



CHAPTER II

PLANNING THE MISSION

CHAPTER II PLANNING THE MISSION

Though primary objective of the mission was to ensure that every household has assured supply of drinking water and sewerage connection, State did not plan to achieve this objective. Number and scope of projects proposed by mission cities under water supply sector was curtailed by SHPSC to include projects under Storm Water Drainage and Urban Transport sectors. Delay in finalising agencies for project development and implementation resulted in delayed project implementation and non-completion of projects especially water supply and sewerage sector projects even after lapse of nine years of commencement of the mission. Non-preparation of DPRs by Kerala Water Authority (KWA) for execution of water supply and sewerage sector projects resulted in change in design and estimates, cost escalation, reduction in scope of the work and delayed execution of projects. In the absence of sufficient expertise, KWA could not plan for adequate and timely implementation of sewerage/septage projects. Preparation of DPRs by empanelled agencies without proper site investigation and public consultation, resulted in abandoning of 27 projects with project cost of ₹233.55 crore.

2.1 Project planning

The mission guidelines envisaged assessment of service level gaps by the ULBs from the available data, in respect of the AMRUT components, as the first stage of planning process. After assessing the gaps, Service Level Improvement Plans (SLIPs) were to be prepared by mission cities to bridge the gap. At the State level, the SLIPs of all mission cities were to be aggregated into the State Annual Action Plan (SAAP). State level High Powered Steering Committee (SHPSC) approved the projects in the SAAP after the projects were technically appraised and sanctioned by the State Level Technical Committee (SLTC). SAAP was the State level service improvement plan indicating the year-wise improvements for components selected under the mission.

The outcomes of mission components viz., water supply, sewerage, septage, storm water drainage, and green space and parks were evaluated as per the Service Level Benchmarks (SLBs) prescribed by MoHUA.

A flow chart showing various stages of planning are given in **Chart 2.1**.

Chart 2.1: Flow chart showing stages in planning of AMRUT projects



(Source: The Mission Guidelines)

Guidelines also prescribed for engagement of Project Development and Management Consultants to ensure end-to-end support for project design, development, implementation and management. Deficiencies noticed in various stages of planning are detailed in succeeding paragraphs:

2.1.1 Assessment of gaps by mission cities

Assessment of actual service level gaps play an important role in the preparation of SLIPs and SAAPs and the successful implementation of the scheme. The mission guidelines envisaged the use of available data or Census 2011 data or data from the baseline survey done by MoUD (2012), for the assessment of service level gaps. The mission cities utilised available data for assessing gap in respect of AMRUT components.

The targets for SLBs proposed by the Ministry under each component and the gaps identified by the mission cities are shown in **Table 2.1**:

Table 2.1: Targets for Service Level Benchmarks and gaps identified by mission cities

Component	Service Level Benchmark	Targets for SLB	Gap in service delivery identified by mission cities								
			Thiruvananthapuram	Kollam	Alappuzha	Kochi	Thrissur	Guruvayur	Palakkad	Kozhikode	Kannur
Water Supply	Household Coverage (In per cent)	100	22	60	39	11	40	91	38	55	57
	Quantum of water supplied (In lpcd ²)	135	35	70	85	49	42	99	47	35	45
	Extent of Non-Revenue Water (NRW) (In per cent)	20	15	10	20	26.7	10	23	10	10	12
Sewerage & Septage management	Coverage of sewage network services (In per cent)	100	63	100	100	97	100	90	100	100	100
	Efficiency in collection of sewage (In per cent)	100	59	100	100	97	100	100	100	100	100
	Efficiency in treatment (In per cent)	100	05	100	100	96	100	100	100	100	100
Storm water drainage	Coverage of storm water drainage network (In per cent)	100	40	75	76	57	94	85	39	50	85
Green space and parks	Per Person availability of open space (In sqm)	10-12 ³	9	5.19	7	00	00	00	6.57	00	6.71

(Source: SLIP and details collected from ULBs/KWA)

Though mission cities had identified gaps across all the sectors, audit noticed shortcomings in planning and implementation of projects to address these gaps, resulting in inadequate resolution as detailed in subsequent paragraphs:

2.1.2 Shortcomings in preparation of SLIP and SAAP

Once the gap in service levels were assessed, the next step was to prepare projects/plans to bridge the gap. Guidelines envisaged the preparation of Service Level Improvement Plan (SLIP) by all AMRUT cities in respect of each of the AMRUT components. During the period 2015-16 to 2017-18, the mission cities had prepared three SLIPs proposing 527 projects for a total project cost of ₹9860.48 crore under the five components.

