Kerala Rural Water Supply and Sanitation Agency (KRWSA)

Department of Water Resources
Government of Kerala

Annual Administration Report (AAR) – 2023-24

Kerala Rural Water Supply & Sanitation Agency
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ABBREVIATIONS

AAP	-	Annual Action Plan
BG	-	Beneficiary Group
BC	-	Beneficiary Committee
DDWS	-	Department of Drinking Water and Sanitation
DPR	-	Detailed Project Report
DWSM	-	District Water and Sanitation Mission
FC	-	Fully Covered
FHTC	-	Functional Household Tap Connection
FTK	-	Field Test Kit
GoI	-	Government of India
GoK	-	Government of Kerala
GBS	-	Gross Budgetary Support
GIS	-	Geographic Information System
GP	-	Grama Panchayat
GPAT	-	Grama Panchayat Action Team
GP LAC	-	Grama Panchayat Level Activity Committee
HRD	-	Human Resource Development
HR	-	Human Resources
IMIS	-	Integrated Management Information System
IEC	-	Information, Education and Communication
IFD	-	Integrated Finance Division
IPC	-	Inter Personal Communication
ISA	-	Implementation Support Agency
JJM	-	Jal Jeevan Mission
LPCD	-	Litres Per Capita/Day
M&E	-	Monitoring & Evaluation
MVS	-	Multi-village Scheme
NE	-	North East
NGO	-	Non-Governmental Organization
NJJM	-	National Jal Jeevan Mission
NRDWP	-	National Rural Drinking Water Programme
O&M	-	Operation and Maintenance
PPP	-	Public Private Partnership
PMU	-	Project Management Unit
PPR	-	Preliminary Project Report
PRI	-	Panchayati Raj Institutions
R&D	-	Research and Development
RPMU	-	Regional Project Management Unit
RWH	-	Rain Water Harvesting
RWS	-	Rural Water Supply
SDG	-	Sustainable Development Goals
SO	-	Support Organisation
SHG	-	Self Help Group
SLC	-	Scheme Level Committee
SLEC	-	Scheme Level Executive Committee

SVS	-	Single Village Scheme
SWSM	-	State Water and Sanitation Mission
ToR	-	Terms of Reference
UC	-	Utilization Certificate
VAP	-	Village Action Plan
VO	-	Village Organization
VWSC	-	Village Water and Sanitation Committee
WASMO	-	Water and Sanitation Management Organisation
WQM&S	-	Water Quality Monitoring & Surveillance

CHAPTER-1

KERALA RURAL WATER SUPPLY & SANITATION AGENCY – A PROFILE

About KRWSA

Government of Kerala was a signatory State in the Cochin Declaration that brought in reforms in rural water supply sector in the Country. Subsequent to Cochin Declaration in 1999, Government of Kerala has established an autonomous institution "Kerala Rural Water Supply and Sanitation Agency (KRWSA)"- as a Special Purpose Vehicle to implement the World Bank aided, community-managed rural water supply and environmental sanitation project named as "Jalanidhi". KRWSA was registered on 17-11-1999 under Travancore Cochin Literary, Scientific and Charitable Societies Registration Act 1955 (Act XII of 1955) with Registration No.T.1812.

KRWSA has successfully implemented two phases of Jalanidhi project; Phase-1 during 2000-2008 & Phase-2 during 2012-2019. The Grama Panchayats have a pivotal role in implementing community-based water supply projects under 'Jalanidhi'. KRWSA has also established a wide network of NGOs in mobilising communities towards implementing the participatory, community-driven water supply & sanitation facilities owned and managed by them. The JALANIDHI model has demonstrated successfully an equitable, inclusive and decentralised delivery system mainly benefiting the SC, ST and BPL categories of rural households in Kerala. KRWSA has been designated as the Nodal Agency by the State Government for the implementation of Rain Water Harvesting Programme in the State.

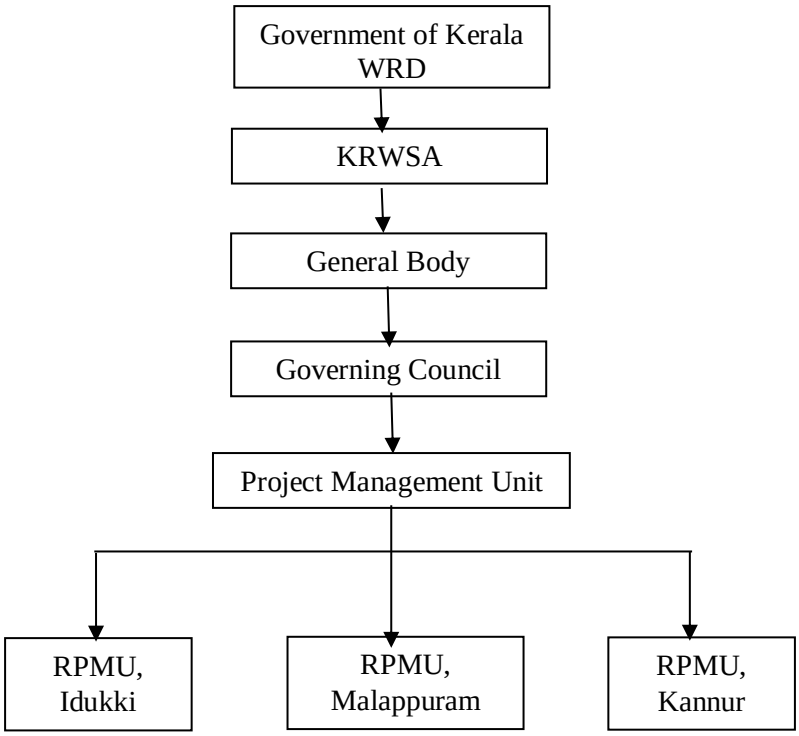
KRWSA is also implementing State Plan Schemes since 2019-20. In addition, KRWSA is one of the implementing agencies of Jal Jeevan Mission Programme in the State.

CHAPTER- 2

ORGANISATIONAL STRUCTURE

Institutional and Implementation Arrangements

Kerala Rural Water Supply and Sanitation Agency (KRWSA) is a registered society established for the implementation of community based water supply and sanitation projects. This Society is registered under Travancore Cochin Charitable Societies Registration Act of 1955. KRWSA is funded by Water Resources Department, Government of Kerala. KRWSA has its General Body and Governing Council. Hon'ble Minister for Water Resources is the President of the General Body. Secretary, Water Resource Department is the Chairman of Governing Council and it has the delegation to manage day-to-day affairs of the Agency.



The General Body of KRWSA consists of the following members:

1. Minister-in-charge of Water Resources, Government of Kerala as President
2. Secretary to Government, Water Resources
3. Secretary to Government, Local Self Government (Rural)
4. Secretary to Government, Planning Department
5. Secretary to Government, Finance (Resources) Department
6. Executive Director, CWRDM, Kozhikode
7. Managing Director, Kerala Water Authority
8. Director, Ground Water Department
9. Executive Director, Socio Economic Unit Foundation
10. Three Presidents of Project GPs, one of whom shall be a woman to be nominated by the Government.
11. One President of a District Panchayat wherein the project is implemented to be nominated by the Government.

12. Two representatives of NGOs which have acted as SOs in the KRWSA project to be nominated by the Government.
13. Two eminent health and hygiene experts one of whom shall be a woman to be nominated by the Government.
14. The Executive Director KRWSA as Member Secretary
15. In addition, three persons not below the age of 21 years, who is in agreement with the aims and objectives of the Society, as set out in the Memorandum of Association, nominated by Government upon a majority decision of the General Body provided it is duly recommended by the Governing Council. Each application for membership should be proposed and seconded by members of the Society.

Number of General Body meetings convened during Phase I : 9
Number of General Body meetings convened during Phase II : 2

The Governing Council consists of the following members:

1. Chairman – Secretary to Government, Water Resources (Ex-officio)
2. Executive Director of KRWSA (Ex-officio) – Member Secretary
3. Secretary to Government, Finance (Resources) (Ex-officio)
4. Secretary to Government (Local Self Government) (Ex-officio)
5. Managing Director, Kerala Water Authority (Ex-officio)
6. One President of a project GP nominated by Government.
7. One representative of an NGO which has acted as Supporting Organization in the KRWSA project nominated by Government.
8. One eminent health and hygiene expert duly nominated by Government.

Number of Governing Council meetings convened during Phase I : 42
Number of Governing Council meetings convened during Phase II : 19
Number of Governing Council meetings convened after Phase II : 6

Functions of the General Body

1. Review the progress of the society during the year and suggest improvements/ modifications in furtherance of organizational objectives.
2. Elect members of the Governing Council as and when necessary.
3. Consider and approve accounts and the auditor's report therein.
4. Appoint auditors for the audit of the accounts for the next financial year and fix their remuneration.
5. Consider and decide the appropriation of surplus/deficit.
6. Seek advice on any emergency matter related to the functioning of the Society.

Functions of the Governing Council

The major responsibilities of the Governing Council are to approve the Annual Action Plan, budget for every year, Grama Panchayat selection, recommendation for staff service extension sourced on deputation or on contract, Support Organization list approval, Annual Audit Report and approval of project estimates beyond the powers of the Executive Director.

The Governing Council– the apex policy making body of KRWSA has met 66 times since its inception and has been functioning as an effective board overseeing the project implementation.

KRWSA has a Project Management Unit in Trivandrum and three Regional Project Management Units at Idukki, Malappuram & Kannur with an overall staff strength of 147 as on 31.03.2024. Existing organisation structure and its functions are detailed below,

A. Project Management Unit (PMU)

The PMU is headed by an Executive Director (an officer from Indian Administrative Service) for general coordination and effective administration of the project. Apart from that, there are 5 operational units under each Director i.e Operations, Technical, Finance and Administration, HRD and M&E. The staff are multi-disciplinary including specialists in Operations, Water Supply, Sanitation, Environment, Social Development, Finance & Administration, HRD, M&E, Procurement and Communication disciplines.

Functions

- Overall programme management for improved and sustainable rural water supply and sanitation services in Kerala, including Information, Education and Communication (IEC), and monitoring and evaluation of activities, outcome and impacts.
- Arranging social, technical, management and capacity building support to GPs, community-based organizations and beneficiary groups (BGs), for all single-GP schemes and Multi GP rehabilitation schemes
- Guiding the functioning of the Regional Project Management Units (RPMUs)
- Consolidation of annual work plans
- Consolidation of periodic progress reports
- Liaison with GoI, GoK and other agencies
- Financial Management and Audit
- Human resource development, including hiring of specialists
- Fund flow management and fund release
- State-level IEC campaigns
- Monitoring, learning, evaluations and MIS
- Quality control of works
- Developing Project Implementation Guidelines
- Framing of policies

B. Regional Project Management Units (RPMUs)

KRWSA's project activities are implemented across the state through Regional Project Management Units (RPMUs) located at Idukki, Malappuram and Kannur districts. Each RPMU covers 3–7 districts and headed by a Regional Project Director, an officer not below the rank of Deputy Development Commissioner.

RPMU staff will travel to Project GPs and give advice, guidance, and on-the-spot approvals as and when needed by GP Support Teams (GPSTs). Strong linkage with grass root

level institutions and effective supervision of project activities can be ensured through this arrangement.

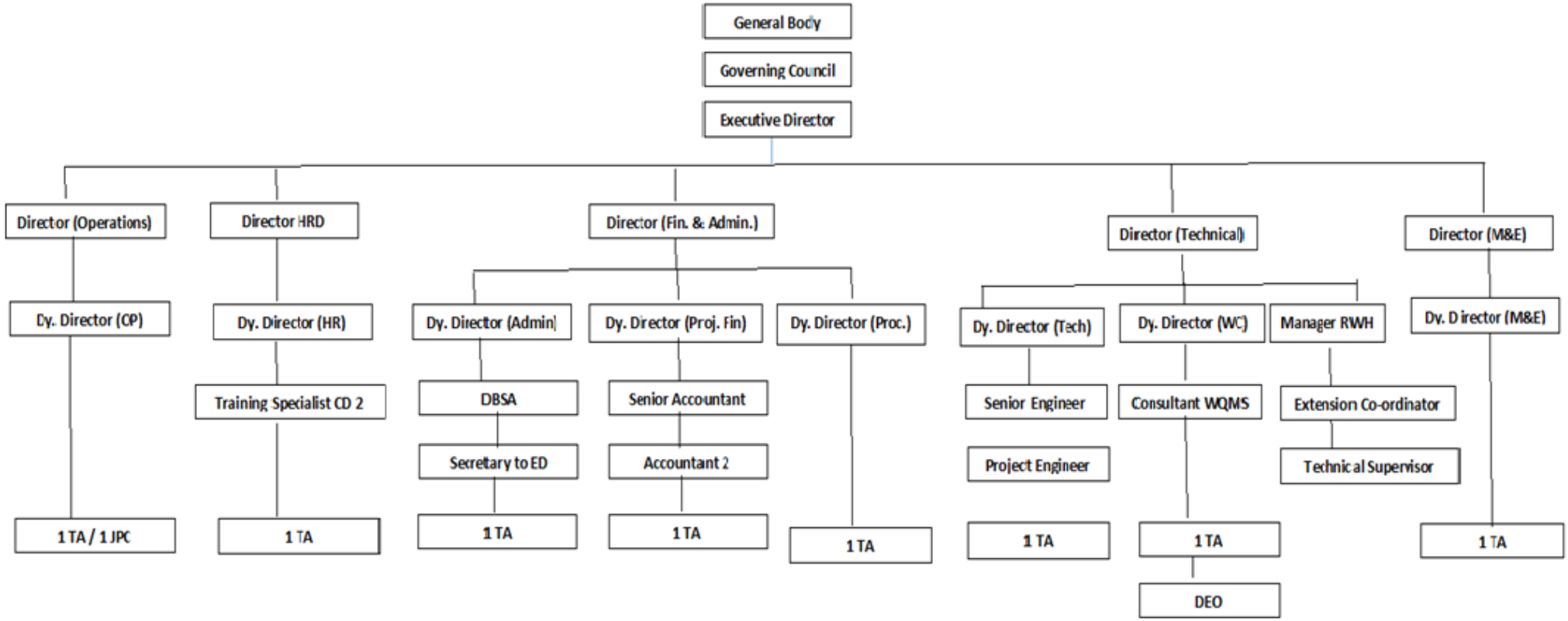
Regional offices are the extended arm of Project management units placed at different locations of the state. The regional offices have the following jurisdiction at present:-

Sl. No.	Location of the RPMU	Districts under each of the RPMU's geographical jurisdiction
1	RPMU, Idukki – located at Thodupuzha, Idukki	Idukki, Kottayam, Trivandrum, Pathanamthitta, Kollam, Ernakulam and Alapuzha Districts
2	RPMU, Malappuram- located at Malappuram	Thrissur, Malappuram, Palakkad and Kozhikode Districts.
3	RPMU, Kannur- located at Kannur	Kannur, Wayanad and Kasaragod Districts

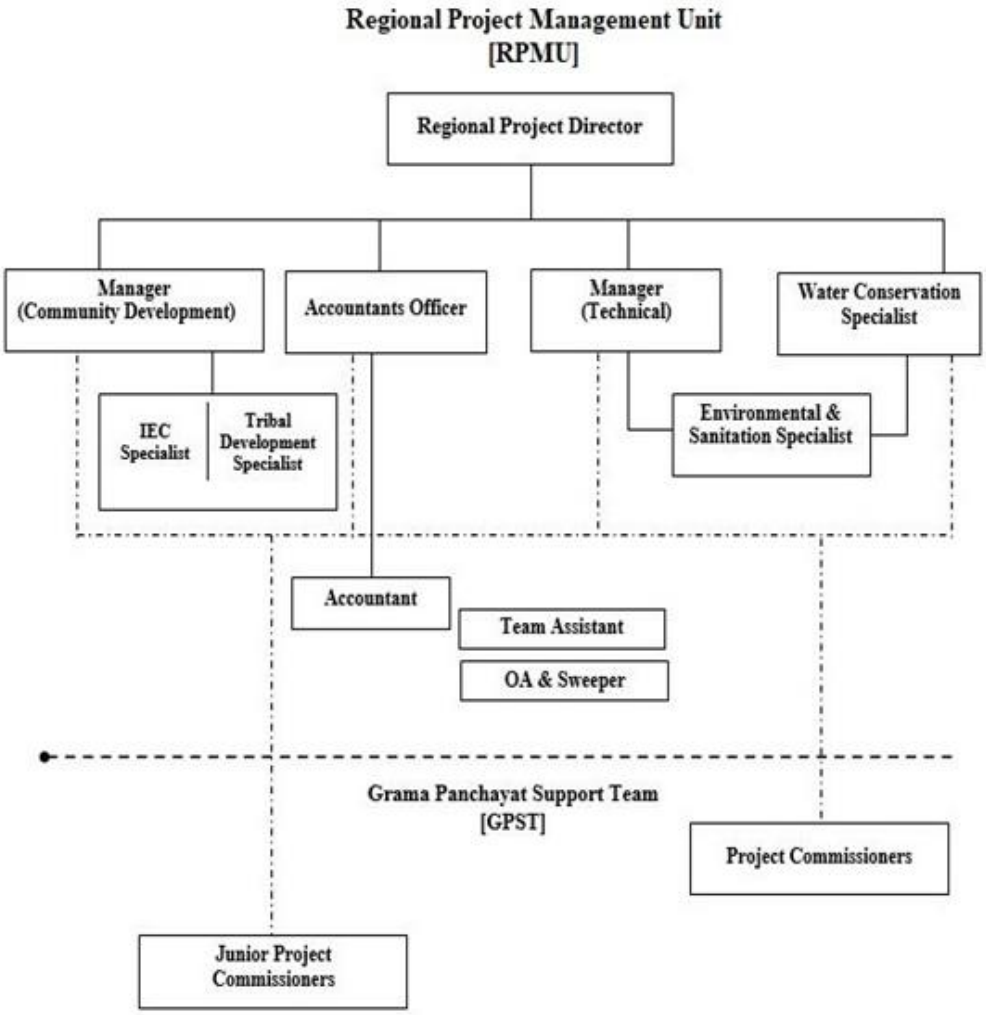
Functions

- Facilitation and implementation support to GP and GPST
- Signing of various agreements with the GP, Grama Panchayat Level Activities Committees (GPLAC), BGs/ Scheme Level Committee and Contractors in connection with the implementation of various projects.
- Capacity building support for the GP, GPST, GPLACs, BG/SLEC teams to ensure that stakeholders perform their functions effectively during Project implementation
- Maintenance of a Project bank account (an account linked to the PMU bank account), fund management at the regional level and timely transfer of these funds to the stakeholders
- Random supervision and monitoring of various components, during Project implementation
- Ensuring timely and satisfactory completion of Project components at par with the scheme cycle
- Completion of project closing formalities at the GP level

Organisational Chart of PMU (As per PIP)



Organisational Chart of RPMU & GPST (As per PIP)



After the completion of Jalanidhi Phase-II project, as directed by the Government KRWSA has prepared a proposal for restructuring the organisation to implement various plan schemes across the state effectively and to take up new challenges in WATSAN sector. The proposal was approved by the 63rd Governing council meeting of KRWSA held on 03.11.2021 and is under Government approval.

CHAPTER - 3
VISION, MISSION, ACTION PLAN AND MILESTONES

Vision

Assured access to safe and sustainable water supply and sanitation services to every household in the State.

Mission

Synergise the strength of Community and Local Governments to build sustainable water supply & sanitation services to reach the unreachable through appropriate technology and resources.

Aims

- Be the lead agency extending support services like community mobilization, capacity building and IEC to the local bodies and implementing agencies for achieving 100% saturation of FHTCs in the state.
- Promote water security by protecting traditional sources, Ground Water Recharge and Rain Water Harvesting.
- Achieve 24 x 7 water supply through smart network management and reducing Non-Revenue Water (NRW).
- Minimize stress on water resources by adopting 3 R concept.
- Capacitate and Empower communities for sustainable Operation and Maintenance of water and sanitation assets.
- Backstopping support to ensure sustainability of investments.
- Ensure safe water through Water Quality Monitoring and Surveillance activities.
- Make sustainable water use a way of life.

Objectives

- Capacity building and awareness creation at community, local body level synergising the strength of Support Organisations, local bodies and sector organisations.
- Build mini/micro water supply schemes using appropriate technology and resources in remote, difficult and forested areas suitable for community management.
- Promote non-conventional energy sources in water supply systems.
- Work as an Agency complementing other sector organisations.
- Recharge and protect traditional sources for water security.

- Community management of Operation and Maintenance for ensuring long-term sustainability of water and sanitation services.
- Provide technical and managerial support to all community-managed water supply schemes.
- Water Quality Monitoring and Surveillance by training volunteers at community level.
- Promote water literacy and a culture of valuing water.
- Develop an ecosystem of institutions for promoting innovation in the sector.
- Recycle , treat Grey Water and reuse for non-potable purpose.

CHAPTER - 4

SCHEMES IMPLEMENTED BY KRWSA

4.1 World Bank assisted 'Jalanidhi' Projects

Introduction

KRWSA has successfully implemented two phases of Jalanidhi Project, i.e. Jalanidhi Phase-1 during 2000-2008 & Phase-2 during 2012-2019. KRWSA had implemented 5884 water supply schemes under Jalanidhi Phase-1&2 projects covering 227 GPs benefiting 4.52 lakh households. 1.04 lakh individual latrines, 24194 latrine conversion, 96703 environment management plan units (soak pit, compost pit, vermin compost etc.) and 1916 bio gas units were also completed under Jalanidhi project. After commissioning of the schemes, the assets created were handed over to the user group - Beneficiary Groups (BGs) for Operation and Maintenance (O&M) all by themselves. The schemes in Phase 1 that were commissioned first have been operational for more than 20 years.

The details of Jalanidhi Phase I & II projects are furnished in the table below.

Jalanidhi Phase I & II Projects			
Description	**Phase I**	**Phase II**	**Total**
Effective Date	28.02.2001	01.01.2012	
Closing Date	30.09.2008	28.06.2019	
Project Cost–outlay (Rs. Cr.)	381.50	1358.53	1740.03
Project Expenditure (Rs. Cr.)	411	1360	1771
No. of Panchayaths	112	115	227
No. of schemes completed	3710	2174	5884
No. of HH Covered	1,91,865	259912	451777

KRWSA with the support of NGOs, have established a system of small/large and Multi GP, beneficiary community-run rural water supply models under the Jalanidhi Project. KRWSA intends to play a meaningful complementary role (together with KWA) in establishing sustainable rural water supply and sanitation infrastructure in the state. The World Bank assistance to Jalanidhi project was over on 31.12.2019 and thereafter there were Spill Over projects which have been completed and pending bills thereon are being settled under state plan.

- Meanwhile, the C&AG had identified that about 35% of the Jalanidhi Schemes implemented under Jalanidhi Phase I are either defunct or only partially functional due to various reasons. Based on the findings, a proposal for rehabilitating these schemes was made and a new head of account "Sustainability support to Community Managed Water Supply Schemes" was sanctioned under State Plan. Also KRWSA is the Nodal Agency for the implementation of Rain Water Harvesting Programme in the State and there is a budget head "Scaling up RWH and GWR activities" with regular budget allocation. Recycle, treat Grey Water and reuse for non-potable purpose.

Besides the above, KRWSA is one of the implementing agencies for the Jal Jeevan Mission project in the state during the period 2020-2024.

On completion of the World Bank assistance to KRWSA, the organisation has taken up the schemes under state plan.

4.2 Schemes under State Plan:

i) Completion of Jalanidhi Phase-II Projects

ii) Sustainability Support to Community Managed Water Supply Schemes.

iii) RWH & GWR

iv) Conversion of Homestead Wells into Protected and Sustainable Drinking Water Sources

v) Water Quality Monitoring and Surveillance & Grey Water Management

vi) R&D in Rural Water Technologies and Management

vii) IEC, Capacity Building and Training & Jalasree clubs

4.30 Achievements of KRWSA in 2023-24

Physical and financial achievements of various Plan schemes implemented by KRWSA in FY 2023-24 are summarised below:-

Government of Kerala (GoK) has provided budget provision of Rs.49.86 Crore for implementing various plan schemes by KRWSA during the year 2023-24. KRWSA has an opening fund balance of Rs.35.93 lakh and Rs.20.89 Crore has been received from GoK against budget allocation in FY 2023-24. KRWSA has expended Rs.13.22 Crore during the year and cheques worth Rs. 6.95 crore were pending at BDS as on 30.03.2024 which was resumed by GoK. KRWSA has also booked Rs.3.94 crore in e-LAMS as on 31.03.2024.

