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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



File No. KSPCB/314/2025-CEE

Dated: 25-06-2026

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 March 2026

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. The report prepared in revised format with respect to the progress in implementation of action plan of polluted river stretches, for the month of March 2026 is submitted herewith. As per the CPCB report on "Polluted River Stretches for Restoration of Water Quality, 2025", a total of 32 polluted river stretches/locations have been identified in the State of Kerala. Further remedial actions are under progress.

Yours faithfully,

MEMBER SECRETARY

Digitally signed by  
RATISH MENON  
Date: 25-06-2026  
10:12:56

**National Mission for Clean Ganga**  
**Monthly Progress Report for the month of March 2026 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 2026 is 3,60,05,329. The water consumption and wastewater generated are calculated based on the population projected for 2026.

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

Based on population projected for 2026, the estimated sewage and sullage generation is as given below:

- Estimated Sewage and Sullage generation in Urban area -1031.94 MLD

Sewage = 309.582 MLD

Sullage = 722.358 MLD

- Estimated Sewage and Sullage generation in Rural area -3010.99 MLD

Sewage = 903.297 MLD

Sullage = 2107.693 MLD

**Total Sewage and Sullage generation -4042.93 MLD**

• **Details of Sewage Treatment Plant:**

1. No. of functional common STPs in the state = 14 (Total = 15 ; 1 – not working)
2. No. of functional major Institutional STPs = 11 (Total = 12 ; (1 – maintenance )
3. Total sewage treatment capacity in the state through existing major STPs (1+2): =138.41 MLD  
(Urban area =**129.705**MLD rural=**8.705**MLD)
4. Total sewage treatment capacity in the state through **functional** major STPs : =138.37 MLD  
(Urban area =**129.675** MLD rural=**8.695** MLD)
5. Utilization Capacity (Urban) = 94.385 MLD
6. Other functional STPs : 3 Nos (0.22 MLD)
7. No. of functional common septage treatment plants in the state: 4 (0.22 MLD)
8. Sewage treatment capacity via individual STPs in **1426** establishments= **83.47 MLD**
- \* In Kerala, individual houses have septic tank/ soak pits existing for toilets attached to them.
9. Gap in treatment of sewage in terms of sewage treatment plant= 131.287 MLD
10. Major STPs/ FSTPs under construction = 29 Nos. (33.46 MLD)
11. STPs/ FSTPs under proposal stage = 38 Nos. (156.39 MLD)

### Common STPs

| Sl. No                    | STP location                                                                                                                    | Urban/Rural | STP Installed capacity                                      | Utilization | Status                                                                                                                                                                                                                             |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>THIRUVANANTHAPURAM</b> |                                                                                                                                 |             |                                                             |             |                                                                                                                                                                                                                                    |
| 1                         | Common Sewage Treatment Plant, Muttathara, Trivandrum maintained by Kerala Water Authority (Co Processing facility for septage) | Urban       | 107 MLD (Activated Sludge Process)With 500 KLD Co-treatment | 80 MLD      | Operational                                                                                                                                                                                                                        |
| <b>PATHANAMTHITTA</b>     |                                                                                                                                 |             |                                                             |             |                                                                                                                                                                                                                                    |
| 2                         | Sewage Treatment Plant at Sannidhanam (5MLD) Maintained by Travancore Devaswom Board                                            | Rural       | 5 MLD (UASBand SBR)                                         | 3.5 MLD     | Operational                                                                                                                                                                                                                        |
| 3                         | Sewage Treatment Plant at Pamba (3.5 MLD) maintained by Travancore Devaswom Board                                               | Rural       | 3.5 MLD (Coagulation & settling)                            | 3.5 MLD     | Operational                                                                                                                                                                                                                        |
| <b>ALAPPUZHA</b>          |                                                                                                                                 |             |                                                             |             |                                                                                                                                                                                                                                    |
| 4                         | DEWATS system, Chathanad (For 50 houses in slum area)                                                                           | Urban       | 25 KLD (Anaerobic Baffle Reactor)                           | 0.025 MLD   | Operational                                                                                                                                                                                                                        |
| <b>KOTTAYAM</b>           |                                                                                                                                 |             |                                                             |             |                                                                                                                                                                                                                                    |
| 5                         | STP for Houseboat (0.09 MLD)atKumarakom maintained by DTPC, Kottayam                                                            | Rural       | 0.09MLD (Activated Sludge Process)                          | 0.09 MLD    | Operational                                                                                                                                                                                                                        |
| <b>ERNAKULAM</b>          |                                                                                                                                 |             |                                                             |             |                                                                                                                                                                                                                                    |
| 6                         | STP owned by Greater Cochin Development Authority, Marine drive, Kochi                                                          | Urban       | 0.9 MLD (Activated Sludge Process)                          | 0.9 MLD     | Operational.                                                                                                                                                                                                                       |
| 7                         | STP at Elamkulam, Kochi (AMRUT)                                                                                                 | Urban       | 5 MLD (MBBR) with Co treatment 50 KLD                       | 4 MLD       | Operational.                                                                                                                                                                                                                       |
| 8                         | STP owned by GCDA, International Stadium Kaloor                                                                                 | Urban       | 0.75MLD (Activated Sludge Process)                          | 0.05 MLD    | Operational.                                                                                                                                                                                                                       |
| <b>IDUKKI</b>             |                                                                                                                                 |             |                                                             |             |                                                                                                                                                                                                                                    |
| 9                         | Sewage treatment Plant at Comfort station, AdimalyGrama Panchayat, Idukki                                                       | Rural       | 0.01 MLD                                                    | 0.01        | <ul style="list-style-type: none"> <li>•STP was not working.</li> <li>•Show Cause Notice issued on 05.02.2024</li> <li>•Inspection conducted on 22.08.2025</li> <li>•Issue addressed to DC vide letter dated 07.11.2025</li> </ul> |
| 10                        | 60 KLD STP at Taluk Hospital Adimaly,                                                                                           | Rural       | 0.06 MLD                                                    | 0.06        | Operational                                                                                                                                                                                                                        |

|                                                                             |                                                                                  |       |                                   |                                                                                  |                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------|-----------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                             | Adimaly Block Panchayat, Idukki                                                  |       |                                   |                                                                                  |                                                                                                                                                                                                                                                                                                               |
| <b>THRISSUR</b>                                                             |                                                                                  |       |                                   |                                                                                  |                                                                                                                                                                                                                                                                                                               |
| 11                                                                          | Sewage treatment Plant at Guruvayur, Thrissur District                           | Urban | 3 MLD (Activated Sludge Process)  | 0.5MLD                                                                           | Operational.                                                                                                                                                                                                                                                                                                  |
| 12                                                                          | Revamping of 35 KLD STP at Kuriyanchira Slaughter House Corporation, Thrissur    | Rural | 0.035 MLD (MBBR)                  | 0.035 MLD                                                                        | Operational                                                                                                                                                                                                                                                                                                   |
| <b>KANNUR</b>                                                               |                                                                                  |       |                                   |                                                                                  |                                                                                                                                                                                                                                                                                                               |
| 13                                                                          | Sewage treatment Plant at Taliparambu (0. 5MLD) Taliparamba Municipality, Kannur | Urban | 0.5MLD (Activated Sludge Process) | 0.5MLD                                                                           | A show cause notice was sent on 26/11/25. In the reply letter on 23/01/2026 the Thaliparamba Municipality stated that the plant is under upgradation under the AMRUT MITRA scheme. Upon inspection on 15/06/2026, the plant was found operational but not upgraded. Sample collected for analysis on 15/06/26 |
| 14                                                                          | STP at Padannappalam                                                             | Urban | 1 MLD                             | 0.3 MLD                                                                          | Operational                                                                                                                                                                                                                                                                                                   |
| 15                                                                          | STP at old age home Kannur                                                       | Rural | 0.010                             | 0.010                                                                            | MBBR (Operational)                                                                                                                                                                                                                                                                                            |
| <b>Total Capacity = 126.88 MLD<br/>(Urban : 118.175 MLD, Rural : 8.705)</b> |                                                                                  |       |                                   | <b>Utilization Capacity = 93.48 MLD<br/>(Urban : 86.275 MLD ; Rural : 7.205)</b> |                                                                                                                                                                                                                                                                                                               |

### **Institutional STPs**

| Sl. No.                   | STP location                                                  | Urban/ Rural | STP Installed capacity        | Utilization | Status      |
|---------------------------|---------------------------------------------------------------|--------------|-------------------------------|-------------|-------------|
| <b>THIRUVANANTHAPURAM</b> |                                                               |              |                               |             |             |
| 1                         | STP at Medical College, Thiruvananthapuram-Phase I & II (PRS) | Urban        | 5MLD (MBBR)                   | 3 MLD       | Operational |
| <b>ALAPPUZHA</b>          |                                                               |              |                               |             |             |
| 2                         | STP at General Hospital                                       | Urban        | 0.24 MLD Electro coagulation. | 0.1 MLD     | Operational |
| <b>ERNAKULAM</b>          |                                                               |              |                               |             |             |
| 3                         | STP at Kalamassery, Market, Kalamassery Municipality (PRS)    | Urban        | 0.01 MLD                      | 0.01 MLD    | Operational |
| <b>THRISSUR</b>           |                                                               |              |                               |             |             |
| 4                         | STP at General Hospital, Thrissur (AMRUT-1.0)                 | Urban        | 0.36 MLD                      | 0.2 MLD     | Operation   |
| <b>MALAPPURAM</b>         |                                                               |              |                               |             |             |
| 5                         | STP at Municipal Bus Stand, Tirur (PRS)                       | Urban        | 0.05 MLD (Biological)         | 0.05 MLD    | Operational |

|                                                                    |                                                                                               |       |                                          |          |                                                                                                                                                                                                           |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------|------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6                                                                  | Sewage treatment Plant at Malappuram Municipal Bus stand                                      | Urban | 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                                        |
| <b>KOZHIKODE</b>                                                   |                                                                                               |       |                                          |          |                                                                                                                                                                                                           |
| 7                                                                  | STP at Kozhikode Medical College.                                                             | Urban | 2 MLD Old plant.                         | 2 MLD    | Operational.                                                                                                                                                                                              |
| 8                                                                  | STP at Kozhikode Medical College.                                                             | Urban | 2 MLD With 100 KLD Co-treatment Facility | 2 MLD    | Operational                                                                                                                                                                                               |
| 9                                                                  | STP at Kozhikode Medical College.                                                             | Urban | 1 MLD                                    | 0.1 MLD  | Operational                                                                                                                                                                                               |
| 10                                                                 | STP at Kozhikode Medical College                                                              | Urban | 0.5 MLD                                  | 0.5 MLD  | Operational                                                                                                                                                                                               |
| 11                                                                 | Common Sewage Treatment Plant at Narayana nagaram, near stadium, Vatakara, Opp. New bus stand | Urban | 0.1 MLD                                  | 0.1 MLD  | Non-functional since June 2025. A latest inspection of the said STP was conducted on 18.06.2026. Based on the inspection findings, notice will be issued to the concerned authority for necessary action. |
| <b>WAYANAD</b>                                                     |                                                                                               |       |                                          |          |                                                                                                                                                                                                           |
| 12                                                                 | Sewage Treatment Plant at Taluk Hospital, SulthanBathery                                      | Urban | 0.14 MLD (MBBR)                          | 0.05 MLD | Operational                                                                                                                                                                                               |
| <b>Total Capacity = 11.53 MLD; Utilization Capacity = 8.14 MLD</b> |                                                                                               |       |                                          |          |                                                                                                                                                                                                           |

### **FSTP**

| Sl. No.                                                           | STP location                                                         | STP Installed capacity | Utilization | Status                                  |
|-------------------------------------------------------------------|----------------------------------------------------------------------|------------------------|-------------|-----------------------------------------|
| <b>ERNAKULAM</b>                                                  |                                                                      |                        |             |                                         |
| 1                                                                 | Septage Treatment Plant at Brahmapuram, Kochi Corporation, Ernakulam | 0.1MLD (MBBR)          | 0.1 MLD     | Operational                             |
| 2                                                                 | Septage Treatment Plant at Wellington Island, Kochi Corporation      | 0.1MLD(MBBR)           | 0.1 MLD     | Not working properly. Directions issued |
| <b>THRISSUR</b>                                                   |                                                                      |                        |             |                                         |
| 3                                                                 | FSTP at Mattampuram                                                  | 0.01MLD (Biological)   | 0.01        | Operational                             |
| <b>WAYANAD</b>                                                    |                                                                      |                        |             |                                         |
| 4                                                                 | FSTP at Kalpetta                                                     | 0.01MLD(Biological)    | 0.01 MLD    | Operational                             |
| <b>Total Capacity = 0.22 MLD; Utilization Capacity = 0.22 MLD</b> |                                                                      |                        |             |                                         |

### Other operational STPs

| Sl. No.                 | STP location                                                 | STP Installed capacity | Status     |
|-------------------------|--------------------------------------------------------------|------------------------|------------|
| <b>PALAKKAD</b>         |                                                              |                        |            |
| 1                       | FSTP at Yakkara, Palakkad Municipality (AMRUT-1.0)           | 0.1 MLD                | Functional |
| <b>KANNUR</b>           |                                                              |                        |            |
| 2                       | STP at Palayad, Taliparamba Municipality, Kannur             | 0.1 MLD                | Functional |
| 3                       | STP for Convention Centre, Pinarayi Grama Panchayath, Kannur | 0.02 MLD               | Functional |
| <b>TOTAL = 0.22 MLD</b> |                                                              |                        |            |