The SAAP was the state level service improvement plan indicating the year-wise improvements in SLBs. At the State level, the SLIPs of all mission cities

² Litres per capita per day

³ Based on Urban and Regional Development Plans Formulation and Implementation Guidelines, 2014 issued by MoUD.

were to be aggregated into SAAP. Preparation of SAAP prioritizing cities and projects based on available resources each year and forwarding the same for approval of MoHUA was vested with SHPSC. Details of SAAP wise duration and funds approved by MoHUA are given in **Appendix 2.1**. MoHUA approved three SAAPs for the period 2015-16, 2016-17 and 2017-20 consisting of 368 projects for an amount of ₹2357.69 crore. Component-wise details of SLIP and SAAP are shown in **Table 2.2**.

Table 2.2: Details of SLIPs and SAAPs

(₹ in crore)

Sl. No.	Components	Proposed in SLIP		Approved in SAAP	
		Number of projects	Amount	Number of projects	Amount
1.	Water supply	107	2217.15	91	1066.92
2.	Sewerage and Septage	78	4141.15	48	624.75
3.	Storm water drainage	167	1976.87	100	382.29
4.	Urban transport	70	1201.76	64	235.12
5.	Green space and Parks	105	323.55	65	48.61
	Total	527	9860.48	368	2357.69

(Source: Data from SMMU)

Audit noticed the following deficiencies in the preparation of SLIPs and SAAPs:

2.1.2.1 Failure to plan for achieving Universal coverage

Primary purpose of the Mission was to achieve universal coverage in water supply and sewerage. The AMRUT Guidelines stipulate that the universal coverage was to start with water supply followed by sewerage. Both water supply and sewerage can be done together depending on availability of funds. On achieving the universal coverage State/ULBs could select other components for execution. Audit noticed that though ULBs had identified and included in SLIP, projects costing ₹2217.15 crore (107 projects) for addressing the gap in water supply, the SHPSC included only 91 projects in the SAAPs and curtailed the scope of the projects to ₹1066.92 crore under the water supply sector. No recorded reason was available for excluding/reducing the scope of the projects under the water supply component proposed by the mission cities though water supply was identified as first priority under AMRUT.

Further, in the approved SAAP, the State targeted 81 *per cent* households for providing tapped water supply (instead of universal coverage) stating that 19 *per cent* of households were reasonably managed by alternative sources like wells, tube wells, public taps, community water supply schemes, etc. Audit noticed that such an exclusion by the State was not based on any survey or realistic study and the SMMU did not produce any justification for the assumption that 19 *per cent* households had access to potable water from wells or other sources. A study conducted (August 2019) by Centre for Water Resources Development and Management (CWRDM), Kozhikode revealed that only 14 *per cent* of groundwater sources in Kochi Corporation met standards for drinking water. As such, the exclusion of 19 *per cent* of households from

definition of universal coverage by the SHPSC was not only against the scheme guidelines, but also curtailed the right of the citizens to have access to clean and safe drinking water.

Government stated (October 2024) that achieving 100 *per cent* coverage was a complex task due to diverse geographic, demographic and technical challenges present in certain areas in addition to financial constraints. Certain households, particularly those in remote or difficult-to-access areas, may face technical limitations in terms of network connectivity, requiring specialized planning and additional phases for their inclusion. Therefore, a realistic and feasible approach was adopted covering areas where immediate execution was technically and logistically possible. Though 100 *per cent* coverage was not immediately planned, the overall long term goal remains to ensure that every household within the ULBs is provided access to a reliable and sustainable water supply.

