Expected Date of Completion: April 2025
3	Muvattupuzha Municipality's 50 KLD FSTP Project	DPR submitted to RKI for AS on 13.11.2024 in advance. To forward through LSGD, in process at Govt.
4	North Paravur FSTP	• Agreement executed with M/s Urban Grey water solutions for DPR preparation. Agency visited the Municipality. • Consultant submitted the quote for doing soil test to LB. Municipality has to approve it.
5	Chittur Thathamangalam	• Agreement executed with M/s Urban Grey water solutions for DPR preparation. Agency visited the Municipality. • Consultant submitted the quote for doing soil test to LB. Municipality has to approve it.
6	Shornur FSTP with grey water management	• Agreement executed with M/s Urban Grey water solutions for DPR preparation. Agency visited the Municipality. • Consultant submitted the quote for doing soil test to LB. Municipality has to approve it.
STP Projects		
1	590 KLD Mayyanad Sewage Treatment Plant (RKI Project) AS received on 04.03.2022 for an amount of Rs. 11.55 Cr (Contract amt. 9.55 Cr)	• Work ongoing at site • Wall construction in progress at Thanni, Valiyavila & Dhawalakuzhy • Network line and manhole installation in progress. • Office building work at Thanni and Valiyavila in progress. Expected Date of Completion: April 2025

Sl No.	Projects	Status
2	1.5 MLD Sewage Treatment Plant with Sewerage Network at Ottappalm Municipality (KIIFB Project) Revised AS received on 19.01.2023 for an amount of Rs. 20.93 Cr (Contract amt. 17.74 Cr)	• STP work in progress. • Preparation for pile cap work is in progress. • KRFB NoC – LB paid fee. • Railway NoC and PWD NoC in process – Higher level meeting required. • Beneficiary meeting convened by the Municipality on 16.12.2024. • First bill submitted to KIIFB for Rs. 1.55 Cr (excluding GST). Awaiting payment. Expected Date of Completion: December 2025
3	Vadakara Municipality's STP (Under appraisal)	• Narayana nagaram – Land was 'Nanja'. Permission received vide G.O(ms)No.88/2024/AGRI dtd 13.08.2024 from Agriculture (NCA)Department. • Consultant submitted modified DPR with TAR reply, submitted to KIIFB.
	Underground STPs	
1	UG STP for Thavanur Central Prison & Correctional Home, Malappuram Dist.	• Agreement executed with M/s CDD India for DPR preparation. • Consultant will do soil test. Prison authorities has to decide on payment and inform the consultant.
2	UG STP at Parassinikadavu, Anthur Municipality, Kannur Dist.	• Agreement executed with M/s CDD India for DPR preparation. • Consultant will do soil test. LB has to decide on payment and inform the consultant.

**OA 673 ൽ 16.01.2025 തീയതിയിൽ സുപ്രണ്ടിങ്ങ് എഞ്ചിനീയർ, ഇറിഗേഷൻ വകുപ്പ്-
നോർത്ത് സർക്കിളിന്റെ അധ്യക്ഷതയിൽ വീഡിയോ കോൺഫറൻസ് വഴി നടത്തിയ
56-ാമത് DLTC മീറ്റിങ്ങിന്റെ മിനുട്ട്സ്.**