### Details of under construction of major STPs/ FSTPs in the State

| No.                       | Location                                                                                                   | Implementing Agency           | Capacity of the plant in MLD | Physical Progress in % | Present Status                                           | Timeline of Completion                                                                                                                                                                               |
|---------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------|------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>THIRUVANANTHAPURAM</b> |                                                                                                            |                               |                              |                        |                                                          |                                                                                                                                                                                                      |
| 1                         | FSTP at Varkala Municipality, Thiruvananthapuram (IMPACT KERALA Ltd)                                       | IMPACT Kerala Ltd.            | 50 KLD FSTP                  | 90%                    | Work ongoing                                             | 31.03.2026                                                                                                                                                                                           |
| <b>KOLLAM</b>             |                                                                                                            |                               |                              |                        |                                                          |                                                                                                                                                                                                      |
| 2                         | STP at Kureepuzha, Kollam (AMRUT-1.0)                                                                      | Kerala Water Authority/ AMRUT | 12                           | 95%                    | Work in progress                                         | STP: Completed<br>FSTP: 31.03.2026<br><b>Sewer Network:</b><br>Vacuum Sewer Network – DPR is expected to be submitted by 15.04.2026. Iron Bridge Sewer Network expected to be tendered by 30.04.2026 |
| 3                         | STP at Chitumala Old Age Home. Chitumala BP, Kollam                                                        |                               | 0.015                        | 98%                    | Work in progress. Revise estimate by IRTC in preperation |                                                                                                                                                                                                      |
| 4                         | 190 KLD STP at Pathanapuram Market and Shopping Mall                                                       |                               | 0.190                        | 38%                    | Need to select new agency for remaining STP construction |                                                                                                                                                                                                      |
| 5                         | STP at Mayyanad GP, Kollam                                                                                 | IMPACT KERALA Ltd             | 590KLD Co-treatment          | 70%                    | Work in progress                                         | 31.03.2026                                                                                                                                                                                           |
| 6                         | Waste water Treatment ( 90 KLD) System for coastal housing and Tsunmai resettlement facility at karikuzhi, | IMPACT KERALA Ltd             | 0.09                         | 90% completed          | Work in progress                                         |                                                                                                                                                                                                      |

|                   |                                                                           |                          |                       |                |                                                                                            |                                                                        |
|-------------------|---------------------------------------------------------------------------|--------------------------|-----------------------|----------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
|                   | mayyanadGrama Panchayath , Kollam                                         |                          |                       |                |                                                                                            |                                                                        |
| 7                 | FSTP at Karungapally (M)                                                  | LSGI                     | 0.05                  | 10% completed. | Work Ongoing.                                                                              | Expected date of completion is 30.10.2026                              |
| <b>ALAPPUZHA</b>  |                                                                           |                          |                       |                |                                                                                            |                                                                        |
| 8                 | FSTP at Cherthala Municipality , Alappuzha                                | IMPACT KERALA Ltd        | 250 KLD Septage TP    | 99%            | Inaugurated on 28.03.2025. Trial run kept on hold due to sludge management issues.         |                                                                        |
| <b>IDUKKI</b>     |                                                                           |                          |                       |                |                                                                                            |                                                                        |
| 9                 | STP at private bus station, Kothayikkunnu, Thodupuzha municipality Idukki | Suchitwa mission         | 0.03                  | 30%            | Work in progress<br>Work order amendment to be carried out.                                |                                                                        |
| <b>KOCHI</b>      |                                                                           |                          |                       |                |                                                                                            |                                                                        |
| 10                | STP at Ambedkar Colony, Div-16, Edakochi South (AMRUT-1.0)                | Kochi Corporation/ AMRUT | 1.1                   | 88%            | Work in progress.                                                                          | 30.08.2026                                                             |
| 11                | STP at RAY Flats, Fort Kochi, Kochi Corporation (AMRUT-2.0)               | Kochi Corporation        | 0.105                 | 92%            | Work in progress.                                                                          | 30.06.2026                                                             |
| 12                | FSTP at Brahmapuram, Kochi Corporation (AMRUT-2.0)                        | Kochi Corporation        | 1                     | Work awarded   | The work is to be started by the contractor.                                               | The site is to be handed over to the contractor for starting the work. |
| <b>THRISSUR</b>   |                                                                           |                          |                       |                |                                                                                            |                                                                        |
| 13                | Viyoore central jail STP ( Thrissur)                                      |                          | 0.05                  | 65%            | Work in progress                                                                           | 30.05.2026                                                             |
| 14                | Kunnumkulam, Thrissur                                                     |                          | 0.01                  |                | Ready for commissioning                                                                    | Ready for commencing                                                   |
| 15                | STP at CHC Cherpu BP, Thrissur                                            |                          | 0.01                  | 90%            | Plant construction completed. Final bill is to be submitted by LB.                         |                                                                        |
| 16                | STP at Community Health Centre Pazhayanoor Block Panchayath ,Thirssur     |                          | 0.025                 | 1%             | Work in progress                                                                           | 30.04.2026                                                             |
| 17                | Pazhayanoor STP (Thrissur)                                                | KWA                      | 0.45                  |                | Work awarded                                                                               | 31.12.2026                                                             |
| <b>PALAKKAD</b>   |                                                                           |                          |                       |                |                                                                                            |                                                                        |
| 18                | STP at Ottappalam Municipality, Palakkad District                         | IMPACT KERALA Ltd        | 1.50ML D Co-treatment | 60%            | Sewer network design finalized using vacuum sewer technology. PWD NoC need to be obtained. | 30.06.2026                                                             |
| <b>MALAPPURAM</b> |                                                                           |                          |                       |                |                                                                                            |                                                                        |
| 19                | STP at Pambad Housing Colony Malappuram Municipality, Malappuram          |                          | 0.110                 | 99%            | Kseb connection pending<br>mechanical works pending                                        | 30.09.2025                                                             |

|                                   |                                                                                                                                                                    |                          |         |              |                                                                                   |                                                                                                                                                                              |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------|--------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20                                | STP at District Hospital, Tirur, Malappuram                                                                                                                        |                          | 0.5     | 70%          | Work in progress                                                                  | 30.06.2026                                                                                                                                                                   |
| 21                                | Eco Friendly waste water Treatment plant 10 KLD in vettamCommunity Health centre ,Tirur BP                                                                         |                          | 0.01    | 95%          | Work in progress                                                                  | 30.05.2026                                                                                                                                                                   |
| 22                                | FSTP at Valancheri                                                                                                                                                 | IRTC-PIUMUNDUR           |         |              | Work ongoing. Concrete works completed.                                           |                                                                                                                                                                              |
| <b>KOZHIKODE</b>                  |                                                                                                                                                                    |                          |         |              |                                                                                   |                                                                                                                                                                              |
| 23                                | Wastewater treatment plant at Kuttiyadi government taluk hospital, Kozhikode                                                                                       |                          | 0.080   | 98%          | Physical work completed. Electrical work pending                                  |                                                                                                                                                                              |
| 24                                | Sewerage System for Zone-A (STP at West Hill Industrial Estate), Kozhikode Corporation (AMRUT-2.0, alternative project for Avikkalthodu & Kothi sewerage projects) | Kozhikode Corporation    | 15      | Work awarded | Work to be started                                                                | STP: Expected to be started by 30.04.2026<br><br>Sewer Network: Package-1 is expected to be started by 30.04.2026 and the Package-2 is expected to be tendered by 31.05.2026 |
| 25                                | 30 KLD Sewage Treatment Plant at EMS Memorial Municipal Town Hall, Koyilandy Municipality, Kozhikkode                                                              | Kerala Water Authority   | 0.03    | Work awarded |                                                                                   | 25.12.2026                                                                                                                                                                   |
| <b>KANNUR</b>                     |                                                                                                                                                                    |                          |         |              |                                                                                   |                                                                                                                                                                              |
| 26                                | Sewage Treatment Plant 20 KLD at Shopping Complex cum multiplex Theatre, Kallumutti, Irutti Payam, Grama Panchayath1, Kannur                                       |                          | 0.02    | 2%           | Contractor has given design and is under verification.                            | 15.07.2026                                                                                                                                                                   |
| 27                                | FSTP at Chelora, Kannur Corporation (AMRUT-1.0)                                                                                                                    | Kannur Corporation/AMRUT | 100 KLD | 99%          | Physically completed. Power supply to be obtained, and trial run to be completed. | 30.06.2026                                                                                                                                                                   |
| <b>WAYANAD</b>                    |                                                                                                                                                                    |                          |         |              |                                                                                   |                                                                                                                                                                              |
| 28                                | Construction of 45 KLD waste water treatment plant at Kalpetta Government Ayurveda Hospital DP , Wayanad                                                           |                          | 0.045   | 65%          | Risk and cost details to be submitted.                                            |                                                                                                                                                                              |
| 29                                | FSTP at Mangalpady, 50 KLD                                                                                                                                         | Suchitwa mission         | 0.05    | 5%           | Work started on 03.03.2026                                                        | 30.11.2026                                                                                                                                                                   |
| <b>Total Capacity = 33.46 MLD</b> |                                                                                                                                                                    |                          |         |              |                                                                                   |                                                                                                                                                                              |

#### Details of proposed STPs/ FSTPs in the State

| No. | Location | Implementing Agency | Capacity of the STP | Project status Status of Project (at DPR Stage/ DPR Approved/ AS | Likely Date of Completion of DPR Preparation/ Tendering |
|-----|----------|---------------------|---------------------|------------------------------------------------------------------|---------------------------------------------------------|
|-----|----------|---------------------|---------------------|------------------------------------------------------------------|---------------------------------------------------------|

|                    |                                                                                                        |                                   | proposd<br>in MLD | issued/ TS<br>Tendering<br>Tendered/<br>Awarded)                                                                           | issued/<br>Stage/<br>Work                                                                                             |  |
|--------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--|
| THIRUVANANTHAPURAM |                                                                                                        |                                   |                   |                                                                                                                            |                                                                                                                       |  |
| 1                  | STP at Rajaji Nagar,<br>Thiruvananthapuram<br>Corporation                                              | Thiruvananthapuram<br>Corporation | 0.5               | At tendering Stage                                                                                                         | STP: Expected to be tendered again<br>by 31.05.2026<br>Sewage Network: Expected to be<br>tendered by 31.05.2026       |  |
| 2                  | Nettukaltery FSTP,<br>trivandrum                                                                       | IMPACT<br>Kerala Ltd              | 80 KLD            | DPR Stage                                                                                                                  | Agreement executed with<br>consultant for DPR<br>preparation.                                                         |  |
| KOLLAM             |                                                                                                        |                                   |                   |                                                                                                                            |                                                                                                                       |  |
| 3                  | CHC Sooranadu,<br>Sasthancotta Block<br>Panchayath, Kollam                                             | Suchitwa<br>mission               | 0.028             | At DPR Stage                                                                                                               | DPC Revisions needed for<br>including sbmkhosh fund                                                                   |  |
| 4                  | Kureepuzha 50<br>KLD FSTP<br>(Proposed)                                                                | KWA                               | 0.05              | Tendering Stage                                                                                                            | Expected to be tendered by<br>30.06.2026                                                                              |  |
| ALAPPUZHA          |                                                                                                        |                                   |                   |                                                                                                                            |                                                                                                                       |  |
| 5                  | STP with Septage<br>Cotreatment<br>Capability at Alissery,<br>Alappuzha<br>Municipality<br>(AMRUT-2.0) | Kerala<br>Water<br>Authority      | 5                 | To be retendered                                                                                                           | Expected to be retendered by<br>31.05.2026                                                                            |  |
| KOTTAYAM           |                                                                                                        |                                   |                   |                                                                                                                            |                                                                                                                       |  |
| 6                  | FSTP at Vellor GP                                                                                      |                                   |                   | DPR stage.<br>Lease agreement<br>discussion ongoing.                                                                       | 31.12.2026                                                                                                            |  |
| 7                  | FSTP at Manganam                                                                                       |                                   | 0.05              | DPR stage<br>The Municipality has<br>proposed an alternative<br>site at Vadavathoor,<br>owned by Kottayam<br>Municipality. | 31.12.2025                                                                                                            |  |
| 8                  | Erumeli FSTP                                                                                           | IMPACT<br>Kerala Ltd              | 105<br>KLD        | Work tendered.<br>Agreement executed.                                                                                      | Selection notice issued.<br>Agreement executed.<br>Contractor to submit vetted<br>documents to IMPACT for<br>approval |  |
| ERNAKULAM          |                                                                                                        |                                   |                   |                                                                                                                            |                                                                                                                       |  |
| 9                  | 4 STPs are coming up<br>under the KMRL's<br>Integrated Water<br>transport System<br>project at         | KWA                               | 105               | DPR Stage                                                                                                                  | 31.09.2026                                                                                                            |  |
|                    | Elamkulam (17.5<br>MLD) revised to 55<br>MLD                                                           |                                   |                   |                                                                                                                            |                                                                                                                       |  |
|                    | Vennala (24MLD)<br>clubbed with<br>Elamkulam                                                           |                                   |                   |                                                                                                                            |                                                                                                                       |  |
|                    | Muttar (16.5 MLD)<br>revised to 50MLD                                                                  |                                   |                   |                                                                                                                            |                                                                                                                       |  |
|                    | Perandur (19 MLD)<br>clubbed with Muttar                                                               |                                   |                   |                                                                                                                            |                                                                                                                       |  |
| 10                 | STP with Septage<br>Cotreatment<br>Capability at                                                       | Kerala<br>Water<br>Authority      | 5                 | Retendering stage                                                                                                          | STP: Expected to be awarded by<br>30.04.2026.Sewer Network: One<br>package is expected to be awarded                  |  |

|                   |                                                                                                                                      |                        |              |                                            |                                                                              |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|--------------------------------------------|------------------------------------------------------------------------------|
|                   | Elamkulam, Kochi Corporation                                                                                                         |                        |              |                                            | by 30.04.2026 and the other package is expected to be tendered by 30.04.2026 |
| 11                | CHC Kadayiruppu, Vadavucode Block Panchayat, Ernakulam                                                                               | Suchitwa mission       | 0.025        | DPR Stage                                  | 31.08.2026                                                                   |
| 12                | Muvattupuzha Municipality's FSTP Project                                                                                             | IMPACT Kerala Ltd.     | 0.05         | Land conversion paperwork to be monitored. |                                                                              |
| 13                | North Paravur FSTP                                                                                                                   | IMPACT Kerala Ltd.     |              | DPR Stage                                  | 30.05.2026                                                                   |
| <b>THRISSUR</b>   |                                                                                                                                      |                        |              |                                            |                                                                              |
| 14                | 5 MLD Decentralized Sewerage Scheme (STP at Kokkala), Thrissur Corporation (AMRUT-2.0)                                               | Thrissur Corporation   | 5            | <b>To be tendered</b>                      | Expected to be tendered by 30.04.2026                                        |
| 15                | STP at Ottuppara Market, Wadakkanchery Municipality, Thrissur (IMPACT KERALA Ltd) (PRS)                                              | IMPACT KERALA Ltd      | 18KLD STP    | DPR preparation ongoing.                   | 30.06.2026                                                                   |
| 16                | STP at Athani market, Wadakkanchery Municipality, Thrissur (PRS) (IMPACT KERALA Ltd)                                                 | IMPACT KERALA Ltd      | 13.9 KLD STP | TS stage                                   | 30.06.2026                                                                   |
| 17                | Augmentation of existing 3 MLD STP at Chakkamkandam to 5 MLD with Septage Cotreatment Capability, Guruvayur Municipality (AMRUT-2.0) | Kerala Water Authority | 2            | DPR stage <b>AS to be issued</b>           | DPR expected to be finalized by 30.04.2026                                   |
| 18                | General Hospital, Irinjalakuda Municipality, Thrissur (PRS)                                                                          |                        | 0.150        | TS received                                | DPR expected to be 31.12.2026                                                |
| 19                | FSTP at Ramavarma puram, Thrissur Corporation                                                                                        | Thrissur Corporation   | 0.1          | Tendering Stage                            | Expected to be tendered by 31.05.2026                                        |
| 20                | Erumapetti FSTP                                                                                                                      | IMPACT Kerala Ltd      |              | DPR Stage                                  | Soil test to be done by LB. Reminder sent.                                   |
| <b>PALAKKAD</b>   |                                                                                                                                      |                        |              |                                            |                                                                              |
| 21                | STP for Municipal Buildings, Palakkad Municipality (AMRUT-2.0)                                                                       | Palakkad Municipality  | 0.030        | DPR Stage <b>AS to be issued</b>           | DPR is expected to be submitted by 15.04.2026                                |
| 22                | Construction sewage treatment plant in Alathur taluk hospital, at Palakkad                                                           |                        | 0.005        | DPR revision stage                         | Land constraints- Need to revise the DPR.                                    |
| 23                | FSTP at Shornur                                                                                                                      | IMPACT Kerala Ltd.     |              | DPR Stage                                  | MoU to be signed with IMPACT Kerala.                                         |
| 24                | Chittur Thathamangalam FSTP                                                                                                          | IMPACT Kerala Ltd      | 20 KLD       | DPR Stage                                  | MOU to be executed with IMPACT Kerala Ltd.                                   |
| <b>MALAPPURAM</b> |                                                                                                                                      |                        |              |                                            |                                                                              |
| 25                | Eco-Friendly wastewater Treatment Plant (140 KLD ) for                                                                               | Suchitwa mission       | 0.14         | Tendering stage                            | Agreement executed on 26-12-2025.                                            |