While Audit acknowledges the geographic, demographic and technical challenges faced in the implementation, the justification provided for not planning coverage of households in remote and unserved areas, due to logistical difficulties and opting to execute projects of relatively lower priority sectors, instead of targeted intervention for inaccessible areas, is not in alignment with the intended objectives of the scheme.

2.1.2.2 Inclusion of projects without citizen consultation

The AMRUT guidelines stipulate that selection of projects and their prioritisation should be people-driven and achieved through citizen consultation meetings involving diverse people such as resident’s welfare associations, taxpayers associations, senior citizens, chamber of commerce and industries, slum dwellers associations groups, etc. During these consultations, details of best practices and appropriate smart solutions should also be shared with the citizens in order to enable them to make informed decisions and generate innovative solutions. However, six⁴ out of nine ULBs prepared SLIPs without conducting citizen consultation. Though the other three ULBs⁵ claimed to have conducted citizen consultation, no documents were available in these ULBs to support their claim. Audit noticed that nine projects with total project cost of ₹174.08 crore in five ULBs could not be executed due to public protest. Details of projects cancelled/delayed due to public protest are given in **Table 2.3**.

Table 2.3: Projects abandoned/delayed due to public protest

				<i>(₹ in crore)</i>
Sl. No.	Name of project (Name of ULB and Component)	Reason for public protest	Present status	Project cost
1.	GV Raja Road, C Lane, Kannamthura Church Road, Shankhumukham Ward (Thiruvananthapuram, SWD)	Lack of interest from the public	Work cancelled	0.45
2.	Work 63 - 16 th street to Girja Thodu (Thrissur, SWD)	Due to the fear of reverse flow from the main drain to the proposed drain when	Work cancelled	0.79

⁴ Thrissur, Kozhikode and Kannur Corporations and Alappuzha, Gurvayur and Palakkad Municipalities

⁵ Thiruvananthapuram, Kollam and Kochi Corporations

Sl. No.	Name of project (Name of ULB and Component)	Reason for public protest	Present status	Project cost
3.	Work 64- Main Street Road (Thrissur, SWD)	the construction is completed, and the solutions suggested (to construct a sump) by the ULB Engineers were not acceptable to the public		0.18
4.	Construction of sewerage system in zone A-package A & B (Kozhikode, Sewerage/septage)	Public protest against the construction of decentralised STPs at Avikkal and Kothi.	Two projects cancelled from AMRUT 1.0 and carried over to AMRUT 2.0.	140.0
5.	Construction of 10LL OHSR at Chakkumkandam (Guruvayur, Water supply)	Public protest against the land filling at the initially selected site at Chakkumkanadam as land was wetland	Site change delayed the execution and resulted in revision of estimate and cost overrun.	15.50
6.	Construction of septage plant at Chakkumkandam (Guruvayur, Sewerage/septage)	Public complained against the land filling of proposed site.	Work was terminated by SHPSC.	4.50
7.	Decentralised Septage Treatment Plant at Vasoorichira (Kollam, Sewerage/septage)	Public protested against decentralised STPs	Work cancelled after preparation of DPRs	12.66
8.	Decentralised Septage Treatment Plant at Karikkuzhi ela (Kollam, Sewerage/septage)			
9.	Decentralised Septage Treatment Plant at Andamukkam (Kollam, Sewerage/septage)			
	Total			174.08

(Source: Data collected from SMMU/CMMU)

Government stated (October 2024) that citizen consultation meetings were held by the mission cities prior to preparation of SLIP. However, documents in support of the citizen consultation meetings held prior to the preparation of SLIP were not furnished (December 2024). Further, the six out of nine ULBs had replied that they prepared SLIPs without conducting citizen consultation.

