

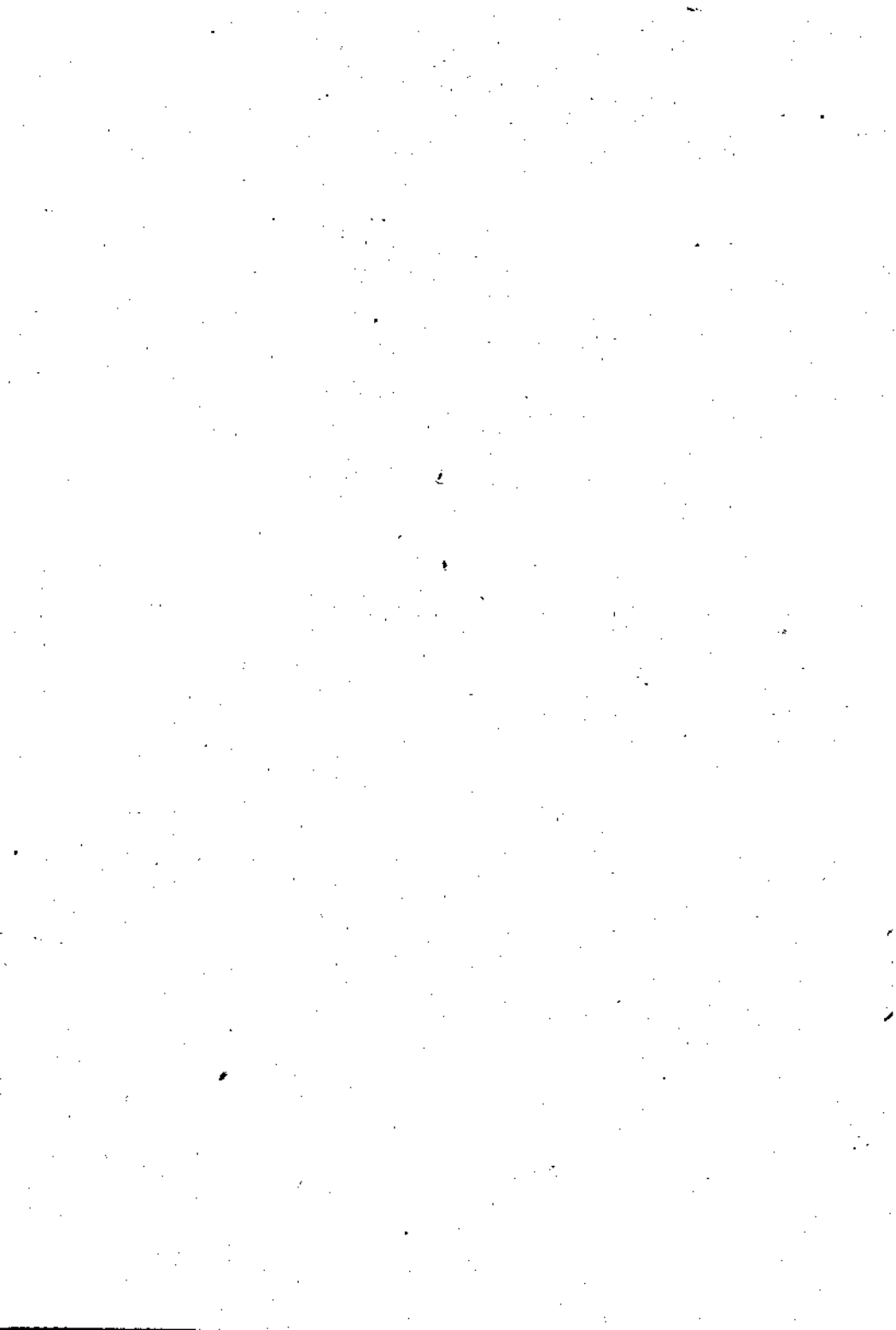
FOURTEENTH KERALA LEGISLATIVE ASSEMBLY

**COMMITTEE
ON
PUBLIC ACCOUNTS
(2019-2021)**

SIXTY NINETH REPORT
(Presented on 6th February, 2020)



**SECRETARIAT OF THE KERALA LEGISLATURE
THIRUVANANTHAPURAM
2020**



FOURTEENTH KERALA LEGISLATIVE ASSEMBLY

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SIXTY NINETH REPORT

On

**Paragraphs relating to Water Resources Department contained in the
Report of the Comptroller and Auditor General of India for the
year ended 31st March, 2013 (General & Social Sector)**

COMMITTEE ON PUBLIC ACCOUNTS (2016-2019)

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REPORT

WATER RESOURCES DEPARTMENT

Introduction (2.4.1)

To provide every rural person with water for drinking, cooking and other domestic basic needs on a sustainable basis, a national water supply and sanitation programme was introduced in the year 1954. To accelerate the pace of coverage, Central Government introduced the Accelerated Rural Water Supply Programme (ARWSP) in 1972-73. The entire programme was given a Mission approach when the National Drinking Water Mission (NDWM) was introduced in 1986. In 1991, NDWM was renamed as Rajiv Gandhi National Drinking Water Mission. The ARWSP was subsequently renamed as National Rural Drinking Water Programme (NRDWP) for the Eleventh Five Year Plan period and this continued for the Twelfth Five Year Plan period.

The Guidelines of the programme revolved around the three distinct inter-related issues viz., accelerating the coverage of remaining uncovered habitations with safe drinking water systems, promote sustainability of safe drinking water systems and institutionalising water quality management, monitoring and surveillance systems.

Audit Objectives (2.4.2)

The objectives of the Performance Audit were to assess whether:

- the planning process conceived was adequate for successful implementation of the programme in terms of coverage, source sustainability and water quality;
- the fund management was economical and effective;
- the implementation of various programme components was effective and efficient; and
- there existed effective monitoring and evaluation mechanism.

Audit Criteria (2.4.3)

Audit adopted criteria derived from the following:

- Vision, Mission and Goals of NRDWP as reflected in the framework for implementation;
- Water Quality norms stipulated in the Protocol on Water Quality Monitoring;
- Work execution norms of Kerala Public Works Department Code and Public Health Engineering Department data book.

Scope and Audit Methodology (2.4.4)

Kerala Water Authority (Authority), a statutory authority under the State Government, is the implementing agency for the programme. Economy, efficiency and effectiveness of the NRDWP implementation in the State, during the five year period (2008-2013) were reviewed. In the process, audit scrutinised the records of Water Resources Department, Head Office of the Authority, Project Divisions, Public Health (PH) Divisions, State Referral Institute (SRI) and Regional/Circle Offices, Quality Control Divisions/laboratories and Collectorates in five¹ selected districts. Five out of 14 districts in the State were selected by adopting statistical sampling methods. Idukki, going by the information available in the Department's website, the district with most number of water contaminated habitations, was selected as the first sample and the remaining four districts were selected by applying Probability Proportionate to Size Without Replacement (PPSWOR) sampling method.

Detailed scrutiny of the records in five selected districts was conducted during the period from April to July 2013. Information and data required were collected by scrutiny of records in KWA and its sub-offices. An entry conference with the Principal Secretary, Water Resources Department, Government of Kerala was held on 27 March 2013 and audit objectives, criteria, districts selected for detailed scrutiny, etc., were intimated in the conference. An exit conference was conducted on 10th September 2013 with the Additional Chief Secretary, Water Resources Department for discussing the audit findings. The views of the department have been considered while finalising the performance audit report.

¹ Idukki, Kollam, Kottayam, Kozhikode and Malappuram

Audit Findings

Planning (2.4.5)

As per paragraph 14 of the Framework for implementation, a Comprehensive Water Security Action Plan (CWSAP) is to be prepared for implementation in the State. The main objective of the CWSAP is to provide a definite direction to the programme, and also to ensure regular monitoring of the progress made by the respective States towards the goal of achieving drinking water security to every rural household. Under the broad goal set by each State, a five year rolling plan is to be prepared and during each financial year, the sub-goal and the priorities would be fixed based on mutual consultation by the Central and the State. In this regard, audit observed the following:

- Annual Action Plans (AAP) were prepared for submission to the Department of Drinking Water and Sanitation (DDWS), Government of India, for allocation and release of funds. However, long-term five year rolling plan as envisaged in the framework was not prepared.

- In the AAPs, adequate priority was not given for incomplete schemes. Out of 32 schemes verified, 20 schemes remained incomplete beyond the stipulated date of completion.

- Framework for implementation stipulates involvement of Panchayathi Raj Institutions (PRIs), in planning and preparation of schemes. As Village Water and Sanitation Committees did not exist, there was no grassroot level involvement in planning and preparation of project reports for schemes.

The Authority stated that rolling plan was not prepared. However, programmes were implemented based on the AAP. It was also stated that strict directions were given to all the concerned officials to take urgent steps to complete the long pending schemes.

Absence of long-term planning and vision lead to several schemes started years back remaining incomplete. Adequate schemes were not planned and implemented for sustainability of sources and water quality, as discussed in the succeeding paragraphs.

[Audit paragraphs 2.4 to 2.4.5 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March 2013 (General & Social Sector)]

Notes furnished by the Government on the above audit paragraphs are included as Appendix-II.

1. The Committee opined that the implementation of NRDWP projects was done on the basis of Annual Action Plan and without preparation of a five year rolling plan as envisaged in the frame work was the audit observation. The Committee also remarked that the absence of long term planning and vision led to several schemes started years back remain incomplete. The Committee enquired about the current status of the NRDWP projects going on the state. The Technical Member, Kerala Water Authority answered that there were 133 ongoing projects and 55 out of them were set aside as per the guidelines issued by Central Government that stipulated to drop the projects that were not even started and those of which 25% of the work were not completed. He added that the major problem that they had to face at the time of implementation of the project was non-availability of land and in most cases the land was handed over by the local bodies after passing the resolution. Out of 133 projects 53 projects were completed in previous year and 31 projects are expected to be completed within one year and 10 of the remaining projects were dropped due to the non-availability of land. The remaining 40 projects are expected to be completed at the end of 2020 on obtaining NRDWP funds from the Central Government. But the Central allocation was in a decreasing trend in recent years. The Committee demanded the Department to submit a detailed report on the NRDWP schemes at the earliest.

2. He added that the project sanctioned under NRDWP for each year is based on the allocation of the fund and the schemes under NRDWP are expected to be completed within three years subject to availability of funds, availability of adequate land and support from the public.

3. The official from the Accountant General drew the attention of the Committee that the department had discussed generally about the NRDWP schemes and the explanation about the 32 schemes mentioned in the audit paragraph were needed to be addressed.

4. The technical member answered that three out of the 11 major schemes the Accountant General inspected were not completed. One among them, the Kunnummel scheme which was expected to be commissioned at the end of current month. Another one was Vellathooval scheme which was not completed due to inadequate source. He added that while preparing the project report, a weir of 5 metre height was proposed to ensure adequate storage of water, but the Panchayath had withdrawn from the resolution that the land liable to be submerged due to the completion of weir would be taken over and hence the construction of the weir could not be proceeded with.