ഹാജരായവർ

1. ശ്രീ.ഷാജി.ടി (സുപ്രണ്ടിങ്ങ് എഞ്ചിനീയർ, ഇറിഗേഷൻ വകുപ്പ് നോർത്ത് സർക്കിൾ)
2. ശ്രീമതി. പ്രീതി പി.എച്ച്. (സുപ്രണ്ടിങ്ങ് എഞ്ചിനീയറുടെ പേഴ്സണൽ അസിസ്റ്റന്റ്, ഇറിഗേഷൻ വകുപ്പ് നോർത്ത് സർക്കിൾ)
3. ശ്രീ.അഹമ്മദ് അലി. (അസിസ്റ്റന്റ് എഞ്ചിനീയർ, കൂട്ടായി ഇറിഗേഷൻ)
4. ശ്രീ.ജവഹർ സുഹാസ് (ഫെൽത്ത് ഇൻസ്പെക്ടർ, ചെറിയമുണ്ടം ഗ്രാമപഞ്ചായത്ത്)
5. ശ്രീ.അബ്ദുൽ ഹമീദ് (ഫെൽത്ത് ഇൻസ്പെക്ടർ, മലപ്പുറം മുൻസിപ്പാലിറ്റി)
6. ശ്രീമതി.ശ്രീജ (ജൂനിയർ സുപ്രണ്ട്, മംഗലം ഗ്രാമപഞ്ചായത്ത്)
7. ശ്രീമതി.ആതിര (ജില്ലാ കോർഡിനേറ്റർ, ശുചിത്വ മിഷൻ, മലപ്പുറം)
8. ശ്രീ.ബാബു (ക്ലീൻ സിറ്റി മാനേജർ, തിരുർ മുനിസിപ്പാലിറ്റി)
9. ശ്രീ.ശ്രീജിത്ത് (ഹൈഡ്രോ ജിയോളജിസ്റ്റ്, ഗ്രൗണ്ട് വാട്ടർ ഡിപ്പാർട്ട്മെന്റ്)
10. ശ്രീ.അനൂ (സെക്രട്ടറി, തലക്കാട് ഗ്രാമപഞ്ചായത്ത്)
11. ശ്രീമതി.സുധ പി (ഫെഡ് ക്ലർക്ക്, ആർ.ഡി.ഒ, തിരുർ)
12. ശ്രീ.ശ്രീജിത്ത് വി.ജെ (സീനിയർ ക്ലർക്ക്, വെട്ടം ഗ്രാമപഞ്ചായത്ത്)
13. ശ്രീമതി.ബസ്മി ബഷീർ. (അസിസ്റ്റന്റ് എഞ്ചിനീയർ, കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്, ജില്ലാ ഓഫീസ്, മലപ്പുറം)
14. ശ്രീമതി.ലത്തീഫ സി.ടി (അസിസ്റ്റന്റ് സയന്റിസ്റ്റ്, കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്, ജില്ലാ ഓഫീസ്, മലപ്പുറം)

DLTC ചെയർമാൻ, സുപ്രണ്ടിംഗ് എഞ്ചിനീയർ, ഇറിഗേഷൻ നോർത്ത് സർക്കിൾ ശ്രീ.ഷാജി.ടി യുടെ അധ്യക്ഷതയിൽ 11.30 AM ന് വീഡിയോ കോൺഫറൻസ് ആരംഭിച്ചു. മലിനീകരണ നിയന്ത്രണ ബോർഡ് അസിസ്റ്റന്റ് സയന്റിസ്റ്റ് ശ്രീമതി.ലത്തീഫ സി.ടി NGT OA673/2018-ഭാഗമായി നടത്തുന്ന 56-ാമത് DLTC മീറ്റിങ്ങിലേക്ക് എല്ലാവരെയും സ്വാഗതം ചെയ്തു.