2.1.2.3 Non-identification of specific projects to address the gap

Scrutiny of the SLIPs/SAAPs showed that instead of mentioning specific projects, ULBs proposed projects under generic names viz., 'renovation of footpath', 'Construction of reservoirs', 'construction/rejuvenation of drain networks', 'rejuvenation of ponds' etc, indicating that SLIPs/SAAPs were prepared without identifying specific projects to address the gap. Further, against 368 projects approved in three SAAPs, ULBs/KWA had taken up 1095 projects for execution. Non-mapping of 1095 projects implemented with 368 projects in the SAAPs indicate that specific project identification was done only after the SAAPs were approved.

Government while acknowledging the importance of mapping of approved projects to their corresponding executed packages, stated (October 2024) that proactive steps have been taken to implement a comprehensive mapping system in the project monitoring software used by KWA, which would ensure clear traceability and accountability for all projects. The mapping system would

enhance project tracking, financial oversight and transparency, ensuring that every project component is mapped against its original approval for better monitoring and reporting.

2.1.2.4 Non-inclusion of sufficient projects to address the gap

In water supply sector, though Thiruvananthapuram, Kollam, Kozhikode and Kannur Corporations had identified gap of 310 km, 104 km, 351 km and 519 km in distribution lines respectively, projects were not included in the SLIP to address the entire gap. As such, these ULBs could address only 12 *per cent* to 32 *per cent* of gap in distribution lines.

Audit noticed that Guruvayur municipality though constructed WTP, OHSRs and laid larger distribution lines, the municipality did not include projects for smaller distribution lines in SAAP, resulting in non-achievement of the objective of providing piped water to the residents as detailed in Paragraph 4.3.4.1.

Though all the nine mission cities had identified gaps in availability of treated water, necessitating construction of new water treatment plants (WTPs), only Kollam Corporation and Palakkad and Guruvayur Municipalities included projects to address the entire gap. Three ULBs⁶ included projects to address only 43 to 76 *per cent* of the gap. Kochi and Kozhikode Corporations and Alappuzha Municipality did not include any project in the SLIP/SAAP.

In Storm Water drainage sector though nine ULBs had identified 148 locations prone to flooding due to sewage mixing and choking, ULBs barring Kollam and Kozhikode Corporations and Palakkad Municipality did not include projects that could address the gaps effectively.

During exit conference (September 2024) Principal Secretary, Local Self Government Department (LSGD) stated that specific projects were not identified under Storm Water drainage sector to address the gap due to the absence of drainage master plan in ULBs.

2.1.2.5 Delay in finalising agencies for project development and implementation

GoI launched AMRUT Scheme in June 2015 and the first SAAP for the year 2015-16 was approved in November 2015 and first instalment of ₹57.60 crore was released in December 2015. The AMRUT mission had identified factors for the slow implementation of projects such as preparation of project design, delay in the process of tendering and its finalisation etc. To overcome these constraints, it was directed to avail the services of external entities called Project Development and Management Consultants (PDMCs). The scope of PDMC under the mission was divided into four broad components viz., Planning, Design, Supervision and Project Management. The PDMC was to identify projects based on SLIP framework and carry out required investigation, design, procurement, and implementation. PDMC was also to explore the possibility of Public Private Partnership (PPP) and for mid-course correction and engage with citizens to get feedback. Though expression of interest was invited by SMMU

⁶ Thiruvananthapuram, Thrissur and Kannur Corporations

in December 2015 to engage PDMC, shortlisting five agencies, the seventh SHPSC held during December 2016, decided to engage KWA for implementation of water supply schemes. As engagement of KWA for water supply schemes led to reduction in the scope of activities of PDMC it was decided to unbundle the functions of the PDMC and entrust project development, quality assurance and project monitoring to different agencies. Further, tenth and fourteenth SHPCs (July and December 2017) entrusted KWA with the implementation of sewerage/septage sector projects in Thiruvananthapuram, Kollam and Kochi municipal corporations. This delay in decision making led to delay in signing of tripartite agreement (January 2018) with KWA for water supply and sewerage sector projects. Thus, delay in finalising agencies for the implementation of projects delayed the project implementation, especially water supply and sewerage sector projects. Most of the major projects like establishment of Water Treatment Plants, laying distribution lines, Sewerage Treatment Plants, etc. were tendered after 2018. This resulted in utilisation of only ₹12.09 crore until 2017-18, against the availability of ₹356.27 crore, towards project fund and consequent delay in receipt of subsequent instalments from GoI, cost escalation and non-completion of projects (March 2024) as detailed in Paragraphs 4.3 and 4.5.