Apart from this KRWSA has also involved in the implementation of JJM programme in the state.

Achievements against each plan head components and JJM activities by KRWSA during the year 2023-24 are detailed below:

SI. No	Name of the Scheme	Budget outlay 2023-24 (Rs. in lakh)	Fund received from Govt. (2023-24) (Rs. in lakh)	Plan Progress				Cheques pending at BDS and was resumed on 30/03/2024 (Rs in lakh)	Expenditure booked under e-LAMS (Rs in lakh)
				Physical		Financial			
				Target	Achievement	Expenditure including previous balance (Rs. in lakh)	% against allocation		
1	Scaling up of Rain Water Harvesting & Ground Water Recharge Programme – 2215-01-800-64 (P)	1000.00	612.14	1533	734	583.76	58%	81.11	130.00
2	Sustainability support to Community managed Water Supply Scheme – 2215-01-102-80 (P)	3090.00	1080.52	579	119	492.63	20%	555.31	163.97
3	Completion of Water Supply Schemes under Jalanidhi –II – 4215-01-102-91	125.00	125.00	-	NA	66.15	53%	58.75	
4	Conversion of Homestead Wells into Protected Sustainable Drinking Water Sources.-4215-01-800-85 (P)	400.00	259.69	696	147	169.03	42%	-	
5	Water Quality Monitoring and Surveillance of Community Managed Water Supply Scheme and Grey Water Management in colonies of vulnerable groups -4215-02-102-99 (P)	350.00	-	95	53	-	-	-	100.00

6	R &D activities in Rural Water Technologies - 4215-01-800-84 (P)	6.00	3.72	-	NA	2.97	50%	-	
7	IEC, Capacity Building and Training & Jalashree Club -2215-01-003-99(P)	15.00	7.95	-	NA	7.85	52%	-	
	Total	**4986.00**	**2089.02**			**1322.39**	**27%**	**695.17**	**393.97**

a) Sustainability support to Community Managed Water Supply Schemes

Once the Jalanidhi schemes are commissioned the assets created are handed over to the BGs for Operation and Maintenance (O&M) by themselves. Neither the WRD nor the LSG is rendering any post exit support. The schemes that were commissioned first have been operational for more than 20 years without any support. The performance assessment conducted by CAG found that nearly 35% of the schemes have become partially or fully non-functional since being handed over to the BGs in 2008 with technical, social & financial issues cropping up during continued operation for more than a decade. In order to ensure sustainability of investments made, Government of Kerala has initiated a project named sustainability project to reinstate all partially / fully defunct community driven schemes to functional schemes and allocated budget provision from 2018 onwards. KRWSA could reinstate overall 1266 schemes so far as on 31.03.2024 under this project. 119 schemes were reinstated in 2023-24 against the targeted 579 schemes. Balance schemes are in different stages of implementation.

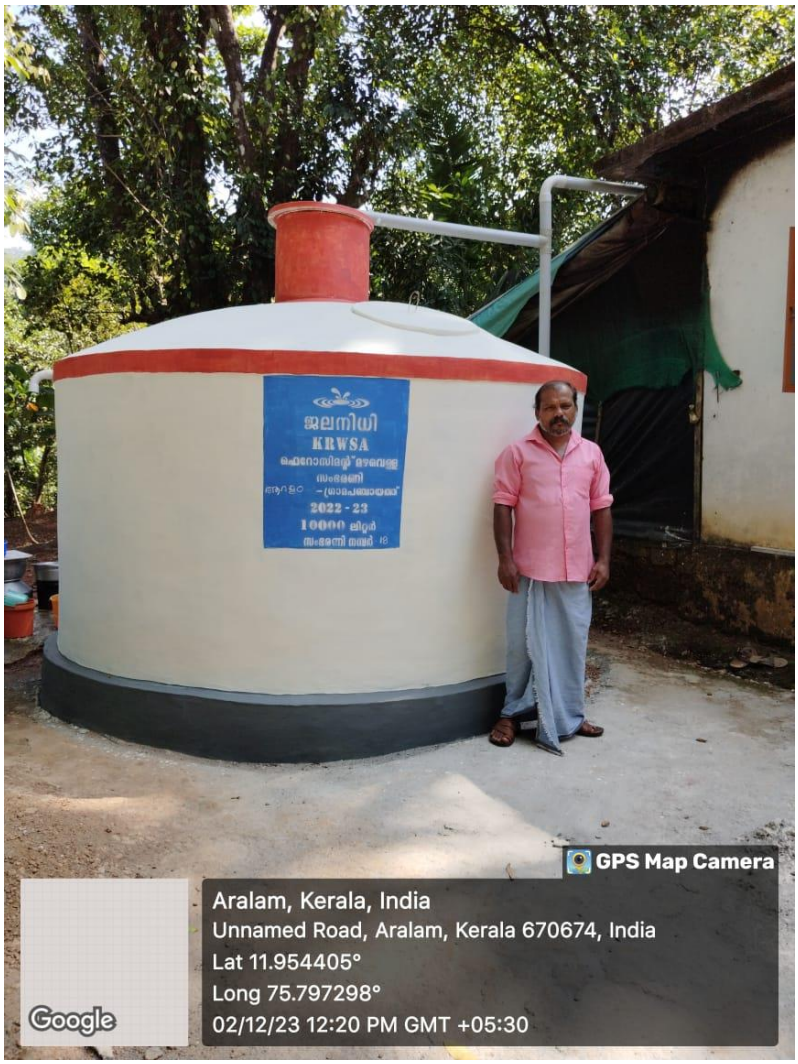
Government of Kerala has provided a budget provision of Rs.30.90 crore and released Rs.10.805 Crore during the year for this component. Rs.4.93 crore have been expended including carried over funds from previous years. Besides cheques worth Rs.5.55 crore were pending at BDS as on 30.03.2024 and was resumed by GoK.

Before Project – Nochad GP

After project – Nochad GP

b) Scaling up of Rain Water Harvesting & Ground Water Recharge programme

Rain Centre functioning as part of KRWSA was constituted in the year 2004 to promote Rain Water Harvesting and Ground Water Recharge activities in the State. Scaling up of roof top Rain Water Harvesting programme with the component of Ground Water Recharge is found suitable for the individual households as alternative method for providing drinking water and gradually improving the water table. The programme is well accepted by the people in State, especially those who are living in hilly, coastal and remote areas with limited access to potable water. The programme is implemented utilizing the Plan provision provided in the State Budget of every Financial Year. Many of the Grama Panchayths, especially the Grama Panchayths belonging to hilly and coastal regions are seriously implementing Rain Water Harvesting as a technology option to solve the drinking water issues of their GPs. The programme named as 'Jala Sowhrudha Vidhayalayam' is implemented on State wide by financially assisting the selected Government/Aided schools to construct RWH structures. 840 structures have been constructed under this programme. The need and importance of Rain Water Harvesting programme under the light of severe flood hit all over the State in 2018 has once again accelerated. Overall 10606 Rain water harvesting structures of 10,000 ltr. capacity and 2936 open well recharge structures have been completed as on 31.03.2024. Out of the 1533 RWH/GWR structures targeted in FY 2023-24, 734 units were completed as on 31.03.2024 and works are at different stages in balance units.



Government of Kerala has provided a budget provision of Rs.10 crore and released Rs.6.12 Crore during the year for this component. Rs.5.84 crore has been expended including carried over funds from previous years.

c) Spill over works of Jalanidhi-Phase-II Project

All schemes taken up under Jalanidhi-II project have been completed. Government of Kerala has provided a budget provision of Rs.1.25 crore for the settlement of pending bills and released Rs.1.25 Crore during the year for this component. Rs.0.706 crore was expended including carried over funds from previous years. Besides cheques worth Rs.0.59 crore were pending at BDS as on 30.03.2024 and was resumed by GoK.

d) Conversion of domestic wells into protected and sustainable drinking water sources

The dug wells are excellent means of ground water recharge and if properly protected and recharged, well can serve as reliable sources of drinking water and at the same time replenish the decreasing ground water table.

GoK has made budget provision from 2022-23 onwards against proposal submitted by KRWSA to convert wells into protected and sustainable drinking water sources. As the quality of living has improved a lot in the state, water demand is high. 100 LPCD ensured by Kerala State Water Utility is insufficient to cater the demand of people. So this programme is highly important to protect the traditional sources to maximum to ensure future water security. Overall 365 domestic wells have been converted as on 31.03.2024 into protected and sustainable drinking water sources.

Government of Kerala has provided a budget provision of Rs.4 crore and released Rs. 2.60 Crore during the year for this component. Rs.1.69 crore has been expended including carried over funds from previous years. Out of the targeted 696 wells in FY 2023-24, 147 domesticwells have been converted into protected and sustainable drinking water sources during the year.

e) Water Quality Monitoring & Surveillance of community managed water supply schemes & Grey water management

Access to safe drinking water is essential to health, a basic human right and component of

effective policy for health protection. Regular testing of water supplied by Government and other institutional agencies is a prerequisite of potable water supply to households and public institutions. To test water samples and surveillance of water sources as well as water at delivery points in homes and alerting people about possible contamination's to prevent water borne diseases are the most critical steps of Water Quality Monitoring and Surveillance (WQM&S). One of the major issues facing the community managed small water supply schemes is the absence of a mechanism to regularly test and monitor water quality. Being a public water supply, though small in capacity, needs regular monitoring and timely mitigation in case of Water Quality issues. KRWSA wants to fill this gap and function as the Water Quality Monitoring and Surveillance (WQM&S) agency for all rural community managed water supply schemes.

Government of Kerala has provided a budget provision of Rs.3.50 crore and no fund was released during the year for this component. Out of the 95 units targeted in FY 2023-24, 53 units have been completed during the year as on 31.03.2024.

f) IEC , Capacity Building & Training and Jalasree Clubs

Information Education and Communication (IEC) activities in water sector aims at building capacities o f different stakeholders especially local communities, responsible and leadership to own, manage, operate and maintain in-village water supply systems. Capacity building and Training activities for the sustainability support programme is envisaged to rebuild/ reorient/ reenergize the existing institutional setup to effectively and scientifically manage the water supply schemes so as to serve at the desired level. The objective of the scheme is to sensitize the importance of water conservation, environment sanitation for safe drinking water, water quality testing, safe drinking water etc. and to promote water conservation activities, water quality improvement activities, activities to control water born and communicable diseases etc.

Jalasree Club is a school-level project on water conservation which is an initiative of Kerala Rural Water Supply and Sanitation Agency (KRWSA). Water literacy promotion programmes is one of the best way to promote water conservation & water quality improvement in our state. The State Government as well as Local-Self Governments have given high priority for water conservation. Since children are the citizens of tomorrow, water literacy campaign should start from school. Moreover, children have great influence over their parents.

Awareness creation among students and involvement of students in water conservation as well as water quality improvement programmes can change the belief and attitude of the general public. Jalasree Club has been organizing various programmes on water conservation that included campaigns, surveys, camps, field trips, and rallies. The clubs has also taken up field trips to conduct water quality testing in all the houses and nearby areas in schools.

The Jalasree Club focuses on the development of life skills and mobilization of parents, communities, governments and institutions to work together to improve ground water level by water conservation techniques and also to improve hygiene and environmental sanitation by promoting best practices.

KRWSA with the help of Jal Jeevan Mission, Implementation Support Agencies (ISAs) has facilitated the formation of 686 Jalasree clubs in schools so far. Trainings were given to teacher coordinators of Jalasree clubs to facilitate various Jalasree club activities.

Government of Kerala has provided a budget provision of Rs.15 lakh and released Rs.7.95 lakh during the year for this component. Rs.7.85 lakh has been expended.

g) R&D in Rural Water Technologies and Management

KRWSA had observed that one of the reasons for the failure of the Water Supply Schemes implemented under the Jalanidhi I & II (world bank aided project), is the water quality issues developing after a course of time. To provide water quality mitigation solutions using appropriate and innovative technologies and successful O&M models to habitations away from the reach of large water supply schemes to the under privileged and vulnerable sections of the population various activities have been proposed under the R&D program. KRWSA proposes to collaborate with reputed academic / management / R&D institutions to address the emerging issues in community managed water supply schemes.

As part of R&D activities, KRWSA has installed 12 LORA systems@ 4 per RPMU (a Low Power, wide Area networking protocol designed to wirelessly connect battery operations to the internet, to connect sensors, gateways, machines, devices etc. wirelessly to the cloud based wireless water level controller cum pump operation) during the year 2023-24.

Continued Researches for developing appropriate, cost effective, and efficient & community manageable technologies /water quality mitigation models for the existing water supply schemes for the uncovered water supply areas located in remote and difficult terrain with no perennial water supply sources are being taken up in the successive years under this program.

Government of Kerala has provided a budget provision of Rs.6 lakh and released Rs.3.72 lakh during the year for this component. Rs 2.97 lakh has been expended under this head during the year 2023-24.

Jal Jeevan Mission

Jal Jeevan Mission announced by the Hon'ble Prime Minister of India on 15th August 2019 is envisioned to provide safe and adequate drinking water through Functional Household Tap Connections (FHTC) to all rural households in India by 2024. The programme will also implement source sustainability measures as mandatory elements, such as water conservation, rain water harvesting, ground water recharge, grey water management etc. The Jal Jeevan Mission is designed with community and GP at the centre and includes extensive Information, Education and Communication (IEC) as a key component of the mission. JJM aims to create a Jan Andolan for water, thereby making it everyone's priority. KRWSA along with KWA and GWD, is one of the implementing agencies of the JJM projects. Out of the targeted 1,08,276 nos. of household level functional tap connections (FHTCs) under JJM by KRWSA, 25,367 FHTCs and 8960 HTCs have been provided as on 31.03.2024 . BG has also provided 5591 connections bythemselves after the exit of KRWSA from Jalanidhi project.

Jal Jeevan Mission Activities – FY 2023-24

KRWSA has taken up the following responsibilities under JJM:-

i. Providing FHTCs from existing Jalanidhi Schemes which has spare capacity.
ii. New schemes in those GPs which have decided KRWSA as the implementing agency.
iii. Management of Implementation Support Agencies (ISAs) in all GPs.
iv. Water Quality Monitoring & Surveillance.

Unlike KWA schemes, the Jalanidhi schemes are owned and operated by the communities. The KRWSA has therefore to convince the existing beneficiaries to get their willingness to include new beneficiaries. Also the number of connections per scheme being small, it is difficult to attract resourceful contractors.

3706 FHTCs and 6713 HTCs have been provided under JJM by KRWSA during the FY 2023-24. Information, Education and Communication (IEC) activities were conducted in all Jal Jeevan Mission projects. Management of Implementation Support Agencies for facilitating the JJM project implementation was also done by KRWSA during this period.

CHAPTER-5

FINANCIAL PERFORMANCE

For the Financial Year 2023-24, a total amount of Rs.4986.00 lakh was allocated in the State Budget in favour of the Agency for the implementation of six State Plan Schemes. Out of this, a total amount of Rs.2089.02 lakh was released to KRWSA for the implementation of the schemes. Out of this a total amount of Rs.1236.65 lakh was incurred as expenditure for the implementation of various schemes. A total amount of Rs.812.37 lakh was resumed by the Government on 30/03/2024 from the total grant amount released, leaving a total amount of Rs.40 lakh as balance in the PSTSB Accounts of PMU and RPMUs with Treasuries concerned.

Plan Expenditure

(Amount Rs. in Lakh)

Sl. No.	***Name of the Scheme***	***Budget Allocation***	***Amount released from Govt.***	***Expenditure from previous year's balance and Interest and other miscellaneous receipts***	***Expenditure from the current year's release***	***Total Expenditure***	***Balance from the budget release as at the end of the year***	***Fund resumed on 30/03/2024***
1	Completion of Water Supply schemes under World Bank aided Jalanidhi –II	125.00	125.00	0	66.15	66.15	0.00	58.85
2	Sustainability support to community managed Water Supply Schemes	3090.00	1080.52	16.86	475.77	492.63	40.00	564.75
3	Scaling up of Rain Water Harvesting & Ground Water Recharge programme	1000.00	612.14	56.45	527.31	583.76	0.00	84.83
4	Conversion of domestic dug wells into protected and sustainable drinking water sources	400.00	259.69	9.98	159.05	169.03	0	100.64

5	Water Quality Monitoring and Surveillance and Grey Water Management	350.00	0	0	0	0	0	0
6	Research and Development in Rural Water Technologies and Management	6.00	3.72	0	2.97	2.97	0	0.75
7	IEC, Capacity Building and Training & Jalasree Club	15.00	7.95	2.45	5.40	7.85	0	2.55
	Total	**4986.00**	**2089.02**	**85.74**	**1236.65**	**1322.39**	**40**	**812.37**

During 2023-24 a total amount of Rs.1322.39 lakh was spent in connection with the implementation of the schemes, including establishment and administrative expenses by utilizing Rs.1236.65 lakh from the budget allocation and a total amount of Rs.85.74 lakh which was available as previous year's balance, interest & miscellaneous receipts.

Even though an amount of Rs.350 lakh was allocated in the State Budget for the year 2023-24, for the scheme "Water Quality Monitoring and Surveillance of Community Managed Water Supply Scheme& Grey Water Management in Colonies of Vulnerable Groups", no amount was released from Government. Hence no expenditure could be incurred under the scheme during the year under report.

Provision for Administrative/Establishment expenses was allocated in each State Plan Schemes except the scheme 'Completion of Jalanidhi-II'. The total amount of establishment and administrative expenditure incurred for the year 2023-24, is Rs.630.58 lakh, which is met out from various schemes implemented under KRWSA.

During the year 2023-24, a total amount of Rs.81.07 lakh was utilized from the balance amount of fund received as SDRF grant during the years 2018-19 and 2019-20, for restoration of partially/fully damaged Water Supply Schemes due to the flood during the years 2018 and 2019. An amount of Rs.25.09 lakh is remaining as balance under this head as on 31.03.2024.

As the Agency is not generating income of its own, and implementation of the schemes, is being carried out only by utilizing Government Grants, the "Accounting Standard-12" of the Institute of Chartered Accountants of India is being followed for the accounting treatment of Govt. grants in the books of Accounts of KRWSA. As such, the annual accounts of the

agency will not disclose any surplus or deficit as financial results. A total amount of Rs.6.02 lakh is charged under depreciation and it has been shown as a deduction from the Capital Grant.

Internal Audit

Internal Audit of Accounts of the Agency was conducted by an in-house team constituted for the purpose of internal audit for the year 2023-24. The team comprised of Director (Finance & Administration)i/c along with Senior Accountant and Accountants from both the PMU and RPMUs in accordance with the administrative convenience. The DFA i/c was acted as the team leader and the audit was carried out under his control. The Internal audit for KRWSA for the year 2023-24 was successfully completed and the reports have been submitted.

Statutory Audit

M/s Ramanda Iyer & Associates, Ernakulam was appointed as the Statutory Auditors for the Agency for the Year 2023-24. The Auditors completed the work and furnished the certified statements of accounts (as noted down) for the year 2023-24 along with audit report thereon, which are attached herewith:-

1. Balance Sheet as on 31-03-2024
2. Income and Expenditure Account for the year 2023-24

CHAPTER-6

COMPUTERISATION & IT INITIATIVES (E-GOVERNANCE INITIATIVES)

KRWSA had implemented the following IT based solutions as part of its e-governance programme.

- Internet based online MIS system named JIMS & Online Financial module (FMIS) had been used for field level data collection and monitoring of Physical and Financial progress of the Jalanidhi Phase-II project activities.
- E-office system "Sujalam" has been implemented in all KRWSA offices. The e-Office system is an integrated file and records management system that allows employees to manage content, search for data internally and collaborate. The file system also enables the electronic movement and the tracking of files, archival and retrieval of data.
- Assets created under Jalanidhi are now mapped in GIS platform. Assets created in 63 GPs have been mapped in GIS & uploaded in Jalanidhi website.
- Grievance Redressal mechanism is functional at KRWSA with the toll-free number 1800-425-5031. Besides web based complaint registration and tracking system attached to Jalanidhi website is also operational.(www.jalanidhi.kerala.gov.in)
- Document Management System (DMS) has been implemented in KRWSA for organizing, securing, capturing, digitizing, tagging, approving, and completing tasks of Documents in the office.
- All KRWSA activities are being uploaded in website under the URL: jalanidhi.kerala.gov.in regularly. (Details of completed projects, ongoing projects, success stories, latest news, grievance redressal system, tender details, GIS/MIS platform, GOs/Guidelines, Project Photos etc. are now available in website)
- Video conferencing facility arranged in PMU as well as all RPMUs.
- Initiated a "mobile app" based functionality survey of all community managed schemes in a GP and survey data with geo referred asset pictures are published in Jalanidhi website for public use. Survey of 7466 schemes in 393 GPs have been completed as on 31.03.2024.

CHAPTER – 7

ESTABLISHMENT

Kerala Rural Water Supply and Sanitation Agency {KRWSA} has four offices across the state, a State level Project Management Unit (PMU) in Thiruvananthapuram and three Regional level Regional Project Management Units (RPMU) in Idukki, Malappuram and Kannur Districts. The PMU has five organizational units: one each for Operations, Technical, Finance and Administration, Human Resources Development (HRD) & Monitoring and Evaluation (M&E). The KRWSA is headed by an Executive Director (IAS Officer). Presently it is held additionally by the Joint Managing Director (JMD) of Kerala Water Authority. The staffs are multi-disciplinary and include specialists in Operations, Water Supply, Sanitation, Environment, Social Development, Finance, HRD, M&E, Procurement and Communication. 139 numbers of staff are working in KRWSA on 1st April 2023 (including daily waged staff & JJM volunteers). At the end of the financial year, there are 147 staff (including daily waged staff & JJM volunteers) are working in KRWSA. The details are as follows:-

Sl. No.	Designation	Office	Approved staff strength	Staff strength as on 31.03.2024
1	Executive Director	PMU	1	1
2	Director	PMU	3	1
3	Regional Project Director	3 RPMUs	3	3
4	Deputy Director	PMU	8	6
5	Accounts Officers	3 RPMUs	3	3
6	Manager (Technical)	3 RPMUs	5	6
7	Manager (CD)	3 RPMUs	3	3
8	Manager (RC)	PMU	1	1
9	DBSA	PMU	1	1
10	Senior Engineer	PMU & 3 RPMUs	5	2
11	Tribal Development Specialist	3 RPMUs	2	2
12	IEC Specialist	RPMU	1	0
13	Training Specialist	PMU	2	0
14	Consultant (WQMS)	PMU	1	0
15	Extension Co-ordinator	RPMU	1	1
16	Sr. Accountant	PMU	1	1
17	Accountant	PMU & 3 RPMUs	7	6

18	Team Assistant	PMU & 3 RPMUs	10	9
19	Project Engineer / Project Commissioner	PMU, RPMUs & GPST	23	27
20	Technical Supervisor	PMU	3	1
21	Jr. Project Commissioner	PMU, RPMUs & GPST	34	25
22	Data Entry Operator	PMU	1	1
23	Office Attendant	PMU & 3 RPMUs	7	8
24	Sweeper	PMU & 3 RPMUs	4	3
25	Driver	PMU	3	3
26	Security	PMU	1	1
	Total		**134**	**115**

1	JJM Technical Consultant	RPMU		1
2	JJM Volunteer	RPMU		31

The present organisation structure, staff pattern, etc. of KRWSA are as per the Jalanidhi Project Implementation Plan approved vide G.O. (Ms) No.71/2011 WRD Dated 25/11/2011. Towards the closure of the World Bank assisted Jalanidhi Project, the staff strength was also curtailed. The approval of 134 staffs has been issued by the Government vide G.O (Rt) No. 774/2020/WRD dated 24/12/2020. As KRWSA is also one of the implementing agencies of Jal Jeevan Mission programme in the state, KRWSA engaged 1 Technical Consultant and 31 volunteers on daily wage basis to facilitate the JJM project activities taken up by KRWSA.