ആദ്യമായി ഇറിഗേഷൻ വകുപ്പിന്റെ പ്രവർത്തന പുരോഗതിയാണ് വിലയിരുത്തിയത്. കൂട്ടായി റെഗുലേറ്റർ കം ബ്രിഡ്ജിന്റെ റീഹാബിലിറ്റേഷൻ പ്രവർത്തനങ്ങൾ താൽക്കാലികമായി നിർത്തിവെച്ചത് പുനരാരംഭിക്കുന്നതിനു വേണ്ടി ഹൈഡ്രോഗ്രാഫിക് സർവ്വേ ടീം സ്ഥലം സന്ദർശിച്ചതു പ്രകാരം സ്റ്റേറ്റ് ലെവൽ ടെക്നിക്കൽ എക്സ്പർട്ട് കമ്മിറ്റിയുമായി കൂടിക്കാഴ്ച നടത്തിയിട്ടുണ്ടെന്നും അവരുടെ റിപ്പോർട്ട് ലഭിച്ചതിനുശേഷം എസ്റ്റിമേറ്റ് റിവൈസ് ചെയ്ത് വർക്ക് തുടങ്ങാനാണ് തീരുമാനിച്ചിട്ടുള്ളതെന്നും കൂട്ടായി ഇറിഗേഷൻ അസിസ്റ്റന്റ് എഞ്ചിനീയർ ശ്രീ.അഹമ്മദ് അലി അറിയിച്ചു.

തുടർന്ന് ചെറിയമുണ്ടം ഗ്രാമപഞ്ചായത്ത് ആക്ഷൻ പ്ലാനുമായി ബന്ധപ്പെട്ട കാര്യങ്ങൾ ചർച്ച ചെയ്തു. ക്യാമറകൾ പൂർണ്ണമായും പ്രവർത്തനക്ഷമമാണെന്നും പുഴയ്ക്ക് ചുറ്റും ഫെൻസിംഗ് പൂർണ്ണമായും നിലവിൽ വന്നതായും ചെറിയമുണ്ടം ഗ്രാമപഞ്ചായത്ത് ഹെൽത്ത് ഇൻസ്പെക്ടർ ശ്രീ.ജവഹർ സുഹാസ് അറിയിച്ചു. ഹരിതകർമ്മസേനയുടെ പ്രവർത്തനങ്ങൾ അസിസ്റ്റന്റ് സയന്റിസ്റ്റ് ചോദിച്ചതനുസരിച്ച് MCF എക്സ്റ്റൻഷൻ വർക്ക് കഴിഞ്ഞിട്ടുണ്ടെന്നും ഹരിതകർമ്മസേനയുടെ പ്രവർത്തനങ്ങൾ കാര്യക്ഷമമായി നടക്കുന്നുണ്ടെന്നും അദ്ദേഹം അറിയിച്ചു. ഡിസംബർ മാസത്തിൽ 73.94 ശതമാനം യൂസർഫീ കളക്ഷൻ നേടാനായെന്നും MCF ന് വാട്ടർ കണക്ഷൻ എടുക്കുന്നതിനും പുതിയ വാഹനം വാങ്ങുന്നതിനുമുള്ള പ്രൊജക്ട് സബ്മിറ്റ് ചെയ്തിട്ടുണ്ടെന്നും അദ്ദേഹം പറയുകയുണ്ടായി.

തുടർന്ന് വെട്ടം ഗ്രാമപഞ്ചായത്ത് ആക്ഷൻ പ്ലാനുമായി ബന്ധപ്പെട്ട് എന്തെല്ലാം നടപടികളാണ് സ്വീകരിച്ചിട്ടുള്ളതെന്ന് അസിസ്റ്റന്റ് സയന്റിസ്റ്റ് ചോദിച്ചറിയുകയുണ്ടായി. ഹരിതകർമ്മസേനയുടെ പ്രവർത്തനങ്ങൾ ഉറപ്പുവരുത്തുന്നുണ്ടെന്നും 56 ശതമാനം യൂസർഫീ കളക്ഷൻ നേടാനായെന്നും ക്യാമറകൾ ക്ലാരിറ്റി കുറവായതിനാൽ മാറ്റി സ്ഥാപിക്കുന്നതിനുള്ള പ്രൊജക്ട് ശുപാർശ ചെയ്തിട്ടുണ്ടെന്നും സീനിയർ ക്ലർക്ക് ശ്രീ.ശ്രീജിത്ത് പറയുകയുണ്ടായി.