2.1.3 Preparation of Detailed Project Reports

Paragraph 10.3 of the Mission guidelines envisaged the preparation of Detailed Project Reports (DPRs) and bid documents for projects in the approved SAAP. The DPRs should contain field/laboratory investigations, surveys, formulation of technical options, design, cost estimates, solutions to resettlement, environmental issues, finance plan including operation and maintenance strategy for the complete life cycle of the project, etc. The DPRs were to be technically and financially appraised by SLTC after ensuring compliance with manuals and guidelines issued by MoUD. ULBs were to ensure city level approval of DPRs.

Seventh, tenth and fourteenth SHPSCs entrusted (December 2016, July and December 2017) Kerala Water Authority with the preparation of DPRs in respect of all water supply projects and sewerage/septage projects in Thiruvananthapuram, Kollam⁷ and Kochi⁸ municipal corporations. In respect of other sectors, ULBs engaged agencies empanelled by GoK for the preparation of DPRs. Audit noticed lapses such as implementation of projects without preparing DPRs by KWA, preparation of DPRs without conducting field investigations/without identifying suitable land, non-ensuring mandatory clearance from agencies, etc., as detailed in subsequent paragraphs:

2.1.3.1 Implementation of water supply and sewerage sector projects by KWA without preparation of DPRs

According to the Mission guidelines DPRs were to be prepared for all the projects in the approved SAAP. However, KWA prepared Detailed Engineering Reports (DERs) for the water supply and sewerage sector projects instead of DPRs. The DERs contained only design and detailed estimate of the projects.

⁷ STP at Kureepuzha and associated components

⁸ STP at Elamkulam

As such, aspects such as field investigations, surveys, formulation of technical options, environmental issues, O&M, availability of hindrance free land, mandatory permission/clearance to be obtained from departments/agencies etc., were not analysed before obtaining Technical Sanction. Though DPRs were to be technically and financially appraised by SLTC after ensuring compliance with manuals and guidelines issued by MoUD, SHPSC permitted (July 2017) KWA itself to accord technical sanction for the DERs of water supply projects. Audit observed that non-inclusion of aspects viz., ensuring availability of hindrance free land, clearances from various departments/agencies etc., resulted in change in design and estimates, cost escalation, reduction of scope of the work etc., thereby delaying the execution of projects as detailed in **Table 2.4**.

Table 2.4: Deficiencies noticed in implementation of water supply schemes by KWA

Sl. No.	Name of project (Name of ULB)	Estimated Project cost (₹ in crore)	Deficiencies noticed	Impact
1.	Construction of 5 LL OHSR at Kuttanelloor (Thrissur)	2.03	Land identified by KWA was unavailable.	Change of site led to increase in project cost. Scope of the project was reduced to limit within the administrative sanction. Execution was delayed by 63 months. Project cost was increased to ₹2.50 crore.
2.	Construction of 10 LL OHSR at Chakkumkandam (Guruvayur)	15.50	Site identified for the construction of 10 LL OHSR was unsuitable (wet land).	Change of site led to change in design and increase in project cost to ₹17.74 crore. Execution was delayed by 43 months.
3.	Providing rider main, replacing AC pipelines and service connections (Palakkad)	54.33	Detailed estimate was not prepared incorporating all factors viz., road restoration charges.	Actual site measurements were prepared by LSGD Engineering wing and prepared detailed estimate. Project cost increased to ₹85.15 crore.
4.	Laying pumping main 500 mm DI pipe from WTP at Maradu to pump house at Thammanam (Kochi)	22.5	Permission from PWD, NHAI and Railway authorities was not ensured before commencement of work.	Work could not be completed due to denial of permission by NHAI. The work was pre-closed in May 2022.
5.	Laying 500 mm DI line from pump house at Thammanam to OHSR at Kadavanthara (Kochi)	9.54	Permission from Railway was not obtained before awarding the work.	The crossing of railway line was not completed (March 2024).