5. To a query about the expenditure made for Vellathooval project and its efficiency, the witness, Technical member replied that a sum of ₹5.9 crore had been spent for the scheme and out of which ₹77 lakh was spent for the construction of the plant. Now a comprehensive water supply scheme was started by using water from Idukki dam and 18 Panchayaths became its beneficiaries. All the components done for the Vellathooval project other than the plant could be utilised for this new scheme.

6. The witness added that the third incompletd water supply scheme was Manimala project and 80% of its works had been completed. He informed that tender had been arranged for buying pump set and water could be distributed through the existing distribution lines within 6 months.

7. The Committee desired to know about the pipe replacement projects under KHIFB and the witness informed that now administrative sanction had been obtained for ₹423 crore and the tender process were going on.

8. Then the Committee discussed the issues related to shattering of pipes. The witness, Technical member Kerala Water Authority informed that at the time of maintenance and widening of roads PWD had never shown concern over the problems of Water authority. Nearly fifty percent of the project cost had to be provided to PWD towards road deformation. The Committee suggested that possibility of using modern technology should be explored for laying water distribution pipes through roadside canals or Government properties rather than laying them through roads.

Conclusions/Recommendations

9. The Committee opines that absence of long term planning and vision led to several schemes under NRDWP projects that started years back remain incomplete. Many projects are found to be dropped at various stages of their implementation and some are not even started owing to many reasons. The Committee directs the department to furnish a detailed report on the status of NRDWP schemes in the state.

10. The Committee concerns the issues related to shattering of pipes. It is observed that at the time of maintenance and widening of roads PWD ignores the problems of Water Authority. Nearly fifty percent of the project cost has to be provided to PWD towards road deformation.

11. The Committee suggests that possibility of using modern technology should be explored for laying water distribution pipes through roadside canals or Government properties rather than laying them through roads.

Funds Management (2.4.6)

Funds available for implementation (2.4.6.1)

NRDWP funds are released by Government of India (GOI) in two parts viz., Programme Fund and Support Fund. The Programme activities comprise of schemes for coverage of habitations, source sustainability issues and Operation and Maintenance (O&M). The Support activities included Water Quality Monitoring and Surveillance (WQMS), Human Resources Development (HRD), Information, Education and Communication (IEC), Monitoring and Investigation/Evaluation (M&E), etc. In the programme activities, schemes for coverage of habitations and O&M, the contribution was shared between State and Government of India (GOI) in the ratio 50:50 and 100 per cent funding from GOI for the components source sustainability and support activities.

The receipt and expenditure under Programme Fund and Support Fund during the last five years are given in **Table**.

Receipt and expenditure under Programme/Support Fund

(₹ in crore)

Year	Receipt of funds						Expenditure				
	GOI ²	Programme fund			Supp ort fund & WQ MS (Cent ral)	Total	Programme fund			Supp ort fund & WQ MS (Cent ral)	Total
		State	Total for Progra- name activities	Total for Progra- name activities			GOI	State	Total		
2008-09	98.33	27.10	NIL	98.33	2.59	100.92	97.14	0	97.14	0.68	97.82
2009-10	150.90	117.53	83.25	234.15	4.24	238.39	149.67	0	149.67	1.32	150.99
2010-11	137.99	122.40	NIL	137.99	6.61	144.60	134.42	25.94	160.36	3.54	163.90
2011-12	124.26	105.20	50.00	174.26	9.45	183.71	124.01	0	124.01	3.13	127.14
2012-13	262.24	218.63	31.73	293.97	9.72	303.69	238.89	0	238.89	7.88	246.77
Total	773.72	590.86	164.98	938.70	32.61	971.31	744.13	25.94	770.07	16.55	786.62

Source: Compiled from GOI sanction orders, information provided by the Authority and Detailed Appropriation Accounts maintained by Principal Accountant General (A&E)

Utilisation of funds

During the period 2008-2013, the Authority received ₹773.72 crore towards Programme fund and ₹32.61 crore towards Support Fund from GOI. Against these receipts, utilisation was ₹744.13 crore (96.18 per cent) and ₹16.55 crore (50.75 per cent) respectively. Inadequate infrastructure for water quality monitoring and surveillance programme activities were the quoted reasons for low utilisation of Support fund.

2 Includes Opening Balance, interest received and other adjustments

The State Government had, against its share of ₹590.86 crore, contributed only ₹164.98 crore (27.92 per cent) during the period covered under audit, resulting in a shortfall of ₹425.88 crore. Even the short releases were barely spent by KWA for the execution of the various programmes.

Audit assessed the State's share due to KWA fund and observed that the KWA neither maintained any records in respect of State share due nor claimed proportionate State share with reference to the funds release orders of GOI. Further, according to the guidelines, the State Government was required to release their share directly to the Programme fund account to which GOI released its share. The State Government did not follow this procedure and the State's share was credited in a Treasury Savings Bank account along with other funds.

Responding to audit observations, the KWA stated that considering the State's investment in different rural water supply schemes like National Bank for Agriculture and Rural Development (NABARD) assisted schemes, Japan International Co-operation Agency (JICA) assisted schemes, etc., the State's share in rural water supply schemes was much more than that of the Central share. It was also stated that this was accepted by GOI in principle. However, the KWA did not produce any documentary evidence in support of the GOI's acceptance.

[Audit paragraph 2.4.6.1 contained in the Report of Comptroller and Auditor General of India for the year ended 31st March 2013 (General & Social Sector)]

Notes furnished by the Government on the above audit paragraph is included as Appendix-II.

12. While considering the audit para, the Committee enquired the details of fund allocation to the NRDWP schemes and the percentage of share by Government of India and the state. The witness, Technical Member Kerala Water Authority informed that the fund contribution was equally shared between Central and State Government. Regarding low utilisation of State share he added that the State had expended much more fund in other heads of accounts than the Central

Government release for this scheme. The State expenditure was made for NABARD assisted schemes, JICA assisted schemes for rural population and other rural water supply schemes. He also stated that the utilisation certificate and the MNP statement submitted to Government of India had detailed all these facts and were accepted in principle. The Committee pointed out that there was no documentary evidence for the approval of it by GOI. The committee directed the department to furnish a report on the status of matching grant through the years.

Conclusion/Recommendation

13. The Committee opines that as per the guidelines, GOI release for the programme fund under NRDWP shall be matched by the State Government release, but GOK released more funds than GOI share for operation and maintenance. The Committee points out that the KWA did not produce any documentary evidence in support of its statement that GOI had accepted the reason in principle. The Committee directs the department to furnish a report on the status of matching grant of NRDWP schemes through the years.

Coverage of Habitations (2.4.7)

Habitation Survey (2.4.7.1)

According to the Guidelines 2000, the norms adopted for NRDWP was 40 lpcd³ for humans. Habitations where a drinking water source/point is not available within 1.6 kms in plains or 100 metres elevation in hilly areas or habitations having quality affected source were categorised as 'Not Covered (NC)/No Safe Source (NSS) habitations'. Habitations which have a safe drinking water source, but the capacity of the system ranges between 10 lpcd to 40 lpcd were categorised as 'Partially covered habitations'. All other habitations were categorised as 'Fully covered habitations'. With the introduction of Framework for Implementation of NRDWP, 2010, there has been a paradigm shift in respect of the status of coverage in the sense that the installation of a water supply system in a habitation does not confer the habitation 'fully covered' status unless every household in the habitation has been fully covered with potable water in sufficient quantity.

3 litres per capita per day

At the beginning of 2008-09, 6483 habitations were 'Fully Covered', 5815 habitations were 'Partially Covered' and 145 habitations were 'Not Covered'. However, under the direction of State government, all rural habitations⁴ as on 31 December 2008 were treated as 'fully covered' considering private wells also.

To cover rural population with individual piped water connections and for coverage of water quality affected habitations, the KWA fixed targets for coverage with effect from 2009-10 in accordance with the revised NRDWP norms. The physical targets and achievements of coverage of habitations were as given in Table.

Target and achievement in respect of coverage of habitations

Year	Target	Achievement	Percentage of achievement
2009-10	362	153	42.27
2010-11	744	389	52.28
2011-12	824	221	26.82
2012-13	696	371	53.30

Source: Data furnished by the KWA

It was observed that KWA could not achieve the targets fixed in any of the four years covered under audit. Lack of definite work execution plan and consequent delay in implementing schemes led to denial of potable drinking water to a large segment of rural habitations in the State. The KWA attributed non-achievement of targets to unexpected problems including slow down of works during monsoon season, issues of land acquisition, paucity of funds etc.

Audit analysis of the impact of the programme showed that despite the Guidelines 2000 specifying norms of 40 lpcd of potable drinking water, by the end of 2012-13, only 76 lakh beneficiaries could be provided with 40 lpcd of potable drinking water which was only 30 per cent of the total rural population of 2.55 crore.

According to the information updated by the KWA on the website of DDWS, out of 11883 habitations the State has 859 'fully covered' habitations, 2715 'not

4 Reassessed as 11883 in 2009-10

covered' habitations and the remaining are with 'partially covered' status while adopting the revised norm⁵. This indicates that State has long way to go in achieving the objectives of the programme and the programme could not bring substantial impact in providing potable drinking water to the rural population.

Programme Implementation/Execution of works (2.4.8)

According to the NRDWP guidelines, for a three-year project period, the activities are to be sequenced and a detailed project implementation schedule has to be developed. At the beginning of 2008-09, there were 92 ongoing schemes and KWA took up 95 new schemes, during the period 2008-2013. Out of these 187 schemes, the KWA has completed only 34 schemes.

In the five districts selected for detailed scrutiny, 12 executive divisions implemented 74⁶ schemes during the review period. These schemes were intended to benefit a population of 24.39 lakh, but only 3.98 lakh could be covered due to partial completion of some of the schemes and the stipulated time for completion was over in respect of 45 schemes. Audit scrutiny of 32 schemes out of the above 74 schemes revealed the following.

- Out of these 32 schemes, nine schemes were completed, three were dropped subsequently due to land not being provided by the PRIs as assured, inadequate source, etc., and 20 schemes, including 11 major comprehensive water supply schemes extending to more than one village, remained incomplete.

- The nine schemes completed were also not completed within the stipulated project period of three years. In fact, six of the nine schemes had delays ranging from three to 10 years and Water Supply Scheme (WSS) to Paleri was completed after curtailing the distribution system. In five schemes⁷, there was a cost escalation of ₹6.12 crore.

- Delays (five to 60 months) in according Technical Sanction and consequent delay in tendering were noticed in 14 schemes. Similarly, in nine works under three schemes, five to 18 months were taken to finalise the tenders.

5. 55 lpcd with effect from 1 April 2013

6. On-going schemes: 43, Newly taken-up: 31

7. (i) ARWSS to Kanjikuzhy, (ii) ARWSS to Paleri, (iii) ARWSS to Pallivasal, (iv) ARWSS to Erattayar and (v) ARWSS to A.R. Nagar

- In five schemes, the works were delayed (from five to 13 years) due to delay in obtaining possession of land or non-availability of land. In five schemes, the works were initiated without obtaining required permission from National Highway Authority, Railways and Public Works Department of the State and the works were forced to stop mid-way.

The above observations indicate that the KWA is very weak in project management using established project management tools⁸ like PERT chart, CPM, Gantt chart, etc., in prioritizing and scheduling of schemes.