തുടർന്ന് മലപ്പുറം മുൻസിപ്പാലിറ്റി ആക്ഷൻ പ്ലാനുമായി ബന്ധപ്പെട്ട പ്രവർത്തനങ്ങളുടെ പുരോഗതിയാണ് വിലയിരുത്തിയത്. നിലവിൽ ബസ് സ്റ്റാന്റ് STP പ്രവർത്തനക്ഷമമല്ലെന്നും അമൂല് പദ്ധതിയിൽ ഉൾപ്പെടുത്തി സാമ്പത്തിക ആനുകൂല്യങ്ങൾ ലഭ്യമാക്കാൻ ശ്രമിക്കുന്നതിന്റെ ഭാഗമായി അമൂല് വിഷ് ഇൻസ്പെക്ഷൻ നടത്തിയെങ്കിലും വേണ്ടത്ര മാർക്ക് ലഭിച്ചില്ലെന്നും അടുത്ത ആഴ്ച റീഇൻസ്പെക്ഷൻ നടത്താൻ തീരുമാനിച്ചിട്ടുണ്ടെന്നും ഹെൽത്ത് ഇൻസ്പെക്ടർ,

ശ്രീ.അബ്ദുൽ ഹമീദ് അറിയിച്ചു. പുഴയുടെ തീരങ്ങളിൽ CCTV ക്യാമറകൾ സ്ഥാപിക്കുന്നതിനായി 10 ലക്ഷം രൂപയുടെ പ്രോജക്ട് സബ്മിറ്റ് ചെയ്തിട്ടുണ്ടെന്നും ക്യാമറകൾ സ്ഥാപിക്കുന്നതിനുള്ള സ്പോട്ട് ഐഡന്റിഫിക്കേഷൻ നടന്നു വരികയാണെന്നും ഹെൽത്ത് ഇൻസ്പെക്ടർ അറിയിച്ചു. പാമ്പാട് ഫ്ലാറ്റ് STP യുടെ ഇലക്ട്രിക് വർക്ക് പൂർത്തീകരിച്ചിട്ടില്ലെന്നും പാനൽ ബോർഡ് സ്ഥാപിക്കുന്നതിനായി ജില്ലാ പഞ്ചായത്ത് ഇലക്ട്രിക്കൽ എഞ്ചിനീയറുടെ എസ്റ്റിമേറ്റ് ലഭിച്ച ശേഷം മാത്രമേ ടെൻഡർ നടപടികൾ തുടങ്ങാൻ സാധിക്കുകയുള്ളൂ എന്നും അദ്ദേഹം അറിയിച്ചു.