|                                    |                                                                                                          |                                                               |                                    |                                               |                                                                      |
|------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------|-----------------------------------------------|----------------------------------------------------------------------|
|                                    | Women and Children Hospital Ponnani Municipality, Malappuram                                             |                                                               |                                    |                                               |                                                                      |
| 26                                 | FSTP at Perinthalmanna                                                                                   | Aquatechnics Water Treatment Technologies Pvt. Ltd. Ernakulam |                                    | New location to be identified.                |                                                                      |
| <b>KOZHIKODE</b>                   |                                                                                                          |                                                               |                                    |                                               |                                                                      |
| 27                                 | STP with Septage Cotreatment Capability at Sarovaram, Kozhikode Corporation                              | Kerala Water Authority                                        | 27                                 | To be retendered                              | Expected to be tendered again by 30.04.2026                          |
| 28                                 | STP at Vadakara Municipality, Kozhikkode                                                                 | IMPACT KERALA Ltd                                             | 0.5 MLD Sewage TP 20KLD FSTP 20KLD | DPR stage                                     | DPR being corrected. Land Issue. Land Conversion process ongoing     |
| <b>KANNUR</b>                      |                                                                                                          |                                                               |                                    |                                               |                                                                      |
| 29                                 | STP with Septage Cotreatment Capability at Maithanappally, Kannur Corporation (AMRUT-2.0)                | Kerala Water Authority                                        | 5                                  | To be retendered                              | Expected to be tendered again by 31.05.2026                          |
| 30                                 | STP at hospital, Pazhayangadi, Kannur                                                                    | Kerala Water Authority                                        | 0.120                              | At tendering stage                            | 31.12.2026                                                           |
| 31                                 | DPR for perumba fish market Payyanur Municipality, Kannur                                                | Kerala Water Authority                                        | 0.01                               | Work tendered                                 | 25.10.2026                                                           |
| 32                                 | 150 KLD Sewage Treatment Plant - Mattannur Municipality                                                  | Suchitwa Mission                                              | 0.2                                | At tendering stage                            | TS issued 06-11-2025. Tendering process ongoing.                     |
| 33                                 | FSTP at Valliyayi, Mokeri GP                                                                             | Suchitwa Mission                                              |                                    | TS issued on 17-10-2025.                      |                                                                      |
| 34                                 | Panur BP FSTP, kannur                                                                                    | IMPACT Kerala Ltd                                             | 50 KLD                             | TS Stage                                      | MOU to be executed with IMPACT Kerala for proceeding with tendering. |
| <b>WAYANAD</b>                     |                                                                                                          |                                                               |                                    |                                               |                                                                      |
| 35                                 | 65 KLD Sewage Treatment Plant at Taluk Head Quarters Hospital Vythiri, Kalpetta Block Panchayat, Wayanad | Suchitwa mission                                              | 0.065                              | At DPR Stage Revised DPR preparation ongoing. | 31.12.2026                                                           |
| <b>KASARGOD</b>                    |                                                                                                          |                                                               |                                    |                                               |                                                                      |
| 36                                 | Taluk Hospital, Neeleswaram Municipality Kasaragod                                                       | Suchitwa mission                                              | 0.040                              | DPR under revision                            | 31.12.2026                                                           |
| 37                                 | FSTP at Manjeswaram, Manjeswaram GP                                                                      | Suchitwa mission                                              |                                    | TS issued                                     | Paused due to public protest                                         |
| 38                                 | Construction of 36 KLD FSTP at Kayyur-Cheemeni Grama Panchayath,                                         |                                                               | 0.036                              | TS issued                                     |                                                                      |
| <b>Total Capacity = 156.39 MLD</b> |                                                                                                          |                                                               |                                    |                                               |                                                                      |

**ETPs/CETPs**

| Sl. No.                  | STP location                                                           | STP Installed capacity | Status                                                                        |
|--------------------------|------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------|
| 1                        | Construction of 6 KLD ETP for Kumali Slaughter House Kumali GP, Idukki | 0.006 MLD              | • Slaughter house is not functioning.                                         |
| 2                        | Effluent treatment Plant at Tirur (fish market)                        | 0.45 MLD (Biological)  | Operational                                                                   |
| 3                        | ETP in Fish Market, PonmundamGP , Malappuram                           | 0.01MLD (Anaerobic)    | The unit has submitted for ICE. STP file has been returned for clarification. |
| 2                        | ETP 10 KLD Capacity, Nedumangad Municipality, Thiruvananthapuram       | 0.01                   | Completed. Consent application under process.                                 |
| <b>Total = 0.476 MLD</b> |                                                                        |                        |                                                                               |

**Details of proposed ETPs in the State**

| No .                             | Location                                                                      | Implementing Agency | Capacity of the ETP proposed in MLD | Status of Project (at DPR Stage/ DPR Approved/ AS issued/ TS issued/ Tendering Stage/ Tendered/ Work Awarded)                         | Likely Date of Completion of DPR Preparation/ Tendering |
|----------------------------------|-------------------------------------------------------------------------------|---------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <b>THIRUVANANTHAPURAM</b>        |                                                                               |                     |                                     |                                                                                                                                       |                                                         |
| 1                                | ETP at KSRTC Depot, Thampanoor, Thiruvananthapuram (AMRUT-2.0)                | KSRTC               | 0.02                                | <b>Tendered:</b><br>LoA has been issued to M/s. Hubertcare Enviro Systems Pvt. Ltd. on 06/03/26, and the agreement is to be executed. | DPR preparation expected to be completed by 31.05.2026  |
| <b>KOTTAYAM</b>                  |                                                                               |                     |                                     |                                                                                                                                       |                                                         |
| 2                                | ETP at Kodimatha, Kottayam Municipality                                       |                     | 0.030                               |                                                                                                                                       | Soil test to be conducted.                              |
| <b>MALAPPURAM</b>                |                                                                               |                     |                                     |                                                                                                                                       |                                                         |
| 3                                | ETP at Perinthalmanna Dialysis Center, District Panchayath, Malappuram        | Suchitwa Mission    | 0.010                               |                                                                                                                                       | Work ongoing                                            |
| 4                                | ETP at Tirur Municipality Slaughter house                                     | Suchitwa Mission    | 0.030                               | Tendering Stage                                                                                                                       | Paused due to public protest 31.08.2026                 |
| <b>KOZHIKKODE</b>                |                                                                               |                     |                                     |                                                                                                                                       |                                                         |
| 5                                | ETP at Govt Ayurvedic Hospital, Talayad, Panangad Grama Panchayath, Kozhikode | Suchitwa Mission    | 0.03                                | TS issued                                                                                                                             |                                                         |
| <b>Total Capacity = 0.12 MLD</b> |                                                                               |                     |                                     |                                                                                                                                       |                                                         |

### **Projects by Indian Railway**

| Sl No. | Location                                      | Implementing Agency | Status of Project                                                                                                                                                                                                                                                                                                                                                                                        |
|--------|-----------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | STP at Ernakulam Junction railway station     | Indian Railway      | The STP will be commissioned along with Station redevelopment of Ernakulam Junction (South) Railway Station                                                                                                                                                                                                                                                                                              |
| 2      | STP at Aluva station                          | Indian Railway      | Agency awarded for installation of STP at Aluva Railway Station. But the agency has yet to commence the work                                                                                                                                                                                                                                                                                             |
| 3      | STP at Ernakulam North                        | Indian Railway      | The STP will be commissioned along with Station redevelopment of Ernakulam Junction (North) Railway Station                                                                                                                                                                                                                                                                                              |
| 4      | Diesel Loco Shed, Southern Railway, Ernakulam | Indian Railway      | 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 2000 sq ft land area. |

### **Proposed Sewerage System**

| Sl No | Sewage network system                                                                                                      | Implementing Agency | Capacity of STP proposal            | Project Status                                                                                                                                                                                                            | Likely Date of Completion of DPR Preparation/ Tendering |
|-------|----------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| 1     | Sewerage system for Thiruvananthapuram Corporation- Cluster 1 Attukal, Ambalathara, Kaladi, Kalipankulam&Kamale swaram     | KWA                 | 7.0(for utilizing exisxtng 107 MLD) | DPR Approved. In Cluster 1 Kaladi Zone 3 &Attukal Zone 4 Part- Work awarded, Attukal Zone 1 Part- Work retendered, Ambalathara Zone 5 Part- The roads under DLP. Once road cutting sanction obtained work can be tendered |                                                         |
| 2     | Preparation of DPR for proposed sewerage system to the Madhippuram colony and surrounding areas near VizhinjamHarbour, TVM | KWA                 | 5                                   | DPR Approved                                                                                                                                                                                                              |                                                         |
| 3     | Detailed Engineering Report for Sewerage Scheme in Neyyattinkara Zone I,TVM                                                |                     | 2.5 MLD                             | DPR Approved                                                                                                                                                                                                              |                                                         |
| 4     | Detailed Engineering Report for the Sewerage scheme in Alappuzha Municipality with ST P – Phase 1                          |                     | 5 MLD                               | DPR Approved                                                                                                                                                                                                              |                                                         |
| 5     | Detailed Engineering Report for the Sewerage scheme in Haripad Municipality - Sewage Treatment                             |                     | 2.6 MLD                             | DPR Approved                                                                                                                                                                                                              |                                                         |

|    |                                                                                            |  |         |                                                                                              |            |
|----|--------------------------------------------------------------------------------------------|--|---------|----------------------------------------------------------------------------------------------|------------|
|    | 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   | DPR Approved                                                                                 |            |
| 7  | Sewerage System for Kattappana Municipality                                                |  | 1.76    | DPR Approved                                                                                 |            |
| 8  | Detailed Engineering Report for Sewerage Scheme in Kalamassery Municipality-Phase-1, Kochi |  | 2.6 MLD | DPR Approved                                                                                 |            |
| 9  | Sewerage System for Aluva –Zone 1                                                          |  | 1.72    | DPR Approved                                                                                 |            |
| 10 | Sewerage system for Pattambi municipality                                                  |  | 5.4     | DPR Approved                                                                                 |            |
| 11 | Decentralized Sewerage Scheme (STP at Kokkala), Thrissur Corporation (AMRUT-2.0)           |  | 2.5     | DPR approved<br>The draft DBOT tender/EoI document is being vetted by the CE, LSGD's office. | 31.03.2026 |

#### Mobile FSTP

| No. | Location                                                         | Implementing Agency           | Capacity of the STP proposed in MLD | Status of Project (in Detail) | Incremental Progress                                                                                                                                                                                                                                                                                                                                                                                                                                    | Likely Date of Completion of DPR 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.)                | Physically completed.         | Both units delivered. The trial run was done by Bhouma on 05.07.2025. As per the test results (dated 28.07.2025) given by the KSPCB it was observed that the faecal coliform content in the effluent taken from both units and the oil & grease content in the effluent of one unit were above the allowable limits. Hence the ULB has asked Bhouma to conduct the trial run & testing again. This time the ULB is planning to give samples for testing |                                                         |

|   |                                                                                                |                    |     |                                                                                 |                                                                                                                                                                                                                                                                                                                                                          |                                                                                                  |
|---|------------------------------------------------------------------------------------------------|--------------------|-----|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|   |                                                                                                |                    |     |                                                                                 | to the KSPCB's lab as well as to a NABL accredited lab suggested by the KSPCB. Trial run & testing to be conducted again by Bhouma. Trial run was done again by Bhouma on 15.11.2025. As per the test results received, all parameters were found to be within the allowable limits prescribed by the KSPCB. MTUs are to be made operational by the ULB. |                                                                                                  |
| 3 | Mobile Treatment Unit - Kodungalloor, Neyyattinkara, Chirayinkeezhu, Kumarakam, Wadakkancherry |                    |     | proposal stage                                                                  |                                                                                                                                                                                                                                                                                                                                                          |                                                                                                  |
| 4 | Mobile Septage Treatment Units - 2 nos., Kollam Corporation (AMRUT-1.0)                        | 0.02 (0.01x2 nos.) | 45% | Tender to be floated by the ULB in the GeM portal for the 2 <sup>nd</sup> unit. | The procured unit is to be made operational.                                                                                                                                                                                                                                                                                                             | Decision on procuring the 2 <sup>nd</sup> unit is expected to be taken by the ULB by 30.04.2026. |

#### **Underground STPs (Proposed)**

| No | Projects                                                                                                                                                                                                                                            | Status                                                                                                                                                                                                                                                                                                                                                 |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | UG STP for Thavanur Central Prison & Correctional Home, Malappuram Dist.                                                                                                                                                                            | <ul style="list-style-type: none"> <li>DPR submitted to SM for financial status. MoU to be signed.</li> </ul>                                                                                                                                                                                                                                          |
| 2  | UG STP at Parassinikkadavu, Anthur Municipality, Kannur Dist.                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>DPR submitted to SM for financial status. MoU to be signed.</li> </ul>                                                                                                                                                                                                                                          |
| 3  | Govt. Ayurveda Hospital, Piravom Municipality, Ernakulam Dist.                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>DPR submitted to SM for financial status. MoU signed.</li> </ul>                                                                                                                                                                                                                                                |
| 4  | 3 projects in Alappuzha district <ul style="list-style-type: none"> <li>i. Civil Station in Alappuzha Municipality</li> <li>ii. Revenue Tower, Taluk Office in Haripad Municipality</li> <li>iii. Taluk Hospital in Haripad Municipality</li> </ul> | <ul style="list-style-type: none"> <li>RFQ invited for PFR from empanelled agencies with 09.06.25 as last date. 8 quotes received, under evaluation. Placed before the technical committee. Selection notice to be issued.</li> <li>In the review meeting held by Principal Director on 05.06.2025, directed LB to proceed with soil test.</li> </ul>  |
| 5  | 2 projects in Palakkad district <ul style="list-style-type: none"> <li>i. PHC in Akathethara Grama Panchayat</li> <li>ii. KAP Camp in Puthupariyaram Grama Panchayath</li> </ul>                                                                    | <ul style="list-style-type: none"> <li>RFQ invited for PFR from empanelled agencies with 09.06.25 as last date. 8 quotes received, under evaluation. Placed before the technical committee. Selection notice to be issued.</li> <li>In the review meeting held by Principal Director on 05.06.2025, directed LBs to proceed with soil test.</li> </ul> |

### **Details of Industrial Pollution**

- **Total Effluent Generating units= 16101**
- **Quantity of Effluent generated = 126.384 MLD**
- 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–95nos