Impact of 11 major schemes (out of 32), which failed to provide drinking water to the rural population much beyond the specified period of completion is given in succeeding paragraph along with a brief description of the status of the schemes and the reasons for non-completion given in Appendix-III.

Impact of incomplete schemes (2.4.8.1)

While implementing major schemes, the KWA should have ensured hindrance free execution of each components of the scheme for timely completion, by proper planning and adequate feasibility study. Audit noticed serious lapses in ensuring water sources, possession of land, etc., which led to delayed implementation of the 11 major schemes and subsequent revision of estimated cost of the project from ₹132.80 crore to ₹201.77 crore. It also denied the benefit of potable drinking water to a large segment of rural population (the schemes were estimated to benefit about ten lakh people over a period of two decades). So far, ₹114.63 crore has been incurred on these schemes.

Audit visited the site of the source of Comprehensive Accelerated Rural Water Supply Scheme (CARWSS) to Vandanmedu and Anakkara villages. The site visit revealed that the flow of the water in the river was very meagre (May 2013) and the two pump sets purchased for pumping raw water to the water treatment plant (WTP) were lying idle in the pump house. The site and building of WTP were in an abandoned state with doors and windows missing. The motor pump sets installed (four numbers) were removed; all the mechanical and electrical equipments installed were also removed. As the construction of the weir at the water source is a remote possibility, the expenditure of ₹5.19 crore incurred so far remained unproductive.

8. PERT-Programme Evaluation Review Technique, CPM - Critical Path Method, Gantt chart -named after Henry Gantt who designed this chart

Schemes completed by reducing components (2.4.8.2)

Escalation of cost due to delayed execution led to curtailment of distribution system in two schemes examined by audit with a design population of 87250. In Comprehensive Water Supply Scheme (CWSS) to Manimala and adjoining villages and Accelerated Rural Water Supply Scheme (ARWSS) to Paleri, the distribution systems were curtailed to 15 per cent and 37 per cent respectively, due to cost escalation and consequent insufficiency of fund after executing other components of the schemes. Executive Engineers of the respective divisions accepted the Audit observations and stated that importance was given to major components of the scheme instead of distribution system. Curtailing of distribution system resulted in denial of potable drinking water to a population of 56545.

Audit also noticed that due to delayed execution and subsequent revision of estimated cost, some of the components (in most cases the distribution system and connected components) had to be dropped to limit the expenditure within the original sanctioned amount. These components were arranged separately after fresh approval of SLSSC and after according fresh Administrative Sanction (AS). In five schemes⁹, the cost escalation due to re-arrangement worked out to ₹18.45 crore.

Coverage for Scheduled Caste (SC)/Scheduled Tribe (ST) habitations (2.4.9)

To accelerate the assured availability of potable drinking water on a sustainable basis in SC and ST dominant habitations, the State has to earmark at least 25 per cent of the NRDWP funds for drinking water supply to the SC dominated habitations¹⁰ and a minimum of 10 per cent for the ST dominated habitations¹¹. In the state, the funds are released to the concerned District Collectors for implementation of water supply schemes for the SC/ST habitations.

Financial performance (2.4.9.1)

Based on the release of funds for implementing NRDWP, ₹265.05 crore had to be released for water supply schemes intended for SC/ST beneficiaries, during 2008-2013. But the KWA released only ₹90 crore to the District Collectors for the

9 WSS to Kumily, ARWSS to Naripatta, ARWSS to Valayam, ARWSS to Kayakodi, ARWSS to Thevalakkara & Thekkumbhagam

10 Habitations in which more than 40 per cent of the population belongs to SC

11 Habitations in which more than 40 per cent of the population belongs to ST

purpose. The utilisation of funds available with the District Collectors was poor (ranging from 40.66 per cent to 68.83 per cent) owing to lack of schemes and other implementing agencies¹² executing drinking water supply schemes in SC/ST habitations. The under-utilisation resulted in retention of heavy unspent balance at the end of each year, varying from ₹1.18 crore to ₹3.36 crore. Audit noticed that neither the KWA nor District Collectors took steps to assess the requirement of drinking water supply schemes and funds for implementing the schemes to avoid blockage/under-utilisation of funds meant for SC/ST habitations. Non-utilisation/under-utilisation of funds led to GOI reducing its releases in subsequent years. Further, improper utilisation led to incurring of extra expenditure by State Government for which GOI funds could not be obtained. Audit observations on the above points are detailed in the succeeding paragraphs.

The special Treasury Savings Bank account of the District Collector, Kottayam remained non-operative from November 2007 to November 2011 as no schemes were taken up during the period. In the event of non-utilisation of funds earmarked for implementing NRDWP under SC/ST habitations, the funds should have been remitted back to NRDWP fund. The account was closed in accordance with the directions of Principal Secretary, Finance Department and the balance in the account amounting to ₹17.74 lakh was credited to the State Government Account instead of remitting back to NRDWP fund in violation of the guidelines.

The KWA requires utilisation certificates with statement of expenditure and vouchers in respect of expenditure incurred by the District Collectors for funds utilised for SC/ST habitations. In the test-checked districts, the Collectors were not furnishing utilisation certificates with statement of expenditure and proper vouchers. The Principal Accountant General (G&SSA), Kerala disallowed ₹19 crore in 2008-09 and 2009-10 while certifying the accounts of NRDWP and resulted in incurring of extra expenditure by State Government to that extent, for which GOI funds were not obtained.

Physical performance (2.4.9.2)

Out of the total 11883 habitations identified, 201 were SC dominated and 108 were ST dominated. The district-wise number of schemes taken up for implementation and completed was as given in **Table**.

12. Local Self-Government Institutions

Details of schemes taken up for implementation and completed

Districts	No. of ongoing schemes as on 1 April 2008	No. of new schemes taken up during 2008-09 to 2012-13	Total	No. of cancelled / abandoned schemes	No. of completed schemes	No. of ongoing schemes as on 31 March 2013	Percent age of comple tion
Kozhikode	23	8	31	-	10	21	32.26
Idukki	6	45	51	11	22	18	43.14
Kottayam	1	7	8	1	7	0	87.50
Malappuram	13	29	42	8	19	15	45.24
Kollam	10	80	90	-	66	24	73.33
Total	53	169	222	20	124	78	55.86

Source: Compiled from data furnished by the KWA

Detailed audit scrutiny revealed that barring Kottayam and Kollam districts, performance of other districts in taking up schemes in SC/ST habitations and executing it in timely manner was poor. The District Collector, Kottayam stated that inspite of repeated reminders, no proposals were received from the implementing agencies and the Local Self-Governments, possibly because other implementing agencies might have implemented their own drinking water supply schemes for SC/ST beneficiaries. Audit also observed that though the schemes taken up in SC/ST habitations were comparatively smaller in magnitude there was inordinate delay in execution of the schemes, as detailed below.

Out of 222 schemes ongoing and newly taken up for SC/ST habitations, in five selected districts, audit examined 52 schemes and deficiencies were noticed in 42 schemes. They are summarised as follows:

- Ten mini water supply schemes¹³, which were to be completed within two to eight months, took 16 to 44 months for completion.
- Two schemes were not taken up for implementation even though AS was issued in March 2005 /January 2010.
- Fifteen schemes were dropped/proposed to be dropped after issue of AS due to reasons such as non-availability of required land, non- feasibility, insufficient yield of source, etc.
- Fifteen schemes due for completion within two to 12 months after issue of AS, remained incomplete with delays¹⁴ ranging between 16 months and 11 years.

Department of Drinking Water Supply, GOI observed (February 2012) that the progress of works was not satisfactory and major part of the funds released had not been utilised by the State Government. The KWA promised to have a better coverage of SC/ST habitations in 2012-13. But the performance did not improve. As there is more than one agency implementing drinking water supply schemes in SC/ST habitations, to avoid blocking of funds with District Collectors, convergence of schemes of various implementing agencies should be ensured by the KWA.

Coverage for water quality affected habitations (2.4.10)

The World Health Organisation attributed 88 per cent¹⁵ instances of diarrhoea to unsafe water supply and inadequate sanitation practices in the world. Since well water is the major source of drinking water in Kerala, bacterial and chemical contamination in drinking water are high. According to the Ministry of Drinking Water and Sanitation, GOI, Kerala has the highest chemical and bacterial contaminated drinking water in the country. Test results of KWA revealed that nearly 34 per cent of the total tested sources in Kerala have been contaminated with presence of iron, fluoride, salinity, nitrates, arsenic and bacteria. The details of water quality affected habitations at the beginning of each year were as given below:

13. These minor schemes were required to be completed within a span of 2 to 12 months of issue of AS
 14. Vengakalathi SC colony in Kakkur Panchayath in Kozhikode district for more than 11 years, another six schemes for more than six years and remaining eight schemes for more than 16 months as of March 2013
 15. Data taken from Economic Review, 2012

Details of affected Habitations (out of 11883 habitations)

Year	Fluoride	Iron	Salinity	Nitrate	Total	Percentage of affected habitations
1 April 2009	172	1291	335	81	1879	16
1 April 2010	109	662	194	53	1018	9
1 April 2011	109	623	191	46	969	8
1 April 2012	106	585	186	57	934	8
1 April 2013	106	564	167	56	893	8

Source: Website of Department of Drinking Water & Sanitation, GOI

The above table shows that the percentage of the affected habitations in Kerala came down from 16 to eight per cent during the review period.

Audit scrutiny revealed that out of ₹162.77 crore available during 2008-2013, for utilisation under water quality program, the KWA could spend only ₹42.19 crore (26 per cent). Though the SLSSC sanctioned seven schemes costing ₹38.20 crore during 2008-09 to 2012-13, none of them were taken up for implementation during the period. This shows there was inadequate effort on the part of the KWA in providing safe drinking water to rural population, even when sufficient funds were available.

In the SLSSC meeting (June 2010) the Principal Secretary, Water Resources Department, suggested to cover all 1018 quality affected habitations within two years so that the number of quality affected habitations was brought to nil. But, at the end of three years (31 March 2013), 893 habitations still remained to be covered. The KWA stated that directions were issued (October 2013) to all Chief Engineers to give top priority and to prepare projects to cover all the quality affected habitations in a phased manner.

Though a considerable section of population was affected by water quality problem, achievement in respect of schemes for coverage of quality affected habitations was poor during the period covered under audit.

Sustainability of water sources (2.4.11)

Guidelines of NRDWP, 2000 regarding sustainability of water sources stipulate a number of steps, which would facilitate the sustainability of ground water in a more scientific manner. A two-pronged strategy was to be adopted to regulate indiscriminate withdrawals and to adopt appropriate measures for augmenting its recharge through spreading techniques in alluvial areas, check-dams and percolation tanks, nalla bunding, contour bunding, contour trench, surface-channels, etc. Besides, direct injection methods utilising the abandoned structures available in large numbers in the hard rock region were prescribed. According to the guidelines 20 per cent of the NRDWP funds need to be utilised for source sustainability activities. Audit observed that against the released fund of ₹89.92 crore, only ₹24.16 crore (27 per cent) was utilised during the period covered under audit. Audit further noticed that:

- Though 20 schemes were sanctioned by the SLSSC during the period 2008-2013, only four schemes were taken up and completed in the State.
- No schemes were taken up for infiltration rings, recharge pits, percolation tanks, injection wells, etc., during the five year period.
- In the test-checked districts, no schemes for sustainability of sources were taken up during the period 2008-2013.