Shri.Ashok Kumar Singh IAS was the Chairman of KRWSA during the period.

During 2023-24 the following Officers functioned as Executive Director of KRWSA.

Name		***Period***
Shri. Venkatesapathy S IAS	Executive Director, KRWSA	Till 29-04-2023
Smt. Veena P	Director (Fin. & Admin.) i/c Additional charge of ED, KRWSA	29-04-2023 to 15-05-2023

Smt. Bhandari Swagat Ranveerchand IAS	Executive Director, KRWSA	15-05-2023 to 24-05-2023
Dr. Dinesan Cheruvat, IAS	Executive Director, KRWSA	24-05-2023 onwards

Address of Project Management Unit

Kerala Rural Water Supply and Sanitation Agency (KRWSA)
PTC Tower, 3rd floor, SS Kovil Road, Thampanoor, Trivandrum.

Address of Regional Project Management Units

Sl.No.	***Name of Offices***	***Address***
1	Regional Project Management Unit (RPMU), Idukki	RPMU, KRWSA Ist Floor, Matha Arcade, Thodupuzha, Idukki - 685 584.
2	Regional Project Management Unit (RPMU), Malappuram.	RPMU, KRWSA MMC-X/102-112, IInd Floor, UMK Tower, Jubilee Road, Uphill, Malappuram - 676505.
3	Regional Project Management Unit (RPMU), Kannur	RPMU, KRWSA IInd Floor, Building No.III/253, Near AKG Hospital, Thalap, Kannur – 670 002.

CHAPTER-8

TRAINING AND CAPACITY BUILDING PROGRAMME

The Human Resources Division at KRWSA organizes training programs primarily based on the needs identified by the RPMUs and during field visits and review meetings conducted at the GPs. During the fiscal year 2023-2024, KRWSA focused mainly on implementing plan schemes such as "Sustainability Support to Community Managed Schemes," "Scaling up of Rainwater Harvesting and Groundwater Recharge," Conversion of Domestic Well into protected, sustainable source of drinking water, water quality mitigation measures, Grey water Management and the implementation of the central flagship program JJM in several GPs. Most of the training programme at Grass root level has been conducted GP centric according to the needs of the community.

During the financial year 2023-24, KRWSA staff participated in various capacity-building and training programs organized by different agencies, as detailed below:

1. Workshop on Energy Transition in Kerala :

Agency for new and renewable energy Research and Technology {ANERT} under Power Department and Water Resource India (WRI) has jointly organised a workshop on research activities on sustainable energy transition in Kerala. This is a kick of workshop organised to need and requirement of energy for each of the departments. Mr.Sreejith.C.R. Manager {Technical}, RPMU, Idukki has attended the workshop and spoke about the transition energy requirements of KRWSA.

2. Training programme on Geographical Information System;

Kerala State Land Use Board { KLUB} has organised three days training programme on the application of Geographical Information System {GIS) in the planning process of state plan schemes taken up during the FY 2022-23. Three Engineers form Regional Offices of KRWSA has attended the online short term training course. Participant's feedback shows that training programme has effective and it gives them a better understanding on better planning. If the programme is done offline it is much useful than the online programme.

3. Training programme on " Operations and Maintenance of Electro Mechanical Equipment in Water Supply Schemes"

Under the auspicious of National Jal Jeevan Mission Programme, Rajagiri Institute of Social Sciences, the Key Resources Centre has organised a training programme on "Operations and Maintenance of Electro Mechanical Equipment's in Water Supply Schemes. Four officers of KRWSA has been nominated for attending the training programme. The three days residential programme was useful for the effective planning of water supply schemes.

4. Training Programme on "Project Implementation line with Specifications, Process of Quality Measurements, Bill preparation and Closure of projects":

Rajagiri College of Social Sciences, Key Resource Centre for National Jal Jeevan Mission has organised a two days residential training programme on "Project Implementation line with Specifications, Process of Quality Measurements, Bill preparation and Closure of projects". Three officers from Regional Offices of KRWSA attended the programme, the feedback shows that the training is extremely useful for staff in concerned activities.

5. Workshop on State Specific Action Plan (SSAP);

The Kerala State Council of Science, Technology and Environment has organised a one day workshop on developing state specific action for the state of Kerala as part of National Action Plan on Climate Changes. All Departments under the Water Resources Department has been invited to attend the programme to specifically discuss and calk out the effective action plan on climate change. IDRB of Irrigation department was the coordinator for the programme. Three offices from KRWSA attended the programme and given their inputs on SSAP for climate changes.

6. Training Course on "Advanced Techniques in Water Quality Management".

Centre for Water Resources Development and Management {CWRDM} has organised a three days residential training programme on "Advanced Techniques in Water Quality Management".

Five officers from cutting edge stages has been nominated to attend the programme. Feedback of the participants shows that training programme was very much useful and improved their knowledge on the advanced techniques on water quality management aspects of RWSS.

7. Training programme on " Operations and Maintenance of Electro Mechanical Equipment in Water Supply Schemes"

Under the auspicious of National Jal Jeevan Mission Programme, Rajagiri Institute of Social Sciences, the Key Resources Centre has organised a training programme on "Operations and Maintenance of Electro Mechanical Equipment's in Water Supply Schemes. Four officers of the Regional Offices of KRWSA has been nominated for attending the training programme. The three days residential programme was useful for the effective planning of water supply schemes.

8. **Residential Training Programme on Grey Water Management:**

Under the auspicious of National Jal Jeevan Mission Programme, Himalayan Institute and Hospital Trust {HIHT} , the Key Resources Centre has organised a training programme on "Grey Water Management" Nine officers of Regional Project Management offices KRWSA has been nominated for attending the training programme. The three days residential programme was useful for the effective planning of Grey Water /Water Re-Use systems.

9. **Training Programme on "Project Implementation line with Specifications, Process of Quality Measurements, Bill preparation and Closure of projects":**

Rajagiri College of Social Sciences, Key Resource Centre for National Jal Jeevan Mission has organised a two days residential training programme on "Project Implementation line with Specifications, Process of Quality Measurements, Bill preparation and Closure of projects". Three officers from Regional Offices of KRWSA attended the programme, the feedback shows that the training is extremely useful for staff in concerned activities.

10. Workshop on State Specific Action Plan (SSAP);

The Kerala State Council of Science, Technology and Environment has organised a one day workshop on developing state specific action for the state of Kerala as part of National Action Plan on Climate Changes. All Departments under the Water Resources Department has been invited to attend the programme to specifically discuss the draft report on State Specific Climate Change Action. Two offices from KRWSA attended the programme.

11. Training Programme on "Action Plan preparation on Jal Jeevan Mission.

Under auspicious on National Jal Jeevan Mission, M/s Anthyodaya Key resource Centre has organised action plan preparation training for the GP level authorities and officials. Two officers of KRWSA participated in the programme to facilitate the GP level action plan preparation.

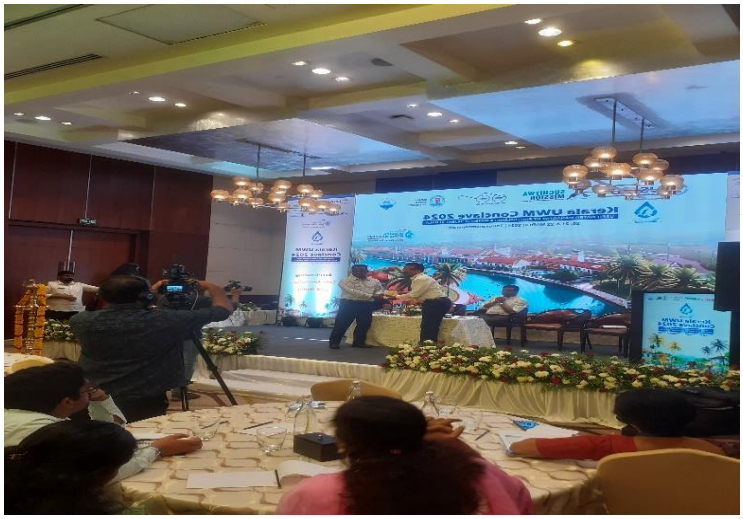
12. Orientation Training Programme on Grey Water Reuse and Management:

KRWSA has organised a training program for our staff members on Grey Water Treatment and Management, during the FY 2023-24, the Government has allocated funds in the state budget for Grey Water Management. In the previous year, KRWSA successfully implemented household-level and institutional-level grey water treatment and management systems. The household-level intervention took place at Marayoor GP, Idukki, adopting the technology MAGIC PIT from Swach Bharat Gramin, while the institutional-level intervention occurred at two tribal hostels in Edavaka GP and Noolpuzha GP, Wayanad District, utilizing the technolog Decentralized Wastewater

Treatment System (DEWATS).

This FY it is proposed for implementation of grey water systems. Additionally, Suchithwa Mission has approved KRWSA as the implementing agency of Grey Water Management under the Swach Bharat Mission (Gramin) program in seven districts across the state. Various institutions, including the Kerala Cricket Association, have approached KRWSA for support in implementing grey water systems. Given these circumstances, it is imperative to provide training on grey water treatment and management and expose our staff members to newer technologies adopted globally in Grey Water Treatment and Management. KRWSA have approached CSIR-NIIST, a premier research institution with a rich portfolio in Grey Water Management, which has agreed to provide training to our staff members. A total of 77 staff members belonging to Engineering and Social Development sectors are to be trained in technical options, general awareness on grey water, treatment and management at household, community, and institutional levels, etc. The participants include Managers (Tech), CD, Senior Engineers, Tribal Development Specialists, Project Commissioners, and Junior Project Commissioners.

13. **National Workshop on Building a Water Resilient Kerala:** Kerala Water Authority in collaboration with UNICEF and WASH Institute has organised three days national conclave on building a water resilient Kerala, highlighting the importance of Grey Water reuse and management. Several experts from National to State attended the conclave. The out puts derived from the workshop will help the participants to design appropriate Grey Water Systems for reuse and management. Three officers from KRWSA attended the programme.



14. Training programme on Onsite Grey Water Treatment & Reuse system:

CSIR- NIIST has organised a three days onsite Grey Water Treatment and Reuse systems training for the stakeholders. Officers from KWA, KRWSA and LSGD participated in the programme. The programme has demonstrated various technologies developed by CSIR _ NIIST for the treatment and management of Grey Water.

15. Keraleeyam -2023:

The Keraleeyam exhibition, conducted by the Government of Kerala from November 1 to 7, 2023, in Thiruvananthapuram, was a comprehensive showcase of the state's cultural heritage, achievements, and developmental strides. The event was inaugurated by Kerala Chief Minister Sri.Pinarayi Vijayan and featured prominent personalities, including international ambassadors and renowned Indian actors such as Sri.Mohanlal, Sri.Mammootty, and Sri.Kamal Haasan. The festival was spread across 42 venues between Kowdiar and East Fort, hosting a variety of events. Key highlights included, Seminars, Cultural Programme, Exhibitions etc.

KRWSA also participated in the exhibition and seminar. The KRWSA stall showcased various models, including water supply schemes, a rainwater harvesting model, a conversion of domestic dug wells into protected drinking water sources model, and working models for greywater management and pipe filters. Leaflets and brochures were developed for each component and distributed to the large audience gathered to see the programs.

Honourable Minister for WRD, Shri. Roshy Augustine, Shri V.K. Prasanth, M.L.A., Mr. Nisamudeen, I.A.S., Mission Director of MGNREGS, Dr. Dinesan Cheruvat, I.A.S., Joint Managing Director of KWA in charge of Executive Director of KRWSA, Dr. T.N. Seema, Chairperson of Harithakeralam Mission, Chief Engineers from KWA, the Irrigation Department, GWD, and officers from various departments also visited the exhibition stalls. The Honourable Minister appreciated KRWSA's efforts to make the event successful.

16. Plan Workshops for Annual Planning 2024-25.

Organizing a planning workshop for staff members of various Regional Project Management Units (RPMUs) is essential for the effective preparation of the annual plan for FY 2024-25. This collaborative workshop will provide a structured environment for RPMU staff to engage in comprehensive discussions, share insights, and align their strategies across different project components. Through interactive sessions, participants can review past performances, identify challenges, and set clear, achievable goals for the upcoming fiscal year. Directors present in the meeting will guide participants in utilizing best practices and innovative approaches to ensure that the annual plan is both ambitious and realistic.

Three workshops for the RPMUs held on 22nd February 2024 at Kannur, 28th February at Malappuram and 2nd March at Idukki, staff members of all RPMUs participated and prepared their own annul plan for various project components with time lines.

17. World Water Day Celebrations;

On March 22, 2024, Kerala celebrated World Water Day with a focus on the theme **"Water for Peace,"** reflecting the global emphasis on the essential role of water in fostering harmony and stability amidst climate challenges. All Departments under Water Resources Department, Govt. of Kerala has jointly organised the programme. Highlights of the programme are as follows;-

1. Water Run

A dedicated group comprising students, Staff of Water Resource Department and members of the public has been actively promoting water conservation and the judicious use of drinking water to

create mass awareness. This programme organized in collaboration with local schools, colleges, and community organizations, involves various activities designed to educate and engage the community. Participants conduct awareness runs, wore T-Shirts display water conservation messages and where they carry placards and distribute informational pamphlets.

2. Seminar on Water Conservation and Governance;

A seminar on water conservation and governance was held, highlighting the critical importance of sustainable water management in an era of increasing scarcity and climate change. The event gathered experts, policymakers, and community leaders to discuss innovative strategies for preserving water resources. Mr. K.Jayakumar. IAS (Retd) provided Keynote address, highlighting the necessity of integrating advanced technologies, such as smart irrigation and water recycling systems, into urban and agricultural practices. Additionally, the seminar emphasized the role of good governance, advocating for transparent policies and equitable access to water. Interactive sessions and workshops provided participants with practical tools and collaborative opportunities to enhance local and global water conservation efforts. This seminar not only raised awareness but also fostered a collective commitment to safeguarding our planet's most vital resource. Smt.Swagat Bhadari Ranveerchand. IAS, Managing Director, KWA Dr.Dinesan Cheruvat. IAS, Executive Director, KRWSA, Dr.Dharmaslashree.

IAS, Director, GWD facilitated the function.

Speakers includes S. Haris, Former Chief Engineer, KWA, Mr.Nisamudeen.IAS, Mission Director, MNREGS, Mr.L.Shekhar Kuriakose , Member Secretary, Kerala Disaster Management Unit spoke on various aspects.

3. Kitty Show

On World Water Day, ventriloquism can play a unique and engaging role in spreading vital messages about water conservation and sustainability. Through the art of ventriloquism, performers can create compelling dialogues between themselves and their puppets, bringing to life the

voices of various characters who educate audiences on the importance of preserving water resources. Ventriloquism shows by Mr.Vinoth Naranattu attracts mass floating population in front of Nisagandhi and Kanakakunnu Palace.

3. Bus Branding and Display of messages;

Branding public transport buses with messages promoting water literacy, conservation, and judicious use of water is an innovative way to reach a broad audience and raise awareness. By utilizing the extensive visibility of double decker bus with Kerala State Transport Corroboration {KSRTC} , these campaigns can educate the public about the importance of sustainable water practices in a visually engaging manner. Eye-catching graphics and clear, compelling messages can illustrate critical facts about water scarcity, the benefits of conservation, and practical tips for reducing water waste. This mobile form of bus campaign not only reinforces the significance of

water stewardship but also encourages community involvement by reminding commuters and pedestrians alike to adopt water-saving habits. As these bus travels various places of the Trivandrum city with children's from various schools reminders of the collective responsibility to protect and manage our vital water resources effectively.

18. Other RPMU / PMU Level Capacity Building and Training Programmes:

Various training and capacity building programmes has been organised for various stakeholders to bring back the scheme in its functional status. Following table shows number of training programmes organised by various unit offices of KRWSA.

Sl. No	RPMU	Name of Training Programme	Aims / Objective of the programme	No of Participants	Expenditure (Rs.)
1	Kannur	GP Level Planning Workshop	Main objective of this workshop is to create awareness regarding the sustainability support projects, roles and responsibilities of various stake holders, selection of schemes, GPLAC and its constitution, fund flow arrangements and its utilization, Implementation Procedures, Important aspects to be checked before going for renovation/rehabilitation etc .	950	0
2	Kannur	GP Level Procurement Workshop	Main objective of this workshop is to ensure that the Project Stakeholders are having through knowledge in procurement activities especially the members of GPLAC.	650	0

3	Kannur	GP level O & M Training	The Main Objective of training is to impart a thorough knowledge for the necessity of continuous implementation of regulations in Operations & Maintenance of drinking water scheme. Ensuring financial transparency, roles and responsibilities of various stake holders in management of operations of drinking water supply schemes etc. Financial Transparency and working practices of drinking water beneficiaries.	460	0
4	Kannur	GP Level RWH Training	The main objective is to impart a Continued maintenance of water reservoirs (Cleaning, Water filling, Annual maintenance work etc.) Water use (Requirement of Rain Water Harvesting, Maximum quantity of water that can be used in summer per day. Water quality and Sanitation (Keep the tank closed / filter media , cleaning of floor pipes / roof cleaning etc.	342	0
5	Kannur	GP level well recharge and well sanitation training	The main aim of this programme is to give awareness of Role of beneficiaries in protection of domestic water sources. Make it Sustainable water sources and Ground water recharge, How to maintain well recharge system.	390	0
6	Kannur	Staff Training Workshop	Main objective of this workshop is to improve team work between staff members, ensuring more accountability, planning for next activities	38	17390
7	Kannur	District Level Workshop	School Jalasree Club – Training of teachers and student coordinators. Conducting various activities at the district level.	364	122000
8	Kannur	District Level Prize distribution ceremony		950	102000
1	Idukki	Training to Teachers and Leaders of Jalasree Clubs in Idukki District.	School Jalasree Club – Training of teachers and student coordinators. Conducting various activities at the district level.	255	75000
2	Idukki	Training to Teachers and Leaders of Jalasree Club in Kottayam	School Jalasree Club – Training of teachers and student coordinators. Conducting various activities at the district level.	243	75000

		district and award distribution of short film.			
3	Idukki	Training to GP board and BG officials in kozhuvanal GP regarding the scope & procedure of handing over of O & M of water supply schemes to KRWSA.	Regarding efficient operations and management.	35	8700
4	Idukki	First part payment of training to GP board and BG officials in Parathode, Meenadam, Thalappalam, Marayoor and Mutholi GPs regarding the scope & procedure of handing over of O & M of water supply scheme to KRWSA		325	42000
5	Idukki	BG inauguration Konnathadi GP		40	
6	Idukki	Capacity building training to RWH beneficiaries in 13 GPs	To create more awareness on the up keep of RWH tanks and Systems	563	1075
1	Malappuram	Awareness Programme for panchayath members	Awareness on plan schemes taken in the GP during 2023-2024.	442	
2	Malappuram	Procurement Training	Training on procurement related activities.	188	
3	Malappuram	Awareness for project implementation	Project Implementation training to GPLAC on supervision and monitoring of various components.	188	
4	Malappuram	Ongoing maintenance of the project	O & M of water supply schemes.	137	
5	Malappuram	Construction and maintenance of RWH tank	To create more awareness on the up keep of RWH tanks and Systems	133	
6	Do	Conversion of domestic well into protected source of drinking water.	To create more awareness on the up keep of Open Well and other systems	78	

7	Do	Operators training on pipe filter	To create more awareness on the up keep of water quality mitigation measures installed in RWSS	21	
8	Do	Site visit to Grey Water treatment and reuse systems		16	
9	Do	Training for Volunteers for using FTKs		766	
10	Do	District Level training programme on school Jalasree club activities	School Jalasree Club – Training of teachers and student coordinators. Conducting various activities at the district level.	513	300000
11	Do	R & D activities	Demo and hands-on training for operators on LORA	12	
12	Do	Formulation of Plan Workshops	Planning for next year's programme	46	20225
13	Do	Printing of IEC report book for WQM			63059

CHAPTER – 9

IMPLEMENTATION OF RIGHT TO INFORMATION ACT – 2005

Right to Information Act 2005 that assured the common man the right to know has been a mile stone in the history of India in bringing transparency in governance.

The main objective of the Right to Information Act, 2005 is to ensure transparency and accountability in the working of every Public Authority in the country and to eliminate the scourge of corruption. The Act mandates a legal-institutional framework for setting out a practical regime of right to information for every citizen to secure access to information held by or under the control of Public Authorities.

The Kerala Rural Water Supply and Sanitation Agency (KRWSA) took initiative to implement the Act in the same year itself by issuing necessary Orders and Circulars. The list of Public Information officers designated from PMU and RPMU as follows:-

Sl. No	Office	Appellate officer Designated	Public Information Officers Designated	Asst. Public Information Officers Designated
1	KRWSA - PMU office	Director (Technical)i/c	Director (Operations)i/c	Team Assistant (Operations)
2	KRWSA -RPMU Kannur	Regional Project Director	Manager (Community Development)	Junior Project Commissioner
3	KRWSA - RPMU Malappuram	Regional Project Director	Accounts Officer	Team Assistant
4	KRWSA - RPMU Idukki	Regional Project Director	Accounts Officer	Manager (Community Development)

The following tables showing the Status of RTI - Reporting Year: 2023-24

(Form -I)

Sl. No	Department	No. of Public Authorities	No. of Public Authorities in which published the 17 manuals under Sec.4(1)(b)	No. of Public Authorities which updated the 17 manuals during the year	No. of Public Authorities which displayed the 17 manuals on line
(1)	(2)	(3)	(4)	(5)	(6)
1	KRWSA - PMU office	1	1	1	1
2	KRWSA -RPMU Kannur	1	0	0	0
3	KRWSA - RPMU Malappuram	1	0	0	0
4	KRWSA - RPMU Idukki	1	0	0	0
	Total	**4**	***1**	***1**	***1**

***KRWSA published all the details in a common Jalanidhi website. PMU and RPMU's details put in this site. So the total number remains one.