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

- 9nos 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- 8.5, TSS -105 mg/l, TDS - 2183mg/l,BOD - 16.2mg/l, COD - 160mg/l,O & G-BDL,Ammoniacal Nitrogen - 0.03mg/l, Nitrate Nitrogen- 2.9mg/l, Total Kjeldahal Nitrogen- 6.4mg/l,Phosphates-0.1932mg/l, Chlorides- 1120mg/l,Sulphates- 18.7mg/l,Flouride-BDL, Total Residual Chlorine -5mg/l, Phenolic Compounds - BDL, Sulphides-BDL, Cyanide-BDLas per analysis report dated 23.03.2026. |
| CETP,KINFRA,Elamannoor, Pathanamthitta                                   | 0.22 MLD           | 30 Cubic metre per day | Operational                                    | 4                      | 4                         | pH - 6.5 to 8.5, TSS - 100, BOD - 30, O&G - 10,COD-250 as per analysis report dated 12.01.2026                                                                                                                                                                                                                                                                                        |
| KSIDC Mega Food Park, Pallipuram, Cherthala, Alappuzha                   | 2 MLD              | 0.5 MLD                | Operational                                    | 6                      |                           | pH-7.7 mg/L, BOD-30.24 mg/L, SS- 21.2 mg/L O&G-BDL , as per analysis report dated 24.12.2025                                                                                                                                                                                                                                                                                          |
| Sea Food Park (India) Ltd., Aroor, Alappuzha                             | 0.3 MLD            | 0.3 MLD                | Operational                                    | 10                     |                           | pH-7.5 mg/L, BOD- 11.62mg/L, SS-5 mg/L, O&G-BDL , as per analysis report dated 31.12.2025                                                                                                                                                                                                                                                                                             |

|                                                                                                                                                     |          |          |             |                                |  |                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|-------------|--------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Kinfra Small Industries Park<br>Nellad,<br>Mazhuvanoor                                                                                              | 0.4 MLD  | 0.4 MLD  | Operational | 15                             |  | pH- 7.09, COD-248 mg/L, BOD-18.37mg/L, Oil and Grease-BDL, Total Suspended Solids –182.4 mg/L, Fluorides< 1 mg/L, Chlorides-149.9 mg/L, Phosphate – 1.89 mg/L, Nitrate-1.10, Sulphates – 19.78mg/L, Sulphides– 3.63 mg/l, Ammoniacal Nitrogen – 0.964mg/l, Phenolic Compounds – BDL, as per analysis report dated 05.06.2025                                                                        |
| 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- 8.11, COD-40 mg/L, Oil and Grease-BDL, Total Suspended Solids – BDL, TDS – 1.31, Chlorides-29.9mg/L, Sulphates – 28.25 mg/L, Sulphides – BDL, Fluorides < 1 mg/L, Ammoniacal Nitrogen –0.21 mg/L , Phenolic Compounds - BDL, Phosphates – 0.53 mg/l, Nitrate – 7.8 mg/l and Total Residual Chlorine - BDL as per analysis report dated 10.06.2025<br>Action is taken for preventing exceedance. |
| CSEZ, Kakkanad, Cochin Special Economic Zone<br>Ernakulam                                                                                           | 1 MLD    |          | Operational | 14                             |  | <ul style="list-style-type: none"> <li>pH-7.23, TSS-BDL , TDS – 360 mg/l, Chloride – 6.9 mg/l, Residual Chlorine – BDL,</li> </ul>                                                                                                                                                                                                                                                                  |

|                                                                                        |              |              |             |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------|--------------|--------------|-------------|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                        |              |              |             |    |    | phosphate-<br>BDL,sulphide-<br>BDL,<br>ammonicalnitr<br>ogen – 0.078<br>mg/L, BOD-<br>BDL , COD-4<br>mg/l, Sulphate<br>– 6.8 mg/l, Oil<br>& grease –<br>BDL, Copper-<br>BDL, cadmium<br>– BDL, Nitrite<br>as Nitrogen –<br>BDL, Nitrates<br>as Nitrogen –<br>2.334 mg/l,<br>Total Kjeldahl<br>Nitrogen –<br>1.232 mg/l,<br>Iron – BDL,<br>Manganese –<br>BDL, Nickel –<br>BDL, Lead –<br>BDL, Zinc –<br>BDL analysis<br>report dated<br>20.06.2025 |
| KinfraTechno Industrial<br>Park,<br>KakkancheryChelambara<br>P.O, Malappuram           | 0.675<br>MLD | 0.675<br>MLD | Operational | 17 | 17 | pH – 7.4, BOD –<br>13 mg/l, COD –<br>56 mg/l, TSS – 62<br>mg/l, oil & grease<br>– BDL as per<br>report dated<br>19.07.2025                                                                                                                                                                                                                                                                                                                         |
| Kinfra Textile Centre,<br>Nadukani, Pallivayal P.O,<br>Thaliparambu, Kannur–<br>670142 | 0.2<br>MLD   | 0.2 MLD      | Operational | 2  | 2  | pH – 8.91, BOD –<br>303.5 mg/l, COD<br>– 736 mg/l, Oil &<br>Grease – 10.72<br>mg/l, TSS – 104<br>mg/l as per<br>analysis report<br>dated 13.08.2025                                                                                                                                                                                                                                                                                                |

\*Appropriate action is being taken in cases where the specified standards are exceeded.

| CETP- Proposed                     |           |          |                                                                                                                                                                                                                                                                                                                                                         |                                                                                |                                                                 |    |
|------------------------------------|-----------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------|----|
| CETP, Industrial department, Aroor | 1.5 MLD   | Proposed | <ul style="list-style-type: none"> <li>• GM issued proceedings on 08/01/2024 to resume the 1 acre land from JIS international</li> <li>• 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.</li> </ul> |                                                                                |                                                                 | NA |
| CETP, Chandiroor                   | 1.5 MLD   | Proposed | <ul style="list-style-type: none"> <li>• Not constructed (Land procured)</li> </ul>                                                                                                                                                                                                                                                                     | 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 |          | <ul style="list-style-type: none"> <li>• ICO issued. CETP is ready to operate</li> </ul>                                                                                                                                                                                                                                                                |                                                                                | Industries have not started functioning.                        |    |

## **Solid Waste Management**

- Total quantity of waste generated = 10182.91 TPD.
- Quantity of biodegradable waste = 7477.05 TPD
- Quantity of non-biodegradable = 2196.71 TPD

### **1. BIODEGRADABLE WASTE MANAGEMENT**

In Kerala, an effective wet-waste management system is being implemented with mandatory source segregation into wet (biodegradable) and dry (non-biodegradable) fractions. The wet waste generated in the state is managed by a three tier system.

**Through Household Level Devices:** Kerala has successfully implemented household-level management of biodegradable waste through the widespread adoption of decentralized solutions such as compost bins. Recent data shows 23,98,843 numbers of composting bins and 68,973 numbers of household-level biogas plants are functioning effectively across the State. As a promotion for using source level waste management devices, the state is providing 90% subsidy to the beneficiaries for purchase of household level biomethanation/composting devices, through the LSGIs. In addition to that, Fifty percent of the estimated project cost, up to a maximum of one lakh rupees is given to the private sector institutions, hostels and hotels for setting up waste management plants in their premises. Workshops and campaign activities are also conducted to inform the Bulk Waste Generators and institutions about source-level waste management.

At present, 186 agencies are empaneled statewide for various services like supply of bio waste management devices, supply of quality inoculum for efficient composting and translation of technologies etc. in biodegradable waste management.

To ensure sustainability and to support households in the effective implementation and operation of these systems, address user queries, and provide technical assistance, more than 5000 Green Technicians have been deployed across Kerala. Overall, this decentralized approach has proven to be highly effective in reducing the overflow of waste from households and thereby reducing requirements of centralized plants

**Through Community Level Facilities:** To manage waste generated from markets and other institutions, Local bodies collect biodegradable waste through Haritha Karma Sena members or sanitation workers and process it at community-level facilities such as composting units, biogas plants, and windrow composting facilities.

**Regional Level Facilities:** Some rapidly urbanizing areas where the overflow of biowaste is sufficient enough to make a commercially viable CBG plant, State has proposed establishment of regional-level compressed biogas (CBG) plants to make the system future proof.

Details of biodegradable waste Management Facilities in the state are given in Table 1.

| <b>Table 1. Biodegradable Waste Management Facilities in the State</b> |                                                            |                                                   |                                                           |                                         |                                            |
|------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------|-----------------------------------------|--------------------------------------------|
| <b>District Name</b>                                                   | <b>Total BDW Generation (TPD) based on 2026 population</b> | <b>Total capacity of Compost Facilities (TPD)</b> | <b>Total capacity of Bio-methanation Facilities (TPD)</b> | <b>Total Rendering Facilities (TPD)</b> | <b>Total BDW Processing Capacity (TPD)</b> |
| Thiruvananthapuram                                                     | 778.04                                                     | 789.05                                            | 70.25                                                     | 61.40                                   | 920.69                                     |
| Kollam                                                                 | 569.34                                                     | 578.89                                            | 55.94                                                     | 70.94                                   | 705.77                                     |
| Pathanamthitta                                                         | 223.58                                                     | 205.32                                            | 19.70                                                     | 16.73                                   | 241.75                                     |
| Alappuzha                                                              | 424.90                                                     | 405.86                                            | 31.16                                                     | 43.17                                   | 480.19                                     |
| Kottayam                                                               | 394.15                                                     | 380.76                                            | 28.01                                                     | 43.82                                   | 452.59                                     |
| Idukki                                                                 | 207.63                                                     | 205.19                                            | 16.24                                                     | 11.99                                   | 233.43                                     |
| Ernakulam                                                              | 788.23                                                     | 716.32                                            | 49.81                                                     | 115.28                                  | 881.42                                     |
| Thrissur                                                               | 698.76                                                     | 672.11                                            | 59.03                                                     | 52.22                                   | 783.36                                     |
| Palakkad                                                               | 610.67                                                     | 646.63                                            | 36.26                                                     | 72.18                                   | 755.07                                     |

| <b>Table 1. Biodegradable Waste Management Facilities in the State</b> |                                                            |                                                   |                                                           |                                         |                                            |
|------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------|-----------------------------------------|--------------------------------------------|
| <b>District Name</b>                                                   | <b>Total BDW Generation (TPD) based on 2026 population</b> | <b>Total capacity of Compost Facilities (TPD)</b> | <b>Total capacity of Bio-methanation Facilities (TPD)</b> | <b>Total Rendering Facilities (TPD)</b> | <b>Total BDW Processing Capacity (TPD)</b> |
| Malappuram                                                             | 994.93                                                     | 935.26                                            | 121.77                                                    | 127.98                                  | 1185.01                                    |
| Kozhikode                                                              | 754.90                                                     | 769.50                                            | 55.56                                                     | 74.57                                   | 899.62                                     |
| Wayanad                                                                | 172.17                                                     | 185.03                                            | 6.70                                                      | 21.92                                   | 213.65                                     |
| Kannur                                                                 | 570.17                                                     | 587.60                                            | 38.07                                                     | 54.80                                   | 680.46                                     |
| Kasaragod                                                              | 289.58                                                     | 294.39                                            | 18.59                                                     | 25.53                                   | 338.51                                     |
| <b>Grand Total</b>                                                     | <b>7477.05</b>                                             | <b>7371.91</b>                                    | <b>607.08</b>                                             | <b>792.55</b>                           | <b>8771.53</b>                             |

The quantity of biowaste generated in the State is approximately 7477.05 TPD, while the existing processing facilities including household, institutional, and community-level systems have a combined installed capacity of about 8771.53 TPD. While accounting for each ULB, a capacity gap exists, a significant portion of the remaining biowaste is productively utilized as livestock feed. A substantial share of biowaste generated originates from Bulk Waste Generators such as hotels, restaurants, and catering establishments, primarily in the form of food waste. The food waste collected from these sources is generally of good quality and can be used as livestock feed with minimal pre-processing. Farm owners often collect food waste directly from these establishments and utilize it as animal feed, thereby ensuring the productive reuse of a considerable quantity of food waste.

To establish a sustainable and long-term system for biowaste management and to address the existing processing capacity gap, the State has proposed the development of regional-level Compressed Biogas (CBG) plants. The status of the projects are given in Table 2.

| <b>Table 2. Status of Compressed Biogas Plants</b> |                                |                         |                             |
|----------------------------------------------------|--------------------------------|-------------------------|-----------------------------|
| Sl.No.                                             | Location of the plant          | Capacity of Plant (TPD) | Implementation Status       |
| 1                                                  | Palakkad Municipality          | 110                     | 85% work completed          |
| 2                                                  | Kochi Corporation              | 150                     | Trial run completed         |
| 3                                                  | Thrissur Corporation           | 30                      | Construction Started        |
| 4                                                  | Thiruvananthapuram Corporation | 150                     | In land acquisition process |
| 5                                                  | Kollam Corporation             | 150                     | Agreement signing stage     |
| 6                                                  | Kozhikode Corporation          | 150                     | Agreement executed          |
| 7                                                  | Changanaserry Municipality     | 30                      | Tendering stage             |
|                                                    | <b>Total</b>                   | <b>770</b>              |                             |

## 2. NON-BIODEGRADABLE WASTE MANAGEMENT

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. Table 3 gives the details of non biodegradable waste collection and segregation facilities.

| <b>Table 3. Non-Biodegradable Waste Management Facilities in the State</b> |                      |                      |
|----------------------------------------------------------------------------|----------------------|----------------------|
| <b>Facility Type</b>                                                       | <b>July 2025</b>     | <b>Jan 2026</b>      |
| Mini MCF                                                                   | 19808 Nos            | 20051 Nos            |
| Containers for temporary Storage                                           | 148 Nos              | 158 Nos              |
| MCF                                                                        | 1272 Nos             | 1350 Nos             |
| RRF                                                                        | 167 Nos              | 192 Nos              |
| Clean Kerala Company + Private Facilities                                  | 73 Nos<br>685.64 TPD | 80 Nos<br>715.64 TPD |

The state is handling non-bio waste through collection, storage & handling, segregation and processing through facilities established by local bodies and private agencies. The details are shown in table 4.

| <b>Table 4. Non-bio waste generation and processing capacity</b> |                                                      |                                  |                                      |                            |                                      |
|------------------------------------------------------------------|------------------------------------------------------|----------------------------------|--------------------------------------|----------------------------|--------------------------------------|
| District Name                                                    | Total NBDW Generation (TPD) based on 2026 population | Facilities in Local Bodies (TPD) | Private agency Godown Facility (TPD) | CKCL Godown Facility (TPD) | Total NBDW Processing Capacity (TPD) |
| Thiruvananthapuram                                               | 240.67                                               | 164.75                           | 68.26                                | 12.20                      | 245.21                               |
| Kollam                                                           | 166.94                                               | 127.83                           | 23.94                                | 22.20                      | 173.97                               |
| Pathanamthitta                                                   | 63.04                                                | 64.16                            | 0.00                                 | 5.00                       | 69.16                                |
| Alappuzha                                                        | 121.26                                               | 138.00                           | 11.62                                | 39.06                      | 188.68                               |
| Kottayam                                                         | 112.02                                               | 109.93                           | 15.33                                | 22.84                      | 148.10                               |
| Idukki                                                           | 57.38                                                | 59.68                            | 6.04                                 | 9.79                       | 75.51                                |
| Ernakulam                                                        | 242.19                                               | 213.29                           | 69.63                                | 7.00                       | 289.93                               |
| Thrissur                                                         | 205.77                                               | 215.05                           | 13.52                                | 0.00                       | 228.57                               |
| Palakkad                                                         | 171.57                                               | 133.01                           | 49.26                                | 4.50                       | 186.77                               |
| Malappuram                                                       | 285.61                                               | 168.48                           | 128.21                               | 2.50                       | 299.18                               |
| Kozhikode                                                        | 229.90                                               | 187.16                           | 80.67                                | 5.60                       | 273.42                               |
| Wayanad                                                          | 48.88                                                | 30.30                            | 54.28                                | 6.07                       | 90.65                                |
| Kannur                                                           | 170.04                                               | 169.68                           | 17.81                                | 10.00                      | 197.50                               |
| Kasaragod                                                        | 81.44                                                | 87.60                            | 18.59                                | 11.73                      | 117.92                               |
| <b>Grand Total</b>                                               | <b>2196.71</b>                                       | <b>1868.93</b>                   | <b>557.16</b>                        | <b>158.49</b>              | <b>2584.57</b>                       |
| <b>Kerala Enviro Infrastructure Ltd (KEIL)</b>                   |                                                      |                                  |                                      |                            | <b>16.00</b>                         |
| <b>Grand Total (TPD)</b>                                         |                                                      |                                  |                                      |                            | <b>2600.57</b>                       |

### 3. LEGACY WASTE MANAGEMENT

Legacy dump sites in the State are being remediated through biomining, a scientific process that employs microorganisms and natural methods to excavate, treat, segregate, and recover useful materials from long accumulated waste. These legacy wastes, comprising organic matter, plastics, metals, and other materials compacted over several years, are segregated into fractions and systematically processed.