The KWA stated that the works related to ground water recharge were being carried out by Ground Water Department.

As the physical and financial performance was poor, the DDWS observed that the KWA Engineers, in general, did not have adequate capacity to understand and design sustainability structures. Further the Hydro-Geo-Morphological (HGM) maps already available with the State Ground Water Department were not being used. DDWS also recommended (October 2011) immediate two day training programme for about 30 Engineers on usage of HGM maps. However, the KWA did not furnish the details of training, if imparted.

In the light of above remarks of DDWS, the KWA transferred ₹ 5.00 crore (out of the total provision of ₹8.08 crore in 2012-13) to Kerala Rural Water and Sanitation Agency¹⁶ (KRWSA) for carrying out source sustainability activities. The KWA stated that based on objection from GOI, KRWSA was requested to refund the unspent balance for works for which AS were not issued and to submit Utilisation Certificates for works carried out. Audit observed that the details of schemes implemented and expenditure incurred by KRWSA were not available with the KWA. As sanctioned schemes were not taken up for source sustainability, water security in the various sources could not be ensured.

Water Quality Monitoring and Surveillance (2.4.12)

The National Water Quality Monitoring & Surveillance Programme (WQM&SP) launched in February 2005 was merged with NRDWP and modified to be implemented with effect from 1 April 2009 with institutionalisation of community participation in the programme.

Setting up of laboratories (2.4.12.1)

Water quality surveillance requires strong and effective organisational framework for assessing the safety and accessibility of water supplied to the people. Laboratories are to be set up at three levels—a nodal unit at the top level, intermediary level units like district laboratories and grassroot level units. The Manual (Implementation Manual on WQM&SP) stipulates that the surveillance agency may be separate from the water supply agency; alternatively there may be two separate wings of the rural water supply department. There are 14 district laboratories in the state. State Referral Institute (SRI) established at Ernakulam (February 2009) acts as the nodal unit in the state. Audit observed that:

- Mandatory accreditation from 'National Accreditation Board for testing and calibration Laboratories' (NABL)/appropriate agency of GOI required for SRI, has not been obtained till date (July 2013), as no steps in this regard were initiated by the KWA.

- Though SRI was formed with statewide jurisdiction, it had the administrative control of only two¹⁷ district laboratories and all other districts laboratories were under the administrative control of three quality control

15. Agency entrusted with implementation of rain water harvesting programme

17. Ernakulam and Idukki

divisions¹⁸ of the KWA. Hence, the performance of only two district laboratories was monitored and reported to this institute. This system not only defeated the uniformity in functioning of the laboratories but also violated the Manual provisions. Besides, certain kind of surveillance and tests like analysis of heavy metal, toxic elements, pesticides, etc., were available only in SRI and hence the programme suffered as comprehensive assessment of water quality was not available at the district laboratories.

- Under NRDWP, the State has to establish water testing laboratories at sub-divisional level to carry out the enormous task of water quality monitoring by checking one sample per 200 people. Out of the 16 sub-divisional laboratories formed in the State, 15 of them were attached to district laboratories using the same premises and manpower and no separate infrastructure and technical facilities were created.

- With the existing 30 laboratories at district and sub-divisional level, at the rate of 3000 samples per laboratory, only 30 per cent of 297121 representative sources (December 2013) could be covered annually. Executive Engineer, Quality control Division, Kozhikode stated that the present facility was not sufficient and setting up of 11 additional sub-divisional laboratories under the Divisions was proposed.

Water quality testing (2.4.12.2)

As per the norms stipulated in the Framework for Implementation of NRDWP Guidelines, all drinking water sources should be tested at least twice in a year for bacteriological contamination and once in a year for chemical contamination. District laboratories have to test at least 30 per cent of water samples tested at Grama Panchayath (GP) level and all cases where possibilities of contamination were reported by the community. Ten per cent of all samples including all positively tested samples tested by district laboratories are to be confirmed at state level. In this regard, audit observed as under.

- One time testing of all the sources in the state was not completed even during the five year period. Out of 297121 sources, 115716 (39 per cent) sources could be tested so far (December 2013). Of these, 27052 sources were found chemically contaminated and 36135 sources bacteriologically contaminated.

18. Ernakulam, Kozhikode and Thiruvananthapuram

The district laboratories did not check any sample at GP level by using Field Test Kits (FTKs) against at least 30 per cent to be done by them for confirmation and no samples were referred to SRI by district laboratories. Thus, cross checking of water quality was not done at any level.

Water Safety Plan and Sanitary Survey (2.4.12.3)

Water safety plan prescribed by the Framework for Implementation of NRDWP guidelines links identification of water quality problem with a water safety solution. It includes both water quality testing and also sanitary inspection to determine appropriate control measures. For the successful implementation of WQM&SP, data generated through monitoring shall be linked with mitigatory/preventive measures and rechecking of the quality after taking preventive action. Surveillance requires a continuous and systematic programme of sanitary inspection and water quality testing. Sanitary survey should be carried out once in a year for all the drinking water sources in the state. Sanitary inspections are intended to provide a range of information and locate potential problems.

Under Nirmal Bharath Abhiyan, the State had achieved 100 per cent against the target of providing individual household latrines (IHHL) under BPL/APL households, schools and anganwadis. In spite of this good performance, presence of E-Coli and Coli form bacteria was found in most of the water sources tested for biological contamination, due to high density of septic tanks/latrine pits and drinking water sources. Out of the 28985 sources tested in 2012-13, E-Coli and Coli form contamination was found in 5145 and 19156 sources respectively.

Sanitary survey as envisaged in the Guidelines for National Rural Drinking Water Quality Monitoring & Surveillance Programme, 2006 was not conducted so far and this adversely affected the preparation of the Water Safety Plan and exposed the population to biological contamination.

Field Test Kits (2.4.12.4)

In the State, Communication and Capacity Development Unit (CCDU) under the Water Resources Department conducts water quality monitoring using Field Test Kits (FTKs). The main objective of the FTKs was to obtain a preliminary

report on quality of water with basic chemical and bacteriological parameters. The guidelines envisaged financial sustainability through full cost recovery of operation and maintenance of FTKs by community contribution at Rupee one per family per month. The amount so collected was to be deposited in the account of the Village Water and Sanitation Committee (VWSC). Audit observed that VWSCs were not constituted in any of the GPs in the State defeating the objective of community participation. The target and achievement of water quality monitoring by using FTKs for the period 2010-2013 was as given below:

Target and achievement of water quality monitoring

Year	Target	Achievement	Shortfall (-)/Excess (+)
2010-11	400000	11059	(-)388941
2011-12	149275	151221	(+)1946
2012-13	171150	54086	(-)117064

Source: Information furnished by the CCDU

In response to audit observation on shortfall in achievement, the Director, CCDU stated that the shortfall was due to delay in approving the action plan and consequent delay in procuring the FTKs and conducting training programmes.

During 2008-2013, CCDU procured 5200 number FTKs for testing 520000 water samples at the rate of 100 samples per FTK and 50100 number of H₂S¹⁹ strips for analyzing bacteriological contamination at one sample per strip. As the bacteriological contamination testing was required twice in a year, procurement of only 50100 H₂S strips (only 10 per cent of the possible FTKs test) was inadequate.

The KWA stated that proposal for providing infrastructure to sub-divisional laboratories had been included in the Annual Action Plan and the implementation was under progress. Action was also taken to improve the infrastructure facilities of the Quality Control laboratories in order to achieve the envisaged targets.

According to the guidelines, GOI has to assess the quality of implementation of the program (WQM&SP) by sending review missions. Also, State/district level officers should conduct regular field inspections, and quarterly review of the progress at block level should be carried out. State Water Sanitation Mission should conduct review of the programme in the district once in six months. Audit scrutiny revealed that no programme assessment/inspection/review at any level was conducted in the State during 2008-2013. Director, CCDU stated that CCDU as part of its regular activities, monitors the implementation of the programme in the State, and since it is an internal activity, no reports have been prepared and filed. This statement is not acceptable as NRDWP guidelines stipulated specific review process at various levels.

Operation and Maintenance (2.4.13)

NRDWP Guidelines (2010) specify that State Government or its agencies may shoulder the responsibility of bulk metered transfer of water, its treatment and distribution up to the village, whereas inside the village, it is the PRI or its subcommittee to take over the responsibility for in-village drinking water management and distribution. The existing water supply systems had to be transferred to communities and PRIs for management, operation and maintenance. The KWA prepared a list of 1050 single Grama Panchayath schemes in November 1998 for handing over to the respective PRIs consequent on decentralised planning and has transferred 229 schemes till date (June 2013). The status of single Panchayath schemes was revised during 2010-11 and 1076 schemes were identified for transfer to PRIs. Audit observed that, during the five year period, out of the total funds of ₹93.16 crore available for operation and maintenance, the KWA transferred (2012-13) only ₹3.02 crore to 25 Grama Panchayaths for 45 schemes.

In the exit meeting, the department stated that the local bodies were not willing to take over the completed schemes for operation and maintenance as they lacked technical and financial capability to run the schemes.

Monitoring and Evaluation (2.4.14)

(i) Functioning of State Level Scheme Sanctioning Committee (SLSSC) As stipulated in the guidelines, SLSSC was constituted for sanctioning new schemes

and for reviewing the progress, completion and commissioning of the schemes approved earlier. Though the committee convened one meeting in each year (against the stipulation of two meetings) to discuss AAP, review of long pending schemes was not carried out in the meeting. The KWA stated that monitoring and evaluation of the schemes were also being carried out during the meeting where financial details of the ongoing schemes were discussed. However, the minutes of the meeting do not support the argument of the KWA and effective steps proposed to be taken to complete the delayed schemes were not evident from the minutes.

(ii) Monitoring and evaluation study by Central and State According to the guidelines, GOI and State Government should take up an independent monitoring and evaluation study on implementation of the programme, through reputed organisations/institutions, from time to time and the reports of these studies should be made available to the department for immediate corrective action. Such an evaluation study has not been conducted by the Central and the State.

(iii) State Water and Sanitation Mission As a step towards achieving co-ordination and convergence among State Departments dealing with water supply, sanitation, education, health, etc., a State Water and Sanitation Mission (SWSM) was to be set up at the State level to provide policy guidelines, co-ordination with various State Government Departments and other partners. SWSM is also responsible for monitoring and evaluation of physical and financial performance besides management of the water supply and sanitation schemes. Audit observed the following:

- Though a State Water and Sanitation Mission was formed by the State Government in January 2004, activities as envisaged in the guidelines were not performed by the Mission. Project formulation, co-ordination with other implementing agencies, monitoring and evaluation, etc., were carried out by the KWA.

- State Water and Sanitation Committee, the apex body of the Mission constituted in 2004, was reconstituted in 2007, 2009 and 2010. Though the Committee met only twice during 2008-2013, evaluation of long pending schemes, steps for improving the implementation process, etc., were not discussed in the meetings.