Form - II

DESIGNATION OF INFORMATION OFFICERS/APPELLATE OFFICERS
REPORTING YEAR:2023-24

Sl. No	Department	No. of Public Authorities	No. of Public Information Officers Designated	No. of Asst.Public Information Officers Designated	No. of Appellate officers Designated
(1)	(2)	(3)	(4)	(5)	(6)
1	KRWSA - PMU office	1	1	1	1
2	KRWSA -RPMU Kannur	1	1	1	1
3	KRWSA - RPMU Malappuram	1	1	1	1
4	KRWSA - RPMU Idukki	1	1	1	1
	Total	**4**	**4**	**4**	**4**

(Form - III)

DISPOSAL OF INFORMATION REQUESTS BY PUBLIC INFORMATION OFFICERS
REPORTING YEAR: 2023-24

Name of the Department	No. of requests pending at the end of last year	No. of request received during the year	Total No. of requests	No. of requests disposed	No. of requests rejected	No. of requests deemed to be refused 7 (2)	% of cases access to information denied
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
KRWSA - PMU office	1	9	10	9	0	0	0
KRWSA - RPMU Kannur	0	6	6	6	0	0	0
KRWSA - RPMU Malappuram	0	6	6	6	0	0	0
KRWSA - RPMU Idukki	0	11	11	11	0	0	0
Total	**1**	**32**	**33**	**32**	**0**	**0**	**0**

(Form - IV)

INFORMATION REQUESTS REJECTED BY PUBLIC INFORMATION OFFICERS
REPORTING YEAR: 2023-24

Name of Department	Total No. of request rejected	No. of request rejected Sec-8	No. of requests rejected Sec. -9	No. of requests rejected Sec.-11	No. of requests rejected Sec.-24	No. of requests rejected other sections
(1)	(2)	(3)	(4)	(5)	(6)	(7)
KRWSA - PMU office	0	0	0	0	0	0
KRWSA -RPMU Kannur	0	0	0	0	0	0
KRWSA - RPMU Malappuram	0	0	0	0	0	0
KRWSA - RPMU Idukki	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**

Form - V

DISPOSAL OF FIRST APPEALS BY DESIGNATED APPELLATE OFFICERS
REPORTING YEAR:2023-24

Name of Department	No. of 1st appeals pending with appellate officers	No. of 1st appeals preferred during the year	Total No. of 1st appeals with Appellate officer	No. of 1st appeals disposed	No. of 1st appeals rejected	% of 1st appeals rejected	No. of 1st appeal pending for more than 45 days
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
KRWSA - PMU office	0	2	2	2	0	0	0
KRWSA -RPMU Kannur	0	0	0	0	0	0	0
KRWSA - RPMU Malappuram	0	0	0	0	0	0	0
KRWSA - RPMU Idukki	0	0	0	0	0	0	0
Total	**0**	**2**	**2**	**2**	**0**	**0**	**0**

Form - VI

PENALTIES IMPOSED & COLLECTED
REPORTING YEAR :2023-24

Name of Department		Details of Penalties imposed by Information Commission under section 20 (1)		Details of penalties collected	
(1)		(2)		(3)	
KRWSA - PMU office		0	0	0	0
KRWSA -RPMU Kannur		0	0	0	0
KRWSA - RPMU Malappuram		0	0	0	0
KRWSA - RPMU Idukki		0	0	0	0
Total		**0**	**0**	**0**	**0**

Form-VII

DISCIPLINARY ACTION TAKEN AGAINST OFFICERS IN RESPECT OF ADMINISTRATION OF RTI ACT
REPORTING YEAR :2023-24

Sl.No	Name of Department	Details of disciplinary action recommended by information commission under section 20(2)	Details of disciplinary action taken based on recommendion of information commission	Other disciplinary actions taken (other than those recommended by IC)
1	KRWSA - PMU office	Nil	Nil	Nil
2	KRWSA -RPMU Kannur	Nil	Nil	Nil
3	KRWSA - RPMU Malappuram	Nil	Nil	Nil
4	KRWSA - RPMU Idukki	Nil	Nil	Nil

Form -VIII

SUMMARY COSTS,FEES & CHARGES COLLECTED BY PUBLIC AUTHORITIES

REPORTING YEAR :2023-24

Name of Department	Cost collected - section 4	Fee collected section 6(1)	Fee collected section 7(1)	Fee collected section 7(5)	Other charges collected (specify)	Total collection
KRWSA - PMU office	0	90	48	0	0	138
KRWSA -RPMU Kannur	0	50	70	0	0	120
KRWSA - RPMU Malappuram	0	60	426	0	0	486
KRWSA - RPMU Idukki	0	110	0	0	0	110
Total		**310**	**544**	**0**	**0**	**854**

CHAPTER – 10

GRIEVANCE REDRESSAL MECHANISM (GRM)

Grievance redressal mechanism is functional at KRWSA with the toll-free number 1800-425-5031. Besides web-based complaint registration, tracking system attached to Jalanidhi website is also operational (www.jalanidhi.kerala.gov.in).

The grievance redressal mechanism consists of a web-based complaint registration and tracking system and a toll-free telephonic system, accessible to all stakeholders. A total of 303 complaints have been received during the FY 2023-24 and all of them have been resolved. All the complaints received in Chief Ministers Public Grievance Redressal Cell (CMO portal) have also been addressed during the period. Nodal Officer and Charge Officer for handling petitions in CMO portal were also assigned and published in PMU and RPMUs.

CHAPTER – 11

WATER QUALITY MONITORING AND SURVEILLANCE (WQM&S) OF COMMUNITY MANAGED WATER SUPPLY SCHEMES

Inadequate access to sufficient and safe drinking water affects human health, a basic human right and a component of effective policy for health protection. Drinking water governance improvements may be one way to better drinking water quality. Regular testing of water supplied by Govt. and other institutional agencies is a prerequisite for potable water supply to households and public institutions. Testing water samples and surveillance of water sources as well as water at delivery points in homes and alerting people about possible contaminations to prevent water-borne diseases are the most critical steps of WQM&S.

Water quality monitoring is a fundamental tool in the management of safe drinking water supply. Surveillance is regular, specific measurement and observation for water quality management and operational activities.

Kerala Rural Water Supply & Sanitation Agency has been making efforts to ensure the supply of safe drinking water to the rural masses. Safe drinking water implies that the quality of the water supply is taken care of by the beneficiaries to get potable water. The issue of Water Quality Monitoring & Surveillance has been given due emphasis. The monitoring and surveillance results from the habitations are also to be put on the database of KRWSA & Jal Jeevan Mission(JJM) Water Quality Monitoring Information System(WQMIS) and monitored to ensure drinking water security at the household level.

JJM emphasises a particular focus on water quality monitoring and surveillance. Water quality testing is important, for constant monitoring to ensure the portability of drinking water supplied; as a validation process; monitoring the operation of water supply systems; investigation of disease outbreaks; and undertaking preventive measures. Surveillance activities for water quality management are undertaken to identify and evaluate factors associated with drinking water that could pose a health risk. It is also both about detecting & preventive risks, so that, remedial action can be taken before public health problems occur and identifying the contaminated water sources to take prompt corrective action. Periodic pre and post-monsoon water quality testing, monitoring, and surveillance give assurance that supplied water to every rural household is safe, and water can be consumed directly from a tap instead of using point-of-use treatment systems available in the market.

Field Test Kit used for WQMS gives an indicative result, it helps in ascertaining whether the water supplier is fulfilling the mandated obligations or not. The multi-parameter FTK is used for the examination of physico-chemical contamination as initial screening. The Bacto Vial is used to indicate the presence or absence of coliforms in water samples. As a part of the surveillance activity, a sanitary inspection is also undertaken. It is an on-site inspection of a water supply facility to identify actual and potential sources of biological contamination. The physical structure and operation of the system and external environmental factors (such as a toilet location) are evaluated. This information may be used to decide on appropriate remedial action to improve or protect the drinking water source and supply system.

Water quality of WSS refers to the physical, chemical, and biological characteristics of water. The Bureau of Indian Standards (BIS) has specified safe drinking water quality standards (IS 10500:2012). These standards have two limits—'acceptable limits' and 'permissible limits in the absence of an alternate source'. If any parameter exceeds the permissible limit such as a chemical parameter, there will be an investigation, and appropriate, remedial measures will be implemented or restrict the continued use of the water supply for drinking purposes until water quality is considered acceptable. It is pertinent that drinking water source(s) will be tested for chemical parameters using FTK once a year and twice for Bacteriological characteristics using H_2S vial, as prescribed, to ensure that the supplied water meets the prescribed standards. Remedial action must be taken if the parameters tested are outside the prescribed limits. For all piped water supply schemes, new or old, design requirements of water treatment plants/ community water treatment plants should take care of supplying drinking water with quality parameters within the prescribed limits. Drinking water due to contamination from various sources, will have disease-causing bacteria, viruses, or parasites (collectively called pathogens). Many WSS have shown microbial hazards which continue to be the primary concern. Guidance on ensuring microbial safety of drinking water, building on principles – such as the multiple-barrier approach and the importance of source protection.

The Field Test Kits (FTKs) for the examination of physio-chemical contamination not only serve the purpose of the initial screening of contamination but also is an effective tool for generating awareness amongst the community to consume safe drinking water. The Kits are for use at grass root level i.e. at Gram Panchayats for indicative chemical and bacteriological testing, however, water quality testing laboratories may also use the same for primary investigation. The kit is used in conjunction with tablets/ reagents and colour charts to test different parameters. The kit is portable, easy to carry, easy to operate, and does not require any kind of energy or power.

This kit can carry out tests for the parameters listed below: i.) Turbidity by visual comparison method ii.) pH by pH strips colour comparison method iii.) Total Hardness by Titrimetric method iv.) Total Alkalinity by Titrimetric method v.) Chloride by Titrimetric method vi.) Ammonia by visual comparison method (Optional) vii.) Phosphate by visual comparison method (Optional) viii.) Residual Chlorine by visual colour comparison method ix.) Iron by visual colour comparison method x.) Nitrate by visual colour comparison method xi.) Fluoride by visual colour comparison method xii.) Bacteriological vials (Presence/ Absence) water test kit (H_2S vial test).

Regular training programme are conducted on Water Quality Monitoring & Surveillance (WQMS) for selected Kudumbasree workers (entrusted with testing of drinking water samples) of the Panchayath using a Field Testing Kit (FTK). Training to selected Kudumbasree volunteers is conducted through the trained resource persons from the Kerala Water Authority. These selected Kudumbasree volunteers are registered using the WQMIS portal for uploading the tested results. The programme is organized by KWA & KRWSA in association with the GP board. The trainees are taught on the basic precautionary measures to be followed while collecting water samples from the drinking water sources and the steps and procedures to test water quality using FTKs. FTKs and bacteriological vials are distributed to the participants. The training is normally attended by about 50 women Kudumbasree members in each Grama Panchayath.

The trained and registered Kudumbashree volunteers thereafter visit the drinking water sources in each HH, economic establishments, and religious and academic institutions consuming water for drinking purposes. The source of the drinking water is photographed/geotagged and tested for chemical and bacteriological parameters using the FTK & vial. The results and location of sources are uploaded to the WQMIS website of JJM-(aejaLshakti.gov.in/wqmis).

Based on the testing results, if any parameter exceeds the permissible limit for portable drinking water, water quality mitigation measures for small water supply schemes (OW) are proposed such as pressure sand filters, Iron Removal Plants, pipe filters, etc. and for Large water Supply Schemes(river-based) conventional mitigation WTP are constructed or the existing ones upgraded.

WQM&S is included under State Plan proposals and appropriate mitigation proposals are implemented in the quality-affected drinking water sources.

Water Quality Mitigation Measures - 2023-24								
Sl No	**RPMU**	**District**	**Name of GP**	**Constituency**	**Name of Scheme**	**No of HH**	**Water Quality issues**	**Proposal proposed**
1	Idukki	Idukki	Nedumkandam	Udumbanchola	Thulasippara	250	Turbidity-14.13, Iron - 1.43	IRP
2	Idukki		Adimaly	Devikulam	12th mile	21	Water quality report to be submitted	KRWSA modified Pipe filter
3	Idukki		Kanjikkuzhy	Idukki	Varsha	42	Turbidity-493, Iron-6.92	IRP
4	Idukki		Konnathady	Idukki	Aiswarya	20	Turbidity-15.66, pH-6.43	PSF
5	Idukki		Adimaly	Devikulam	Kainagiri	3600	Turbidity-1.6, E Coli and Coliform present	KRWSA modified Pipe filter
					Idukki Total	**3933**		
6	Idukki	Kottayam	Bharananganam	Pala	Choondacheri	75	Turbidity-21.5, Iron- 1.6	IRP
7	Idukki		Kangazha	Kanjirappally	Pidisserimala	95	Turbidiy-8.14,Ph-6.368, Coliform bacteria present	PSF
8	Idukki		Prathodu	Poonjar	Dreamland	95	Turbidity-18.44	PSF
9	Idukki		Madapally	Changanacherry	Kottaramkunnu	45	Turbidiy-20, Ph-6.3, Iron 3.92	IRP
					Kottayam Total	**310**		
10	Idukki	Pathanamthitta	Koduman	Adoor	Kuryara	94	Turbidity-8.41, Iron-0.6,Bacteria present	IRP
					Pathanamthitta	**94**		
					RPMU Idukki Total	**4337**		
1	Kannur	Kozhikode	Maruthomkara	Nadapuram	Moilothara	24	Iron & Turbidity	Micro Filter Unit

2	Kannur				Nellikkunnu	62	Turbidity	2 Micro Filter Unit
3	Kannur		Kavilumpara	Nadapuram	Anaswara Kizhakkumkunnu	42	Turbidity	Micro Filter Unit
4	Kannur		Omassery	Koduvally	Kettungal Koramchola	42	Iron & Turbidity	Micro Filter Unit
Kozhikode Total						**170**		
5	Kannur	Kannur	Aralam	Peravoor	Aralam SLEC &	1250	Iron & Turbidity	PSF & Chlorine Doser
6	Kannur		Ulikkal	Irikkur	Olamala	16	Iron & Turbidity	Micro Filter Unit
7	Kannur				Amrutham Chulliyod	24	Iron & Turbidity	Micro Filter Unit
8	Kannur		Kunnothuparamba	Kuthuparamba	East Kannamkode	129	Turbidity	Micro Filter Unit
9	Kannur		Kuttiattoor	Thaliparamba	Chirattumoola	76	Iron & Turbidity	Micro Filter Unit
10	Kannur		Munderi	Kannur	Padannot	70	Iron & Turbidity	PSF Refilling
11	Kannur	Kasaragod	Kianoor Karinthalam	Kanhangad	Manjalamkadu	147	Turbidity	Micro Filter Unit
Kannur Total						**1712**		
RPMU Kannur Total						**1882**		
21	**GRAND Total**					**6219**		

WQ- 2023-24						
Sl No	**Name of RPMU**	**No. of GPs**		**No. of HHs**		
1	Idukki	10		4337		
3	Kannur	11		1882		
	Grand Total	**21**		**6219**		

CHAPTER - 12

CONSERVATION AND REJUVENATION OF WATER BODIES OF KERALA

KRWSA in its new initiative aims to undertake surface water management measures for the conservation and rejuvenation of the water bodies lands of Kerala. This initiative seeks to enhance the storage capacity of water bodies, recharge groundwater, mitigate groundwater depletion, and minimize the risk of water pollution, thereby ensuring water security and sustainability. The rejuvenation of water bodies in Kerala is crucial for the long-term sustainability of water supply projects undertaken by the Kerala Water Authority, KRWSA, LSGIs, and other agencies.

The Jal Jeevan Mission aims to provide 70 lakh functional tap connections to rural households across Kerala. In addition, the state has to provide sustainable drinking water to the urban population of the State. In the given context, it is imperative to safeguard, conserve, and strengthen all water sources to ensure sustainability in drinking water supply, protect the wetland ecosystem, etc.

For the financial year 2024-2025, KRWSA proposes to take up Surface Water Management for the rejuvenation of Sasthamkotta Lake, Kollam District on a pilot basis, to increase its storage capacity, induce groundwater recharge, limiting groundwater mining and minimize the risk of pollution towards water sustainability and for establishing efficient water management and technology adoption for Safe Drinking Water Supply Schemes, depending on the Lake.

As per the studies of the Ground Water Estimation Committee (GEC) 2023 of CGWB, Sasthamkotta is categorized as semi-critical (groundwater availability); hence the proposal is justified as the need of the hour. Sasthamkotta Lake is a source of drinking water for Kollam City and adjoining panchayats, catering to about **seven lakh households**. The current KWA water supply withdrawal at the rate of 37.5 mld, and bulk water supply implemented by KRWSA to Chavara and Panmana Panchayaths @ 11.50 mld, is about 69% of the annual outflow with an annual deficit of 0.438MCM (as per CGWB). During periods of deficit rainfall, the Lake outflows including the water supply demands have to be met from the Lake storage. Hence, it will lower the Lake water level proportionate to the rainfall deficit.

The Sasthamkotta Lake is under serious threat due to siltation, sedimentation, and pollution affecting the whole ecosystem and consequently the unique bio-diversity, land, and people. The water spread area of the lake, has shrunk by 15.56% from the 3.02 km² to 2.55 km² (as per CWRDM). The inflow components to the Lake are largely depending on rainfall. Hence, rainfall deficits largely influence the water balance status of Sasthamkotta Lake, since the outflow

components are found almost constant.

Under normal rainfall condition, the Lake water balance shows an annual water deficit of 0.438 MCM. During periods of deficit rainfall, the Lake outflows including the water supply demands have to be met from the Lake storage hence, it will lower the Lake water level proportionate to the rainfall deficit. It is the reason why a drastic lowering of the Lake water level occurred (and the Lake bottom exposed in certain areas) during 2009-10, in which the water balance showed an annual water deficit of 3.29 MCM for the rainfall deficit of 13.7% (as per CWRDM).

Human intervention in the Lake catchment area is leading to high sedimentation and siltation in the Lake, which will lead to a reduction in Lake Storage. Most of the lateritic hillocks around the Lakes, which have the capability of storing groundwater and releasing that to the Lake during the non-monsoon periods are being mined for building materials that also, affect the Lake inflow. Since, the occurrence of annual deficit rainfall conditions is a recurring event, scientific conservation and management plans for Lake and its catchment is very much essential for saving the Sasthamkotta Lake.

The proposal is designed to assess the total ecological aspect of the drinking water standards of the intake water and to ensure the sustainability of the drinking water supply schemes Revival of fauna and flora, prevent soil erosion, increase the water carrying capacity, and ensure waste management from polluting the lake.

Envisaged actions:

- Conserving water,
- Minimizing wastage and ensuring more equitable distribution through integrated water resource management.
- Develop a framework to increase the water use efficiency.
- Strategies to tackle variability in rainfall and river flows such as enhancing surface and underground water storage,
- Rainwater harvesting
- Baseline Integrated Survey for socio-economic and ecological assessment and planning
- Technology transfer for enhancing adaptive capacity and building resilience of the community through efficient water management technology adoption
- Knowledge Management by documentation and dissemination of learning from the project
- Soil and moisture conservation
- Biodiversity conservation
- Agroforestry operations
- Capacity building
- Training

- Monitoring and Evaluation

KRWSA intends to take up proposals on Surface Water Management for the Conservation and Rejuvenation of Water bodies to increase its storage capacity, induce groundwater recharge, limit groundwater mining minimize the risk of pollution towards water sustainability, and establish efficient water management and technology adoption for Safe Drinking Water for Water Supply Schemes.

KRWSA with its experience in water management in Rural Kerala is ready to scale up its activities towards "Rejuvenation and conservation of water bodies of Kerala".

The management plan will be budgeted on the principle of convergence, by analyzing developmental schemes which can support specific activities. An analysis of such schemes indicates that nearly 75% of funds can be leveraged from various developmental schemes of the central and state governments. The rest of the resources shall be placed for consideration of the National Plan of different like-minded agencies.

The proposal for the Rejuvenation and conservation of water bodies will be scaled up for the whole state prioritising Water Supply schemes.

CHAPTER - 13

Community Grey Water Treatment & Management for Rural Kerala

The management of Greywater needs innovative solutions to address the ever-growing challenges of solid and liquid waste in the state. There needs to be a development of a management strategy to stop unsafe methods of disposal of greywater.

Grey waste management activities will reduce the burden on the freshwater supply and augment water for non-potable domestic purposes. With appropriate policy nudges, these can be scaled up into opportunities to address water stress in rural Kerala. This proposal aims to serve as a platform for building an implementation framework for Greywater Management in tandem with various stakeholders and Grama Panchayats (GPs) of Kerala. Each technological solution proposal is likely to address the challenges present and recommend solutions for sustainable water management.

KRWSA aims to create an action plan and way forward for Greywater Management and bring forward various policy frameworks, and technologies for rural areas. Implementation of suggested action plans and technologies would make an important contribution towards transforming this important sector by augmenting additional water. Concrete and game-changing steps have to be taken for Greywater management to achieve the goals anchored in this proposal.

KRWSA will take up a program to provide technical support to the GPs for establishing greywater treatment and management systems. It is envisaged to treat the grey water using physical and biological methods preferably employing a low cost and less sophisticated technology acceptable by the GP HH/community.

KRWSA intends to identify Hotspots in GPs on priority to be addressed immediately for Grey water treatment and Management and prepare detailed Project report.

As pressures on freshwater resources grow around the world and as new sources of supply become increasingly scarce, expensive, or politically controversial, efforts are underway to identify new ways to meet water needs by increasing the efficiency of water use and expanding the usefulness of alternative sources of water previously considered unusable, among these potential new sources of supply is “grey water”.

35% reduction of water consumption in HH units can be achieved with simple technology if grey water is recycled and reused in toilet flushing and irrigation. Acquiring innovation capacity in developing and implementing wastewater recovery technology at the HH level is essential to improve the competitiveness of both supply and demand aspects. Therefore the establishment of a Re-Water Innovation Network that consists of various stakeholders to acquire local capacity for innovation and develop several local technologies for waste water recovery is a way forward.

Managing grey water: ***Grey water/wastewater*** that must not contaminated with fecal or urinal matter at the first instance. This includes post-use water for domestic purposes like bathing, washing dishes, laundry, etc.

Most rural areas in the state let domestic run-offs of grey water that collect in open areas or flow into water bodies because of the high density of habitats in Kerala. This creates an environmental problem where diseases and pathogens breed. While substantially less harmful than black water (water that has been contaminated by fecal matter), grey water still contains potentially hazardous chemical and biological particles. Additionally, untreated grey water is a wasted resource that could have been used to provide relief from acute water stress in many parts of the state. If harnessed with the right scientific techniques, grey water can become a potent resource for several non-potable uses, if treated with care. This proposal attempts to lay the background for why grey water requires immediate attention, and how Kerala state can chart a well-defined course on the journey to attaining sustainable grey water systems.

This proposal is organized into four sections that cover an overview of grey water. Existing government policy and international landscapes have a range of technical and operational models for managing Greywater Strategy and implementation framework for the State- Gram Panchayat levels.

Water Use and Grey water Generation:

S.no.	Source	Quantity in litres	Percentage	Category
1	Drinking and Cooking	20	2.7	1
2	Washing machine/home laundry	100	13.3	2
3	Bathing	300	40	2
4	Wash basin	40	5.3	2
5	Kitchen Sink	180	24	3
6	Toilet	90	12	4
7	Miscellaneous (floor cleaning, routine vehicle cleaning etc.)	20	2.7	1
Total		730	100	

Grey Water Profile: Domestic wastewater can broadly be categorized as (a) grey and (b) black water, not counting agriculture or industrial wastewater which tends to have a very chemical-heavy mix. At institutional and community toilet facilities, a significant quantum of (c) yellow water is generated.

Grey water in households gets generated as a by-product of processes such as:

(i) bathing, (ii) laundry, (iii) cooking, (iv) washing utensils,(v) washing livestock.

Blackwater, on the other hand, is wastewater that is contaminated with fecal matter and urine.
Advantage: The composition of grey water, naturally, is substantially different from black water. It contains only about a tenth of the nitrogen found in black water. There is a much-decreased load of pathogens in grey water than in black water. As a result, the organic content of grey water decomposes more rapidly than black water, and thus treatment is easier. These features make it usable as a sustainable source of irrigation, for construction activities, and for reuse in toilets provided it meets quality criteria with a separate network system.

Characterisation of Grey Water: Greywater is the reflection of household activities, its main characteristics strongly depend on factors such as cultural habits, living standards household demography, and type of household chemical use. Grey water is the least contaminated type of wastewater which needs a very low degree of treatment. Typically grey water contains Total solids (TS) and total Suspended Solids (TSS) which are bigger than 0.2µm, settle able and colloidal solids. Grey water contains 60% to 70% of readily degradable organic solids and 30% of inorganic solids. The inorganic fraction is mostly sand and grit that settles to form an inorganic sludge layer. Total suspended solids comprise both settleable solids and colloidal solids. Suspended solids can be easily removed through settling or filtration.

Organic Constituents: Biodegradable organic compounds are mainly composed of proteins, carbohydrates, and fats. If discharged untreated into the environment, their biological stabilization can lead to the depletion of natural oxygen and the development of septic conditions.

Inorganic Constituents: Nitrogen and Phosphorus are the two essential nutrients present in greywater. Greywater contains 10% or less than 10% of nitrogen in the total water system and 10% to 30% of phosphorus in the total water system. Nitrogen and Phosphorus, also known as nutrients are essential for the growth of microorganisms, plants, and animals. When discharged into the aquatic environment, these nutrients can lead to the growth of undesirable aquatic life, which rob the water of dissolved oxygen which when discharged in excessive amounts on land can lead to groundwater pollution.

Quantity of Greywater Generated in Kerala: Kerala is supplied with an average of 150 litres of water per capita per day. 65% to 70% of the total water supplied is converted into grey water. Based on the quantity of water supplied, Kerala on average generates about 3,150 Million litres of grey water daily. This primarily includes wastewater from the kitchen, bathroom, and laundry. The volume and nature of grey water varies with the lifestyle of the population. In rural Kerala generation of grey water depends of the quantum of quality water available and the traditional water sources in their habitation.