ഹരിത കർമ്മസേനയുടെ പ്രവർത്തനങ്ങൾ കാര്യക്ഷമമായി വരുന്നുണ്ടെന്നും 38-ാം വാർഡിലെ MCF ൽ KSWMP യുടെ നേതൃത്വത്തിൽ ബയോമൈനിംഗ് തുടങ്ങിയിട്ടുണ്ടെന്നും അദ്ദേഹം പറഞ്ഞു. ദൈനംദിന ശുചീകരണ പ്രവർത്തനങ്ങളുടെ ഭാഗമായി കോട്ടപ്പടി സ്വാഗത് ഹോട്ടലിന്റെ ഔട്ട്ലെറ്റ് പൊതു ഡ്രൈനേജിലേക്ക് ഒഴുക്കുന്നത് ശ്രദ്ധയിൽ പെട്ടതിനെ തുടർന്ന് വേണ്ട നടപടികൾ സ്വീകരിച്ചിട്ടുണ്ടെന്നും അയ്യങ്കാളി തൊഴിലുറപ്പ് പദ്ധതിയിലുൾപ്പെടുത്തി കടലുണ്ടിപ്പുഴയിൽ പതിക്കുന്ന കാട്ടുങ്ങളിലെ തോട് വൃത്തിയാക്കിയിട്ടുണ്ടെന്നും ശ്രീ.അബ്ദുൽ ഹമീദ് പറയുകയുണ്ടായി. നിരോധിത പ്ലാസ്റ്റിക് ഉൽപ്പന്നങ്ങളുടെ ഇൻസ്പെക്ഷൻ മന്ദഗതിയിലാണെന്നും എന്നാൽ പരാതികൾക്കനുസരിച്ച് നടപടിയെടുക്കുന്നുണ്ടെന്നും അദ്ദേഹം പറഞ്ഞു. സോളിഡ് വേസ്റ്റ് ഓതറൈസേഷനുവേണ്ടിയുള്ള അപേക്ഷ മലിനീകരണ നിയന്ത്രണ ബോർഡിന് സമർപ്പിച്ചിട്ടുണ്ടോ എന്ന് അസിസ്റ്റന്റ് എഞ്ചിനീയർ ചോദിച്ചതനുസരിച്ച് MCF പുളിയേറ്റിങ്ങിലേക്ക് മാറ്റി സ്ഥാപിക്കുവാൻ തീരുമാനിച്ചതുമൂലമാണ് അപേക്ഷിക്കാൻ വൈകിയതെന്നും എന്നാൽ നിലവിൽ പുളിയേറ്റിങ്ങിൽ ബയോമൈനിംഗ് തീരുന്നതിന് കാലതാമസം എടുക്കുന്നതിനാൽ നിലവിലുള്ള MCF നിലനിർത്തുന്നതിനുള്ള സാഹചര്യമാണുള്ളതെന്നും ആയതിനാൽ ഓതറൈസേഷനുവേണ്ടിയുള്ള നടപടികൾ എത്രയും പെട്ടെന്ന് തന്നെ സ്വീകരിക്കാമെന്ന് ശ്രീ.അബ്ദുൽ ഹമീദ് പറയുകയുണ്ടായി. സിവിൽ സ്റ്റേഷനിൽ കളക്ടറുടെ അനുമതിയോടുകൂടി പുതിയ MCF പ്രവർത്തന സജ്ജമായിട്ടുണ്ടെന്നും ഈ ആഴ്ചയിൽ ഉദ്ഘാടനം ഉണ്ടാകുമെന്നും അദ്ദേഹം അറിയിച്ചു.

അടുത്തതായി തിരുർ മുനിസിപ്പാലിറ്റിയുടെ പ്രവർത്തന പുരോഗതിയാണ് വിലയിരുത്തിയത്. STP യുടെ പ്രവർത്തനങ്ങൾ അസിസ്റ്റന്റ് സയന്റിസ്റ്റ് ചോദിച്ചതനുസരിച്ച് ബസ് സ്റ്റാന്റ് STP പ്രവർത്തനക്ഷമമാണെന്നും ഫിഷ് മാർക്കറ്റ് STP മലിനീകരണ നിയന്ത്രണ ബോർഡ് നിർദ്ദേശിച്ച റെക്ടിഫിക്കേഷൻ