The KWA stated that most of the members of SWSM Committee were present in the SLSSC. However, the fact remains that envisaged role of SWSM was not carried out by SLSSC.

Conclusion (2.4.15)

To provide every rural person with water for drinking, cooking and other domestic basic needs, a national water supply and sanitation programme was introduced in the country. Though, a five year rolling plan with sub-goals and priorities for each year was mandatory, only AAP with yearly targets was prepared. In schemes involving several components, failure to plan and synchronize resulted in delayed commissioning of the schemes. Audit analysis of the impact of the programme revealed that despite the Guidelines 2000 specifying norms of 40 lpcd of potable drinking water, by the end of 2012-13, only 76 lakh beneficiaries could be provided with said quantity of potable drinking water, which worked to only 30 per cent of the total rural population of 2.55 crore. The challenges before the Government become all the more acute when faced with the heightened norms of providing piped water with quality to each household and higher norms of 55 lpcd.

Delayed execution of 11 major schemes resulted in cost escalation and denial of potable drinking water facility to 10 lakh rural population. Poor progress was noticed in respect of schemes implemented for coverage of quality affected habitations and for sustainability of waters sources. Out of the 16 sub-divisional laboratories formed in the State, 15 of them were functioning without separate infrastructure and technical facilities. Though a State Water and Sanitation Mission was formed, activities as envisaged in the guidelines were not performed. Effective monitoring and evaluation by State Level Scheme Sanctioning Committee or evaluation study by Central/State Government was absent during the period covered under audit.

Recommendations

- The KWA should prepare a comprehensive rolling plan for according priority for completion of schemes already taken up.
- In view of the criticality of the water quality problems, the KWA should accord priority to cover all quality affected habitations in providing safe drinking water to rural population.
- Government should urgently formulate and execute schemes for sustainability of water sources to ensure water security in the State.

- The State Water Supply and Sanitation Mission should function to ensure greater co-ordination and convergence among various departments, besides carrying out other activities as envisaged in the scheme guidelines.

[Audit paragraph 2.4.7 to 2.4.16 contained in the Report of Comptroller and Auditor General of India for the year ended 31st March 2013 (General & Social Sector)]

14. The Committee expressed its strong dissatisfaction over the irresponsible attitude of the Water Resources Department in submitting the action taken report within stipulated time. The Committee pointed out that the same paragraph had been taken into consideration on 29-11-2017 though the action taken reports had not been submitted by the department at that time and it was decided to postpone the discussion and directed the department to submit the report within one month. As the department could not provide a satisfactory reason for the delay in submitting RMT, the Committee expressed its displeasure over the careless attitude of the Department even after a period of six months from its previous meeting in which the Secretary herself assured of furnishing the RMT within one month. The Committee viewed the attitude of the Department as an insult to the Committee. The Secretary Water Resources Department expressed her apology for not furnishing the RMT within time and assured the Committee that utmost care would be taken on this in future.

15. Again the Committee expressed its dissatisfaction over the lackadaisical attitude of the Water Resources Department in not furnishing the Remedial Measures Taken Statements regarding the audit paragraphs 2.4.7 to 2.4.16 even at the time of Committee meeting. The Committee opined that the department should be more vigilant in submitting the statements before the Committee so as to avoid such lapses in future.

Conclusion/Recommendation

16. The Committee expresses its strong dissatisfaction over the lackadaisical attitude of the Water Resources Department in not furnishing the Remedial Measures Taken Statements regarding the audit paragraphs 2.4.7 to 2.4.16 even at the time of Committee meeting and directs that the department should be more vigilant in submitting the statements before the Committee so as to avoid such lapses in future.

Failure to implement Jalamani Programme for providing safe drinking water facility to rural school children (3.10)

Despite availability of funds, Jalamani programme, specifically intended for improving the supply of quality of potable water to the students of rural schools, could not be implemented even after four years due to lack of co-ordination among various agencies.

Jalamani programme, a 100 per cent Centrally Sponsored Scheme (CSS), was launched (2008) by Government of India (GOI) with the objective of providing potable and adequate quantity of drinking water to students in rural schools by installing a standalone water purification system. GOI sanctioned (January 2009) ₹2.56 crore for installation of water purification system in 1282 schools in the State and the entire amount was released to the State Government/Kerala Water Authority (KWA) in March 2009.

On receipt of the funds, in a meeting convened (March 2009) for implementation of the project by Additional Chief Secretary with the Secretary General Education Department, Managing Director-KWA, State Project Director Sarva Siksha Abhiyan (SSA) and the Director of Public Instruction, it was decided that the General Education Department (GED) would identify 1282 rural schools on or before 15 April 2009 and report to KWA, the nodal agency for implementation of the project. The GED did not furnish the required details despite repeated efforts made by KWA.

Meanwhile, a State Level Implementation Committee (SLIC) under the chairmanship of Additional Chief Secretary, Water Resources to review/monitor the pace of implementation and a Technical Committee under the Chairmanship of Secretary, Water Resources to finalise appropriate system and to invite tenders were constituted (June 2009) in accordance with the scheme guidelines. As the list of schools with the required details was not furnished by GED, KWA identified 502 schools for the implementation of the scheme in the first phase and the list was approved (March 2010) by the Technical committee.

Tenders were invited (August 2010) and supply orders (January 2011) were issued to two firms viz. M/s. Membrane Filters (India) Pvt. Ltd and M/s. Amara Aqua Systems for the installation of water purifiers in 396 and 106 schools respectively. But, the second firm did not respond to the work order.

M/s. Membrane Filters completed (April 2012) installation work in 388 schools. Against a release of ₹1.44 crore, the KWA incurred an expenditure of ₹0.27 crore and a balance of ₹1.17 crore is lying with KWA. In addition to the above, an unspent balance of ₹1.12 crore lies with the State.

For the second phase KWA reminded (January 2011) the agency implementing the SSA to furnish the list of the remaining schools. However, they provided the list only in December 2011. Tenders were invited for installing the purification system in 886 rural schools (March 2012). The tender was cancelled (February 2013) as only one firm participated in the tender and their systems were not having the stipulated efficiency. After deliberations, the High level Technical committee of the KWA short listed (July 2013) three firms for the second phase and systems were installed by M/s Eureka Forbes in 148 schools (January 2014).

Audit noticed that the SLIC failed to co-ordinate the various implementing agencies such as GED, SSA and KWA and monitor the pace of implementation of the scheme. There were delay on the part of GED to provide the list of needy schools and KWA to identify the best water purification system in the market. Thus, the laxity on the part of SLIC, GED and KWA resulted in undue delay in implementation of a 100 per cent CSS for more than four years, besides depriving the benefit of potable drinking water facility to the students in rural areas, despite the availability of sufficient funds.

Government stated (August 2013) that earnest effort were being taken to utilise the funds allotted by GOI for implementation of Jalamani programme and it would be completed within six months and thereby students in rural schools would have access to safe drinking water.

The fact remains that the systems were installed only in 536²⁰ out of the 1282 rural schools envisaged.

[Audit paragraph 3.10 contained in the Report of Comptroller and Auditor General of India for the year ended 31st March 2013 (General & Social Sector)]

Notes furnished by the Government on the above audit paragraphs are included as Appendix-II.

17. The Committee enquired about the present status of 'Jalamani Programme' intended for improving the supply of quality of potable water to the students of rural schools. The witness Technical Member Kerala Water Authority replied that Government of India had sanctioned ₹2.56 crore for installation of water purification system in 1282 schools but it had been installed only in 886 schools. He deposed that many schools were not ready for implementing 'Jalamani Programme' because the schools alone were responsible for the electricity bill and they had to find out the place for the installation of water filter.

18. The Committee asked why the Water Authority didn't take initiatives to prepare an agreement with the beneficiaries. The witness explained that the list of schools for implementing the 'Jalamani Programme' was prepared and provided by the DPI. But the Water Authority had not signed any agreement with the DPI.

19. The Committee suggested that for proper implementation and monitoring of any project it was better to make an agreement between the department and the Local Self Government.

20. To a query of the Committee the witness informed that about 57% of water purifier had been installed at schools which were functioning and spent ₹98 lakh out of ₹2.56 crore and the balance amount was parked at department's account. The Accountant General asked about the refund of balance amount and the witness replied that GOI had demanded return of the balance amount. The Committee enquired about the AMC period of installed water purifier and then the witness informed that it was 5 years. The Committee opined that the Water Authority should have conducted proper meetings before the installation of purifier to prepare proper plans and to discuss various aspects like quality, guaranty period, AMC, etc. A monitoring mechanism involving the local bodies and PTA should be framed and necessary agreements had to be executed.

21. The Committee opined that due to the lack of proper planning this project could not be implemented in all schools. The Committee advised the Department not to stop the 'Jalamani Project' and suggested that the scheme should be implemented with the collaboration of local bodies. The Committee insisted the department to make necessary interactions with GOI to avoid lapse of grants for like schemes.

Conclusion/Recommendation

22. The Committee opines that before the installation of water purifier in schools and similar schemes the Water Authority should conduct proper meetings to prepare plans and to discuss various aspects like quality of the system, guaranty period, AMC, etc. A monitoring mechanism involving the local bodies and PTA should also be framed and necessary agreements should be executed in this regard. The Committee opines that due to lack of proper planning the project, Jalamani Programme could not be implemented in all schools. The Committee urges the Department not to stop the project but to extend the scheme to all schools by involving local bodies.

23. The Committee suggests that for proper implementation and monitoring of any project it is better to make an agreement between the department and the Local Self Government. Also the Committee insists the department to make necessary interactions with GOI to avoid lapse of grants for schemes like 'Jalamani Programme'.

Inordinate delay in implementation of a Water Supply Scheme (3.11)

Formulation of a water supply scheme by Kerala Water Authority without consulting Panchayath authorities resulted in an unfruitful expenditure of ₹37.83 crore.

Government accorded sanction (September 2007) for Water Supply Scheme to Payyannur Municipality under the Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) at an estimated cost of ₹40.19 crore. The amount was to be shared by the Government of India, State Government and Payyannur Municipality in the ratio 80:10:10. The scheme was intended to benefit a population of 95009 in Payyannur Municipality and was scheduled to be completed by December 2010. While water for the scheme was to be drawn from the upstream of Kuppam river at Mangara in Chapparappadavu Panchayath, the beneficiaries were the people of Payyannur Municipality.

Tenders were invited by dividing the scheme into six²¹ packages. All the packages, except package IV, were started in March 2009. The package IV was not commenced as the tenders were cancelled due to quoting of higher rates. The

21. Package I: Intake well cum pump house and pumping main; Package II: 14 MLD water treatment plant and GL sump; Package III: Gravity Main; Package IV: Construction of Weirs; Package V: Distribution network; Package VI: Supply and erection of generator, transformers and pump set and road restoration works

work of package I (Intake well-cum Pump house) and package II (Treatment plant) which commenced in March 2009 were forced to stop in June/November 2009 after incurring an expenditure of ₹6.48 crore due to public protest against the construction of an open well at the source fearing drying up of river water and salinity intrusion. The works on packages III and V, however, were continued and an expenditure of ₹31.35 crore was incurred (December 2013).