The volume and nature of wastewater are economic status and access to water sources. In less-affluent communities with poor access to water, quantities typically range from 20 to 30 litres/person daily. The volume increases to approximately 70 litres/person in developing areas. In fully urbanized regions, it is in the range of 100 to 200 litres/day.

Effect of Greywater on Health and Environment: Greywater is hazardous by nature and a breeding ground for diseases. Grey water, when mixed with fecal matter and other toilet waste, becomes black water, and carries a substantially greater threat of disease.

Current grey water disposal*:* Current practices in managing grey water need improvement. There is indiscriminate disposal of liquid waste in open areas. Vector-borne diseases like malaria, polio, dengue, and cholera are largely dependent on stagnant grey water. These diseases will be a threat in the future and responsible for more deaths every year. Drains in rural areas are not common. 63% of households don't have drains within their premises. 10% of households have open drains, leaving them susceptible to dumping of other kinds of waste. Only 7% of households have closed drainage systems. Drain construction is often faulty and improper, leading to cracks and leaks. There is also misuse of drainage systems, as unintended leakages lead to the mixing of grey water with fecal matter during floods, monsoons, and leaks. Even where drains exist, they often empty directly into water bodies without treatment. This hazardous grey water poses serious risks of contamination of surface as well as groundwater, particularly in the state with high rainfall and with high water tables during floods and runoffs.

Benefits of Greywater Management: Treated grey water provides an opportunity for decreasing the water stress by its reuse for non-potable purposes and groundwater recharge. This is particularly important given Kerala's growing need for water. Moreover, materials found in grey water become pollutants when they join larger water bodies or are allowed to stagnate, but if integrated with the soil system, they can act as a source of nutrition. Households and communities can effectively integrate their grey water into irrigation systems in kitchen gardens as well as public parks, provided their processes meet the standards set out by the state agencies.

The most common example is a holding tank connected to standard drainage pipes that deliver wastewater (meeting the standards notified by competent authorities) to the roots of trees and other large plants. While these solutions are challenging to implement in Kerala, they serve as an extremely useful opportunity in water-scarce areas. Effective policy design and technical intervention can turn the challenge of managing greywater into a resource.

There are many ecological benefits of greywater recycling

- Lowering the freshwater use
- Less strain on septic tank or treatment plant
- Less energy and chemical use
- Highly effective purification
- Groundwater recharge
- Plant growth

Reclamation of otherwise wasted nutrients
Thus, grey water, if managed safely and scientifically, has the potential to be used in:

- Kitchen gardens
- Non-potable domestic use like washing and cleaning.
- Under certain specific contexts, irrigation in agricultural fields as well
- Recharging ground water.
- landscape,
- public parks, and

- sports field irrigation

POLICY BACKGROUND

Liquid waste management is meant to be enacted by the State/ Corporation/Municipality/Gram Panchayats. There are guidelines and standards regarding the treatment and reuse of Blackwater.

a. Central Public Health and Environmental Engineering Organization (CPHEEO) has specified discharge standards for treated black water. They permit the use of this water in agriculture and horticulture.
b. Central Pollution Control Board (CPCB) has also issued standards for the disposal of treated black water.
c. Central Ground Water Board (CGWB) advocates that treated black water can be used as a source of artificial groundwater recharge, once it meets standards and is compatible with existing groundwater.
d. Ministry of Environment, Forests and Climate Change has issued wastewater reuse policies with discharge and reuse standards.

Suggested Policy guidelines to be framed by GoK

1. Propose "GoK Guidelines for Water Reuse & Water Recycling 20--" on the available technologies and key implementation considerations. The use of greywater standards is accepted by state pollution boards, state environmental agencies, and stipulations on processes as well as design guidelines that help achieve these standards e.g. allowing irrigation using greywater after treatment meeting stipulated standards set up by the state Irrigation and Agriculture Dept.
2. Providing financial incentives for the installation of greywater reuse systems in new residential homes and rural HHs.
3. Mandatory for commercial and industrial buildings with an area of over 30,000 m2 to install greywater systems
4. Providing Govt. subsidy for installation of grey water treatment facility cluster community dwelling.

Challenges and Opportunities

There will be initial reluctance by the people to the widespread acceptance of greywater reuse. Some of the important barriers these interventions face and that require capacity building are:
Behavioural barriers to the reuse of greywater are to be overcome to drive household and community-level technologies to success. This will require motivating the need and value for these technologies. Though there is provision for the construction of household-level soak pits and leach pits for greywater management under government schemes, due to lack of awareness in most cases it is defunct.
Huge stress is given to the construction of drainage systems to carry greywater out of habitation areas without providing a specific discharge point or treatment facility.

More and more funds have been utilised for the construction of drains without the preparation of

a master plan and without having the technical knowledge to construct.

Poor or absence of solid waste management has led to the clogging of drains therefore making drains dysfunctional and the state has been spending a major portion of its funds on cleaning these drains. In certain places, there is a direct discharge of black water directly into drains.

There is a lack of institutional support at the GP level to do feasibility analyses for where these technologies are most suitable, what conditions are required for their success, and what operational models guarantee sustainability and success.

IEC and Capacity Building

Given the intricate nature of wastewater treatment technologies, community members, operators, and entrepreneurs will require training on technical and operational models. Many grey water management technologies such as ponds, wetlands, small bore sewers, and drains require frequent O&M. Typically, this has been a challenge as not enough resources or monitoring has been set aside for this at the state Govt.

Post Data Collection: Greywater technology is relatively new; therefore, very little data exists in the way of greywater systems and their use for agriculture. We believe that all monitoring data, health outcomes, functionality measures, and agricultural outcomes (such as crop health, yield, and quality) should be recorded to assess any changes within these communities. Negative changes can then be efficiently identified and addressed, while positive changes can promote the use of this innovative technology in water-constrained regions.

Grey Water Recycling Health Concerns

Health risks are often cited by regulators as reasons for requiring high-tech expensive systems although there are no recorded instances of grey water transmitted illness. However, grey water may contain infectious organisms. Bear this in mind when designing and using a system. A poorly designed system could become a pathway for infecting people. There are two main principles for safety are considered as follows:

1. Grey water must pass slowly through healthy topsoil for natural purification to occur.
2. Design a grey water system so no grey water-to-human contact occurs before purification (i.e. passing through the soil or mulch basin).

- Precautions:

1. Prevent contact when cleaning grey water filters
2. Avoid accidental connections between freshwater and greywater by labelling grey water plumbing, including garden hoses.
3. Don't apply untreated grey water onto lawns, or fruits and vegetables that are eaten raw (e.g. strawberries, lettuce, carrots, and tomatoes).
4. Use only grey water that is fairly clean to start with – Greywater containing water used to launder diapers or generated by anyone with an infectious disease should be diverted to a sewer or septic system.
5. Don't store grey water, use it within 24 hours before bacteria multiply. After 24 hours it goes its way to become black water.
6. Don't overload your system.
7. Divert grey water containing harmful chemicals to the sewer or septic system
8. Prevent contamination of surface water. Discharge grey water underground or into a mulch filled basin.
9. Don't apply grey water to saturated soils.

Grey water Volumes and Sources

(a) Bathroom grey water (bath, basin, and shower) contributes approximately 50% of the total grey water volume. Bathroom grey water is usually contaminated with hair, soaps, shampoos, hair dyes, toothpaste, lint, nutrients, body fats, oils, and cleaning products.

(b) Laundry grey water contributes approximately 30% of total grey water volume. Wastewater from the laundry varies in quality from wash water to rinse water to second rinse water. Laundry grey water can be contaminated with lint, oils, grease, laundry detergents, chemicals, soaps, nutrients, and other compounds.

(c) Kitchen wastewater is sometimes considered a greywater source. If a suitable treatment is not available, kitchen wastewater should not be used due to the amount of contaminants (food particles, oil, grease, etc.) it contains. Fortunately, kitchen greywater contributes a relatively small portion of the total available greywater (20%).

Water-quality characteristics of selected domestic greywater

Grey Water Source	Characteristics
Washing Machine	Bleach, Foam, High pH, Hot Water, Nitrate, Oil, grease, Oxygen demand, Phosphate, Salinity, Soaps, Sodium, Suspended solids and Turbidity
Kitchen Sink	Bacteria, Foam, Food particles, High pH, Hot water, Odour, Oil, Grease, Organic Matter, Oxygen demand, Salinity, Soaps, Suspended solids, and Turbidity.
Bath room	Bacteria, Hair, Hot Water, Odour, Oil and Grease, Oxygen Demand, Soaps, Suspended solids, and Turbidity,

Chemical and physical quality of grey water compared with raw sewage

Parameter	Unit	Grey Water		Raw sewage
		Range	Mean	
Suspended Solids	mg/l	45-330	115	100-500
Turbidity	NTU	22->200	100	NA
BOD	mg/l	90-290	160	100-500
Nitrate	mg/l	<0.1-0.8	0.3	1-10
Ammonia	mg/l	<1.0-25.4	5.3	10-30
Total phosphorous	mg/l	0.6-27.3	8	5-30
Sulphate	mg/l	7.9-110	35	25-100
pH		6.6-8.7	7.5	6.5-8.5
Conductivity	mS/cm	325-1140	600	300-800
Hardness (Ca & Mg)	mg/l	15-55	45	200-700
Sodium	mg/l	29-230	70	70-300

TECHNICAL OPTIONS FOR GREYWATER MANAGEMENT

Grey water composition varies by region and concentration across the state. In industrial areas, it is likely to be dominated by hazardous metallic and chemical waste that is challenging to treat. The contamination in grey water is likely to be from organic waste and fertilizers. Grey water management in rural areas requires special attention since most of the commonly suggested urban interventions are infeasible and unlikely to be successful in these contexts. There are several feasible alternatives, including small bore drainage systems that are cheaper and less invasive.

Technology Options for Greywater Management

HH Level: There are menus of options available at the household, and community /GP level, all offering cost-effective treatment systems. Soak pits, leach pits, and kitchen gardens are suggested at individual household levels.
Community level: larger community pits and wetlands are suggested at the community level.
GP Level: At the Grama Panchayat, GP can invest in bigger initiatives such as duckweed pond systems, Phytorid-based technologies, and waste stabilization ponds.

Grey Water Treatment Methodologies

Greywater treatment methodologies range from simple low-cost devices that divert grey water to direct reuse, such as in toilets or outdoor landscaping, to complex treatment processes incorporating sedimentation tanks, bioreactors, filters, pumps, and disinfection. Some greywater plants are home-built, do-it-yourself style through piping and storage systems. On the other hand, there are also a variety of commercial greywater systems available that filter water to remove hair, lint, and debris, and remove pollutants, bacteria, salts, pharmaceuticals, and even viruses from greywater. In short, the available treatment technologies in both scientific literature and market are shown below:

Grey water treatment technologies

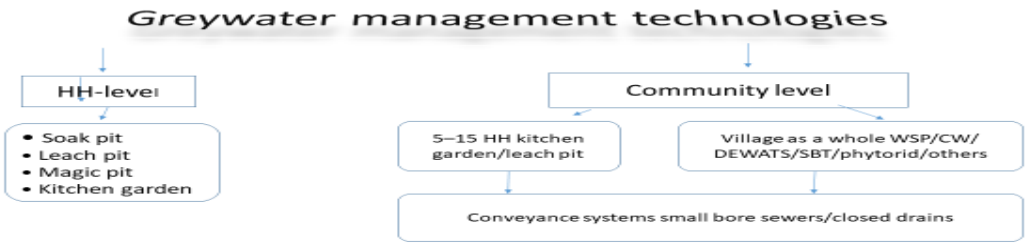
Systems	Level of treatment	Application
Direct reuse	**No treatment**	**Garden irrigation**
Short retention	Very basic treatment techniques such as skimming debris off the surface and allowing particles to settle to the bottom of the tank.	Garden irrigation
Basic physical, chemical, and biological	Filter, chemical disinfectants, and aeration process are used in such system	Garden irrigation, Toilet flushing

Common grey water treatment methodologies suggested for rural area Treatment	**Technique Description**	**Advantages**	**Disadvantages**
Sand filter	Beds of sand or in some cases coarse bark or mulch trap and adsorb contaminants as grey water flows through.	Simple operation, low maintenance, low operation costs.	Reduces pathogens but does not eliminate them, subject to clogging and flooding if overloaded.
Membrane bioreactor	Uses aerobic biological treatment and filtration together to encourage consumption of organic contaminants and filtration of all pathogens.	Highly effective if designed and operated properly, high degree of operations flexibility to accommodate grey water of varying qualities and quantities, allows treated water to be stored indefinitely	High capital cost, high operating cost, and complex operational requirements.
Activated carbon filter	Activated carbon has been treated with oxygen to open up millions of tiny pores between the carbon atoms. These filters thus are widely used to adsorb odorous or coloured substances from gases or liquids.	In simple operation, activated carbon is particularly good at trapping organic chemicals, as well as inorganic compounds like chlorine	Many other chemicals are not attracted to carbon at all -- sodium, nitrates, etc. This means that an activated carbon filter will only remove certain impurities. It also means that, once all of the bonding sites are filled, an activated

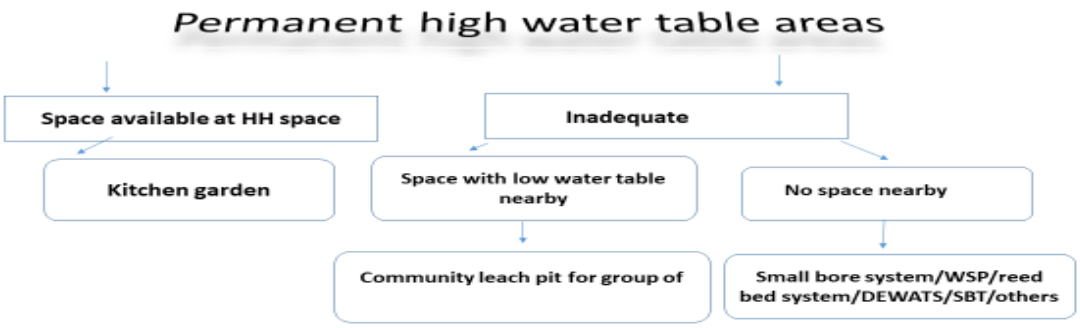
			carbon filter stops working.
Disinfection	Chlorine, ozone, or Ultraviolet light can all be used to disinfect grey water	Highly effective in killing bacteria if properly designed and operated, low op	Chlorine and ozone can create toxic by-products, ozone and ultraviolet can be adversely affected by variations in organic content of grey water.
Aerobic biological treatment	Air is bubbled to transfer oxygen from the air into the grey water. Bacteria present consume the dissolved oxygen and digest the organic contaminants, reducing the concentration of contaminants.	High degree of operations flexibility to accommodate grey water of varying qualities and quantities, allows treated water to be stored indefinitely	High capital cost, high operating cost, complex operational requirements, does not remove all pathogens.

Greywater Management Implementation in Rural Areas

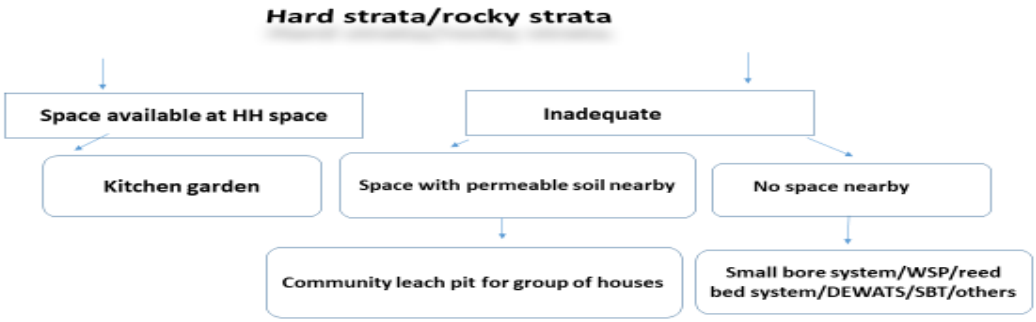
GP HHs should consider the following decision support matrix to identify interventions that would be needed for the implementation of greywater management in their villages.



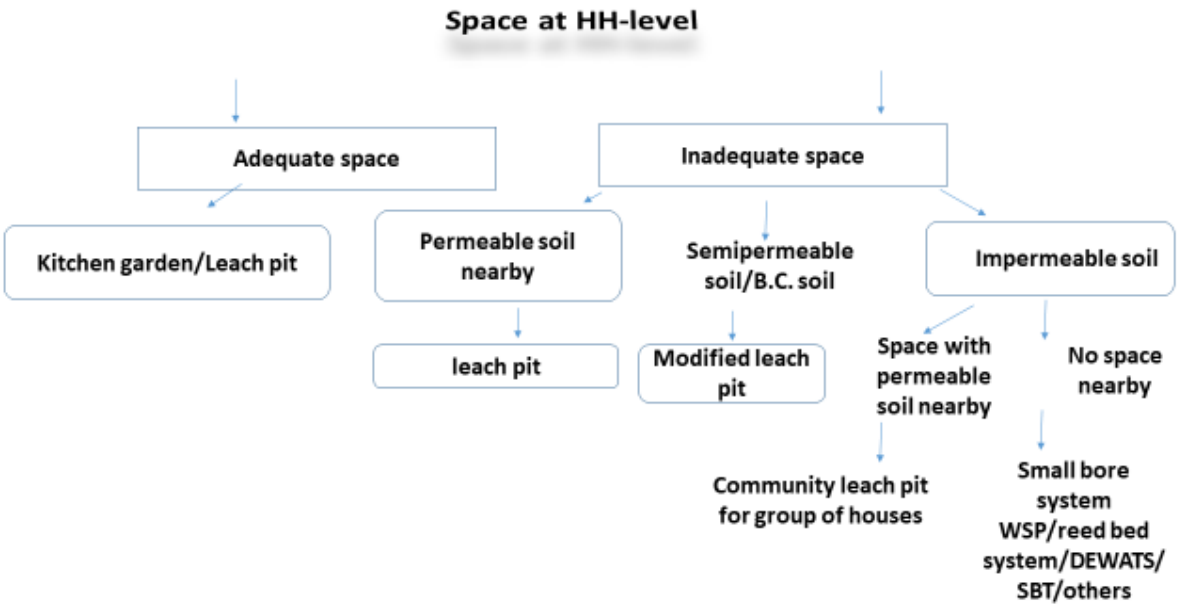
Technology Options for Permanent High Water Table/Water Logged Areas



Technology Options for Hard Strata Areas



Technology Options for Other Areas



To start with:

Each Grama Panchayath (GP) should develop a GP-level plan for greywater management The GP Action Plan (GPAP) should cover the following aspects of greywater management:

a. Existing number of households connected to household-level treatment units
b. Details of existing conveyance systems, if any
c. Number and details of community-level greywater treatment units
d. Number of households that need to be connected to household-level treatment units
e. Number of households that need to be connected to community-level treatment units
f. Quality of the greywater generated so that community treatment facilities may be planned
g. Availability of land for development of community treatment facilities
h. Requirements for conveyance systems
i. Estimated amount of greywater generated
j. Details of greywater reuse and recharge, if any
k. Funds received for greywater management and expenditure67

Checklist for GP-level implementation for Greywater Management

I	**GP analysis**		**Remarks**
1	Whether all HHs are connected to HH/community-level greywater treatment units?		(Yes/No)
2	If no, what is the number of HHs that are not connected to HH/ community-level greywater treatment units?		
3	How many HHs have HH-level greywater treatment units?		Soak pits_____ Leach pits_____ Magic pits_____ Kitchen gardens ___
4	How many community-level greywater treatment units are there in the GP?		
5	Type of conveyance system in the GP		
6	Length of the conveyance system (in metres)		
7	Length of drainage lines that are silted (in metres)		
8	Length of drainage lines that need repairs (in metres)		
9	Amount of greywater reused (in litres)		
10	Details of greywater reuse		
	Sr. No.	Purpose	Quantity of greywater reused
			_____litres
			_____litres
			_____litres
II	**Planning for GWM**		
1	Number of HHs that need to be connected to HH-level greywater treatment units		

2	Number of HHs that need to be connected to community-level greywater treatment units					
3	Length of additional conveyance lines required					
4	Please provide details about grey water treatment units received					
	S.no.	Location of the proposed treatment unit	Treatment technology proposed	No. of HHs proposed to be connected to the unit	Treatment capacity of the unit(litres/day	Amount of grey water proposed to be treated per day (litres)
5	Financial Details					
	Amount of funds received for GWM in financial year_____			Rs.		
	Amount of funds spent on GWM in financial year_____			Rs.		
	Amount of GWM funds unspent in fi nancial year_____			Rs.		

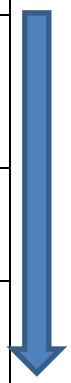
Proposal proposed for selected hotspot GPs of Kerala for treatment of Grey water and its reuse

Objective of the proposal

- To propose a grey water treatment system for the GP- individual HH (if space available)/ community (cluster HHs with suitable space availability)
- To design an affordable and cost effective treatment facility suitable to the site.
- To develop an O&M plan for sustainable working of created assets.
- Capacity building on acceptance of the proposal by the HH/Community/GP
- DPR- Details of the proposal, design, drawing and detailed estimate limited to budget allocation.

Grey water Treatment stages

1. Grease Traps	for removal of fat and grease	Greywater from bathrooms, kitchen and wash areas of HHs and kitchen is first led to grease traps for removal of grease and fat
2. Anaerobic filters	for partial BOD removal	This water is then directed to up flow filters for removal of solid particles and for partial reduction of BOD due to anaerobic action.
3.Submersible pump chamber		This effluent from the filter is pumped to multi stage constructed wetlands/red beds at the top of the mount.
4. Constructed wetlands	for BOD removal to 0 mg/l	The treated effluent is collected in a polishing pond, where the final polishing and BOD removal is effected mainly by water plants like duck weed.
5.Online chlorination	for disinfection	This water is chlorinated



6. Overhead tank for flushing/gardening/ kitchen garden	for flushing/gardening/kitchen garden	The chlorinated water is finally pumped to the overhead tank for flushing, gardening and other not potable domestic end use.

Note: Grey water must be separated from black and yellow water before treatment

Establishing the minor grey water treatment plant

Land or space is an issue with rural HHs. The proposal can be implemented by constructing rectangular chain chambers along the approach path/ or by converting the open drain into closed chambers with covers over which movement of access must be ensured. Diverting the flow of grey water through dedicated pipe line to the covered soak pits/ filtration chambers is proposed. Low cost environmentally friendly natural or constructed wetlands can be applied where space is not a constraint. Also the treated water can be lifted by pumps and re conveyed by separate dedicated pipe line to separate OH tanks and reused for toilets and other non-potable domestic uses. The choice has to be made for a all-new system or a conversion of disused waste water treatment at site.

Components of the proposed system

1. Grey water receiving chamber

A grey water collection tank of appropriate capacity depending on the quantum of grey water generation of the proposal is to be constructed underground (precast RCC rings with chambers / PVC septic compartment tank available in the market as per design will function as the equalisation tank. The grey water is conveyed to this chamber through dedicated underground PVC pipe. Care has to be taken not to allow bigger particles to enter the chamber by providing a screen arrangement at the generation point of grey water.

2. Screen and grit chamber (primary treatment)

Coarse material and floating material in the receiving chamber can be screened in the screen chamber and the grit deposited in the grit chamber. This can be periodically removed and digested using bleaching powder and disposed in a pit (excluding plastic if any) (*note preliminary screening can take place at the beginning of the grey water conveyance system.*) Screen chamber must be provided with openings of uniform size like a sieve to retain solids found in the incoming grey water conveyance system. This chamber must have partitions wherein the first partition acts as a sieve retaining the solids and floating material and allow only water to flow through the openings in to the next chamber consisting of grit (sand, gravel having specific gravity more than the organic solids in the waste).

3. Oil and grease separating chamber (primary treatment)

This chamber with specific capacity is placed next to the grit chamber for oil separation which is having a skimmer mechanism attached. Which allows surface oil/grease to flow and is collected separately. The water is now allowed to flow into the secondary treatment chamber.