പൂർത്തിയായിട്ടുണ്ടെന്നും കൺസെന്റിനുവേണ്ടി അപേക്ഷിച്ചിട്ടുണ്ടെന്നും എന്നാൽ പേമെന്റ് നടത്തിയിട്ടില്ലെന്നും ക്ലീൻ സിറ്റി മാനേജർ ശ്രീ.ബാബു പറയുകയുണ്ടായി. പേമെന്റ് നടത്തിയാൽ മാത്രമേ അപ്ലിക്കേഷൻ കംപ്ലീറ്റ് ആകുകയുള്ളൂ എന്ന് അസിസ്റ്റന്റ് എഞ്ചിനീയർ അറിയിച്ചു. തിരുർ ഭാഗത്ത് പൊല്യൂട്ടഡ് റിവർ സ്ട്രച്ച് പോയിന്റുകളിൽ ഡിസോൾവ്ഡ് ഓക്സിജൻ കുറവാണെന്ന് സൂചിപ്പിച്ച് മുനിസിപ്പാലിറ്റിക്ക് കത്തയച്ചിരുന്നെന്നും മറുപടി ലഭിച്ചില്ലെന്നും അസിസ്റ്റന്റ് സയന്റിസ്റ്റ് അറിയിച്ചതിനെത്തുടർന്ന് കത്ത് ലഭിച്ചിട്ടുണ്ടെന്നും ഇൻസ്പെക്ഷൻ നടത്തുന്നതിനായി 2 ഹെൽത്ത് ഇൻസ്പെക്ടർമാരെ നിയോഗിച്ചിട്ടുണ്ടെന്നും അദ്ദേഹം പറയുകയുണ്ടായി. അനധികൃത ഡിസ്ചാർജ്ജുകൾ ശ്രദ്ധയിൽ പെട്ടിട്ടുണ്ടോ എന്ന് അസിസ്റ്റന്റ് എഞ്ചിനീയർ ചോദിച്ചതനുസരിച്ച് പരിശോധന തുടങ്ങിയിട്ടുണ്ടെന്നും 5 കിലോമീറ്റർ ദൂരത്തിലുള്ള സ്ട്രച്ച് ആയതിനാൽ സമയയമെടുക്കുമെന്നും ഒരാഴ്ചക്കുള്ളിൽ റിപ്പോർട്ട് അയക്കാമെന്നും ശ്രീ.ബാബു പറയുകയുണ്ടായി.

തുടർന്ന് തലക്കാട് ഗ്രാമപഞ്ചായത്ത് ആക്ഷൻ പ്ലാനുമായി ബന്ധപ്പെട്ട് എന്തെല്ലാം നടപടികളാണ് സ്വീകരിച്ചിട്ടുള്ളതെന്ന് അസിസ്റ്റന്റ് സയന്റിസ്റ്റ് ചോദിച്ചറിയുകയുണ്ടായി. CCTV ക്യാമറകൾ പ്രവർത്തനക്ഷമമാണെന്നും രണ്ടിടത്ത് പുതുതായി ക്യാമറകൾ സ്ഥാപിച്ചിട്ടുണ്ടെന്നും സെക്രട്ടറി ശ്രീമതി.അനു അറിയിച്ചു. തിരുർ പുഴയുടെ ഭാഗമായ കട്ടുച്ചിറയിൽ ജെസിബി ഉപയോഗിച്ച് വൃത്തിയാക്കിയിട്ടുണ്ട് എന്നും പൊന്നാനി പുഴയുടെ തീരങ്ങളിൽ വേസ്റ്റ് അടിഞ്ഞു കൂടിയതായി ശ്രദ്ധയിൽ പെട്ടിട്ടില്ലെന്നും ഹരിതകർമ്മസേനയുടെ പ്രവർത്തനങ്ങൾ നടന്നുവരുന്നുണ്ടെന്നും 60-70 ശതമാനം യൂസർഫീ കളക്ട് ചെയ്തിട്ടുണ്ടെന്നും അദ്ദേഹം പറഞ്ഞു.

തുടർന്ന് മംഗലം പഞ്ചായത്തിന്റെ ആക്ഷൻ പ്ലാനുമായി ബന്ധപ്പെട്ട പ്രവർത്തന പുരോഗതി വിലയിരുത്തി. തിരുർ പൊന്നാനി പുഴയുടെ സംരക്ഷണ പ്രവർത്തനങ്ങൾ പൂർണ്ണമായും കഴിഞ്ഞിട്ടുണ്ടെന്ന് മംഗലം ഗ്രാമപഞ്ചായത്ത് ജൂനിയർ സൂപ്രണ്ട് ശ്രീമതി.ശ്രീജ അറിയിച്ചു. ഹരിതകർമ്മ സേനയുടെ പ്രവർത്തനങ്ങൾ കാര്യക്ഷമമായി നടക്കുന്നുണ്ടെന്നും പുഴയിലേക്ക് മാലിന്യങ്ങൾ തടയുന്നതിനായി കൃത്യമായ പരിശോധന രണ്ടാഴ്ച കൂടുമ്പോൾ നടന്നുവരുന്നുണ്ടെന്നും ശ്രീമതി.ശ്രീജ അറിയിച്ചു.