Across the State, a total of 59 legacy dump sites have been identified, biomining and bioremediation activities have been completed at 24 sites, while remediation work is currently in progress at 21 sites. The process is scheduled to commence at the remaining 14 sites. Details of the quantities of processed and unprocessed legacy waste are presented in the table 7 below.

**Table 4. Progress of Biomining projects**

|                 | June 2025 |                   |                  | December 2025 |                   |                  |
|-----------------|-----------|-------------------|------------------|---------------|-------------------|------------------|
|                 | No        | Quantity (MT)     |                  | No            | Quantity (MT)     |                  |
|                 |           | Processed         | unprocessed      |               | Processed         | unprocessed      |
| Completed Sites | 24        | 358278.55         | 0                | 24            | 369978.33         | 0                |
| Ongoing Sites   | 19        | 962389.14         | 396970.58        | 21            | 1008764.85        | 433601.79        |
| To be started   | 16        | 0                 | 173719.29        | 14            | 0                 | 142369.46        |
| <b>Total</b>    | <b>59</b> | <b>1320667.69</b> | <b>570689.87</b> | <b>59</b>     | <b>1378743.18</b> | <b>575971.24</b> |

#### Remediation Completed Sites

|   | Name of Districts  | Name of Local Body             | Legacy waste site (district wise) | Quantity of processed 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                                | 46699.78 |
| 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, Sankaramangalam                  | 1041.1   |
| 12 | Malappuram      | Malappuram ulb                   | Puliyettummal, Near Inkel city, Malappuram | 5079.04  |
| 13 | Malappuram      | Tirurulb                         | Trenching ground, Ottilathara              | 3079.2   |
| 14 | Malappuram      | Perinthalmanna Municipality      | Perinthalmanna, Kunnappalli                | 200      |
| 15 | Malappuram      | Manjeri Municipality             | Vettekkode, Manjeri                        | 13902.11 |
| 16 | Kozhikkode      | Kozhikkode Municipal Corporation | Kalliyi, ward-56, beside the river         | 15       |
| 17 | Kozhikkode      | Koyilandy Municipality           | Koyilandi                                  | 40       |
| 18 | Kozhikkode      | Kozhikkode Municipal Corporation | Njaliyanparambu                            | 130,000  |
| 19 | Thrissur        | Thrissur Corporation             | Laloor                                     | 19500    |
| 20 | Palakkad        | Alathur Grama Panchayath         | Alathur                                    | 1824     |
| 21 | Palakkad        | Vadakkanchery Grama Panchayath   | Vadakkanchery                              | 1520     |
| 22 | Palakkad        | Nemmara Grama Panchayath         | Nenmmara                                   | 3641.1   |
| 23 | Kottayam        | Mundakkayam Grama Panchayath     | Mundakkayam                                | 4000     |

|    |          |                          |         |                  |
|----|----------|--------------------------|---------|------------------|
| 24 | Kottayam | Erumeli Grama Panchayath | Erumeli | 1500             |
|    |          | <b>Total</b>             |         | <b>369978.33</b> |

### 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 | Quantity of processed waste (in MT) |
|--------|--------------------|--------------------------------|-----------------------------------|----------------------------------------|-------------------------------------|
| 1      | Thiruvananthapuram | Attingal Municipality          | Attingal, Chudukad                | 11365                                  | 7800                                |
| 2      | Kottayam           | Kottayam municipality          | Vadavathoor, Kottayam             | 80943.3                                | 12950.91                            |
| 3      | Ernakulam          | Kothamangalam Municipality     | Kumbalathumuri, Kothamangalam     | 19146                                  | Yet to Start                        |
| 4      | Idukki             | Thodupuzha Municipality        | Parakadavu, Thodupuzha            | 28000                                  | 18000                               |
| 5      | Ernakulam          | Kochi Corporation              | Brahmapuram, Kochi                | 843000                                 | 732465                              |
| 6      | Thrissur           | Chavakkad Municipality         | Chavakkad                         | 5000                                   | 3600                                |
| 7      | Thrissur           | Wadakkanchery Municipality     | Kumbalangad                       | 21063                                  | 14745                               |
| 8      | Palakkad           | Ottapalam municipality         | Panamanna, Ottappalam             | 37600                                  | 28100                               |
| 9      | Kannur             | Kannur Corporation             | Chelora                           | 43727.32                               | 32874                               |
| 10     | Kannur             | Mattannur Municipality         | Mattannur, Karithurparamba        | 15680                                  | 10328                               |
| 11     | Kottayam           | Changanaserry Municipality     | Fathimapuram, Changanaserry       | 7300                                   | 3650                                |
| 12     | Ernakulam          | Muvattupuzha Municipality      | Kurianmala, Muvattupuzha          | 44589                                  | 6242.46                             |
| 13     | Thrissur           | Irinjalakuda Municipality      | Irinjalakkuda, Mangadikunnu       | 18389                                  | 4200                                |
| 14     | Palakkad           | Palakkad Municipality          | Koottupatha, Kodumba              | 73827                                  | 53155.44                            |
| 15     | Kannur             | Thalaserry Municipality        | Thalaserry, Punnoolpetty          | 45430.4                                | 18172.16                            |
| 16     | Thiruvananthapuram | Thiruvananthapuram Corporation | Vizhinjam                         | 3177.1                                 | 317.71                              |
| 17     | Ernakulam          | North Paravoor Municipality    | Vedimara, North Paravoor          | 18666                                  | Yet to Start                        |

|    |           |                            |                           |                   |                    |
|----|-----------|----------------------------|---------------------------|-------------------|--------------------|
| 18 | Thrissur  | Wadakkanchery Municipality | Wadakkanchery, Kumblangad | 16152             | 13729.2            |
| 19 | Kozhikode | Vadakara Municipality      | Puthiyappu, Vadakara      | 30693.6           | 7366.464           |
| 20 | Alappuzha | Alappuzha Municipality     | Sarvodayapuram            | 57200             | 34320              |
|    |           | <b>Total</b>               |                           | <b>1420948.72</b> | <b>1002016.344</b> |

### 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      | Kottayam          | Erattupetta Municipality    | Erattupettah, Thevarrupara                   | 8000                                   |
| 3      | Idukki            | Kattappana Municipality     | Kattappana, Puliyanmala                      | 12000                                  |
| 4      | Wayanad           | Kalpetta Municipality       | Vellaramkunnu, Kalpetta                      | 9485.37                                |
| 5      | Kannur            | Iritty Municipality         | Iritty, Athithattu                           | 1618.49                                |
| 6      | Kannur            | Payyannur Municipality      | Payyannur, Moorikkovval                      | 2100.00                                |
| 7      | Kannur            | Kuthuparamba Municipality   | Palapparamba, Kuthuparambu                   | 22473.955                              |
| 8      | Kasaragod         | Kasaragod Municipality      | Kelugudde, Kasaragod                         | 12873.6                                |
| 9      | Kasaragod         | Kanhangad Municipality      | Kanjhangad, Trenching Ground Chemmattamvayal | 3481.39                                |
| 10     | Kollam            | Kottarakkara Municipality   | Ugrankunnu, Kottarakkara                     | 6596                                   |
| 11     | Alappuzha         | Mavelikkara Municipality    | Puthiyakavu, Mavelikkara                     | 2880                                   |
| 12     | Idukki            | Munnar Grama Panchayath     | Munnar                                       | 25000                                  |
| 13     | Ernakulam         | Koothattukulam Municipality | Town-Ward 15, Koothattukulam                 | 1346                                   |
| 14     | Thrissur          | Chalakkudy Municipality     | Near Cosmos Club, Chalakkudy                 | 6769                                   |
| 15     | Kasaragod         | Mangalpady Grama Panchayath | Kubanoor                                     | 12557.80                               |
|        |                   | <b>Total</b>                |                                              | <b>133748.6</b>                        |

### **Online Vehicle Tracking Portal**

Rule 16 (6) of Solid Waste Management Rules, 2016 and on the order of Hon'ble NGT Board had 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.

### **Sanitary Waste Management**

Sanitary waste is collected separately at the source, based on demand, and is disposed of using double-chambered incinerators. In addition to the double-chambered sanitary incinerators established at the local body level and the common biomedical waste management facility (KEIL), four regional sanitary waste treatment plants, each with a capacity of 20 TPD, have been proposed in four regions to address existing gaps in the sanitary waste management sector (Given in Table 6). Agreements for the implementation of these projects have been executed.

| Table 6. Regional Level Sanitary Waste Incinerators in the State |           |               |                                            |
|------------------------------------------------------------------|-----------|---------------|--------------------------------------------|
| S1. No                                                           | Location  | Capacity(TPD) | Districts in the cluster                   |
| 1                                                                | Kollam    | 20            | Thiruvananthapuram, Kollam, Pathanamthitta |
| 2                                                                | Ernakulam | 20            | Alappuzha, Ernakulam. Kottayam, Idukki     |
| 3                                                                | Palakkad  | 20            | Thrissur, Palakkad, Malappuram             |
| 4                                                                | Kannur    | 20            | Kozhikode, Wayanad, Kannur, Kasaragod      |

### **RDF Plants**

To facilitate easier transportation and enhance calorific value, the conversion of reject waste into Refuse Derived Fuel (RDF) is being promoted. In this regard, seven RDF plants have been established across the State, while six additional plants are at various stages of implementation, with a combined capacity of 730 tonnes per day. The details are given in Table 5.

| Table 5. Status of RDF Plants |                    |                      |         |
|-------------------------------|--------------------|----------------------|---------|
| Sl No                         | Plant Location     | Plant Capacity (TPD) | Status  |
| 1                             | Thiruvananthapuram | 100                  | Ongoing |

|    |            |                |                     |
|----|------------|----------------|---------------------|
| 2  | Kollam     | 80             | Planning stage      |
| 3  | Ernakulam  | 40             | Completed           |
| 4  | Ernakulam  | 40             | Completed           |
| 5  | Ernakulam  | 60             | Planning stage      |
| 6  | Ernakulam  | 60             | Planning stage      |
| 7  | Ernakulam  | 60             | Completed           |
| 8  | Palakkad   | 40             | 80 % work completed |
| 9  | Palakkad   | 100            | Completed           |
| 10 | Malappuram | 40             | Completed           |
| 11 | Kozhikkode | 40             | Completed           |
| 12 | Kannur     | 60             | Ongoing             |
| 13 | Kasaragod  | 10             | Completed           |
|    |            | <b>730 TPD</b> |                     |

## 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) |
|----------------|---------------|----------------------|
| Kollam         | 1             | 185                  |
| Pathanamthitta | 1             | 30                   |
| 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                  |

### **Status of proposed Waste- to- Energy Plants**

| Sl No. | Plant Location           | Status of operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Power generation |
|--------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 1      | Palakkad Kanjikode       | At Palakkad Municipality, around 50% of the construction work for the 110 TPD CBG plant has been completed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 110 TPD          |
| 2      | Malappuram               | 8.09 acres of land identified by District Administration at Kurumbathur village Tirur taluk for setting 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 & ROOHFWR                                                                                                                                                                                                                                                                                                                                         |                  |
| 3      | Ernakulam<br>Brahmapuram | Construction of CBG Plant ongoing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 150TPD           |
| 4      | Kannur Chelora           | Work of plant can be started only after the work of Biomining is carried out. WIE plant is proposed in 9.7 acres of land after clearing the legacy waste. Tendering completed and 65 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 has already started. Agreement to be executed Bio-mining is already started (6500) cum is biomined (50%) |                  |
| 5      | Thrissur Corporation     | Proposal for CBG plant in the district is at various stages of planning.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 30 TPD           |

|   |                                |                                                                           |         |
|---|--------------------------------|---------------------------------------------------------------------------|---------|
| 6 | Thiruvananthapuram Corporation | Proposal for CBG plant in the district is at various stages of planning.  | 150 TPD |
| 7 | Kollam Corporation             | Proposal for CBG plant in the district is at various stages of planning.  | 150 TPD |
| 8 | Kozhikode Corporation          | Proposal for CBG plant in the district is at various stages of planning.  | 180 TPD |
| 9 | Changanassery Municipality     | Proposals for CBG plant in the district is at various stages of planning. | 20 TPD  |

## **Other interventions taken by the State in Solid Waste Management**

### **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.

### **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 2024-25:

- Total Bio-medical generation: 96773.817 kg/day
- No. of Hospitals and Health Care Facilities: 29465
- Total Bio-Medical waste treated :96773.817 kg/day

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 CTSDf in the State: 27,50,000 MTA for 45 years
- Total hazardous waste treated (captive and Common) : 57451.16Tonne/year

#### VIII . Plastic Waste Management:

- Total Plastic Waste generation: 68683.7 TPA (as per annual report in the whole state for the year 2024-25).
- Material Collection Facility – 1233 nos.; Resource Recovery Facility-136 nos.
- Processing including recycling- 66402.5 TPA
- Gap between current status and desirable level :2281.2 TPA

#### 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
- 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.
- 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.



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.

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, 17.12.2024, 05.03.2025, 29.08.2025, 12.11.2025
- 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, 16.11.2024, 13.06.2025

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

Latest Analysis report of PollutedRiver Stretches are attached as Annexure of the Monthly Progress Report.

### XIVGround water regulation:

Groundwater governance in the State is carried out through the statutory enforcement of the **Kerala Groundwater (Control and Regulation) Act, 2002**. As per the section 3 of the act, the Govt.of Kerala has been constituted the State Ground Water Authority in 2004, in order to regulate and manage ground water resources in the State. The **State Groundwater Authority** is responsible for the notification of areas (to regulate the extraction or use of ground water in any area, as required), regulation of groundwater abstraction, and the registration of drilling agencies. Since 2009, the Authority has been issuing **No Objection Certificates (NOCs)** for groundwater extraction to industrial and infrastructure establishments. The issuance of NOCs

are based on the recommendations of the **District Level Evaluation Committee (DLEC)**, chaired by the **District Magistrate**. The DLEC considers proposals based on scientific reports, including pumping test studies conducted by the district offices of the Groundwater Department. To further streamline these processes, the State Groundwater Authority implemented specific guidelines for groundwater extraction effective from **April 15, 2018**.

In notified blocks-specifically **Chittur and Malampuzha** in Palakkad District and **Kasaragod Block** in Kasaragod District-a permit is mandatory for the construction of new groundwater abstraction structures (except dug wells for domestic use) and conversion permit is mandatory for drilled wells to be energized. From 2016 to December 2025, 6,127 permits have been issued for digging new wells in notified blocks, while 1,939 conversion permits were granted. To regulate private drilling activities, 376 no of private rig agencies have been registered, 669 nos of registration certificates for private drilling rigs were issued, and 92 no of renewals were carried out in the State. The State Ground Water Authority has issued No Objection Certificates for 412 no of industrial units and 36 no of infrastructure units so far.

The Department has undertaken sustained awareness and outreach activities to improve compliance and promote ground water conservation and management to students, public officials, NGO's and people's representatives. A total of 451 mass awareness seminars on groundwater management were organized across the State during the period from April 2016 to December 2025.

For the year **2026-27**, the Department is proposed to intensify the implementation of the Act through wider public outreach and capacity building. About **70 awareness programs** are to be planned across the State, alongside the preparation of educational materials and handbooks for the public. Further strengthening of the State Groundwater Authority is envisaged through augmentation of scientific capability, including procurement of additional pumping test units, modern equipment, software, hardware and mobility support to improve regulatory oversight and groundwater resource management.