(Source: Information collected from KWA)

While acknowledging that preparation of DERs in place of DPRs was not in strict alignment with AMRUT guidelines, Government stated (October 2024) that this approach was adopted by KWA to expedite project approvals and implementation, without compromising the project's technical and financial integrity and no project outcomes were negatively impacted by using DERs. It was assured that KWA will take up the preparation of DPRs in future phases of the scheme.

The reply of the Government is not acceptable as Audit noticed instances of cost escalation, indefinite delay in implementation/cancellation of projects, etc., due

to reasons such as non-assessment of suitability of the site, non-availability of identified site, non-preparation of detailed estimate, not obtaining mandatory clearances from authorities like Railways, PWD, etc. as detailed in **Table 2.4**. These obstacles would have been mandatorily addressed in the DPR as DPRs deal with the entirety of the projects, not just its engineering and technical aspects.

2.1.3.2 Entrustment of sewerage/septage projects to KWA without sufficient expertise

In the fourth SHPSC meeting held on 11 August 2016, Principal Secretary, LSGD brought to the notice of the committee that the projects of earlier schemes implemented through KWA had failed miserably in achieving targeted output and timely completion and led to cost overrun and loss of funds. In reply to a query by the Principal Secretary, LSGD, the Technical Member, KWA, had stated that KWA did not have a dedicated team to develop, design and implement sewerage projects. However, tenth and fourteenth SHPSC entrusted implementation of sewerage/septage management projects of Thiruvananthapuram⁹, Kollam¹⁰ and Kochi¹¹ municipal corporations to KWA itself. In the absence of sufficient expertise, KWA could not plan for adequate and timely implementation of sewerage/septage projects in these ULBs as detailed in Paragraph 4.5. Of the 132 sewerage/ septage management projects undertaken by KWA, one project was cancelled and of the remaining 131 projects, KWA could complete only 100 projects¹² and expended only 73 per cent of the project cost (March 2024). Audit noticed that out of the 100 completed works, only 16 works pertained to establishment of new sewerage network/construction of Sewage Treatment Plant and the remaining 84 projects pertained to rehabilitation of existing sewer network. As KWA could not so far establish connectivity with the STP for the new network laid, expansion of sewer network coverage as envisaged could not be achieved (July 2024). Further, construction of 5 MLD STP at Medical College campus, Thiruvananthapuram by KWA without ascertaining the availability of minimum quantity of sewage to the plant resulted in malfunctioning of the plant as detailed in Paragraph 4.5.1.1. Audit noticed the following further deficiencies in the projects by KWA:

- KWA did not plan for laying sewer network for utilisation of STP constructed at Kureepuzha, Kollam, resulting in non-commissioning of the plant (October 2024) as detailed in Paragraph 4.5.2.
- KWA had purchased (February 2015) 120 km of pipes for ₹28.69 crore for establishing sewer network and pumping mains in Kochi Corporation under Kerala Sustainable Urban Development Project (KSUDP). As this work was pre-closed (May 2016), 90 km pipes remained unutilised with KWA. However, utilisation of these pipes

⁹ Of the 135 sewerage sector projects, six projects pertaining to procurement of sewage/septage transportation vehicles and equipment were undertaken by the ULB.

¹⁰ Two (STP at Kureepuzha and associated components) of the five sewerage sector projects in Kollam.

¹¹ One project (STP at Elamkulam) out of four sewerage projects in Kochi.

¹² 99 projects (97 projects for establishment of sewer network and two projects for construction of STP) in Thiruvananthapuram and one project in Kochi.

were not envisaged by KWA while preparing projects for sewerage/water supply¹³ networks in ULBs.

Audit observed that entrustment of sewerage/septage sector projects to KWA without sufficient expertise to plan and execute the projects resulted in non-completion of projects, idling of the assets created and idling of 90 km pipes for the last eight years.