A series of discussions with the local people at various levels were held and a consensus was reached in July 2012 to change the source to Kadumkayam, about two kilometers downstream. It was also decided to construct a regulator-cum-bridge at Kattampally Kadavu to prevent salinity intrusion. However, it was not materialised. It was also noticed that the Secretary of the Panchayath warned (October 2013) the Executive Engineer, Kannur Division, KWA against resuming construction in that area. The entire work remained standstill after incurring an expenditure of ₹ 37.83 crore.

Audit noticed that Kerala Water Authority (KWA) had not done any consultation with the Panchayath authorities where the source of water is situated. As the source of water and the beneficiaries of the scheme were under two different Local Self Government Institutions, the lack of consultation between KWA and the Panchayath resulted in difficulties in implementing the scheme.

Government stated (August 2013) that the progress of the work was affected due to protest from the local people which was totally unexpected. It was also stated that the practice of getting prior permission from the Panchayath concerned, where intake structure was located in rivers, flowing through different Panchayaths would be a major hurdle in planning water supply projects. Government added that the Administrative Sanction was accorded by the Local Self-Government Department and hence no separate discussion was conducted with the Panchayath while preparing the Detailed Engineering Report.

However, the fact remains that, due to lack of consultation prior to firming up the source which is the most critical part of the scheme, the expenditure of ₹37.83 crore incurred remains unproductive. The possibility of deriving intended benefit out of the project in the near future appears to be remote in view of the Panchayath's stiff resistance.

[Audit paragraph 3.11 contained in the Report of Comptroller and Auditor General of India for the year ended 31st March 2013 (General & Social Sector)]

Notes furnished by the Government on the above audit paragraphs are included as Appendix-II.

24. While considering the audit observation about the unfruitful expenditure of ₹37.83 crore for the formulation of a Water supply scheme, the witness Technical Member, Kerala Water Authority informed that Government had accorded sanction for water supply scheme to Payyannur Municipality under the Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) and the amount was shared by the Central Government, State Government and Payyannur Municipality and the detailed report of UIDSSMT was submitted to the KSTP through the beneficiary Payyannur Municipality. He added that the tenders were invited by dividing the scheme into five packages as intake well, pumping main, plant, etc. and the agreement was signed within one month. The proposed source for the project was Appachikayam at Chapparapadavu in Kuppam river that was 26 km away from the beneficiary Municipality. But when the work for the intake well was started the local people of source Panchayat obstructed drawing of water from the river. After Minister level discussions it was decided to construct a Regulator-Cum-Bridge in the source and now a project was submitted to KIII·B for construction of RCB. However the water supply scheme at Payyannur was partially commissioned in 2016 using water from JICA scheme and currently many connections were given from the scheme. The Committee directed that the department should take urgent steps to complete the project at the earliest so as to reach the full benefit of the scheme to the people of Payyannur Municipality.

Conclusion/Recommendation

25. The Committee directs that the department should take urgent steps to complete the water supply scheme at Payyannur at the earliest so as to reach the full benefit of the scheme to the people of Payyannur Municipality.

Thiruvananthapuram,
3rd February, 2020.

V. D. SATHEESAN,
Chairman,
Committee on Public Accounts.

APPENDIX - I

SUMMARY OF MAIN CONCLUSIONS/RECOMMENDATIONS

Sl. No.	Para No.	Department Concerned	Conclusions/ Recommendations
1	9	Water Resources Department	The Committee opines that absence of long term planning and vision led to several schemes under NRDWP projects that started years back remain incomplete. Many projects are found to be dropped at various stages of their implementation and some are not even started owing to many reasons. The Committee directs the department to furnish a detailed report on the status of NRDWP schemes in the state.
2	10	Water Resources Department	The Committee concerns the issues related to shattering of pipes. It is observed that at the time of maintenance and widening of roads PWD ignores the problems of Water Authority. Nearly fifty percent of the project cost has to be provided to PWD towards road deformation.
3	11	Water Resources Department	The Committee suggests that possibility of using modern technology should be explored for laying water distribution pipes through roadside canals or Government properties rather than laying them through roads.
4	13	Water Resources Department	The Committee opines that as per the guidelines, GOI release for the programme fund under NRDWP shall be matched by the State Government release, but GOK released more funds than GOI share for operation and maintenance. The Committee points out that the KWA did not produce any documentary evidence in support of its statement that GOI had accepted the reason in principle. The Committee directs the department to furnish a report on the status of matching grant of NRDWP schemes through the years.

5	16	Water Resources Department	The Committee expresses its strong dissatisfaction over the lackadaisical attitude of the Water Resources Department in not furnishing the Remedial Measures Taken Statements regarding the audit paragraphs 2.4.7 to 2.4.16 even at the time of Committee meeting and directs that the department should be more vigilant in submitting the statements before the Committee so as to avoid such lapses in future.
6	22	Water Resources Department	The Committee opines that before the installation of water purifier in schools and similar schemes the Water Authority should conduct proper meetings to prepare plans and to discuss various aspects like quality of the system, guaranty period, AMC, etc. A monitoring mechanism involving the local bodies and PTA should also be framed and necessary agreements should be executed in this regard. The Committee opines that due to lack of proper planning the project, Jalamani Programme could not be implemented in all schools. The Committee urges the Department not to stop the project but to extend the scheme to all schools by involving local bodies.
7	23	Water Resources Department	The Committee suggests that for proper implementation and monitoring of any project it is better to make an agreement between the department and the Local Self Government. Also the Committee insists the department to make necessary interactions with GOI to avoid lapse of grants for schemes like 'Jalamani Programme'.
8	25	Water Resources Department	The Committee directs that the department should take urgent steps to complete the water supply scheme at Payyannur at the earliest so as to reach the full benefit of the scheme to the people of Payyannur Municipality.

Appendix-II
Notes Furnished by Government



GOVERNMENT OF KERALA
Water Resources (WS-B) Department

Action Taken Statement on para 2.4.1 to 2.4.6 contained in the Report of C&AG (General & Social Sector) for the year ended March 2013

Para No.	Recommendations of the Committee	Action Taken
2.4.1 to 2.4.4	Introduction, Audit objectives, Audit Criteria, Scrop and Audit Methodology.	KWA is implementing the NRDWP Schemes as per the guidelines of GoI.
2.4.5	Absence of long term planning and vision lead to several schemes started years back remaining incomplete. Adequate schemes were not planned and implemented for sustainability of sources and water quality.	NRDWP is a major programme of Government of India under which rural water supply coverage is achieved in each state. The schemes in the NRDWP are selected in the State Level Scheme Sanctioning Committee (SLSSC). The project sanctioned under NRDWP for each year is based on the allocation of the relevant years. Eventhough there was slow in the progress of schemes under NRDWP special emphasis is now given for the completion of the ongoing schemes by preparing road map for the completion and proper monitoring of the progress of the schemes. The Schemes under NRDWP are expected to be completed within three years subject to availability of funds, availability of adequate land and support from the public.
2.4.6.	Audit assessed the State's share due to KWA fund and observed that the KWA neither maintained any records in respect of State share due nor claimed proportionate State share with reference to the funds release orders of GOI. Further, according to the guidelines, the State Government was required to	As per the guidelines of NRDWP, the basis of Central and State share for coverage is 50:50. Le GoK shall invest at least an amount equal to GoI share as State Share for the coverage of rural habitations. In this regard, it may be noted that for the coverage of rural population, the State invests much more fund than that of the Central release. The investment of State fund is in different head of accounts including the one stated in the audit paragraph (ARWSS 50% State Share). The other heads of accounts under which the State share was released are, NABARD assisted schemes, JICA assisted schemes for rural population and other rural water supply schemes. The budget allocation, release and expenditure of the state fund for the above

MNP STATEMENT FOR THE YEAR 2009-10								
Sl. No.	Scheme Code	Name of Scheme	Rs. in lakhs			Cumulative expenditure for the year	Cl. Balance	
			Budget Allocation	Op. Balance	Receipts during the year			
1	25 & 26	Technology Mission Schemes (State share only) 2215-01-190-99-13	400.00	0.00	400.00	659.16	2588.00	
2	28	RWSS-not eligible for ARP	500.00		9998.00	7469.06		
3	21	Completion of Rural WSS started with LIC assistance	100.00		100.00	39.72		
4	99	WSS to Sabarimala 2215-01-190-99-10	15.00	0.00	15.00	14.67		
5	29	Other RWSS-improvements to existing schemes 2215-01-190-99-07	250.00	0.00	250.00	236.49		
6	79	WSS to Rural Schools - 50% state share	100.00		100.00	11.50		
7	7	Completion of Ongoing RWSS	150.00		150.00	2.18		
8	22	NABARD Assisted RWSS 4215-01-800-99	3700.00	1874.16	19903.00	19047.12	2727.04	
9	29	Improvements of RWSS to Cherianadu in Alappuzha	30.00		30.00	0.00		
10	5	JBIC assisted Kerala Water Supply project (50% share only) 6215-01-190-98	45000.00	4963.35	15750.00	15778.57	4940.00	
		Total	50245.00	6837.51	46686.00	43268.47	10255.04	
		O&M charge	4259.20		4259.20	4259.20		
		Grand Total	54504.20	6837.51	50945.20	47527.67	10255.04	

MNP STATEMENT FOR THE YEAR 2010-11

Rs.in lakhs

Sl. No.	SP code	Scheme Code	Name of Scheme	Budget Allocation	Op. Balance	Receipts during the year	Cumulative expenditure for the year	Cl. Balance
1	38	25 & 26	Technology Mission Schemes (State share only) 2215-01-190-99-13	600.00	0.00	600.00	322.86	523.40
2	63	10	ARWSS (50% state share) 01-190-99-18 2215-	2500.00	2586.00	0.00	2594.06	
3	14	7	Completion of ongoing Rural WSS other than ARWSP schemes 2215-01-800-86.	300.00	0.00	300.00	723.25	
4	11	99	WSS to Sabarimala 01-190-99-10 2215-	500.00	0.00	500.00	18.63	
5	8	29	Other RWSS-Improvements to existing schemes 2215-01-190-99-07	400.00	0.00	400.00	205.80	
6	23	22	NABARD Assisted RWSS 4215-01-800-99	3200.00	2727.04	936.00	12083.04	0.00
7	12	5	JBIC assisted Kerala Water Supply project (50% share only) 6215-01-190-98	30000.00	4940.00	4733.50	6645.35	1028.15
			Total	37500.00	10255.04	15869.50	24572.99	1551.55
			U&M charge	3750.00		3513.84	3513.84	
			Grand Total	41250.00	10255.04	19383.34	28086.83	1551.55