A statewide well census titled 'Neerarivu' has been carried out using a mobile application developed by KSREC with the support of Kudumbashree Mission. Data collection has been completed in 331 Panchayats covering about 22 lakh abstraction structures, and the information generated will support future water budgeting and policy formulation.

In addition, for effective regulation of bulk groundwater extraction and transportation through tanker lorries, the Government have issued specific procedural guidelines. Vide G.O.(Rt) No. 465/2023/WRD dated 18.05.2023, provisions were introduced for issuance of No Objection Certificates (NOCs) for bulk groundwater supply. Subsequently, detailed procedures for Groundwater Extraction for Bulk Water Supply have been prescribed as per G.O.(Rt) No. 97/2026/WRD dated 27.01.2026, streamlining the application, scrutiny, monitoring, and compliance mechanisms associated with such extraction. These orders strengthen regulatory oversight, ensure scientific assessment prior to approval, and facilitate sustainable management of groundwater resources in the context of commercial bulk supply.

#### XV. 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.

##### 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.

## XVI. Rain Water Harvesting:

The Groundwater Department is the nodal department in the State for coordination and implementation of activities under the Jal Shakti Abhiyan - CTR, JSJB initiative with various line departments involved in water conservation activities.

From 2016 to March 2025, under the Groundwater Conservation and Recharge programme, 1179 recharge pits have been constructed, 65 open well or borewell recharge schemes were implemented, 16 small ring check dams were built, and 2 small ponds were renovated, resulting in a total of 1,262 recharge structures with an expenditure of 26.09 crore in the State. Further, during the financial year 2025-26, technical sanction was issued for works amounting to 600 lakhs, 58 schemes have been completed.

In compliance with the directions of the Hon'ble National Green Tribunal, the Department continues to implement groundwater conservation and artificial recharge measures as long-term strategies for aquifer sustainability through the plan funded scheme "Groundwater Conservation and Recharge". Artificial recharge schemes are predominantly undertaken in public buildings and government institutions, with priority accorded to blocks classified as Critical and Semi-critical, where the Stage of Groundwater Development exceeds sustainable thresholds or indicates emerging stress on aquifer systems. However in the latest Government order i.e. G.O.(Rt) No.93/2026/WRD dtd 28/01/2026 department has been taken steps to recharge bore wells drilled for domestic and private purpose by providing 80% subsidy on pilot basis. Bore wells constructed in Critical blocks (Chittoor, Malampuzha and Kasaragod) and in the Semi Critical block Kattappana will be taken for recharge.

As of February 2026, under the Jal Sanchay - Jan Bhagidari initiative in Kerala, a total of 9,170 works have been taken up across the State, of which 3,815 works have been completed and 5,355 works are in progress, with major concentrations in districts such as Palakkad, Kozhikode and Thrissur, and the activities are being subjected to regular monitoring to ensure timely completion and effectiveness.

For the year 2026-27, the Department intends to implement about 300 no of recharge structures across the State. The programme will also include execution of recharge pit/direct dug well recharge/ bore well recharge, rejuvenation of small open ponds and small check dams in first and second order streams to ensure sustainability of the ground water resources. Implementation of recharge interventions will continue to be based on hydrogeological feasibility studies, scientific site selection and field supervision.

## XVII. 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 km<sup>2</sup>. 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 indifferent 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.

#### XVIII. 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 IDRB 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 viz) 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, IDRB 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

#### XIX. Reuse of Treated Water:

Draft policy on treated waste water reuse is under preparation by Suchitwa Mission

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

Tirur-Ponnani River, Malappuram

#### XXI. 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 regarding 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 coliform . 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. The Coastal Action Plan is being revised with projected population for the year 2024.

## XXII. 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. The permissible activities under District Mineral Foundation includes among other things, developing sources of irrigation, development alternate sources of energy and rain water harvesting, conservation measures of biodiversity of the affected areas.

The expert study in all selected quarries in Kerala was carried out with one day for ambient air quality measurement (without the operation of quarry) and next day with the operation of the quarry. Individual site reports with the observations on dust, noise and mine pit water quality was prepared by the monitoring team of KSPCB for all the nine quarry sites.

XXIII. Action taken status with regard to directions issued for prohibition of immersion of idols, puja materials and other items of religious offerings in rivers & other water bodies in particular during the occasion of festivals

- Regarding the Ganesh Utsav celebration and immersion of idols, it may kindly be noted this is not widely practiced in the State of Kerala. The Board had instructed the District offices to conduct monitoring of water bodies where immersion of idols is practiced on

a large scale. Water quality was carried out in three stages-pre immersion, during immersion & post immersion periods. A press release was also issued by the Board in connection with the festival for information of the public on the guidelines for immersion, issued by CPCB. In Kerala idol immersion are not celebrated as a major festival. The Govt. take steps to avoid water pollution due to immersion of idols. If to celebrate natural clay and colours are being used and that too in artificial ponds arranged by local authorities

- During Sabarimala festival season, there is a traditional celebration “ Pettathullal”, for the same the pilgrims will apply colouredKumkum on their body. It was directed that only natural colours shall be used for the celebration. Separate arrangement like shower bath are provided for carrying out bath after the celebration, in order to avoid the reach of coloured water into the main waterbody. The waste water from the shower bath location will be treated in ETP provided.

#### XXIV. Current status of water quality of rivers based on draft revised categorisation of CPCB

- Out of 21 stretches, the following 11 stretches delisted from PRS. Mogral- at Kasaragod, Kuppam, Peruvamba, Ramapuram, Kavvayi- at Kannur, Bharathapuzha, 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)

- As per the report of CPCB on “Polluted River Stretches for Restoration of Water Quality, 2025”, a total of 32 polluted river stretches/locations (polluted River stretches (14 nos)/ locations (18 nos)) have been identified in the State of Kerala. (Priority III - 2 river stretches/ locations; Priority IV - 4 river stretches/ location & Priority V - 26 river stretches/ locations)

#### XXV. Action against identified polluters, law violators and officers

**responsible for failure for vigorous monitoring**

Necessary actions are initiated against the identified polluters, environmental law violators for inadequate monitoring, including issuance of statutory directions, assessment of Environmental Compensation, closure action, and departmental action, as applicable under the relevant environmental statutes and service rules.

MEMBER SECRETARY

Digitally signed by  
RATISH MENON  
Date: 25-06-2026  
10:16:35

| NWMP RIVER MONITORING REPORT FOR THE MONTH MARCH 2026 |                                  |              |              |                 |              |             |                |              |                |                    |
|-------------------------------------------------------|----------------------------------|--------------|--------------|-----------------|--------------|-------------|----------------|--------------|----------------|--------------------|
| SL NO                                                 | PARAMETER                        | RIVER-NEYYAR |              | RIVER- KARAMANA |              |             |                | RIVER- MAMOM | RIVER- AYIROOR | RIVER- VAMANAPURAM |
|                                                       |                                  | Amaravila    | Aruvippuram  | Peppara         | Aruvikkara   | Thiruvallom | Moonnattumukku | Mamom Bridge | Ayroor Bridge  | Vamanapuram        |
| 1                                                     | Temperature, 0°C                 | 29.6         | 29.6         | 29.6            | 29.8         | 30          | 29.9           | 30           | 29.8           | 29.5               |
| 2                                                     | Dissolved Oxygen, mg/l           | 7.4          | 6.8          | 5.5             | 5.5          | 0.2 (BDL)   | 0 (BDL)        | 6.1          | 5.6            | 6.6                |
| 3                                                     | pH                               | 6.8          | 6.8          | 6.6             | 6.5          | 7           | 7              | 6.8          | 6.2            | 6.6                |
| 4                                                     | Conductivity, µmhos/cm           | 91           | 88           | 39              | 64           | 2184        | 620            | 198          | 129            | 95                 |
| 5                                                     | BOD, mg/l                        | 0.2 (BDL)    | 0.5 (BDL)    | 0.3 (BDL)       | 0.6 (BDL)    | 12          | 15.9           | 1.1          | 1.2            | 0.5 (BDL)          |
| 6                                                     | Nitrate-N, mg/l                  | 2.2          | 1            | 0.0 (BDL)       | 0.6          | 3.6         | 6.4            | 1.3          | 2.1            | 1.4                |
| 7                                                     | Turbidity, NTU                   | 2            | 1.8          | 1 (BDL)         | 2.8          | 36          | 44             | 3.6          | 3.6            | 2.5                |
| 8                                                     | Phenolphthalein Alkalinity, mg/l | 0 (BDL)      | 0 (BDL)      | 0 (BDL)         | 0 (BDL)      | 0 (BDL)     | 0 (BDL)        | 0 (BDL)      | 0 (BDL)        | 0 (BDL)            |
| 9                                                     | Total Alkalinity, mg/l           | 16 (BDL)     | 28           | 12 (BDL)        | 16 (BDL)     | 112         | 132            | 40           | 28             | 20 (BDL)           |
| 10                                                    | Chloride, mg/l                   | 24           | 16           | 8               | 8            | 620         | 88             | 24           | 24             | 24                 |
| 11                                                    | COD, mg/l                        | 4 (BDL)      | 4 (BDL)      | 4 (BDL)         | 4 (BDL)      | 64          | 72             | 4 (BDL)      | 4 (BDL)        | 4 (BDL)            |
| 12                                                    | TKN, mg/l                        | 1.4 (BDL)    | 1 (BDL)      | 0.024 (BDL)     | 0.5 (BDL)    | 28          | 30             | 1.5 (BDL)    | 1.8            | 1.7                |
| 13                                                    | Ammoniacal-N, mg/l               | 0.0 (BDL)    | 0.0 (BDL)    | 0.0 (BDL)       | 0.3 (BDL)    | 11          | 16.6           | 0.6          | 0.0 (BDL)      | 0.0 (BDL)          |
| 14                                                    | Hardness as CaCO3, mg/l          | 24           | 24           | 12              | 12           | 248         | 116            | 40           | 24             | 28                 |
| 15                                                    | Calcium as CaCO3, mg/l           | 16           | 16           | 8               | 8            | 128         | 64             | 32           | 20             | 20                 |
| 16                                                    | Magnesium as CaCO3, mg/l         | 8            | 8            | 4 (BDL)         | 4 (BDL)      | 120         | 52             | 8            | 4 (BDL)        | 8                  |
| 17                                                    | Sulphate, mg/l                   | 3.1 (BDL)    | 3.4 (BDL)    | 1.3 (BDL)       | 3.9 (BDL)    | 9.7         | 7.5            | 6.5          | 3.4 (BDL)      | 1.7 (BDL)          |
| 18                                                    | Calcium (Ca2+), mg/l             | 6.41         | 6.41         | 3.21            | 3.21         | 51.3        | 25.65          | 12.83        | 8.02           | 8.02               |
| 19                                                    | Magnesium (Mg2+), mg/l           | 1.944        | 1.944        | 0.972           | 0.972        | 29.16       | 12.636         | 1.944        | 0.972          | 1.944              |
| 20                                                    | Sodium, mg/l                     | 13.2         | 11.3         | 5.3             | 6.1          | 332         | 57.5           | 16.5         | 14.6           | 12.8               |
| 21                                                    | Total Dissolved Solids, mg/l     | 76           | 64           | 27.3            | 38.8         | 1355        | 338            | 110          | 91             | 74                 |
| 22                                                    | Total Fixed Solids, mg/l         | 56           | 48           | 18              | 25           | 1100        | 298            | 80           | 60             | 56                 |
| 23                                                    | Total Suspended Solids, mg/l     | 12           | 7 (BDL)      | 8 (BDL)         | 9.4 (BDL)    | 232         | 224            | 16           | 26             | 11                 |
| 24                                                    | Phosphate, mg/l                  | 0.0385 (BDL) | 0.0339 (BDL) | 0.0210 (BDL)    | 0.0210 (BDL) | 0.3664      | 0.381          | 0.0229 (BDL) | 0.0320 (BDL)   | 0.0311 (BDL)       |
| 25                                                    | Boron, mg/l                      | 0 (BDL)      | 0 (BDL)      | 0 (BDL)         | 0 (BDL)      | 0.28 (BDL)  | 0.21 (BDL)     | 0 (BDL)      | 0 (BDL)        | 0 (BDL)            |
| 26                                                    | Potassium, mg/l                  | 6.6          | 3.7          | 1.2             | 2.2          | 140         | 28.4           | 6.8          | 9.6            | 6.8                |
| 27                                                    | Fluoride, mg/l                   | 0 (BDL)      | 0 (BDL)      | 0 (BDL)         | 0 (BDL)      | 1.6         | 0.29           | 0 (BDL)      | 0 (BDL)        | 0 (BDL)            |
| 28                                                    | Total Coliform, MPN/100 ml       | 610          | 600          | 140             | 370          | 17000       | 36000          | 1600         | 1500           | 820                |
| 29                                                    | Fecal Coliform, MPN/100 ml       | 180          | 90           | 12              | 92           | 8200        | 17000          | 560          | 780            | 140                |
| 30                                                    | Fecal Streptococcus, MPN/100 ml  | 0 (BDL)      | 0 (BDL)      | 0 (BDL)         | 0 (BDL)      | 37          | 40             | 0 (BDL)      | 0 (BDL)        | 0 (BDL)            |
| 31                                                    | % SODIUM                         | 47           | 46.1         | 46              | 47.2         | 62.8        | 45.1           | 42.4         | 46.7           | 43.1               |
| 32                                                    | SAR                              | 1.17         | 1            | 0.66            | 0.76         | 9.2         | 2.32           | 1.14         | 1.3            | 1.05               |

# WATER QUALITY DATA OF POLLUTED RIVER STRETCHES MARCH-2026

DISTRICT OFFICE, PATHANAMTHITTA

Date of Sampling:17.03.2026

| Sl. No | PARAMETERS                                       | THAKAZHY | EDATHUA | MANNAR |
|--------|--------------------------------------------------|----------|---------|--------|
| 1      | Temperature, °C                                  | 28       | 28      | 28     |
| 2      | pH                                               | 6.6      | 6.6     | 6.8    |
| 3      | Conductivity, µmhos/cm                           | 86       | 92      | 110    |
| 4      | Turbidity, NTU                                   | 1        | 1       | 1      |
| 5      | Phenolphthalein Alkalinity, as CaCO <sub>3</sub> | Nil      | Nil     | Nil    |
| 6      | Total Alkalinity, as CaCO <sub>3</sub>           | 28       | 27      | 36     |
| 7      | Chloride, mg/l                                   | 16       | 20      | 22     |
| 8      | COD, mg/l                                        | 5        | 6.5     | 5      |
| 9      | TKN, mg/l                                        | NIL      | NIL     | NIL    |
| 10     | Ammoniacal-N, mg/l                               | BDL      | BDL     | BDL    |
| 11     | Hardness, as CaCO <sub>3</sub> mg/l              | 32       | 26      | 38     |
| 12     | Calcium, as CaCO <sub>3</sub> mg/l               | 25       | 20      | 20     |
| 13     | Magnesium as CaCO <sub>3</sub> , mg/l            | 7        | 6       | 18     |
| 14     | Sulphate, mg/l                                   | 4.8      | 5.0     | 6.8    |
| 15     | Sodium, mg/l                                     | 8.5      | 11.6    | 11.6   |
| 16     | Total Dissolved Solids, mg/l                     | 70       | 76      | 91     |
| 17     | Total Fixed Solids, mg/l                         | 26       | 58      | 41     |
| 18     | Total Suspended Solids, mg/l                     | 40       | 27      | 52     |
| 19     | Phosphate, mg/l                                  | BDL      | BDL     | BDL    |
| 20     | Boron, mg/l                                      | BDL      | BDL     | BDL    |
| 21     | Potassium, mg/l                                  | 1.6      | 2.8     | 3.5    |
| 22     | BOD, mg/l                                        | 0.96     | 3.0     | 0.7    |
| 23     | Fluoride, mg/l                                   | BDL      | BDL     | BDL    |
| 24     | Dissolved Oxygen, mg/l                           | 6.08     | 3.8     | 6.6    |
| 25     | Nitrate-N, mg/l                                  | 3.6      | 2.6     | 3.8    |
| 26     | Total Coliform, CFU/100 ml                       | 3500     | 8000    | 11250  |
| 27     | Faecal Coliform, CFU/100 ml                      | 1900     | 2250    | 4250   |
| 28     | SAR                                              | 0.65     | 1.0     | 0.8    |
| 29     | % of sodium                                      | 35       | 46.02   | 37     |
| 30     | Faecal Strepto Coccus,CFU/100 ml                 | 600      | 450     | 350    |