തുടർന്ന് ജില്ലാ ശുചിത്വ മിഷന്റെ പ്രവർത്തനപുരോഗതിയാണ് വിലയിരുത്തിയത്. തിരുർ ബസ് സ്റ്റാന്റ് STP യിൽ പെരിന്തൽമണ്ണ പോളിടെക്നിക് മെക്കാനിക്കൽ വിഭാഗം ഇൻസ്പെക്ഷൻ നടത്തിയതുപ്രകാരം കറക്ഷൻ പറഞ്ഞതനുസരിച്ച് റെക്ടിഫിക്കേഷൻ നടത്തിയിട്ടുണ്ടെന്നും ആയതിനാൽ ഒരു തവണ കൂടി ഇൻസ്പെക്ഷൻ

നടത്തേണ്ടതുണ്ടെന്നും ജില്ലാ കോർഡിനേറ്റർ ശ്രീമതി.ആതിര പറയുകയുണ്ടായി. പാമ്പാട് ഫ്ളാറ്റ് സമുച്ചയത്തിലെ STP യുടെ ഇലക്ട്രിക് വർക്ക് കംപ്ലീറ്റായിട്ടില്ലെന്നും പാനൽ ബോർഡിന്റെ എസ്റ്റിമേറ്റ് ജില്ലാ പഞ്ചായത്തിൽ നിന്നും ലഭിച്ച ശേഷം ടെൻഡർ നടപടി തുടങ്ങാനാണ് തീരുമാനമെന്നും ശ്രീമതി.ആതിര അറിയിച്ചു. പലയിടത്തും MCF ൽ മാലിന്യങ്ങൾ കെട്ടിക്കിടക്കുന്നുണ്ടെന്നും എത്രയും പെട്ടെന്ന് മാലിന്യങ്ങൾ നീക്കം ചെയ്യാൻ പഞ്ചായത്തുകളും മുനിസിപ്പാലിറ്റികളും ശ്രദ്ധിക്കണമെന്നും അദ്ദേഹം നിർദ്ദേശിച്ചു.

അടുത്തതായി ഗ്രൗണ്ട് വാട്ടർ ഡിപ്പാർട്ട്മെന്റിന്റെ പ്രവർത്തനങ്ങൾ ചർച്ച ചെയ്തു. ആക്ഷൻ പ്ലാനുമായി ബന്ധപ്പെട്ട് കൂടുതലൊന്നും ചെയ്യാനില്ലെന്നും കിണറുകളുടെ വാട്ടർ ക്വാളിറ്റി അനാലിസിസ് നടന്നു വരുന്നുണ്ടെന്നും ഹൈഡ്രോ ജിയോളജിസ്റ്റ് ശ്രീ.ശ്രീജിത്ത് പറയുകയുണ്ടായി.

ആർ.ഡി.ഒ യിൽ നിന്ന് ശ്രീമതി.സുധ പി പങ്കെടുത്തു.

മീറ്റിംഗിൽ പങ്കെടുത്ത എല്ലാവർക്കും അസിസ്റ്റന്റ് സയന്റിസ്റ്റ് ശ്രീമതി.ലത്തീഫ സി.ടി നന്ദി പറഞ്ഞു. 12.00 PM ന് വീഡിയോ കോൺഫറൻസ് അവസാനിച്ചു.


എൻവയോൺമെന്റൽ എഞ്ചിനീയർ

മലപ്പുറം

17.01.2025