MNP BUDGET PROVISION AND RELEASES 2011-12						
Scheme Code	Name of Scheme with Head of Account	BUDGET ALLOCATION	OB AS ON 01.04.2012	RELEASE DURING THE YEAR 2011-12	EXPENDITURE DURING THE YEAR 2011-12	BALANCE AS ON 31.03.2012
(A) PLAN FUND						
SWS 008	Other Rural WSSs - Improvements to existing schemes (2215-01-190-99-07)	580.00		250.00	430.54	
SWS 011	WSS to Sabarimala (2215-01-190-99-10)	350.00		175.00	78.42	
SWS 026	Completion of Rural WSS other than ARWSP Schemes (2215-01-102-99))	350.00		350.00	589.01	
SWS 038	Technology Mission Schemes 25% & 50% State share (2215-01-190-99-13)	600.00		600.00	486.62	
SWS 063	Accelerated Rural WSSs -50% State share (2215-01-190-99-16)	5,000.00		5,000.00	1,853.49	
SWS 064	New capital schemes(Parassala & Kumarakom WSS) (2215-01-102-97)	6,000.00	623.4	2,000.00	1,271.80	
SWS 065	SAARK 2010-11 (Special Assistance Against Recession in Kerala) (2215-01-800-60)	500.00		200.00	27.04	4,884.97
SWS 067	WSS to Erumeli Panchayath (2215-01-102-96)	500.00			1.70	
SWS 046	Drinking Water Supply Scheme to Cheekode and Adjoining Villages - WSS to Feroke-karuvanthuruthy villages in Feroke Panchayat- laying distribution systems (2215-01-102-98)	540.00		270.00	235.91	
SWS 073	Drinking Water Supply Project for Kilmanoor, Pachayakunnumel and Madavoor Villages (2215-01-102-95)	1,300.00		650.00	0.20	
SWS 074	Drinking Water Supply project for Vihura and Tholicoode (2215-01-102-94)	141.00		70.50		
SWS 028	NABARD Assisted RWSS (4215-01-800-59)	3,264.00		6,981.74	6,981.74	
SWS 012	JBIC assisted Kerala Water Supply Project (50%) (6215-01-190-98)	25,000.00	1028.15	11,505.00	9,653.50	1,851.50
TOTAL		44,045.00	1,551.55	30,052.24	23,615.77	7,988.02
O&M		4249.85		4,249.85	4,249.85	
GRANT TOTAL		48,294.85	1,551.55	34,302.09	27,865.62	7,988.02

MNP STATEMENT 2012-13

Scheme Code	Name of Scheme with Head of Account	BUDGET ALLOCATION	OB. AS ON 01.04.2012	Rs. in lakhs		BALANCE / ON 31.03.2013
				RELEASE DURING THE YEAR 2012-13	EXPENDITURE DURING THE YEAR 2012-13	
(A) PLAN FUND						
WS 006	Other Rural WSSs - improvements to existing schemes (2215-01-190-99-07)	600.00		600.00	630	
WS 011	WSSs to Sabarimala (2215-01-190-99-10)	350.00		350.00	317	
WS 026	Completion of Rural WSS other than ARWSP Schemes (2215-01-102-99)	400.00		400.00	649	
WS 038	Technology Mission Schemes 25% & 50% State share (2215-01-190-99-13)	600.00		600.00	4,334	
WS 063	Accelerated Rural WSSs - 50% State share (2215-01-190-99-18)	5,000.00		3,173.00		
WS 064	New capital schemes(Parassala & Kumarakom WSS) (2215-01-102-97)	3,500.00		3,500.00	3,915	
WS 065	SAARK 2010-11 (Special Assistance Against Recession in Kerala) (2215-01-800-60)	40.00		40.00	179	
WS 067	WSS to Erumeli Panchayath (2215-01-102-96)	301.95	5,108.37	301.95	358	
WS 049	Drinking Water Supply Scheme to Cheekode and Adjoining Villages - WSS to Feroke-karuvanthuruthy villages in Feroke Panchayat- laying distribution systems (2215-01-102-98)	500.00		200.00	214	
WS 073	Drinking Water Supply Project for Kilimanoor, Pachayakunnumel and Medavoor Villages (2215-01-102-95)	500.00		500.00	529	
WS 077	Comprehensive Drinking Water Supply in Manppad (2215-01-102-91)	100.00		100.00		
WS 074	Drinking Water Supply project for Vilhura and Tholcode (2215-01-102-94)	200.00		200.00	41	
WS 103	Water Supply Scheme to Vengara and adjoining Panchayats (2215-01-102-88)	50.00		50.00	14	
SUB TOTAL OF STATE PLAN SCHEMES		12,141.95	5,108.37	10,014.95	10,991.6	4,131
WS 028	NABARD Assisted RWSS (2215-01-800-99)	9,600.00		9,600.00	9,600.00	
WS 012	JBIC assisted Kerala Water Supply Project (50%) (2215-01-190-99)	12,000.00	2,879.65	12,000.00	12,501.11	2,375
TOTAL		33,741.95	7,988.02	31,614.95	33,092.80	6,510.11
O&M		4,245.00		4,245.00	4,245.00	



GOVERNMENT OF KERALA
Water Resources (WS-B) Department

Action Taken Report on Para 3.10 in C & AG Report (General & Social Sector) for the year ended 31.03.2013(2011-14)

Para No.	Recommendations of the Committee	Action Taken
10	Failure to implement Jalamani programme for providing safe drinking water facility to rural schools children	<p>Government of India had sanctioned Rs.256.40 lakh on 22.01.2009 as 1st installment for implementing Jalamani programme by installing stand alone water purification system in 1282 rural schools in Kerala. Accordingly, negotiated tenders were invited from the 8 vendors, included in the list recommended by the Government of India, fixing due date as 27.08.2010. Based on this, supply order was placed on 31.01.2011 with lowest quoted firms - (1) M/s. Membrane Filters (India) Pvt. Ltd., Pune for the supply, installation and maintenance of stand-alone-water purification systems in 396 rural schools for an amount of Rs.52,09,600/- and (2) M/s. Amara Aqua Systems, Erode for installing in 106 schools for an amount of Rs. 26,60,750/-. As M/s. Amara Aqua Systems, Erode did not comply with the product liability insurance entrusted by the Government of Kerala and did not execute the agreement, their supply order was cancelled and the EMD was forfeited.</p> <p>M/s. Membrane Filters (India) Ltd, Pune had installed stand alone water purification systems in 388 schools only. As per the supply order, arrangements for checking the quality of treated water is to be arranged by school authorities and only after checking and assessing that the quality of treated water is as per the IS standards for potable water, the firm will get the 20% payment. Frequency of ckecking the quality of water is 30 days for the first 6 months and then 60 days. If there is any problem in quality that should be rectified within 5 days and failing which a penalty of Rs.100/- per day will be imposed and on correction by the supplier, cost of the test will be charged on the supplier. The reason</p>

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for limiting the payment to Rs.18.19 lakh is due to the irresponsibility of the firm in rectifying the defects of installed units and their response towards the poor quality water from the purifier. The Executive Engineers reported that immediately after the installation of stand alone water purification system in schools and before getting the invoices from the firm for 50% payment, the school authorities reported that the systems are not working properly and also facing quality problems. In the above circumstances, the Executive Engineers were not in a position to make the 50% payment and the payment was limited due to irresponsibility of the firm in rectifying the defects of installed units and poor quality of water from the purifier. In November 2012, th Chief Engineer(HRD&GL) invited the above firm and all the Executive Engineers, in connection with the Jalamani programme, for a meeting but the firm did not attend. On 12.03.2013 Keala water Authority requested the DPI, Government of Kerala, Thiruvananthapuram by enclosing the list of 396 schools for reporting the present position. Kerala Water Authority had already directed the firm to rectify the defects and informed them that, on providing satisfactory quality reports. Kerala Water Authority is willing to release 70% of the cost, for settling the issue. But they arc yet to respond. For the Second phase, tenders were invited on 14/02/2012 for installing the systems in the balance 886 schools including the cancelled 106 units of first phase. But there was no response to the tender call. Hence retenders were invited with due date as on 29.03.2012. Only one firm, M/s. Sree Senthil Engineering Company, Coimbatore participated in the tender. For ascertaining the performance of the systems installed by the single firm, two officers of Kerala Water Authority were deputed. After studying the performance of the installed units in Tamil Nadu, the officers recommended in their report that the filters installed by the firm in Tamil Nadu State are not having the stipulated efficiency to treat the water and its large scale procurement is not advisable. Hence the Board of Kerala Water Authority met on 05/11/2012 decided to cancel the single offer.

Since response to the previous tenders floated by Kerala Water Authority had been very poor, it was decided to invite

the 9 firms who are following the technology recommended by the High Level Committee of Government of India for Jalmani, for a discussion. But only 3 reputed firms, viz (1) M/s. Eureka Forbes, (2) M/s Hindustan Uni Lever and (3) M/s KENT who are popular in this field had attended and furnished their offers. Their offers were placed before the High Level Committee met on 18/06/2013 for deciding suitable technology for the stand alone water purification system for rural schools in Kerala. The HLC decided to provide one unit for every hundred students, subject to a maximum of 3 numbers in a school. Above details were placed before the 362nd Authority meeting held on 04/07/2013. The Authority discussed the matter in detail and resolved to approve the proposal of implementing Jalamani Programme by short listing the 3 firms M/s. Eureka Forbes, M/s Hindustan Uni Lever and M/s KENT with the approved rates of the products. The Authority also directed that suitability of appropriate product shall be decided by the Executive Engineer based on the quality of water to be treated. It was also decided to collect and circulate the list of schools, for implementing the programme. Executive Engineers of O&M Divisions shall be entrusted with implementation of the works.

Based on this resolution, Executive Engineers of O&M Divisions were directed to select the suitable purifier for the selected schools and to place supply order with corresponding firm following the prevailing conditions, vide this office letter dated 13/08/2013. Accordingly the Executive Engineers of O&M Divisions conducted detailed field study and quality of water for selecting the appropriate stand alone water purifier. However, despite all possible earnest effort, Kerala Water Authority could install only 709 units of Stand Alone Water Purifiers in 498 schools for a total cost of Rs.80.67 lakh in the second phase.

Reasons for the short utilization of Central Fund :

1. In phase I, even if supply order had been issued to M/s.Membrane Filters (India) Pvt. Ltd., for an amount of Rs.52,09,600/- for installing stand alone purifications systems in 396 rural schools, they could install only in

388 schools and the payment to the firm was limited to Rs.18.19 lakh due to irresponsibility in rectifying the defects of units in time. In case of M/s.Amara Aqua Systems, Erode, the supply order issued for installing stand alone purification systems in 106 schools for an amount of Rs.26,60,750/- had been cancelled since they have not submitted the Product Liability Insurance as insisted by the Govt. Of Kerala.

2. In Phase II, only 709 unit of stand alone water purifiers were installed in 498 schools and the expensiture for the same was Rs.80.671 lakh. In some schools we were not able to intall the units due to the following technical problems:
- a) Some schools regretted to install the unit due to non availability of power, where RO units were essential for purification.
 - b). In certain schools available head of water was not enough to the requirement of the filter unit. Without proper head, there was no option for Kerala Water Authority to place the unit.

From the above, it can be noted that the Kerala Water Authority has taken all earnest efforts to implement the programme and utilise the funds allotted by Government of India for the implementation of Jalamani Programme.

Under the above circumstances, it is requested that the para may please be dropped.