4. Dispersion chamber (secondary treatment)

The overflowing water now collects in this chamber and is allowed to retain this water for a period

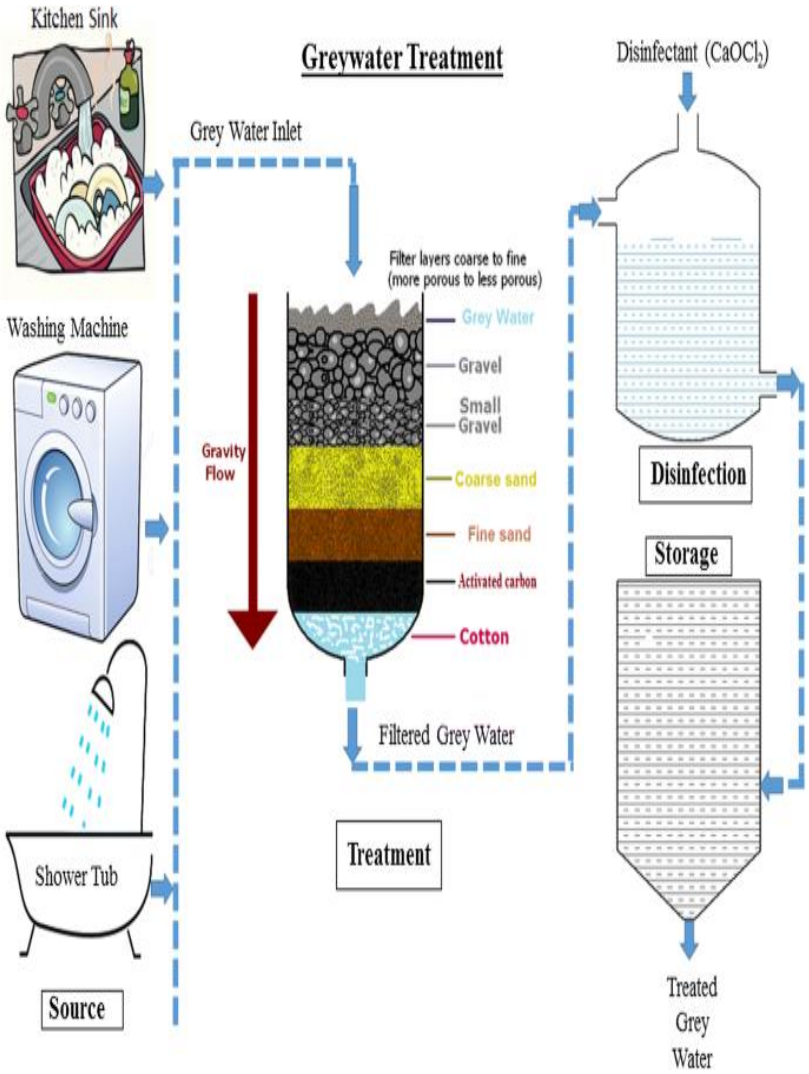
of 24 to 48 hrs depending on the sullage waste of the organic load. The design of this tank and capacity must depend on the quantum of grey water generated during the day.

5. Soak Pit (Secondary treatment)

This comes after the dispersion chamber. Here the effluent from the dispersion chamber enters the bottom of the soak pit and flows upwards. Filter media is provided in the soak pit consisting of broken bricks, charcoal, assorted road metal and sand. The final output water can be used for ground water recharging, watering coconut trees etc.

Operation and Maintenance

No major operational issues are likely to encounter. The accumulated waste from the grit chamber has to be cleaned at regular intervals through the manhole. The bends and junctions of the conveying pipes are to be monitored for any blockage which can be easily done by providing closed top cover silt traps. The O&M must be carried out by dedicated HHs in turns.



Grey Water Management 2023-24						
Sl .no.	**Name of RPMU**	**District**	**Name of GP**	**Constituency**	**Location**	**Beneficiaries (Nos.)**
1	Idukki	**Idukki**	Kattappana	Idukki	Taluk Hospital, 20 Acre, (Ward 27)	350
2	Idukki		Vazhathope	Idukki	District Ayurveda Hospital, Paremavu, (Ward 10)	500
3	Idukki		Marayoor	Devikulam	Individual HH Unit	40
		Idukki Total				**890**
4	Idukki	**Kollam**	Kottarakkara	Kottarakara	Kerala Institute of Local Administration (KILA) CHRD Division	300
					Kollam Total	**300**
					RPMU Idukki Total	**1190**
5	Malappuram	**Kozhikode**	Beypore	Beypore	Cherambalam Palakudu SC Colony	24
6	Malappuram			Beypore	SC/Fisherman Individual HH Unit	75
					Kozhikode Total	**99**
					Total	**1289**

CHAPTER- 14

JALANIDHI SUCCESS STORIES

Puthupadi Grama Panchayat creates history by ensuring hundred percentage sustainability for Water Supply Schemes owned and operated by the communities.

Puthupadi Grama Panchayat in Kozhikode district has been included in the phase 1 project implementation of Kerala Rural Water Supply and Environmental Sanitation Project along with other 114 Grama Panchayts across the state. After a through IEC campaign, special grama sabha meetings, stakeholders cluster meetings, the Grama Panchayt identified 40 water scarcity pokets. The Grama Panchayat has resolved to implement the water supply schemes in and around these areas to permanently solve the water scarcity issues. The schemes are implemented with full participation of user communities with sharing of 15 % capital cost and full operational cost after the scheme commissioning. These schemes were served for the respective communities and deliver services at the desired level. These schemes were functioning for the last 20 years, so it is high time to renovate/ rehabilitate the schemes by ensuring sustainability. Forty drinking water projects included in the first phase of the Jalanidhi project have been taken up for rehabilitation /rejuvenation in the GP.

The GP resolved to augment the schemes using the sustainability fund allocated by Govt. of Kerala in each of the financial year. Obsolete project elements can be fully or partially incorporated into this project and reused.

The project is being implemented entirely with the cooperation of the Grama Panchayat. The Grama Panchayat forwards the list of projects to the KRWSA Regional Project Director upon the application of the Beneficiary Committees requiring rehabilitation activities. These Beneficiary Committees must pass resolutions stating that the ownership rights of the proposed projects, as outlined in the project guidelines, shall be shared equally between the Beneficiary Committee and the concerned Grama Panchayat. (In Jalanidhi phase 1, only the Beneficiary Committee had ownership rights). Alongside this, a detailed report on the rehabilitation activities to be implemented at the beneficiary committee level should be prepared and submitted to the KRWSA Regional Project Director through the Grama Panchayat using a provided format.

Beneficiary committee has to share 10 % of the capital cost and full operational cost. Gram Panchayt in turn has to contribute 15 % of the capitals.A Gram Panchayat Level Activity Committee (GPLAC) will be formed to implement the project, comprising representatives from various committees. The construction work will be supervised by the GPLAC, which will also have a separate bank account.

A joint account in the name of the Gram Panchayat Secretary and President should be opened for the sustainability project purposes. Both the beneficiary share and the Gram Panchayat share should be deposited into this account. This amount will be set aside as a revolving fund for the future activities of the various committees of the Gram Panchayat. The government will fully bear the project cost.

To ensure project participation, a portion of the beneficiary share (no less than Rs. 10,000) must be deposited in the Gram Panchayat Project Account. Only after this deposit will KRWSA technical department personnel visit the project area and prepare a detailed estimate. A joint meeting of Grama Panchayat Governing Council members and Beneficiary Committee office-bearers will be held to finalize the estimate after detailed discussions. The Grama Panchayat will then give administrative approval and submit it to KRWSA for technical approval. The preliminary phase will be completed once technical clearance is obtained. The sustainability scheme initiates the tendering process and ensures timely project completion once the sanctioned amount is deposited by the Grama Panchayat and the beneficiary committee in the sustainability scheme bank account.

Plans for the next 20 years were envisioned, and Pudupadi Grama Panchayat and GPLAC have upgraded all the projects by leveraging the potential of the sustainability plan. Pudupadi is becoming a prime example of capitalizing on opportunities and working for the common good. When the Grama Panchayat Bharana Samiti and GPLAC worked in unison, outstanding results were achieved.

The KRWSA Regional Office will provide necessary training to the Grama Panchayat Management Committee and Beneficiary Committee regarding project implementation activities to ensure transparency and quality. KRWSA will also complete the process of empowering the committees through training to ensure continued implementation and maintenance. Various ledgers required by the committees will be maintained. Some initially reluctant beneficiary committees became project sponsors through continuous interventions. MLA Sri. Linto Joseph joined in with full support. In the next phase, the Grama Panchayat and GPLAC aim to address the drinking water shortage by renovating other community-based drinking water schemes (besides the Jalanidhi scheme) in the sustainability plan.

Sl.No	Project Period	No. of Schemes	Beneficiary HH	GP Contribution (Rs.)	User Contributions (Rs.)	Total Project Cost (Rs.)
1	2019-2020	13	495	8,48,100	5,65,400	56,54,000

2	2020-2021	13	623	8,23,500	5,49,000	54,90,000
3	2021-2022	4	151	1,68,000	1,12,000	11,20,000
4	2022-2023	12	562	11,98,500	7,99,000	79,90,000
Total		**42**	**1831**	**30,38,100**	**20,25,400**	**2,02,54,000**

Water Future is safe in young hands – Success of Jalasree clubs in Schools

Jalasree Club is a school-level project focused on water conservation, initiated by the Kerala Rural Water Supply and Sanitation Agency (KRWSA). The project aims to enhance water literacy and promote water conservation and quality improvement in the state. Recognizing the significance of water conservation, both the state government and Local-Self Governments have accorded high priority to this cause. Given that children are the future citizens, instilling awareness through water literacy campaigns at the school level is crucial. The influence that children wield over their parents further amplifies the impact. Jalasree Club organizes diverse programs, including campaigns, surveys, camps, field trips, and rallies. Field trips involve conducting water quality tests in households and nearby areas.

The Jalasree Club is committed to fostering life skills, mobilizing parents, communities, governments, and institutions to collaborate in elevating groundwater levels through water conservation techniques. Additionally, it endeavours to enhance hygiene and environmental sanitation by promoting best practices. Currently, with support from the Jal Jeevan Mission, Implementation Support Agencies (ISAs) have established 445 Jalasree clubs in schools.

Objectives of Jalasree Clubs:

Sensitize students about the importance of water conservation.

Promote water conservation activities in schools and households.

Raise awareness about environmental sanitation for safe drinking water.

Foster water quality improvement activities in schools and households.

Educate students about water quality testing methods.

Encourage water quality testing activities in schools and households.

Highlight the importance of controlling waterborne diseases among students.

Promote activities to control waterborne and communicable diseases.

Raise awareness about creating multimedia content on water-related topics.

Goal:

The goal is to establish, develop, and strengthen a dynamic and enlightened team of students and teachers in Jalanidhi Grama Panchayaths, serving as a model for water and sanitation promotion. The strategic approach, named JALASREE CLUB, prioritizes providing schools with safe drinking water, improved sanitation facilities, hygiene education, and encourages judicious water use and conservation methods.

Activities:

Activities include district-wise training for selected teachers, selection of Jalasree club members, school-level training on water conservation and hygiene, script writing competitions, awards for the Best Jalasree Club, observing environmental and water days, conducting awareness programs, seminars for parents, community visits, flash mobs, and various studies and audits related to water.

Scaling up Jalashree Club activities:

Partnering with organizations like Nehru Yuva Kendra, Youth Welfare Board, NABRD, National Service Scheme to extend water literacy programs, water conservation, rainwater harvesting, and source protection to youth clubs in Grama Panchayats.

Monitoring and Evaluation:

Grama Panchayat Water Supply Committee and DWSM are responsible for overseeing and reviewing activities at the GP level.

Outcome:

Increased awareness among the younger generation about water resource management.

Enhanced water literacy, especially among students.

Improved understanding of water conservation and rainwater harvesting techniques.

Increased citizen participation in government-led water conservation and rainwater harvesting activities.

Active student involvement in water auditing, water quality testing, and environmental sanitation.

Achievements So Far:

With the support of Implementation Support Agencies (ISAs) of Jal Jeevan Mission, KRWSA has successfully formed 445 Jalasree clubs across the state. Various awareness activities, including essay writing and competitions, have been conducted at district levels.

Conclusion:

Water, a crucial resource in Kerala, demands planned interventions for water literacy. Schools are encouraged to develop annual action plans and budgets for Jalasree clubs, contributing to KRWSA's mission of nurturing a responsible, nature-conscious generation capable of managing community water supply schemes.


RWSA മലപ്പുറം ജില്ല

Annexures

S. Ramanand Aiyar & Co.
CHARTERED ACCOUNTANTS
1/851 BM1,HARSHAM, PADAMUGAL, KAKKANAD,ERNAKULAM – 682 030.
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INDEPENDENT AUDITORS' REPORT

To
M/s Kerala Rural Water Supply and Sanitation Agency,
Thiruvananthapuram

1. Report on the Financial Statements

We have audited the financial statements of M/s. Kerala Rural Water Supply and Sanitation Agency, Thiruvananthapuram which comprise of the Balance Sheet as at March 31st, 2024 and the Statement of Income and Expenditure for the year ended, and a summary of significant accounting policies and other explanatory information.

2. Management's Responsibility for the Financial Statements

Management is responsible for the preparation of these financial statements that give a true and fair view of the financial position and financial performance of the organization. This responsibility includes the design, implementation and maintenance of internal controls relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

3. Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We have conducted our audit in accordance with the Standards on Auditing issued by the Institute of Chartered Accountants of India. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

S. RAMANAND AIYAR & CO. KOCHI-30 CHARTERED ACCOUNTANTS

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An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the organization's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

4. Basis for Qualified Opinion

i. Matters which may have an impact on the financial statements are as specified in Annexure - I to the Audit Report.

5. Qualified Opinion

In our opinion and to the best of our information and according to the explanations given to us, except for the possible effect of the matters described in the basis for qualified opinion paragraph, the financial statements give the information required in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India:

i. in the case of the Balance Sheet, of the state of affairs of the Kerala Rural Water Supply and Sanitation Agency as at 31st March, 2024, and

ii. in the case of the Statement of Income and Expenditure of the Incomes and Expenditures for the year ended on that date.

6. Report on other legal and regulatory requirements

i. We have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purpose of our audit;

ii. In our opinion, proper books of account as required by law have been kept by the Institution so far as appears from our examination of the said books;

iii. The Balance sheet and the statement of Income and Expenditure dealt with by this report are in agreement with the books of account;

Ernakulam
16th December, 2024

For S.RAMANAND AIYAR & Co.
Chartered Accountants
FRN: 000990N

Shaban Kuncheria B.Sc.,F.C.A
(Partner)
M.No: 214197

UDIN : 24214197BJZWEF8258

S. RAMANAND AIYAR & CO. KOCHI-30 CHARTERED ACCOUNTANTS

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Annexure - I to our Audit Report dated 27th November 2024 as specified in para-4 – Basis for Qualified Opinion

1) **Regional Project Management Unit, Malappuram**

The following statutory dues and payables carried forward from previous year continue to remain outstanding as on the date of Balance Sheet. As per the communication from the RPMU, the opening value of the following accounts were due to the negligence from the part of the Accountant, Mr.Praveen Kumar.

KCWWF Contribution	475027.00 Cr
Retention Amount	343562.00 Cr
Salary Deductions - LIC	13970.00 Dr
Salary Deductions - Others	676559.00 Dr
Salary Deductions – PF	220060.00 Dr
Salary Payable	88000.00 Dr
TDS - Against Consultancy	1044223.00 Cr
TDS - Against Contract	69281.00 Cr
TDS - Against Rent	14720.00 Dr
TDS - Against Salary	344091.00 Dr
VAT	1531581.00 Cr
Advance to Staff – Praveenkumar	39618.00 Dr
Advance to Others – Malappuram	38513.00 Dr
Adjusting Account	76256971.00 Dr
Elavally GP	Difference with RPMU Rs. 70,500
Elavanchery GP	Difference with RPMU Rs. 5,45,000
Puthanchira GP	Difference with RPMU Rs. 42,000
Thamarassery GP	Difference with RPMU Rs. 2,57,156
Annamanada GP	Difference with RPMU Rs. 90
Karuvarakundu GP	Difference with RPMU Rs. 98,304

2) **Opening difference is in fund transfer**

Opening difference is in fund transfer for Rs.1,57,00,000/- between PMU & RPMU. As per the information received, difference is due to the change in software FMIS (old) to Tally and entries of fund transfer from PMU to RPMUs are not entered in PMU Tally for the financial year 2012-13, but no document received in this regard.

NOTES FORMING PART OF THE FINANCIAL STATEMENTS AS ON 31-03-2024

1. **Project Information**

The Government of Kerala established Kerala Rural Water Supply and Sanitation Agency (KRWSA) under the Societies Act. The project integrates Water Supply with Sanitation, Health & Hygiene Promotion, Environmental Management and Ground Water Recharge activities.

2. **Significant Accounting Policies**

A. **Basis of Accounting**

i. The entity has been following Cash based accounting system.

ii. Out of Grant from Government of Kerala, an amount equivalent to the cost of fixed assets has been treated as Capital Grant and balance is treated as Revenue Grant. The Revenue Grant from Government of Kerala – Jalanidhi Phase-II of Rs.66,15,124/- is excess utilized, after considered all other incomes.

B. **Fund Flow**

Kerala Rural Water Supply and Sanitation Agency (KRWSA) receives funds from Government of Kerala through State Plan Budget. This State Budget is released to KRWSA, Kerala Rural Water Supply and Sanitation Agency's (PMU) Treasury Account by following Governments system of release of

funds. As per requirement, funds are transferred from the PSTSB Account of PMU with District Treasury, Thiruvananthapuram to the PSTSB Accounts of RPMUs with District/ Sub Treasury concerned through Integrated Financial Management System (IFMS).

C. **Treatment of expenditure during project period**

Project Management Unit (PMU) and Regional Project Management Units (RPMUs) incur revenue expenses, make payments for consultancies entrusted by them, purchase of goods etc. as per rules from their bank account.

D. **Tangible Assets (Property, Plant and Equipment)**

The Property, Plant and Equipment are accounted on historical cost basis, which includes purchase price, and all other costs attributable to bring the assets into its working condition as reduced by accumulated depreciation up to the end of the financial year. Fixed Assets schedule includes assets in respect of Jalanidhi Phase-I & II.

E. **Depreciation**

i) Depreciation has been charged on the 'Written Down Value Method" on the block of assets as per the provisions of Section 32 of Income Tax Act, 1961.

ii) An amount equivalent to the depreciation on fixed assets acquired out of Government Grant is transferred to Income & Expenditure Account from Capital Grant as prescribed in the Accounting Standard 12 "Accounting for Government Grant" issued by The Institute of Chartered Accountants of India.

F. **Recovery from staff on account of embezzlement**

Based on the final report on verification of accounts of Malappuram for the period from 22-12-2011 to 31-10-2016, reported misappropriation of fund, conducted by Finance Division of KRWSA, an amount of Rs.7,53,75,187/- is to be recovered from Mr. Praveen Kumar of Malappuram RPMU on account of misappropriation of funds.

G. **Other Recovery**

Details of Other Recoveries from Staff disclosed in the Balance Sheet are as follows

Nature	Unit	Amount
Income Tax Penalty	Malappuram RPMU	5,32,020.00
EPF – Interest and Penal Charges	PMU	42,328.00
TDS Arrears	Malappuram RPMU	3,49,764.00

H. **Consolidation**

Based on the certificate received from authorities of KRWSA, financial statement is consolidated by PMU and RPMU for this year. Payments to Grama Panchayaths have been treated as Expenditure.

Jalanidhi Phase I & II balances has been consolidated and shown as a single figure in the Balance Sheet.

I. **Regrouping of opening balances**

Opening balances of the financial is regrouped and rearranged wherever necessary.

3. **Grant (Capital & Revenue)**

A. Capital Grant

Particulars	Capital Grant	
	As on 31/03/2024	As on 31/03/2023
Opening Balance	41,07,243	46,97,734
Add: Used for acquisition of capital assets during the year	3,10,071	65,884
Less: Transfer to Income & Expenditure Account	6,02,037	6,56,375
Less: Assets sold/ transfer to Revenue Grant	0	0
Total	**38,15,277**	**41,07,243**

B. Unutilised Revenue Grant

Particulars	Opening Balance	Fund Received	Utilised during the year	Balance at the end of the year
Jalanidhi (Phase I & II) - EAP	16,87,36,274	-	- (66,15,124)	17,53,51,398
CCDU - Govt. Grant	3,58,76,486	-	2,73,64,018	85,12,468
IEC, Capacity Building and Training & Jalasree Club	2,25,000	5,60,592	7,85,592	-
Conversion of Homestead Wells Into Protected and Sustainable Drinking Water Sources	9,98,815	1,59,04,666	1,69,03,481	-
Scaling Up of Rain Water Harvesting and GWR Measures Through KRWSA	63,99,961	5,27,09,842	5,83,76,709	7,33,094
Completion of Water Supply Schemes under the World Bank Aided - Jalanidhi II-Project - Plan	244	66,14,880	66,15,124	-

Fund From State Disaster Relief Fund	1,06,16,740	-	81,07,750	25,08,990
Sustainability Support to Community managed Water Supply Scheme	16,86,180	5,15,76,822	4,92,63,002	40,00,000
Research & Development	-	2,96,542	2,96,542	-

Ernakulam

16th December, 2024

For S.RAMANAND AIYAR & Co.
Chartered Accountants
FRN. 000990N

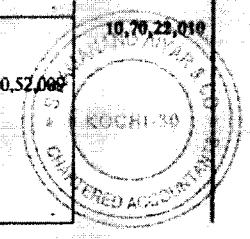
Shaban Kunchheria B.Sc., F.C.A
(Partner)
M.No. 214197

UDIN : 24214197BJZWEF8258

KERALA RURAL WATER SUPPLY AND SANITATION AGENCY
PTC TOWER, S.S KOVIL ROAD, THAMPANOOR, THIRUVANANTHAPURAM.
BALANCE SHEET AS AT 31-03-2024

Amount in Rs

PREVIOUS YEAR	LIABILITIES	SCH NO		As on 31.03.2024	PREVIOUS YEAR	ASSETS	SCH NO		As on 31.03.2024
	CAPITAL GRANT					**FIXED ASSETS**			
46,97,734	Opening Balance of Capital Grant used for acquisition of Capital Assets		41,07,243		5,25,89,628	Gross Value		5,28,99,698	
65,884	**Add** : Capital Grant used for		3,10,071		4,84,82,385	**Less:** Accumulated depreciation		4,90,84,422	
47,63,618	acquisition of Capital Assets during the Year		44,17,314		**41,07,243**		XV		38,15,276
6,56,375	**Less:** Amount transferred to		6,02,037			**CURRENT ASSETS, LOANS AND ADVANCES**			
41,07,243	income and Expenditure Account		38,15,277			**A. CURRENT ASSETS**			
	being the depreciation on Fixed				17,960	Cash in Hand	I	25,153	
	Assets acquired out of Capital				18,10,95,484	Cash at Bank	II	18,66,68,889	
	Grant				4,21,630	Deposits	III	5,56,168	
-	**Less:** Assets sold/ tfr to revenue grant		-						**18,72,50,210**
41,07,243				**38,15,277**	**18,15,35,074**				
	UNUTILISED GRANT(REVENUE)					**B. LOANS AND ADVANCES**			
	Jalanidhi (Phase I & II) - EAP								
18,44,55,433	Opening Balance		16,87,36,274						
1,24,92,525	**Add:** Funds received during the year		-						
-	Less: Amount utilised by GPs		-66,15,124						
2,82,11,684	Less: Utilised during the year		-						
16,87,36,274				**17,53,51,398**					
	CCDU - Govt. Grant								
3,58,76,486	Opening Balance		3,58,76,486						
-	Fund received during the year		-						
-	Less: Utilised during the year		2,73,64,018						
3,58,76,486				**85,12,468**					
	IEC, Capacity Building and Training & Jalasree Club								
	Opening Balance		2,25,000						
5,62,898	Fund received during the year		5,60,592						
3,37,898	Less: Utilised during the year		7,85,592						
2,25,000				-					
	Conversion of Homestead Wells Into Protected and Sustainable Drinking Water Sources								
	Opening Balance		9,98,815						
35,30,902	Fund received during the year		1,59,04,666						
25,32,087	Less: Utilised during the year		1,69,03,481			Advances to KWA			
9,98,815				-	10,46,94,860	Opening Balance		10,70,22,010	
	Scaling Up of Rain Water Harvesting and GWR Measures Through KRWSA				23,27,150	**Add:** Paid and Adjusted during the year		-	
82,42,020	Opening Balance		63,99,961		-	**Less:** Utilised during the year		-	
5,67,74,584	Add: Funds received during the year		5,27,09,842		**10,70,22,010**				**10,70,22,010**
5,86,16,643	Less: Utilised during the year		5,83,76,709						
63,99,961				**7,33,094.00**	20,52,009	Opening Advance to KWA-Electricity arrear advance		20,52,009	
	Completion of Water Supply Schemes under the World Bank Aided -Jalanidhi II-Project - Plan				-	**Add:** Paid during the year			
244	Opening Balance		244		-	**Less:** Utilised during the year		-	