16/4/2026  
 ധനു റ്റി.പി  
 അസിസ്റ്റന്റ് സെക്ഷണിസ്റ്റ്

**MONTHLY ANALYSIS REPORT OF POLLUTED RIVER  
STRETCHES MARCH-2026  
STATION: MANNAR**

Sampling Date: 5.03.2026

| Sl. No | PARAMETERS              | ITTINAYARKKADAVU<br>BRIDGE<br>KUTTAMPEROOR | KOTTAKAL KADAVU<br>BRIDGE<br>KORATTIKADAVU | PARUMALA<br>BRIDGE | MANNAR<br>BRIDGE |
|--------|-------------------------|--------------------------------------------|--------------------------------------------|--------------------|------------------|
| 1      | Temp. (°C)              | 29                                         | 27                                         | 28                 | 28               |
| 2      | pH                      | 6.9                                        | 6.7                                        | 6.6                | 6.8              |
| 3      | Conductivity<br>(μS/cm) | 66                                         | 43                                         | 46                 | 58               |
| 4      | DO (mg/L)               | 5.6                                        | 7.1                                        | 6.0                | 6.6              |
| 5      | BOD (mg/L)              | 1.6                                        | 1.1                                        | 1.0                | 0.7              |
| 6      | COD (mg/L)              | 5                                          | 5                                          | 5                  | 5                |
| 7      | TDS (mg/L)              | 43                                         | 28                                         | 30                 | 38               |
| 8      | TC (CFU/100ml)          | 5750                                       | 2900                                       | 3500               | 11250            |
| 9      | FC (CFU/100ml)          | 1900                                       | 1750                                       | 1900               | 4250             |
| 10     | FSC(CFU/100ml)          | ABSENT                                     | 250                                        | 600                | 350              |

  
 16/3/2026  
 ധനു റ്റി. പി  
 അസിസ്റ്റന്റ് സാമ്പിളിസ്റ്റ്

**ANALYSIS REPORT OF DRAINS OF MANIMALA BETWEEN KALLOOPARA AND  
THONDRA  
March- 2026**

| <b>SI<br/>NO</b> | <b>BOTTLE<br/>NO.</b> | <b>Name of Drains</b>          | <b>PH</b> | <b>BOD</b> | <b>TC</b> | <b>FC</b> |
|------------------|-----------------------|--------------------------------|-----------|------------|-----------|-----------|
| 1                | TK1                   | Panayampalathodu               | 6.5       | 0.8        | 570       | 200       |
| 2                | TK2                   | PadathupalamThodu              | 7.31      | 0.4        | 200       | 100       |
| 3                | TK3                   | Thottappuzha                   | 7.4       | 0.6        | 900       | 300       |
| 4                | TK4                   | Kuttapuzha under Kattodubridge | 7.45      | 0.27       | 100       | 80        |
| 5                | TK5                   | Kadavumbara                    | 7.33      | 1.63       | 410       | 100       |
| 6                | TK6                   | Drain under Varappalam Bridge  | NIL       | NIL        | NIL       | NIL       |
| 7                | TK7                   | Drain under kallupalam Bridge  | NIL       | NIL        | NIL       | NIL       |
| 8                | TK8                   | Komalamthodu                   | 7.43      | 0.66       | 900       | 200       |
| 9                | TK9                   | Vennikulam Valiyathodu         | 7.24      | 0.07       | 230       | 100       |
| 10               | TK10                  | Paduthodu                      | NIL       | NIL        | NIL       | NIL       |
| 11               | TK11                  | Mallappally Valiyathodu        | NIL       | NIL        | NIL       | NIL       |

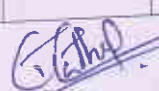
**Analysis report of polluted river stretches-R Periyar, R- Chithrapuzha,R-Kadambrayar, R-Chalakudy For the month of March 2026**

| STNCod e | Sampling Date | Sampling Time | StnName                      | Type Of Water Body | Name Of Water Body | River Basin |  |
|----------|---------------|---------------|------------------------------|--------------------|--------------------|-------------|--|
| 17       | 10.03.2026    | 11:00         | Periyar at Eloor             | River              | Periyar River      |             |  |
| 1338     | 27.03.2026    | 10:15         | Periyar at SDP Aluva         | River              | Periyar River      |             |  |
| 2334     | 03.03.2026    | 11:05         | Periyar at Pathalam          | River              | Periyar River      |             |  |
| 2335     | 03.03.2026    | 11:50         | Periyar at Kalamassery       | River              | Periyar River      |             |  |
| 3468     | 27.03.2026    | 10:35         | Periyar at KWA Aluva         | River              | Periyar River      |             |  |
| 2337     | 17.03.2026    | 11:05         | Kadambrayar At Brahmapuram   | River              | Kadambrayar River  |             |  |
| 2338     | 17.03.2026    | 10:45         | Kadambrayar At Manackakadavu | River              | Kadambrayar River  |             |  |
| 1573     | 17.03.2026    | 11:15         | Chithrapuzha At Irumpanam    | River              | Chithrapuzha River |             |  |
| 1154     | 27.03.2026    | 12:35         | Chalakudy at Pulikkakadavu   | River              | Chalakudy River    |             |  |

| Sl. No. | Parameters                     | Values       |       |        |       |       |                                         |       |        |       |      |
|---------|--------------------------------|--------------|-------|--------|-------|-------|-----------------------------------------|-------|--------|-------|------|
|         |                                | Station Code |       |        |       |       |                                         | 2337  | 2338   | 1573  | 1154 |
|         |                                | 17           | 1338  | 2334   | 2335  | 3468  |                                         |       |        |       |      |
| 1       | Temperature, °C                | 28           | 29    | 29     | 28    | 29    | No Sampling due to dense water hyacinth | 29    | 29     | 29    |      |
| 2       | Dissolved Oxygen, mg/l         | 9.3          | 5.7   | 4.2    | 5.2   | 5.9   |                                         | 2.3   | 6.7    | 8.7   |      |
| 3       | pH                             | 7.3          | 6.7   | 7.2    | 7.1   | 6.9   |                                         | 7.5   | 6.2    | 7.2   |      |
| 4       | Conductivity, µmhos/cm         | 4010         | 52    | 4700   | 55    | 50    |                                         | 95    | 1992   | 252   |      |
| 5       | BOD, mg/l                      | 5.1          | 1.4   | 1.4    | 1.4   | 1.5   |                                         | 4.2   | 6.2    | 1.9   |      |
| 6       | Nitrate-N, mg/l                | 0.02         | 0.14  | 0      | 0.05  | 0.16  |                                         | 0.14  | 3.5    | 0.14  |      |
| 7       | Turbidity, NTU                 | 6.9          | 2.1   | 1.2    | 1.7   | 1.8   |                                         | 4.7   | 1.5    | 1     |      |
| 8       | Phenolphthalein alkalinity     | 0.62         | BDL   | 4.05   | BDL   | BDL   |                                         | BDL   | BDL    | BDL   |      |
| 9       | Total Alkalinity, as CaCO3     | 22           | 15    | 21     | 15    | 15    |                                         | 24    | 5      | 42    |      |
| 10      | Chloride, mg/l                 | 1224.8       | 5.9   | 1518.8 | 7     | 5.9   |                                         | 11.76 | 494.82 | 50    |      |
| 11      | COD, mg/l                      | 32.0         | 32.0  | 16     | 24    | 4     |                                         | 13.6  | 24     | 5.6   |      |
| 12      | TKN, mg/l                      | BDL          | BDL   | BDL    | BDL   | BDL   |                                         | BDL   | 4.5    | 3.4   |      |
| 13      | Ammoniacal-N, mg/l             | BDL          | BDL   | BDL    | BDL   | BDL   |                                         | BDL   | 3.1    | 1.48  |      |
| 14      | Total Hardness, as CaCO3 mg/l  | 400          | 13    | 410    | 14    | 13    |                                         | 20    | 205    | 82    |      |
| 15      | Calcium, as CaCO3 mg/l         | 120          | 8     | 130    | 9     | 10    |                                         | 14    | 111    | 72    |      |
| 16      | Magnesium as CaCO3, mg/l       | 280          | 5     | 280    | 5     | 3     |                                         | 6     | 94     | 10    |      |
| 17      | Sulphate, mg/l                 | 155          | 3.1   | 91     | 2.5   | 3.5   |                                         | 3.2   | 85     | 2.9   |      |
| 18      | Sodium, mg/l                   | 796          | 3.8   | 795    | 3.6   | 3.9   |                                         | 6.4   | 321    | 26    |      |
| 19      | Total Dissolved Solids, mg/l   | 2324         | 30    | 2682   | 35    | 32    |                                         | 56    | 1190   | 146   |      |
| 20      | Total Fixed Solids, mg/l       | 1859         | 24    | 2146   | 28    | 26    |                                         | 45    | 952    | 117   |      |
| 21      | Total Suspended Solids, mg/l   | 134          | 10    | 26     | 4     | 10    |                                         | 8     | 24     | 16    |      |
| 22      | Phosphate, mg/l                | 0.1          | 0.2   | 0.2    | 0.1   | 0.2   |                                         | 0.1   | 53     | 0.1   |      |
| 23      | Boron, mg/l                    | 0.277        | 0.034 | 0.372  | 0.023 | 0.031 |                                         | 0.041 | 0.149  | 0.042 |      |
| 24      | Potassium, mg/l                | 14.4         | 1     | 21.60  | 1.2   | 1     |                                         | 2.2   | 8.2    | 1     |      |
| 25      | Fluoride, mg/l                 | 0.088        | 0.044 | 0.112  | 0.247 | 0.034 |                                         | 0.037 | 2.612  | 0.032 |      |
| 26      | Total Coliform, MPN/100 ml     | 47000        | 43000 | 6300   | 50000 | 47000 |                                         | 25000 | 410000 | 4300  |      |
| 27      | Feacal Coliform, MPN/100 ml    | 700          | 4900  | 400    | 1200  | 2500  |                                         | 840   | 1000   | 38    |      |
| 28      | Feacal Streptococci, MPN/100ml | 260          | 200   | 120    | 100   | 220   |                                         | 100   | 200    | 15    |      |

**ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN TIRUR RIVER -MARCH  
2026**

| SI NO | Name of point                             | PARAMETERS |              |               |               |                   |
|-------|-------------------------------------------|------------|--------------|---------------|---------------|-------------------|
|       |                                           | pH         | DO<br>(mg/l) | BOD<br>(mg/l) | COD<br>(mg/l) | FC<br>(cfu/100ml) |
| 1     | Drain near Tirur Railway station          | 6.5        | 4.1          | 2.1           | 10.8          | 340               |
| 2     | Thazhepalam drain                         | 6.9        | 3.8          | 1.9           | 12.5          | 760               |
| 3     | Naduvilangadi drain (old<br>ponnanithodu) | Dried      |              |               |               |                   |
| 4     | Annassery drain                           | Dried      |              |               |               |                   |
| 5     | Canal at CV Land                          | Dried      |              |               |               |                   |
| 6     | Canal at Mangalam thuruth                 | 6.9        | 4.4          | 3.2           | 12.0          | 160               |
| 7     | Canal at Pullooni                         | 6.9        | 4.3          | 2.3           | 10.4          | 100               |
| 8     | Drain near Mangattiri bridge ,            | Dried      |              |               |               |                   |
| 9     | Drain near Ettirikkadavu bridge           | 7.0        | 4.2          | 1.6           | 8.8           | 140               |
| 10    | Epothingal                                | 6.5        | 3.5          | 1.0           | 9.4           | 140               |
| 11    | Asarikkadav                               | Dried      |              |               |               |                   |
| 12    | Kandanathkadav                            | Dried      |              |               |               |                   |
| 13    | Pancharamoola                             | Dried      |              |               |               |                   |
| 14    | Kakadav                                   | 6.8        | 3.3          | 1.5           | 8.4           | 1200              |
| 15    | Kanathkadav                               | 6.7        | 3.0          | 1.8           | 8.6           | 300               |
| 16    | Drain near tirur railway station          | Dried      |              |               |               |                   |
| 17    | Payyanangadi (kadayithodu)                | Dried      |              |               |               |                   |
| 18    | Thalakkadathur                            | 6.5        | 4.3          | 1.1           | 56            | 200               |
| 19    | Naduvilangadi                             | 6.9        | 3.9          | 1.7           | 32            | 280               |

  
ASSISTANT SCIENTIST

**ANALYSIS REPORT OF POLLUTED STRETCH POINTS IN KADALUNDY RIVER -  
MARCH 2026**

| Sl .No | Name of point            | PARAMETERS |              |               |               |                       |
|--------|--------------------------|------------|--------------|---------------|---------------|-----------------------|
|        |                          | pH         | DO<br>(mg/l) | BOD<br>(mg/l) | COD<br>(mg/l) | FC<br>(cfu/100<br>ml) |
| 1      | Valiyangadi drain        | 7.0        | 5.5          | 2.7           | 8.8           | 100                   |
| 2      | Valiyangadi bypass drain | DRIED      |              |               |               |                       |
| 3      | Valiyathod drain         | 7.1        | 7.2          | 1.4           | 6.2           | 640                   |
| 4      | Hajiyarpally             | 6.9        | 8.1          | 2.3           | 8.0           | 40                    |
| 5      | Tirurangadi              | 7.1        | 7.5          | 2.6           | 16            | 400                   |