THARA SAMUEL

**Additional Secretary to Government
Water Resources Department
Govt. Secretariat, Thiruvananthapuram**



GOVERNMENT OF KERALA
Water Resources (WS-B) Department

Action Taken Report on Para 3.11 contained in the Report C & AG (G&SS) for the year ended March 2013

Para No.	Recommendations of the Committee	Action Taken
3.11	<p>Formulation of a water supply scheme by Kerala Water Authority without consulting Panchayath authorities resulted in an unfruitful expenditure of Rs.37.83 crore. Water Supply Scheme in Payyannur Municipality under UIDSSMT</p>	<p>The Detailed Engineering Report of the UIDSSMT WSS to Payyannur Municipality was submitted to the KSTP through the beneficiary Payyannur Municipality only. Generally we won't seek permission from the local bodies for drawing water from the river which does not belong to any local bodies. In this case also we didn't seek permission from Chapparapadavu Panchayath for drawing water from Kuppam river.</p> <p>Initially, there was a 30 mld JICA Water Supply proposal for water supply to Thaliparamba and adjoining panchayaths including Chapparapadavu Panchayath with source as Appachikayam at Chapparapadavu in Kuppam river. Later when this proposal was revised and the capacity was enhanced to 93.00 mld, the source point had to be changed to Pazhassi barrage from Appachikayam due to the enhanced requirement. At this point Apachikayam was considered as source point for the proposal of 14 mld water supply scheme for Payyannur Municipality.</p> <p>The execution work for the UIDSSMT scheme was started in 3/2009 and it was obstructed in 6/2009 by the local people and the Chapparapadavu panchayath demanding the change of source point to Kodumkayam and also demanding construction of RCB at Kattampally kadavu. A series of meetings were conducted to solve the issue. In a meeting convened by the then Honourable Minister for Water Resources Sri. P.J. Joseph at Kannur on 28.07.2012, it was decided to change the source point to Kodumkayam and to construct a RCB by Minor Irrigation Department in Kattampally kadavu. On these assurances the work</p>

was started again in 4/2013 continued till 10/2013, when it was stopped again by the local people demanding the construction of RCB. However, we could finish the Water Treatment Plan (WTP) Work in 12/2014 and part of pumping main in 3/2014. In the meantime an estimate of 26.5 crore for RCB was submitted by Minor Irrigation Department for approval. As there was no immediate solution in sight to settle the local issue, there was a Government decision in 2015 to spare 4.00 mld water from JICA Pattuvam water supply scheme for Payyannur for the time being.

The 37.83 crore expenditure incurred is now made productive as the scheme was partially commissioned in 2016 using water from JICA scheme and now three packages are commissioned. The completed components of the scheme are 2300 m 450 mm DI k9 pumping main, 14.00 MLD Water Treatment plant at Madamthattu, 21.25 Km of 500 and 400 mm DI gravity main from Chapparapadavu to Korom, 45 LL capacity GL reservoir at Korom and 116 Kilometres of Distribution pipe lines in Payyanur municipality.

The details of all packages are as given below.

Packages	Details	Current Position
I	Intake Well and Pumping main	Pumping main completed intake well is to be arranged only after settling the issue of RCB
II	14 mld WTP and 45 LL GL tank	Both completed and GL tank is commissioned
III	21.25 KM Gravity main	Completed and commissioned
IV	4.00m RCC Weir	Not done. Entrusted to minor Irrigation Department
V	Distribution system 131 KM	116 KM laid and commissioned
VI	Transformer and Pump sets	To be arranged only after construction of intake

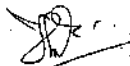
The inauguration of partial commissioning of the scheme was done by the Hon. Minister Sri. P J Joseph on 01/02/2016 using water from JICA scheme. The scheme is now interconnected with the existing rural

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schemes of the municipality to reduce the expenditure. Currently 900 house connections were given from the scheme and 150 street taps utilising the newly laid distribution system.

For the comprehensive completion and operation of the scheme, the balance works to be done are Construction of Intake well cum pump house, Erection of Pump sets and Transformer at Intake well site, Interconnection of 450 mm DI pumping main from Intake well. Expected date of full commissioning is December 2019. Detailed Engineering report for Rs 610 lakhs for executing the balance work of this scheme is under process for Administrative Sanction (AS) under State Plan. For the proposed RCB, to be constructed by the Irrigation Department, the proposal is included in the KIIFB proposals and an Administrative Sanction (AS) was accorded by the Water Resource Department for Rs. 30.00 crore. The DER for the project is submitted to the KIIFB by the Irrigation Department after verification by the KIDC (Kerala Infrastructure Development Corporation) for approval.

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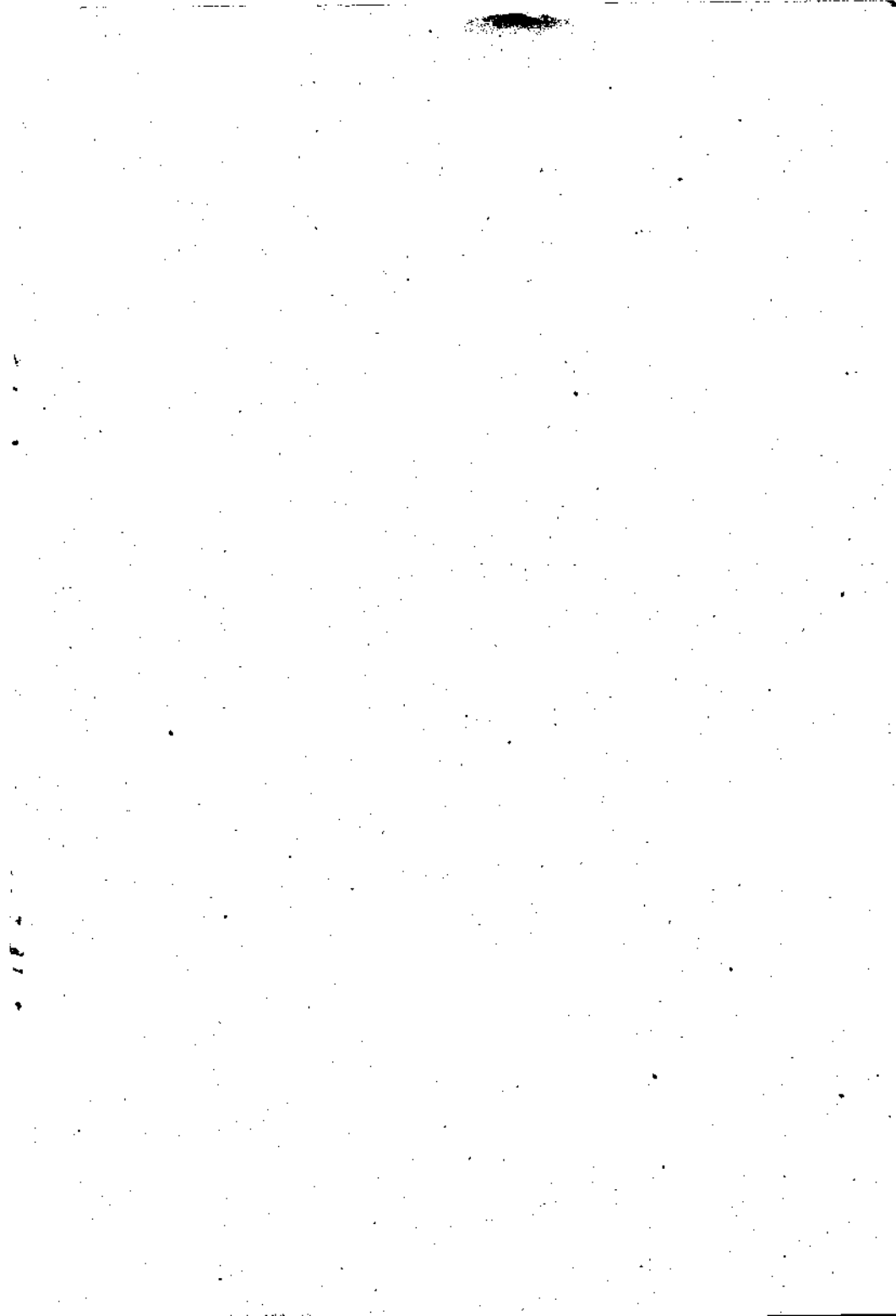
THARA SAMUEL
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Appendix-III
Appendices from AG's Report

Appendix
Status as on 31 March 2013 of major incomplete schemes test-checked in Audit
(Reference: Paragraph 2.4.8;

Sl. No.	Description of scheme	Status of the scheme	Audit analysis	
(i)	Comprehensive Water Supply Scheme covering eight villages (Kunnumel and adjoining) in Kozhikode district			
	Naripetta, Kayakody and Valayam villages were part of the Comprehensive Water Supply Scheme covering eight villages (Kunnumel and adjoining). All the schemes together have certain common components ¹⁶⁰ and individual components. Status of work in Naripetta, Kayakody and Valayam villages are as follows:			
	(a) Accelerated Rural Water Supply Scheme (ARWSS) to Naripetta			
	Source: Kuttiaady river Population to be benefited: 34250 in 2019 AS : April 2000 for ₹ 2.95 crore Expenditure as on 31 March 2013: ₹ 1 crore	Only Ground Level Service Reservoir was completed. The remaining components viz., Clear Water Gravity Main and laying of distribution system were not completed (March 2013).	Reasons for the delays were: <ul style="list-style-type: none"> • Lack of synchronization in execution of components. • Failure to ensure availability of land before taking up the scheme. • Cost escalation due to time overrun and consequent insufficiency of funds. 	
	(b) Accelerated Rural Water Supply Scheme (ARWSS) to Valayam			
	Source: Kuttiaady river Population to be benefited : 23750 in 2019 AS : April 2000 for ₹ 3.07 crore Expenditure as on 31 March 2013: ₹ 1.28 crore	Only the Over Head Service Reservoir was completed and the remaining component distribution system was yet to be completed (March 2013).		
	(c) Accelerated Rural Water Supply Scheme (ARWSS) to Kayakodi			
	Source: Kuttiaady river Population to be benefited : 35000 in 2019 AS : April 2000 for ₹ 2.51 crore Expenditure as on 31 March 2013: ₹ 0.71 crore	The components of the scheme were clear water gravity main, ground level service reservoir and distribution system. None of the components were completed (March 2013).		
	Reply of KWA: The Executive Engineer, Project Division, Kozhikode replied that the main reasons for the delay in completion of the schemes were delay in handing over the required land by the Panchayaths, cancellation of tenders as the contractors quoted high rates and consequent retender.			
(ii)	Comprehensive ARWSS to Vandanmedu and Anakara villages in Idukki District			
	Source: Amayar river Population to be benefited : 51304 in 2018 AS : March 1996 for ₹ 5.29 crore Expenditure as on 31 March 2013: ₹ 5.19 crore	All components except the construction of weir, across the river at five meter height at the source, were completed. Grama Panchayath had assured to acquire and provide the required land for weir free of cost. As the land (cardamom estate) would be submerged on construction of the weir, the Grama Panchayath failed to acquire the land and the scheme could not be completed and commissioned.	Failure to ensure the source before taking up the drinking water scheme led to failure of the scheme and an unproductive expenditure of ₹ 5.19 crore.	

¹⁶⁰ In-take well-cum-pump house, raw water pump set, raw water pumping main, water treatment plant with clear water sump, clear water pump sets, clear water pumping main, ground level balancing reservoir, installation of transformer and power supply were common



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