KERALA RURAL WATER SUPPLY AND SANITATION AGENCY
PTC TOWER, S.S KOVIL ROAD, THAMPANOOR, THIRUVANANTHAPURAM.
BALANCE SHEET AS AT 31-03-2024

Amount in Rs

PREVIOUS YEAR	LIABILITIES	SCH NO		As on 31.03.2024	PREVIOUS YEAR	ASSETS	SCH NO		As on 31.03.2024
-	Add: Funds received during the year		66,14,880		20,52,009				20,52,009
-	Less: Amount utilised through GPs		12,90,000						
	Less: Utilised during the year		53,25,124						
244				-	7,53,75,187	Other current Assets - Malappuram Embezzlement		7,53,75,187	
	Fund From State Disaster Relief Fund				5,32,020	Other current Assets - Income Tax Penalty- Malappuram		5,32,020	
2,75,35,741	Opening Balance		1,06,16,740		3,49,764	Other current Assets - Arrear TDS-Malappuram		3,49,764	
-	Funds received during the year				42,328	Other current Assets -Income tax Penalty - PMU		42,328	
1,69,19,001	Less: Utilised during the year		81,07,750						
1,06,16,740				25,08,990	10,62,000	Advance to CED Suchitwa mission and SEUF-Suchitwa mission		10,62,000	
	Sustainability Support to Community managed Water Supply Scheme				-	Advance to GP LAC		-	
37,60,514	Opening Balance		16,86,180		1,48,190	Staff Advance	IV	2,54,595	
19,09,66,723	Funds received during the year		5,15,76,822		2,04,337	Other Advances	V	2,04,337	
19,30,41,057	Less: Utilised during the year		4,92,63,002	40,00,000	-			-	7,78,20,231
16,86,180					7,77,13,826				
	Research & Development				4,03,958	Social Justice Department - Rain Centre			4,03,958
-	Opening Balance		-						
-	Funds received during the year		2,96,542						
-	Less: Utilised during the year		2,96,542	-					
-									
	CURRENT LIABILITIES AND PROVISIONS								
	CURRENT LIABILITES								
4,25,09,915	Retention Money		7,16,13,164						
10,16,77,262	Sundry Creditors	VI	11,18,29,303	18,34,42,467					
14,41,87,177									37,83,63,694
37,28,34,120				37,83,63,694	37,28,34,120				

For S.RAMANAND AIYAR & Co.
Chartered Accountants
FRN: 000990N

Shaban Kuncheria B.Sc.,F.C.A
(Partner)
M.No: 214197

UDIN : 24214197BIZWEE8258
AUDITORS' REPORT
Vide our report of even date

Director (Finance & Admn) i/c
KRWSSA

Executive Director
KRWSSA

Place : Trivandrum
Date: 16/12/2024

KERALA RURAL WATER SUPPLY AND SANITATION AGENCY

PTC TOWER, S.S KOVIL ROAD,THAMPANOOR,THIRUVANANTHAPURAM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE PERIOD FROM 01/04/2023 TO 31/03/2024

PREVIOUS YEAR	EXPENSES	SCH NO	AMOUNT	PREVIOUS YEAR	INCOME	SCH NO	AMOUNT	CURRENT YEAR
					GRANTS			
3,37,898	IEC, Capacity Building and Training & Jalasree Club	VIII	7,85,592	3,37,898	For IEC, Capacity Building and Training & Jalasree Club			7,85,592
25,32,087	Conversion of Homestead Wells Into Protected and Sustainable Drinking Water Sources	IX	1,69,03,481	25,32,087	For Conversion of Homestead Wells Into Protected and Sustainable Drinking Water Sources			1,69,03,481
5,86,16,643	Scaling Up of Rain Water Harvesting and GWR Measures Through KRWSA	X	5,83,76,709	5,86,16,643	For Scaling Up of Rain Water Harvesting and GWR Measures Through KRWSA			5,83,76,709
19,30,41,057	Sustainability Support to Community Managed Water Supply Scheme	XI	4,92,63,002	19,30,41,057	For Sustainability Support to Community Managed Water Supply Scheme			4,92,63,002
-	Research and Development	XII	2,96,542	-	For Research and Development			2,96,542
8,19,541	Completion of Water Supply Schemes under the World Bank Aided -Jalanidhi II-Project - Plan	XIII	53,25,124		For Completion of Water Supply Schemes under the World Bank Aided - Jalanidhi II-Project - Plan			53,25,124
3,25,67,406	Jalanidhi I&II - EAP	XIV	-13,46,098	2,82,11,684	For Jalanidhi I&II - EAP		-66,15,124	
6,56,375	Depreciation	XV	6,02,037	65,884	Less:Fixed Asset Purchased		3,10,071	
				2,81,45,800	Add: Fixed Assets Sold during the year		0	-69,25,195
				52,41,147	Interest & Other Non Project Income	VII(a)		55,79,097
				6,56,375	Amount Transferred from capital grant			6,02,037
28,85,71,007			**13,02,06,389**	**28,85,71,007**				**13,02,06,389**

For S.RAMANAND AIYAR & Co.
Chartered Accountants
FRN: 000990N

Shaban Kuncheria B.Sc.,F.C.A
(Partner)
M.No: 214197

UDIN : 24214197BKZWBP6258

Place:Trivandrum

Date: 16/12/2024

Director (Finance & Admn)
KRWSSA

Executive Director
KRWSSA

S.RAMANAND AIYAR & CO. KOCHI-30 CHARTERED ACCOUNTANTS

KERALA RURAL WATER SUPPLY AND SANITATION AGENCY

Schedules to Balance Sheet as on 31.03.2024

Previous Year		Schedule I	Current Year	
Dr	Cr		Dr	Cr
		Cash in Hand		
10,466.00		PMU Cash - Imprest	13,834.00	
21.00		PMU Cash - Main	21.00	
438.00		RPMU Idukki Cash	2,994.00	
2,361.00		RPMU Kannur Cash	3,186.00	
4,674.00		RPMU Malappuram Cash	5,118.00	
17,960.00	-		**25,153.00**	-
17,960.00			**25,153.00**	

Previous Year		Schedule II	Current Year	
Dr	Cr	**Cash at Bank**	Dr	Cr
4,59,579.98		PMU Bank - Canara, Cantt./Chalai	14,919.98	
3,22,09,417.84		PMU Bank - SBI, Santhinagar	79,20,853.34	
10,00,000.00		PMU - District Treasury PSTSB A/C	10,00,000.00	
7,603.34		PMU - SBI Online Account - Santhinagar	7,603.84	
23,68,017.88		PMU - SBI, Santhinagar - E-Tender	18,12,147.88	
63,53,672.00		PMU -Union Bank of India, Trivandrum Main Br.	44,21,773.60	
96,97,662.97		RPMU Idukki Bank - SBI	60,15,126.47	
12,07,274.50		RPMU Idukki Bank - SBI E-Tender	13,63,522.50	
10,00,000.00		RPMU Idukki -Treasury Bank A/C	10,00,000.00	
12,82,489.68		RPMU Idukki Union Bank	2,95,294.38	
3,03,634.00		RPMU Idukki SBI Sustainability Support	10,22,237.50	
5,94,242.00		RPMU Kannur Treasury - PSTSB	10,00,000.00	
1,49,938.95		RPMU Kannur Bank- Canara	35,164.95	
24,13,170.00		RPMU Kannur Bank - Canara - SSP	5,52,607.00	
9,53,87,048.00		RPMU Kannur Bank - SBI	8,63,85,463.00	
17,63,103.50		RPMU Kannur SBT- CA A/c	25,53,064.50	
15,492.03		RPMU Kannur - Syndicate Bank	15,947.03	
60,46,454.85		Rpmu Mlpm - SBI - Project	6,62,63,385.35	
10,00,000.00		RPMU Mlpm-Treasury Bank-Project	10,00,000.00	
2,01,584.00		RPMU Mpm Bank - Indian NRDWP	496.00	
24,08,682.79		RPMU MPM- Canara (E-Syndicate Bank - Sustainability	2,09,430.79	
11,622.00		Rpmu Mpm-Indian Bank -admin	1,936.00	
18,53,513.00		RPMU Mpm-SBI-E Tender A/c- CA	30,44,820.50	
1,641.00		Rain Centre - PSTSB	-	
1,33,59,639.13		Rain Centre - SBI	7,33,094.13	
18,10,95,483.44	-		**18,66,68,888.74**	-
18,10,95,483.44			**18,66,68,888.74**	

Previous Year		Schedule III	Current Year	
Dr	Cr	**Deposits**	Dr	Cr
		PMU		
3,000.00		Telephone Deposit 30/05/2000	3,000.00	
2,000.00		Telephone Deposit 25/11/2000	2,000.00	
6,000.00		Telephone Deposit 10/10/1999	6,000.00	
9,000.00		Telephone Deposit 30/11/1999	9,000.00	
10,000.00		Telephone Deposit 18/08/2015	10,000.00	
1,750.00		Gas Conn. Deposit 21/02/2015	1,750.00	
3,312.00		Other Deposits	3,312.00	
		CCDU		
3,200.00		Telephone Deposit	3,200.00	

200.00		Other Deposits - Water Can	200.00	
		CPTR		
500.00		Telephone Deposit 31/03/2010	500.00	
		Thrissur		
1,100.00		Gas Conn. Deposit 25/07/2006	1,100.00	
		RPMU-Malappuram		
15,000.00		Telephone Deposit 19/12/15	15,000.00	
5,298.00		Electricity Deposit 12/06/2019	5,298.00	
13,300.00		Other Deposits	13,300.00	
		RPMU-Kannur		
2,26,706.00		Other Deposits - Treasury FD - JL0157639 dtd. 21/02/2022	2,26,706.00	
29,688.00		Other Deposits - Treasury FD - JL0157638 dtd. 21/02/2022	29,688.00	
49,480.00		Other Deposits - Treasury FD - JL1638496 dtd. 23/12/2022	49,480.00	
42,096.00		Other Deposits - Treasury FD - JL1929706 dtd.27/02/2023	42,096.00	
-		Other Deposits - DD No.036337 dtd.06/05/2023	1,34,538.00	
4,21,630.00	-	**Total**	**5,56,168.00**	-
4,21,630.00			**5,56,168.00**	

Previous Year		Schedule IV	Current Year	
Dr	Cr	**Staff Advance**	Dr	Cr
85,572.00		Advance to Staff-PMU	2,11,977.00	
39,618.00		Advance to Staff-RPMU Malappuram	39,618.00	
20,000.00		Advance to Staff-RPMU Idukki	-	
3,000.00		Advance to Staff - Geethakumari - Rain Centre	3,000.00	
1,48,190.00		**Total**	**2,54,595.00**	
1,48,190.00			**2,54,595.00**	

Previous Year		Schedule V	Current Year	
Dr	Cr	**Other advances of RPMU & PMU**	Dr	Cr
41,426.00		Advance to KRWSA - Rain Centre	41,426.00	
19,892.00		Advance to Ashok Kumar Singh, IAS	19,892.00	
38,513.00		Advance to others-Malappuram	38,513.00	
5,232.00	-	CCDU - Adv. For Water Literacy Campaign	5,232.00	
99,274.00		CCDU - Adv. To State Programme Co-ordinator VHSC	99,274.00	
2,04,337.00	-	**Grand Total**	**2,04,337.00**	-
	2,04,337.00			**2,04,337**

KERALA RURAL WATER SUPPLY AND SANITATION AGENCY

Schedules to Balance Sheet as on 31.03.2024

Previous Year		Schedule VI	Current Year	
Dr	Cr	Sundry Creditors For Expenses	Dr	Cr
	1,50,000.00	Audit Fee Payable		-
	38,827.00	CCDU - Admn. Exp Outstanding		38,827.00
13,970.00	5,580.00	Deductions LIC	13,970.00	5,103.00
-	1,92,133.00	Salary Deductions Others		10,577.00
2,20,060.00	58,693.00	Deductions P F	2,20,060.00	28,189.00
-	84,968.00	Salary Deduction-EPF	55,432.00	-
	2,204.00	Salary Deduction-ESI	2,509.00	-
	1,000.00	Salary Deduction-Medicep		-
6,76,559.00	10,708.00	Salary Deduction-Others	6,76,559.00	-
	30,464.00	Electricity & Water Charges Payable		-
88,000.00	26,41,930.00	Salary Payable	88,000.00	-
	6,55,028.00	Wages Payable		-
	36,88,732.00	EMD		34,52,151.00
	-	EMD JJM		7,55,970.00
	7,41,841.00	Expenses Payable		-
3,62,278.00	-	Flood Relief Contribution	2,67,653.00	
	8,79,98,107.00	Fund from Others		10,50,66,628.00
-	2,75,524.00	GST TDS		3,31,481.00
	4,84,638.00	KCWWF		4,75,027.00
	15,31,581.00	VAT		15,31,581.00
	2,21,407.00	Rent Payable		-
3,44,091.00	15,056.00	TDS on Salary	3,44,091.00	1,556.00
14,720.00	11,022.00	Tax Deductions Rent	14,720.00	32,793.00
639.00	10,56,723.00	Tax Deductions Consultancy	639.00	10,44,223.00
	16,67,559.00	Tax Deductions Consultancy - JJM		-
	81,644.00	Tax Deductions Works		69,718.00
	14,49,127.00	Withheld Amount - Third Party Inspection		3,66,029.00
	9,049.00	KCWWF - Rain Centre		9,049.00
38,42,215.00		Vittal Constructions - Rain Centre	-	
	38,42,215.00	Siva Sankara MG - Rain Centre		-
	1,94,034.00	Salary Payable - Rain Centre		1,94,034.00
	1,00,000.00	District Collectorate Trivandrum - Rain Centre		1,00,000.00
55,62,532.00	**10,72,39,794.00**	**Total**	**16,83,633.00**	**11,35,12,936.00**
	10,16,77,262.00			**11,18,29,303**

KERALA RURAL WATER SUPPLY AND SANITATION AGENCY

Schedules to Income & Expenditure for the period from 01/04/2023 to 31/03/2024

Administrative Expenditure and Income

Schedule - VII(a)

Previous Year			Current Year	
Dr	Cr		Dr	Cr
	26,62,009.00	Bank Interest		44,54,197.00
-	10,56,138.00	Other Income		2,51,280.00
	285.00	RTI Receipts		493.00
	14,93,246.00	Tender Fee Receipts		8,73,127.00
	29,469.00	Water Quality Testing - JJM		-
-	**52,41,147.00**		-	**55,79,097.00**

Schedule - VII(b)

Previous Year			Current Year	
Dr	Cr		Dr	Cr
	9,039.00	Advertisement	3,03,783.00	
336.30		Bank Charges	5,924.70	
-		Employer's Contribution to ESI	1,10,388.00	
-		Legal Consultant Charges	1,39,000.00	
-		Office Shifting Expenditure	86,493.00	
-		Stipend to Internship Person	2,47,270.00	
-		Legal Charges	1,73,877.00	
-		Audit Fee - PMU - RPMU	-	1.00
-		Fuel Charges	2,28,979.00	
-		Annual Maintanence Contracts	2,95,977.00	
-		Communication Expenses	9,09,951.00	
-		Computer Stationery	47,935.00	
-		Conference, Meeting & Seminar	1,93,499.00	
-		Electricity & Water Charges	5,73,243.00	
-		Employer's Contribution to EPF	18,14,568.00	
-		Grass Root Level Training - General/CD/ Managerial	600.00	
-		Gratuity to Staff	8,19,368.00	
-		Medical Expenses	16,56,905.00	
-		Other Establishment Expenses	1,89,721.00	
-		Permanent Travel Allowance	9,08,000.00	

KERALA RURAL WATER SUPPLY AND SANITATION AGENCY

Schedules to Income & Expenditure for the period from 01/04/2023 to 31/03/2024

-		Postage	12,146.00	
-		Printing and Stationery	2,19,425.00	
-		Rent - Office Building	67,74,341.00	
-		Repairs and Maintanence - General	1,37,293.00	
-		Repairs and Manintanence- Vehicle	97,469.00	
-		Salary to Staff	3,52,26,055.00	
-		Staff Welfare Expenses	1,66,432.00	
-		Travelling Expenses	15,36,071.00	
-		Vehicle Hire Charges	41,03,562.00	
-		Wages	60,61,877.00	
-		Water Quality Surveillance	17,850.00	
2,30,00,000.00		Inter Scheme Allocation of Admn. Exp. - Sustainability	-	1,50,80,413.00
		Inter Scheme Allocation of Admn. Exp. - CCDU		2,73,64,018.00
		Inter Scheme Allocation of Admn. Exp. - RWH&GWR		1,17,05,945.00
		Inter Scheme Allocation of Admn. Exp. - Well Conversion		46,43,179.00
		Inter Scheme Allocation of Admn. Exp. - IEC & Jalasree Club		42,30,589.70
		Inter Scheme Allocation of Admn. Exp. - Jalanidhi I&II		33,857.00
2,30,00,336.30	**9,039.00**		**6,30,58,002.70**	**6,30,58,002.70**

IEC, Capacity Building and Training & Jalasree Club

Schedule - VIII

Previous Year			Current Year	
Dr	Cr		Dr	Cr
3,00,000.00		IEC - JALASREE CLUB	4,92,927.00	
37,898.00		Training Expenses - IEC	2,58,808.00	
-		Inter Scheme Allocation of Admn. Exp.	33,857.00	
3,37,898.00	-		**7,85,592.00**	-

Conversion of Homestead Wells Into Protected and Sustainable Drinking Water Sources

Schedule - IX

Previous Year			Current Year	
Dr	Cr		Dr	Cr
25,32,087.00		Well Conversion Expenses	1,22,60,302.00	
		Inter Scheme Allocation of Admn. Exp.	46,43,179.00	
25,32,087.00	-		**1,69,03,481.00**	-

KERALA RURAL WATER SUPPLY AND SANITATION AGENCY

Schedules to Income & Expenditure for the period from 01/04/2023 to 31/03/2024

Scaling Up of Rain Water Harvesting and GWR Measures Through KRWSA

Schedule - X

Previous Year			Current Year	
Dr	Cr		Dr	Cr
	30,62,325.00	Beneficiary Contribution -RWH & GWR Programme		2,13,145
25,544.00		Training Expenditure-Rain Centre	-	
6,16,53,424.00		RWH & GWR Expenses	4,68,83,909.00	
		Inter Scheme Allocation of Admn. Exp.	1,17,05,945.00	
6,16,78,968.00	**30,62,325.00**		**5,85,89,854.00**	**2,13,145.00**

Sustainability Support to Community Managed Water Supply Scheme

Schedule - XI

Previous Year			Current Year	
Dr	Cr		Dr	Cr
3,24,318.00		Advertisement - Sustainability	-	
2,34,634.00		Annual Maintanence Contracts-Sustainability	-	
1,64,750.00		Audit Fee - PMU-RPMU - Sustainability	-	
2,167.50		Bank Charges - Sustainability	-	
9,93,715.00		Communication Expenses - Sustainability	-	
95,357.00		Computer Stationery - Sustainability	-	
1,41,803.00		Conference, Meeting & Seminar - Sustainability	-	
-		Capacity Building Under Sustainability	1,075.00	
1,22,665.00		Consultancy - Others - Sustainability	-	
5,59,559.00		Electricity & Water Charges - Sustainability	-	
20,30,186.00	42,328.00	Employer's Contribution to EPF - Sustainability	-	
6,94,690.00		Employer's Contribution to ESI - Sustainability	-	
2,47,363.00		Fuel Charges - Sustainability	-	
14,39,449.00		Gratuity to Staff - Sustainability	-	
5,22,790.00		IEC - Sustainability	-	
42,500.00		Legal Consultant Charges - Sustainability	-	
18,08,374.00		Medical Expenses - Sustainability	-	
-		Volunteers Payment - FunctionalitySurvey	1,87,450.00	
2,34,206.00		Other Establishment Expenses - Sustainability	-	
7,39,000.00		Permanent Travelling Exp. -Sustainability	-	
30,452.00		Postage - Sustainability	-	

S. RAMANAND AIYAR & CO. KOCHI-30 CHARTERED ACCOUNTANTS

2,07,605.00		Printing and Stationery - Sustainability	-	
52,00,248.00		Rent - Office Building - Sustainability	-	
2,74,983.00		Repairs and Maintanence - General- Sustainability	-	
2,79,950.00		Repairs and Manintanence- Vehicle - Sustainability	-	
4,11,08,170.00		Salary to Staff - Sustainability	-	
1,20,815.00		Staff Welfare Expenses - Sustainability	-	
1,54,830.00		Stipend to Internship Person	-	
3,17,976.00		Training Expenses - Sustainability	-	
17,10,540.00		Travelling Expenses - Sustainability	-	
36,03,522.00		Vehicle Hire Charges -Sustainability	-	
47,86,709.00		Wages -Sustainability	-	
4,73,63,253.00		WSS Expenses - Sustainability	3,35,91,800.00	
	5,44,842.00	Bank Interest - Sustainability		-
	2,28,062.00	Other Income - Sustainability		-
-	2,30,00,000.00	Inter Scheme Allocation of Admn. Exp.	1,50,83,803.00	
10,12,99,709.00		Fund Transfer to GPs - Sustainability	3,98,874.00	
21,68,56,288.50	**2,38,15,232.00**		**4,92,63,002.00**	-

Research and Development

Schedule - XII

Previous Year			Current Year	
Dr	Cr		Dr	Cr
-		Research & Development Expenses	2,99,932.00	
		Inter Scheme Allocation of Admn. Exp.		3,390
-	-		**2,99,932.00**	**3,390.00**

Jalanidhi Phase I&II - Plan

Schedule - XIII

Previous Year			Current Year	
Dr	Cr		Dr	Cr
-		New Large Water Supply Schemes	38,85,850.00	
6,28,197.00		SO/GPAT Payment - LWSS	-	
1,91,344.00		SO/GPAT Payment - SWSS	-	
-		SO/GPAT Payment - Multi-GP WSS	10,67,525.00	
-		SO/GPAT Payment - SWSS	3,71,749.00	
8,19,541.00	-		**53,25,124.00**	-

Jalanidhi Phase I&II - EAP

Schedule - XIV

93,87,509.00		Fund Transfer from RPMUs to GPs		63,14,931.00
1,88,600.00		Audit Fee - GP-BG-SO	1,08,560.00	
-		SO/GPAT Payment - LWSS	1,43,287.00	
-		SO/GPAT Payment - Multi-GP WSS	4,30,844.00	
-		Jalanidhi-I CPTRP	55,552.00	
-		Inter Scheme Allocation of Admn. Exp.	42,30,589.70	
95,76,109.00	-		**49,68,832.70**	**63,14,931.00**