Regarding idling of pipes purchased under the KSUDP, Government stated (October 2024) that pipes purchased would be effectively integrated into future projects, after conducting quality testing. The reply underscores the failure of KWA to plan the execution of sewerage sector projects effectively and the need to have engaged a competent agency as envisaged in the guidelines to execute sewerage sector projects.

2.1.3.3 Deficiencies in preparation of DPRs by empanelled agencies

In the absence of PDMC for project development, SHPSC directed (July 2017) ULBs to utilise the service of agencies empanelled by GoK for the preparation of DPRs for Sewerage sector projects. In respect of stormwater drainage, urban transport and green space and park sectors, SHPSC directed ULBs to engage either the agencies empanelled by GoK or select agencies through competitive bidding process. GoK had empanelled (October 2014 and February 2017) 53 agencies for the preparation of DPRs of projects under various sectors. Mission cities selected nine agencies¹⁴ by inviting tender, of which eight¹⁵ were GoK empanelled agencies. Audit noticed several deficiencies in the preparation of DPRs by these agencies as detailed in subsequent paragraphs:

(a) Preparation of DPRs without ensuring availability of hindrance free land

Non/delayed availability of land and delay in obtaining clearances from other departments were identified by MoUD as key factors that delayed project implementation in earlier missions. Hence, one of the conditions stipulated in AMRUT guidelines was that no projects should be included in AMRUT which do not have land available, and no project work order should be issued if all clearances from all the departments have not been received by that time.

However, Audit noticed that availability of hindrance free land was not ensured by ULBs before inclusion of projects in the SAAP. The agencies entrusted with the preparation of DPRs were to conduct field visits to ascertain the availability of land, manner of acquisition, requirement of permissions from departments/other agencies etc., and include in the DPRs. Audit noticed instances of identification of wrong site in the DPR, identification of private land for execution of project, incorrect assessment of work to be done, non-obtaining mandatory clearance from department/institutions concerned, public protest, etc. This resulted in issuing work orders in respect of 37 projects with project cost of ₹272.50 crore without ensuring hindrance free land/without

¹³ Of the 90 km pipes, 13 km HDPE/DI pipes could be used for water supply projects also.

¹⁴ Ram Biologicals, KITCO, GITPAC, Institute for Societal Advancement, KMRL, Suresh Babu and Partners Mumbai, Murali Associates, Structures India Limited and Salim Group of Engineers

¹⁵ Ram Biologicals, KITCO, GITPAC, Institute for Societal Advancement, KMRL, Suresh Babu and Partners Mumbai, Structures India Limited and Salim Group of Engineers

obtaining mandatory clearances. Of the 37 projects, 27 projects with project cost of ₹233.55 crore were abandoned and 10 projects could not be completed (March 2024) as detailed in **Appendix 2.2**.

(b) Poor performance of two empanelled agencies in the preparation of DPR

The mission cities had empanelled M/s Ram Biologicals and M/s Kerala Industrial and Technical Consultancy Organisation Limited (KITCO) for the preparation of DPRs in respect of Sewerage, storm water drainage and urban transport components. Audit noticed several deficiencies such as preparation of unrealistic estimates, wrong site identification etc in the preparation of DPRs by these agencies resulting in cancellation/delay in execution of projects as detailed below:

(i) M/s. Ram Biologicals

Seven¹⁶ ULBs selected M/s. Ram Biologicals for the preparation of DPRs for the projects under sewerage/septage component. The agency prepared DPRs for 16 projects costing ₹280.39 crore and ₹2.67 crore was paid to the agency towards DPR charges. However, six projects costing ₹222.64 crore were cancelled and three projects worth ₹11.56 crore were delayed for reasons such as lack of public consultation, preparation of estimate without proper site study, non-receipt of consent from various departments/agencies, not ensuring suitability of the land identified, etc., as detailed in **Appendix 2.3**.