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**POLLUTED RIVER STRETCH MONITORING PROGRAM (MARCH 2026)**

|                                     |                                                        |
|-------------------------------------|--------------------------------------------------------|
| STN Code                            | PR-1                                                   |
| State                               | Kerala                                                 |
| District                            | Palakkad                                               |
| Monitoring Agency                   | Kerala SPCB                                            |
| Waterbody Type                      | Tributary                                              |
| Waterbody Name                      | Kalpathypuzha                                          |
| Frequency of Monitoring             | Monthly                                                |
| Sampling Date                       | 09-03-2026                                             |
| Sampling Time                       | 10.30 AM                                               |
| Monitoring Location                 | <b>Kalpathypuzha at Pezhumkara Bridge (Downstream)</b> |
| Location Details                    | D/s of town or industrial area                         |
| Use of Water in Down Stream         | Irrigation, Drinking water source, Others              |
| Human Activities around the Station | Bathing, Washing, Cattle wading, Others                |
| Major Polluting Sources             | Municipal Solid Waste, Plastic Waste                   |
| Visible Effluent Discharge          | Municipal Sewage                                       |
| Weather                             | Clear                                                  |
| Approxdepth (m)                     | Greater than 100 cm                                    |
| Floating Matter                     | Yes (Floating algae , Water Hyacinth)                  |
| Colour                              | Clear                                                  |
| Odour                               | None                                                   |
| Flow (in MLD)                       |                                                        |
| Temperature (°C)                    | 29                                                     |
| Dissolved O2 (mg/L)                 | 5.6                                                    |
| pH                                  | 7.1                                                    |
| Conductivity (µmho/Cm)              | 253                                                    |
| BOD (mg/L)                          | 2.8                                                    |
| Nitrate - N (mg/L)                  | 1.1                                                    |
| Total Coliform (MPN/100ml)          | 12100                                                  |
| Fecal Coliform (MPN/100ml)          | 5800                                                   |
| Fecal Streptococci (MPN/100ml)      | 1080                                                   |
| Turbidity (NTU)                     | 0 (BDL)                                                |
| Phenolphthalein Alkalinity (mg/L)   | 0 (BDL)                                                |
| Total Alkalinity (mg/L)             | 86                                                     |
| Chlorides (mg/L)                    | 45                                                     |
| COD (mg/L)                          | 45                                                     |
| Total Kjeldahl Nitrogen (mg/L)      | 4                                                      |
| Ammonical N (mg/L)                  | 2.6                                                    |
| Total Hardness (mg/L)               | 82                                                     |
| Ca as CaCo3 (mg/L)                  | 30                                                     |
| Mg as CaCo3 (mg/L)                  | 52                                                     |
| Sulphate (mg/L)                     | 7                                                      |
| Ca++ (mg/L)                         | 12.02                                                  |
| Mg++ (mg/L)                         | 12.636                                                 |
| Sodium (mg/L)                       | 30                                                     |
| Total Dissolved Solids (mg/L)       | 164                                                    |
| Total Fixed Solids (mg/L)           | 90                                                     |
| Total Suspended Solids (mg/L)       | 10 (BDL)                                               |
| Total Phosphate (mg/L)              | 0.31                                                   |
| Boron (mg/L)                        | 0 (BDL)                                                |
| Potassium (mg/L)                    | 2                                                      |
| Fluoride (mg/L)                     | 0.2 (BDL)                                              |
| Sodium Percentage (%)               | 43.6                                                   |
| SAR                                 | 1.43                                                   |

**POLLUTED RIVER STRETCH MONITORING PROGRAM (MARCH 2026)**

|                                     |                                                    |
|-------------------------------------|----------------------------------------------------|
| STN Code                            | PR-2                                               |
| State                               | Kerala                                             |
| District                            | Palakkad                                           |
| Monitoring Agency                   | Kerala SPCB                                        |
| Waterbody Type                      | Tributary                                          |
| Waterbody Name                      | Kalpathypuzha                                      |
| Frequency of Monitoring             | Monthly                                            |
| Sampling Date                       | 09-03-2026                                         |
| Sampling Time                       | 11.05 AM                                           |
| Monitoring Location                 | <b>Kalpathypuzha at Mukkai Causeway (Upstream)</b> |
| Location Details                    | Pilgrim Center, Bathing Ghat/ Water intake         |
| Use of Water in Down Stream         | Irrigation, Drinking water source, Others          |
| Human Activities around the Station | Bathing, Washing, Cattle wading, Others            |
| Major Polluting Sources             | Others                                             |
| Visible Effluent Discharge          | None                                               |
| Weather                             | Clear                                              |
| Approxdepth (m)                     | Greater than 100 cm                                |
| Floating Matter                     | Yes(Floating algae , Water Hyacinth)               |
| Colour                              | Clear                                              |
| Odour                               | None                                               |
| Flow (in MLD)                       |                                                    |
| Temperature (°C)                    | 30                                                 |
| Dissolved O2 (mg/L)                 | 6                                                  |
| pH                                  | 7.1                                                |
| Conductivity (µmho/Cm)              | 129                                                |
| BOD (mg/L)                          | 1.7                                                |
| Nitrate - N (mg/L)                  | 0.2                                                |
| Total Coliform (MPN/100ml)          | 5200                                               |
| Fecal Coliform (MPN/100ml)          | 1700                                               |
| Fecal Streptococci (MPN/100ml)      | 40                                                 |
| Turbidity (NTU)                     | 0 (BDL)                                            |
| Phenolphthalein Alkalinity (mg/L)   | 0 (BDL)                                            |
| Total Alkalinity (mg/L)             | 56                                                 |
| Chlorides (mg/L)                    | 14                                                 |
| COD (mg/L)                          | 25                                                 |
| Total Kjeldahl Nitrogen (mg/L)      | 4                                                  |
| Ammonical N (mg/L)                  | 2.6                                                |
| Total Hardness (mg/L)               | 48                                                 |
| Ca as CaCo3 (mg/L)                  | 43                                                 |
| Mg as CaCo3 (mg/L)                  | 5                                                  |
| Sulphate (mg/L)                     | 6                                                  |
| Ca++ (mg/L)                         | 17.23                                              |
| Mg++ (mg/L)                         | 1.215                                              |
| Sodium (mg/L)                       | 7                                                  |
| Total Dissolved Solids (mg/L)       | 84                                                 |
| Total Fixed Solids (mg/L)           | 55                                                 |
| Total Suspended Solids (mg/L)       | 10 (BDL)                                           |
| Total Phosphate (mg/L)              | 0.04 (BDL)                                         |
| Boron (mg/L)                        | 0 (BDL)                                            |
| Potassium (mg/L)                    | 1                                                  |
| Fluoride (mg/L)                     | 0.2 (BDL)                                          |
| Sodium Percentage (%)               | 23.6                                               |
| SAR                                 | 0.44                                               |

**POLLUTED RIVER STRETCH MONITORING PROGRAM (MARCH 2026)**

|                                     |                                               |
|-------------------------------------|-----------------------------------------------|
| STN Code                            | PR-3                                          |
| State                               | Kerala                                        |
| District                            | Palakkad                                      |
| Monitoring Agency                   | Kerala SPCB                                   |
| Waterbody Type                      | Tributary                                     |
| Waterbody Name                      | Korayar                                       |
| Frequency of Monitoring             | Monthly                                       |
| Sampling Date                       | 09-03-2026                                    |
| Sampling Time                       | 01.00 PM                                      |
| Monitoring Location                 | <b>Korayar at Menonpara Bridge (Upstream)</b> |
| Location Details                    | D/s of town or industrial area                |
| Use of Water in Down Stream         | Irrigation, Drinking water source, Others     |
| Human Activities around the Station | Bathing, Washing, Cattle wading, Others       |
| Major Polluting Sources             | Others                                        |
| Visible Effluent Discharge          | None                                          |
| Weather                             | Clear                                         |
| Approxdepth (m)                     | Greater than 100 cm                           |
| Floating Matter                     | Yes(Floating algae , Water Hyacinth)          |
| Colour                              | Clear                                         |
| Odour                               | None                                          |
| Flow (in MLD)                       |                                               |
| Temperature (°C)                    | 31                                            |
| Dissolved O2 (mg/L)                 | 4.3                                           |
| pH                                  | 8.1                                           |
| Conductivity (µmho/Cm)              | 871                                           |
| BOD (mg/L)                          | 3.9                                           |
| Nitrate - N (mg/L)                  | 0.4                                           |
| Total Coliform (MPN/100ml)          | 8200                                          |
| Fecal Coliform (MPN/100ml)          | 2100                                          |
| Fecal Streptococci (MPN/100ml)      | 1360                                          |
| Turbidity (NTU)                     | 0 (BDL)                                       |
| Phenolphthalein Alkalinity (mg/L)   | 0 (BDL)                                       |
| Total Alkalinity (mg/L)             | 480                                           |
| Chlorides (mg/L)                    | 235                                           |
| COD (mg/L)                          | 45                                            |
| Total Kjeldahl Nitrogen (mg/L)      | 4                                             |
| Ammonical N (mg/L)                  | 2.8                                           |
| Total Hardness (mg/L)               | 372                                           |
| Ca as CaCo3 (mg/L)                  | 106                                           |
| Mg as CaCo3 (mg/L)                  | 266                                           |
| Sulphate (mg/L)                     | 115                                           |
| Ca++ (mg/L)                         | 42.48                                         |
| Mg++ (mg/L)                         | 64.638                                        |
| Sodium (mg/L)                       | 115                                           |
| Total Dissolved Solids (mg/L)       | 750                                           |
| Total Fixed Solids (mg/L)           | 320                                           |
| Total Suspended Solids (mg/L)       | 10 (BDL)                                      |
| Total Phosphate (mg/L)              | 0.06 (BDL)                                    |
| Boron (mg/L)                        | 0 (BDL)                                       |
| Potassium (mg/L)                    | 3                                             |
| Fluoride (mg/L)                     | 0.2 (BDL)                                     |
| Sodium Percentage (%)               | 40                                            |
| SAR                                 | 2.59                                          |

**POLLUTED RIVER STRETCH MONITORING PROGRAM (MARCH 2026)**

|                                     |                                             |
|-------------------------------------|---------------------------------------------|
| STN Code                            | PR-4                                        |
| State                               | Kerala                                      |
| District                            | Palakkad                                    |
| Monitoring Agency                   | Kerala SPCB                                 |
| Waterbody Type                      | Tributary                                   |
| Waterbody Name                      | Korayar                                     |
| Frequency of Monitoring             | Monthly                                     |
| Sampling Date                       | 09-03-2026                                  |
| Sampling Time                       | 12:05 AM                                    |
| Monitoring Location                 | <b>Korayar at Naragampilly (Downstream)</b> |
| Location Details                    | D/s of town or industrial area              |
| Use of Water in Down Stream         | Irrigation, Drinking water source, Others   |
| Human Activities around the Station | Bathing, Washing, Cattle wading, Others     |
| Major Polluting Sources             | Others                                      |
| Visible Effluent Discharge          | None                                        |
| Weather                             | Clear                                       |
| Approxdepth (m)                     | Greater than 100 cm                         |
| Floating Matter                     | Yes(Floating algae , Water Hyacinth)        |
| Colour                              | Clear                                       |
| Odour                               | None                                        |
| Flow (in MLD)                       |                                             |
| Temperature (°C)                    | 31                                          |
| Dissolved O2 (mg/L)                 | 3.8                                         |
| pH                                  | 7.9                                         |
| Conductivity (µmho/Cm)              | 462                                         |
| BOD (mg/L)                          | 3.4                                         |
| Nitrate - N (mg/L)                  | 0.2                                         |
| Total Coliform (MPN/100ml)          | 9800                                        |
| Fecal Coliform (MPN/100ml)          | 1500                                        |
| Fecal Streptococci (MPN/100ml)      | 120                                         |
| Turbidity (NTU)                     | 0 (BDL)                                     |
| Phenolphthalein Alkalinity (mg/L)   | 0 (BDL)                                     |
| Total Alkalinity (mg/L)             | 248                                         |
| Chlorides (mg/L)                    | 115                                         |
| COD (mg/L)                          | 40                                          |
| Total Kjeldahl Nitrogen (mg/L)      | 4.5                                         |
| Ammonical N (mg/L)                  | 3.2                                         |
| Total Hardness (mg/L)               | 228                                         |
| Ca as CaCo3 (mg/L)                  | 88                                          |
| Mg as CaCo3 (mg/L)                  | 140                                         |
| Sulphate (mg/L)                     | 28                                          |
| Ca++ (mg/L)                         | 35.27                                       |
| Mg++ (mg/L)                         | 34.02                                       |
| Sodium (mg/L)                       | 60                                          |
| Total Dissolved Solids (mg/L)       | 399                                         |
| Total Fixed Solids (mg/L)           | 225                                         |
| Total Suspended Solids (mg/L)       | 10 (BDL)                                    |
| Total Phosphate (mg/L)              | 0.03 (BDL)                                  |
| Boron (mg/L)                        | 0 (BDL)                                     |
| Potassium (mg/L)                    | 3                                           |
| Fluoride (mg/L)                     | 0.2 (BDL)                                   |
| Sodium Percentage (%)               | 36                                          |
| SAR                                 | 1.73                                        |



# KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

കോഴിക്കോട് റീജ്യണൽ ഓഫീസ്  
REGIONAL OFFICE, KOZHIKODE



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3<sup>rd</sup> FLOOR, ZAMORIN'S SQUARE, LINK ROAD, KOZHIKODE - 673 002



## ANALYSIS REPORT OF RIVER WATER

| <b>Report No.</b>           | <b>K R O S 5 9 9 1 / 1 to 5</b> | <b>Date:</b>                                                                                              | <b>3 0 0 3 2 0 2 6</b>                                            |           |       |       |        |        |
|-----------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------|-------|-------|--------|--------|
| Date of Sample Collection   | 0 8 0 3 2 0 2 6                 | Date of receipt of the sample                                                                             | 0 9 0 3 2 0 2 6                                                   |           |       |       |        |        |
| Sampled by:                 | RL ,KKD                         | Time                                                                                                      | Hours: 0 4 : 0 0 PM                                               |           |       |       |        |        |
| Sampling Method             | APHA1060B,a                     | Sample ID                                                                                                 | KL1, KL2, KL3, KL5,& KL6                                          |           |       |       |        |        |
| Sample container            | PC 2.5 L                        | Sample Lab Code                                                                                           | KROS :5991/1-5                                                    |           |       |       |        |        |
| Source:                     | KALLAI RIVER WATER              | Ref.letter No.                                                                                            | PCB/KKD/DO/ Polluted River Stretch/2018 Vol. IV, Dated 17.02.2026 |           |       |       |        |        |
| Specific sampling location: | KALLAI POLLUTED RIVER STRETCH   | Received from:                                                                                            | EE,DO,KKD                                                         |           |       |       |        |        |
| Sample preservation:        | Ice box                         | Period of analysis:                                                                                       | 09.03.2026-24.03.2026                                             |           |       |       |        |        |
|                             |                                 | No. of samples                                                                                            | 5                                                                 |           |       |       |        |        |
|                             |                                 | Analysed by:                                                                                              | SNS/NSS/PVH/FZ                                                    |           |       |       |        |        |
|                             |                                 | Method:Standard Methods for the examination of Water and Wastewater, APHA AWWA WEF (22 <sup>nd</sup> 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                                                    | 7.36      | 7.32  | 7.3   | 7.16   | 7.45   |
| 2                           | CONDUCTIVITY                    | µmhos /cm                                                                                                 | APHA 2510B                                                        | 12770     | 17570 | 20080 | 9300   | 29300  |
| 3                           | BOD                             | mg/L                                                                                                      | IS3025 (Part 44)                                                  | 1.67      | 2.07  | 1.47  | 2.67   | 1.47   |
| 4                           | DISSOLVED OXYGEN                | mg/L                                                                                                      | APHA 4500-O,C                                                     | 6.7       | 4.9   | 4     | BDL    | 2.7    |
| 5                           | TOTAL COLIFORM,                 | CFU/100ml                                                                                                 | APHA 9222B                                                        | 20000     | 16000 | 24000 | 190000 | 100000 |
| 6                           | FECAL COLIFORM                  | CFU/100ml                                                                                                 | APHA 9222D                                                        | 12000     | 10000 | 13000 | 140000 | 70000  |
| 7                           | FECAL STREPTOCOCCUS             | CFU/100ml                                                                                                 | APHA 9230 C                                                       | 1200      | 600   | 1000  | 600    | 1800   |
| 8                           | TEMPERATURE                     | °C                                                                                                        | APHA 2550B                                                        | 27        | 27    | 27    | 28     | 28     |

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 .

*Abisha P*  
Scientist in charge  
**ABISHA. N.K**  
Assistant Scientist