KERALA RURAL WATER SUPPLY AND SANITATION AGENCY
III FIOOR, PTC TOWERS,SS KOVIL ROAD,THAMPANOOR, THIRUVANANTHAPURAM

DEPRECIATION STATEMENT FOR THE PERIOD ENDED 31-03-2024

Schedule-XV

Amount in Rupees

Particulars	Cost					Depreciation					Written Down Value	
Description of Assets	Cost as on 01-04-2023	Additions during the year		Sale or Transfer	TOTAL	Rate (%)	Upto 01-04-2023	For the period from		Upto 31-03-2024	WDV as at 31-3-2023	WDV as at 31-03-2024
		More than 180 days	Less than 180 days					On Assets sold	Existing / New Assets			
PMU												
Air conditioner / Refrigeration	5,63,147.00				5,63,147.00	15.00	4,68,392.68		14,213.15	4,82,605.83	94,754.32	80,541.17
Refrigerator	-				-	15.00	-		-	-	-	-
Books	42,436.65				42,436.65	100.00	42,436.65		-	42,436.65	-	-
Communication Equipment	5,98,406.00				5,98,406.00	15.00	5,57,477.38		6,139.29	5,63,616.67	40,928.62	34,789.33
Computer	2,54,58,384.30	73,867.00			2,55,32,251.30	60.00	2,54,06,789.36	-	75,277.16	2,54,82,066.52	51,594.94	50,184.78
Electrical Fittings	1,93,502.00	2,650.00			1,96,152.00	10.00	1,71,181.66		2,497.03	1,73,678.69	22,320.34	22,473.31
Furniture & Fixtures	40,09,948.00		7,300.00		40,17,248.00	10.00	31,37,252.54		87,634.55	32,24,887.09	8,72,695.46	7,92,360.91
Miscellaneous Assets	2,29,536.00				2,29,536.00	15.00	2,06,699.09		3,425.54	2,10,124.63	22,836.91	19,411.37
Photocopier	16,02,227.00				16,02,227.00	15.00	14,74,820.38	-	19,110.99	14,93,931.37	1,27,406.62	1,08,295.63
Projector-LCD& Overhead	10,25,114.00				10,25,114.00	15.00	9,40,746.20		12,655.17	9,53,401.37	84,367.80	71,712.63
Technical Equipments	8,58,887.00				8,58,887.00	15.00	8,18,394.44		6,073.88	8,24,468.32	40,492.56	34,418.68
Typewriter	10,672.00				10,672.00	15.00	10,553.15		17.83	10,570.98	118.85	101.02
Vehicle Motor car	33,54,395.00				33,54,395.00	15.00	29,34,337.14		63,008.68	29,97,345.82	4,20,057.86	3,57,049.18
UPS	9,53,607.00				9,53,607.00	15.00	8,36,339.86		17,590.07	8,53,929.93	1,17,267.14	99,677.07
Modem	64,426.00				64,426.00	15.00	63,191.18		185.22	63,376.40	1,234.82	1,049.60
Printer & Scanner	7,28,061.00	29,382.00	46,960.00		8,04,403.00	15.00	5,08,752.15		40,825.63	5,49,577.78	2,19,308.85	2,54,825.22
Media Equipments	2,24,646.00		74,690.00		2,99,336.00	15.00	1,74,758.31		13,084.90	1,87,843.21	49,887.69	1,11,492.79
GIS Software	17,60,400.00				17,60,400.00	60.00	17,60,076.96		193.82	17,60,270.78	323.04	129.22
Handheld GPS	3,82,465.00				3,82,465.00	15.00	3,09,722.23		10,911.42	3,20,633.65	72,742.77	61,831.35
(A)	**4,20,60,259.95**	**1,05,899.00**	**1,28,950.00**	**-**	**4,22,95,108.95**	**450.00**	**3,98,21,921.36**	**-**	**3,72,844.33**	**4,01,94,765.69**	**22,38,338.99**	**21,00,343.26**
DPMU-Calicut											-	-
Furniture & Fixtures	5,88,400.00				5,88,400.00	10.00	5,25,968.61		6,243.14	5,32,211.75	62,431.39	56,188.25
Typewriter	11,092.00				11,092.00	15.00	10,968.48		18.53	10,987.01	123.52	104.99
UPS	14,500.00				14,500.00	15.00	14,080.12		62.98	14,143.10	419.88	356.90
Communication Equipment	11,645.00				11,645.00	15.00	11,067.88		86.57	11,154.45	577.12	490.55
Electrical Fittings	-				-	10.00	-		-	-	-	-
Comp.Serv.UPS&Equip	1,10,734.00				1,10,734.00	60.00	1,10,734.00		-	1,10,734.00	(0.00)	(0.00)
Modem	3,320.00				3,320.00	15.00	3,212.05		16.19	3,228.24	107.95	91.76
Books	23,209.00				23,209.00	100.00	23,209.00		-	23,209.00	-	-
Miscellaneous Assets	10,970.00				10,970.00	15.00	10,652.07		47.69	10,699.76	317.93	270.24
Technical Equipments	9,207.00				9,207.00	15.00	8,913.65		44.00	8,957.65	293.35	249.35
Scanner	3,803.00				3,803.00	15.00	3,669.10		20.09	3,689.19	133.90	113.81
(B)	**7,86,880.00**	**-**	**-**	**-**	**7,86,880.00**	**285.00**	**7,22,474.96**	**-**	**6,539.19**	**7,29,014.15**	**64,405.04**	**57,865.85**
DPMU-Thrissur												
Furniture & Fixtures	4,00,232.00				4,00,232.00	10.00	3,56,115.55		4,411.64	3,60,527.19	44,116.45	39,704.81
UPS	72,500.00				72,500.00	15.00	70,393.97		315.91	70,709.88	2,106.03	1,790.12
Books	846.00				846.00	100.00	846.00		-	846.00	-	-
Electrical Fittings	9,739.00				9,739.00	10.00	8,622.54		111.65	8,734.19	1,116.46	1,004.81
Technical Equipments	14,239.00				14,239.00	15.00	13,500.89		110.72	13,611.61	738.11	627.39
Miscellaneous Assets	6,565.00				6,565.00	15.00	6,419.87		21.77	6,441.64	145.13	123.36
Computer Access	46,141.00				46,141.00	60.00	46,141.00		-	46,141.00	0.00	0.00
Communication (Tele & fax)	16,276.00				16,276.00	15.00	15,358.42		137.64	15,496.06	917.58	779.94
(C)	**5,66,538.00**	**-**	**-**	**-**	**5,66,538.00**	**240.00**	**5,17,398.23**	**-**	**5,109.33**	**5,22,507.56**	**49,139.77**	**44,030.44**

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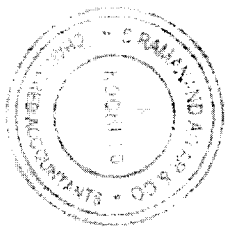
Particulars	Cost					Depreciation					Written Down Value	
		Additions during the year						For the period from				
Description of Assets	Cost as on 01-04-2023	More than 180 days	Less than 180 days	Sale or Transfer	TOTAL	Rate (%)	Upto 01-04-2023	On Assets sold	Existing / New Assets	Upto 31-03-2024	WDV as at 31-3-2023	WDV as at 31-03-2024
DPMU-Malappuram												
Communication(Tele/Fax)	69,481.00				69,481.00	15.00	59,204.56		1,541.47	60,746.03	10,276.44	8,734.97
Computer,Server	11,96,985.00	4,980.00	8,100.00		12,10,065.00	60.00	11,95,536.72		6,286.97	12,01,823.69	1,448.28	8,241.31
Electrical Fittings	48,956.00		2,150.00		51,106.00	10.00	40,617.60		941.34	41,558.94	8,338.40	9,547.06
Books	6,210.00				6,210.00	100.00	6,210.00		-	6,210.00	-	-
Furniture & Fixtures	15,03,241.00				15,03,241.00	10.00	9,87,620.78		51,562.02	10,39,182.80	5,15,620.22	4,64,058.20
Miscellaneous Assets	26,425.00		7,375.00		33,800.00	15.00	25,521.73		688.62	26,210.35	903.27	7,589.65
Photocopier	1,29,828.00				1,29,828.00	15.00	1,20,830.16		1,349.68	1,22,179.84	8,997.84	7,648.16
Technical Equipments	10,579.00				10,579.00	15.00	10,100.73		71.74	10,172.47	478.27	406.53
UPS	3,83,305.00		5,000.00		3,88,305.00	15.00	2,79,673.27		15,919.76	2,95,593.03	1,03,631.73	92,711.97
Airconditioner & Refrigerator	61,185.00				61,185.00	15.00	55,114.63		910.56	56,025.19	6,070.37	5,159.81
Modem	30,910.00				30,910.00	15.00	22,370.24		1,280.96	23,651.20	8,539.76	7,258.80
Printer & Scanner	2,00,100.00				2,00,100.00	15.00	1,43,183.90		8,537.41	1,51,721.31	56,916.10	48,378.69
Projector LCD	19,634.00				19,634.00	15.00	19,017.56		92.47	19,110.03	616.44	523.97
Scanner	63,650.00				63,650.00	15.00	46,683.99		2,544.90	49,228.89	16,966.01	14,421.11
(D)	**37,50,489.00**	**4,980.00**	**22,625.00**	-	**37,78,094.00**	**330.00**	**30,11,685.87**	-	**91,727.90**	**31,03,413.77**	**7,38,803.13**	**6,74,680.23**
DPMU-Palakkad												
Books	1,149.00				1,149.00	100.00	1,149.00		-	1,149.00	-	-
Electrical Fittings	28,718.00				28,718.00	10.00	25,687.89		303.01	25,990.90	3,030.11	2,727.10
Furniture & Fixtures	4,21,071.00				4,21,071.00	10.00	3,71,116.15		4,995.49	3,76,111.64	49,954.85	44,959.36
Miscellaneous Assets	33,169.00				33,169.00	15.00	32,014.71		173.14	32,187.85	1,154.29	981.15
Photocopier	86,268.00				86,268.00	15.00	84,315.57		292.86	84,608.43	1,952.43	1,659.57
UPS	4,950.00				4,950.00	15.00	4,837.99		16.80	4,854.79	112.01	95.21
Communication Equipment	43,857.00				43,857.00	15.00	42,135.92		258.16	42,394.08	1,721.08	1,462.92
Computers & Accessories	1,18,005.00				1,18,005.00	60.00	1,18,005.00		-	1,18,005.00	(0.00)	(0.00)
Technical Equipments	16,838.00				16,838.00	15.00	15,819.81		152.73	15,972.54	1,018.19	865.46
Vehicle	-				-	15.00	-		-	-	-	-
Modem	5,563.00				5,563.00	15.00	5,367.70		29.30	5,397.00	195.30	166.00
Refrigerator & Air conditioner	38,700.00				38,700.00	15.00	37,591.69		166.25	37,757.94	1,108.31	942.06
Scanner	6,349.00				6,349.00	15.00	6,157.40		28.74	6,186.14	191.60	162.86
Air Conditioner	-				-	15.00	-		-	-	-	-
(E)	**8,04,637.00**	-	-	-	**8,04,637.00**	**330.00**	**7,44,198.83**	-	**6,416.48**	**7,50,615.31**	**60,438.17**	**54,021.69**
Capcell												
UPS	7,750.00				7,750.00	15.00	7,492.25		38.66	7,530.91	257.75	219.09
Computer	1,19,836.00				1,19,836.00	60.00	1,19,836.00		-	1,19,836.00	0.00	0.00
Miscellaneous Assets	18,728.00				18,728.00	15.00	17,939.21		118.32	18,057.53	788.79	670.47
Furniture & Fixtures	2,10,162.00				2,10,162.00	10.00	1,87,063.02		2,309.90	1,89,372.92	23,098.98	20,789.08
(F)	**3,56,476.00**	-	-	-	**3,56,476.00**	**100.00**	**3,32,330.48**	-	**2,466.88**	**3,34,797.36**	**24,145.52**	**21,678.64**
DPMU-Trivandrum												
Furniture & Fixtures	76,509.00				76,509.00	10.00	65,089.49		1,141.95	66,231.44	11,419.51	10,277.56
Typewriter	-				-	15.00	-		-	-	-	-
UPS	7,500.00				7,500.00	15.00	7,034.89		69.77	7,104.66	465.11	395.34
Communication Equipment	7,100.00				7,100.00	15.00	6,685.50		62.17	6,747.67	414.50	352.33
Electrical Fittings	13,480.00				13,480.00	10.00	11,373.02		210.70	11,583.72	2,106.98	1,896.28
Comp.Serv.UPS&Equip	4,212.00				4,212.00	60.00	4,212.00		-	4,212.00	0.00	0.00
Modem	-				-	15.00	-		-	-	-	-
Books	-				-	100.00	-		-	-	-	-
Miscellaneous Assets	2,719.00				2,719.00	15.00	2,547.39		25.74	2,573.13	171.61	145.87
Technical Equipments	-				-	15.00	-		-	-	-	-
Scanner	-				-	15.00	-		-	-	-	-
(G)	**1,11,520.00**	-	-	-	**1,11,520.00**	**285.00**	**96,942.29**	-	**1,510.33**	**98,452.62**	**14,577.71**	**13,067.38**

Particulars	Cost					Depreciation					Written Down Value	
Description of Assets	Cost as on 01-04-2023	Additions during the year		Sale or Transfer	TOTAL	Rate (%)	Upto 01-04-2023	For the period from		Upto 31-03-2024	WDV as at 31-3-2023	WDV as at 31-03-2024
		More than 180 days	Less than 180 days					On Assets sold	Existing / New Assets			
DPMU-Kottayam											-	-
Furniture & Fixtures	34,090.00				34,090.00	10.00	29,315.37		477.46	29,792.83	4,774.63	4,297.17
Typewriter	-				-	15.00	-		-	-	-	-
UPS	-				-	15.00	-		-	-	-	-
Communication Equipment	10,337.00				10,337.00	15.00	9,851.78		72.78	9,924.56	485.22	412.44
Electrical Fittings	21,005.00				21,005.00	10.00	18,088.71		291.63	18,380.34	2,916.29	2,624.66
Comp.Serv.UPS&Equip	11,130.00				11,130.00	60.00	11,130.00		-	11,130.00	(0.00)	(0.00)
Modem	1,663.00				1,663.00	15.00	1,517.73		21.79	1,539.52	145.27	123.48
Books	-				-	100.00	-		-	-	-	-
Miscellaneous Assets	-				-	15.00	-		-	-	-	-
Technical Equipments	-				-	15.00	-		-	-	-	-
Scanner	-				-	15.00	-		-	-	-	-
(H)	**78,225.00**	-	-	-	**78,225.00**	**285.00**	**69,903.60**	-	**863.66**	**70,767.26**	**8,321.40**	**7,457.74**
DPMU-Ernakulam												
Furniture & Fixtures	86,843.00				86,843.00	10.00	73,808.34		1,303.47	75,111.81	13,034.66	11,731.19
Typewriter	-				-	15.00	-		-	-	-	-
UPS	-				-	15.00	-		-	-	-	-
Communication Equipment	9,500.00				9,500.00	15.00	9,054.06		66.89	9,120.95	445.94	379.05
Electrical Fittings	77,329.00				77,329.00	10.00	66,592.83		1,073.62	67,666.45	10,736.17	9,662.55
Comp.Serv.UPS&Equip	7,150.00				7,150.00	60.00	7,150.00		-	7,150.00	0.00	0.00
Modem	3,965.00				3,965.00	15.00	3,778.88		27.92	3,806.80	186.12	158.20
Books	-				-	100.00	-		-	-	-	-
Miscellaneous Assets	6,524.00				6,524.00	15.00	6,158.41		54.84	6,213.25	365.59	310.75
Technical Equipments	867.00				867.00	15.00	820.49		6.98	827.47	46.51	39.53
Scanner	-				-	15.00	-		-	-	-	-
(I)	**1,92,178.00**	-	-	-	**1,92,178.00**	**285.00**	**1,67,363.01**	-	**2,533.72**	**1,69,896.73**	**24,814.99**	**22,281.27**
DPMU-Waynad											-	-
Furniture & Fixtures	2,59,617.00				2,59,617.00	10.00	2,20,388.83		3,922.82	2,24,311.65	39,228.17	35,305.35
Air conditioner / Refrigeration	-				-	15.00	-		-	-	-	-
Typewriter	-				-	15.00	-		-	-	-	-
UPS	2,900.00				2,900.00	15.00	2,744.42		23.34	2,767.76	155.58	132.24
Photocopier	51,830.00				51,830.00	15.00	49,049.51		417.07	49,466.58	2,780.49	2,363.42
Communication Equipment	21,375.00				21,375.00	15.00	20,228.31		172.00	20,400.31	1,146.69	974.69
Projector LCD	1,25,888.00				1,25,888.00	15.00	1,17,942.78		1,191.78	1,19,134.56	7,945.22	6,753.44
Electrical Fittings	22,783.00				22,783.00	10.00	19,331.29		345.17	19,676.46	3,451.71	3,106.54
Comp.Serv.UPS&Equip	10,035.00				10,035.00	60.00	10,035.00		-	10,035.00	0.00	0.00
Modem	2,200.00				2,200.00	15.00	2,081.98		17.70	2,099.68	118.02	100.32
Books	-				-	100.00	-		-	-	-	-
Miscellaneous Assets	4,600.00				4,600.00	15.00	4,331.45		40.28	4,371.73	268.55	228.27
Technical Equipments	720.00				720.00	15.00	681.38		5.79	687.17	38.62	32.83
Scanner	4,950.00				4,950.00	15.00	4,661.03		43.35	4,704.38	288.97	245.62
(J)	**5,06,898.00**	-	-	-	**5,06,898.00**	**330.00**	**4,51,475.97**	-	**6,179.30**	**4,57,655.27**	**55,422.03**	**49,242.73**
DPMU-Kannur											-	-
Furniture & Fixtures	4,74,514.00				4,74,514.00	10.00	3,85,616.47		8,889.75	3,94,506.22	88,897.53	80,007.78
Typewriter	-				-	15.00	-		-	-	-	-
UPS,scanner,printer	2,59,450.00				2,59,450.00	15.00	1,91,993.46		10,118.48	2,02,111.94	67,456.54	57,338.06
Communication Equipment	24,585.00				24,585.00	15.00	23,266.11		197.83	23,463.94	1,318.89	1,121.06
Electrical Fittings	59,290.00		-		59,290.00	10.00	49,204.76		1,008.52	50,213.28	10,085.24	9,076.72
Comp.Serv.UPS&Equip	98,595.00				98,595.00	60.00	98,547.07		28.76	98,575.83	47.93	19.17
Modem	550.00				550.00	15.00	524.19		3.87	528.06	25.81	21.94
Books	3,545.00				3,545.00	100.00	3,545.00		-	3,545.00	-	-
Miscellaneous Assets	20,990.00		6,450.00		27,440.00	15.00	17,295.79		1,037.88	18,333.67	3,694.21	9,106.33
Technical Equipments	48,600.00				48,600.00	15.00	45,992.79		391.08	46,383.87	2,607.21	2,216.13
Air conditioner / Refrigeration	2,71,600.00				2,71,600.00	15.00	1,76,070.63		14,329.41	1,90,400.04	95,529.37	81,199.96
(K)	**12,61,719.00**	-	**6,450.00**	-	**12,68,169.00**	**285.00**	**9,92,056.27**	-	**36,005.58**	**10,28,061.85**	**2,69,662.73**	**2,40,107.15**

Particulars	Cost					Depreciation					Written Down Value	
Description of Assets	Cost as on 01-04-2023	Additions during the year		Sale or Transfer	TOTAL	Rate (%)	Upto 01-04-2023	For the period from		Upto 31-03-2024	WDV as at 31-3-2023	WDV as at 31-03-2024
		More than 180 days	Less than 180 days					On Assets sold	Existing / New Assets			
DPMU-Kollam												
Communication Equipment	7,256.00				7,256.00	15.00	6,669.70		87.95	6,757.65	586.30	498.35
Electrical Fittings	6,520.00				6,520.00	10.00	5,244.71		127.53	5,372.24	1,275.29	1,147.76
Comp.Serv.UPS&Equip	2,70,634.00				2,70,634.00	60.00	2,70,634.00		-	2,70,634.00	0.00	0.00
Furniture & Fixtures	7,250.00				7,250.00	10.00	5,831.92		141.81	5,973.73	1,418.08	1,276.27
Vehicle	3,200.00				3,200.00	15.00	2,920.46		41.93	2,962.39	279.54	237.61
Miscellaneous Assets	5,870.00				5,870.00	15.00	5,395.68		71.15	5,466.83	474.32	403.17
(L)	**3,00,730.00**	-	-	-	**3,00,730.00**	**125.00**	**2,96,696.47**	-	**470.37**	**2,97,166.84**	**4,033.53**	**3,563.16**
RPMU-Idukki											-	-
Computer	5,46,400.00				5,46,400.00	60.00	5,45,773.34		375.99	5,46,149.33	626.66	250.67
Furniture & Fixtures	5,71,160.00				5,71,160.00	10.00	3,01,295.11		26,986.49	3,28,281.60	2,69,864.89	2,42,878.40
UPS,Printer	2,54,590.00		34,500.00		2,89,090.00	15.00	1,91,545.01		12,044.25	2,03,589.26	63,044.99	85,500.74
Media Equipments	49,616.00				49,616.00	15.00	37,110.10		1,875.89	38,985.99	12,505.90	10,630.01
Electrical Fittings	30,664.00				30,664.00	10.00	19,965.49		1,069.85	21,035.34	10,698.51	9,628.66
Miscellaneous Assets	2,850.00		6,667.00		9,517.00	15.00	2,330.99		577.88	2,908.87	519.01	6,608.13
Photocopier	1,77,975.00				1,77,975.00	15.00	1,07,513.26		10,569.26	1,18,082.52	70,461.74	59,892.48
Air conditioner / Refrigeration	28,750.00				28,750.00	15.00	23,938.88		721.67	24,660.55	4,811.12	4,089.45
(M)	**16,62,905.00**	-	**41,167.00**	-	**17,03,172.00**	**155.00**	**12,29,472.18**	-	**54,221.28**	**12,83,693.46**	**4,32,532.82**	**4,19,478.54**
CCDU												
Furniture & Fixtures	61,818.00	-	-	-	61,818.00	10.00	8,963.61	-	5,285.44	14,249.05	52,854.39	47,568.95
Electrical Fittings	3,247.00	-	-	-	3,247.00	10.00	470.82	-	277.62	748.44	2,776.18	2,498.56
EPABX	5,976.00	-	-	-	5,976.00	15.00	1,277.37	-	704.79	1,982.16	4,698.63	3,993.84
Computer Printer Scanner	2,769.00	-	-	-	2,769.00	60.00	1,993.68	-	465.19	2,458.87	775.32	310.13
UPS	47,988.00	-	-	-	47,988.00	15.00	10,257.44	-	5,659.58	15,917.02	37,730.56	32,070.98
Books	532.00	-	-	-	532.00	100.00	532.00	-	-	532.00	-	-
Miscellaneous Assets	317.00	-	-	-	317.00	15.00	67.76	-	37.39	105.15	249.24	211.85
LCD Projector	7,420.00	-	-	-	7,420.00	15.00	1,586.03	-	875.10	2,461.13	5,833.97	4,958.87
(N)	**1,30,067.00**	-	-	-	**1,30,067.00**	**240.00**	**25,148.71**	-	**13,305.11**	**38,453.82**	**1,04,918.29**	**91,613.18**
Rain Centre												
Computer - Rain Centre	424.00	-	-		424.00	60.00	305.28	-	71.23	376.51	118.72	47.49
Furniture - Rain Centre	20,189.00	-	-	-	20,189.00	10.00	2,927.41	-	1,726.16	4,653.57	17,261.59	15,535.43
Printer - Rain Centre	392.00	-	-	-	392.00	15.00	83.79	-	46.23	130.02	308.21	261.98
(O)	**21,005.00**	-	-	-	**21,005.00**	**85.00**	**3,316.48**	-	**1,843.62**	**5,160.10**	**17,688.52**	**15,844.90**
TOTAL (A+B+C+D+E+F+G+H+I+J+K+L+M+N+O)	**5,25,89,626.95**	**1,10,879.00**	**1,99,192.00**	-	**5,28,99,697.95**		**4,84,82,384.71**	-	**6,02,037.08**	**4,90,84,421.79**	**41,07,242.24**	**38,15,276.16**



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