Chief Secretary in a review meeting had directed (August 2022) the Mission Director to blacklist and disempanel agencies which were found incompetent to complete the projects assigned to them in a systematic, scientific and time bound manner. Considering the faulty preparation of DPR without proper site investigation by M/s. Ram Biologicals, in respect of construction of STPs at Kozhikode Corporation, which led to revision of estimate from ₹116.50 crore to ₹140 crore, Suchitwa Mission¹⁷ removed the firm from the list of empanelled agencies (August 2022). However, the agency was later re-empaneled (December 2022) as an approved agency on the basis of request from Kozhikode Corporation. Re-empanellment of an agency, which defaulted in the preparation of DPR, within a short period of time, was unjustified.

(ii) M/s Kerala Industrial and Technical Consultancy Organisation Limited (KITCO)

Seven ULBs¹⁸ engaged KITCO for preparation of DPRs under the components urban transport, storm water drainage and green space and parks. KITCO prepared DPRs for 370 projects costing ₹ 282.53 crore¹⁹ and ₹2.79 crore was paid to KITCO towards DPR charges. However, 16 projects costing ₹ 8.55 crore were cancelled and six projects costing ₹16.72 crore were delayed for reasons such as not ensuring hindrance free land, not including design, drawings in the DPR, non-receipt of consent from various departments/agencies, etc., as

¹⁶ Kollam, Alappuzha, Thrissur, Guruvayur, Palakkad, Kozhikode and Kannur

¹⁷ Suchitwa Mission is the technical support group in waste management sector under LSGD

¹⁸ Thiruvananthapuram, Kollam, Kochi, Thrissur, Kannur, Alappuzha and Palakkad

¹⁹ Project cost of 166 projects in Alappuzha Municipality was not furnished

detailed in **Appendix 2.4**. In respect of projects executed, audit noticed that estimates prepared by KITCO had to be revised by Engineering wing of the ULBs after ascertaining field level requirements as detailed below:

- Kollam Corporation had entrusted KITCO for the preparation of DPRs in respect of 40 projects with project cost ₹53.48 crore under the Storm Water Drain, Urban Transport and Green Space and Park sectors. As all the DPRs prepared by the agency except in one work was revised extensively and not found useful, the ULB directed (February 2020) KITCO to refund ₹ 34.50 lakh paid to the agency as consultancy charges, after deducting the charges of one work. However, KITCO has not responded to the direction even after four years (March 2024).
- In Palakkad Municipality the DPRs prepared by the agency in respect of four projects (cost ₹12.25 crore) under Urban Transport sector had serious defects and were found, not fit to be presented for technical sanction. The municipality prepared estimates afresh for obtaining TS. While sanctioning revised estimate for the work ‘Construction of Bus Terminal yard near stadium bus stand’, GoK (January 2020) instructed Palakkad Municipality to recover an amount of ₹1.85 crore from KITCO as the defects and lack of proper vision in the preparation of DPR resulted in cost escalation. Though the municipality had directed (August 2020) KITCO to refund the amount, KITCO has not responded yet (March 2024).
- In respect of MLCP project in Thiruvananthapuram Municipal Corporation, there were wide variations in the estimates included in the DPR with respect to the site conditions. Audit noticed that estimate was revised from ₹5.64 crore to ₹6.13 crore due to change in height of the parking bay, increase in foundation depth from 2 m to 3.5 m and increase in number of piles from 12 to 24 after confirmatory soil test.

Audit noticed that though several instances of incompetency of these agencies had come to the notice of ULBs, no effective action was taken to recover the loss sustained by the ULBs or to dis-empanel these agencies.

Government stated (April 2025) that deficiencies in the DPRs prepared by empanelled agencies were rectified by the Engineering wing of the ULB. The reply substantiates the Audit finding.

Recommendation 1: Government should ensure that adequate public consultation meetings are conducted and documented by ULBs at the planning stage to enable them to make informed decisions.

Recommendation 2: Government should ensure that empanelment of agencies for the preparation of Detailed Project Reports is based on a thorough evaluation of previous projects executed by the agencies.