

Chapter-I
Social, General and Economic Sectors
(Non-PSUs)

CHAPTER-I

Social, General and Economic Sectors (Non-PSUs)

1.1 Introduction

1.1.1 Budget Profile

There are 63 Government departments and 41 autonomous bodies in the State. The position of budget estimates and expenditure by the State Government during 2012-17 is given in **Table-1.1.1** below.

Table-1.1.1: Budget and Expenditure of the State Government during 2012-17

(₹ in crore)

Particulars	2012-13		2013-14		2014-15		2015-16		2016-17	
	Budget Estimates	Expenditure	Budget Estimates	Expenditure	Budget Estimates	Expenditure	Budget Estimates	Expenditure	Budget Estimates	Expenditure
Revenue Expenditure										
General Services	5,443.94	5,372.23	6,804.28	6,182.04	8,157.61	7402.28	8,910.83	8,409.98	11,129.62	9,934.09
Social Services	6,856.51	6,095.84	7,766.53	7,298.01	10,555.22	9,223.69	11,386.47	9,926.69	14,217.69	10,528.57
Economic Services	2,568.74	1,995.29	2,755.73	2,067.95	4,271.41	3,856.47	4,394.41	3,983.21	5,648.75	3,902.66
Grant-in-aid and contributions	847.92	496.86	727.66	668.41	807.79	681.27	1,046.63	766.56	1,254.33	906.18
Total (1)	15,717.11	13,960.22	18,054.20	16,216.41	23,792.03	21,163.71	25,738.34	23,086.44	32,250.39	25,271.50
Capital expenditure										
Capital Outlay	3,653.48	3,542.09	4,874.19	3,712.03	4,591.37	4,939.01	4,004.85	4,217.38	5,744.36	4,954.22
Loans and advances disbursed	264.05	272.57	248.66	277.99	212.59	150.97	172.67	83.15	395.22	165.05
Repayment of Public Debt	2,297.13	1,472.21	2,152.79	1,316.81	1,757.79	893.89	2,776.79	1,996.56	2,032.23	1,127.40
Contingency Fund	40.00	32.07	40.00	194.48	180.00	194.15	175.00	385.46	205.00	227.70
Public Accounts disbursements	12,872.30	20,961.24	14,212.33	25,190.33	15,683.06	33,534.94	16,247.59	36,536.73	6,602.72	26,607.34
Closing Cash balance	-	1,945.54	-	2,433.41	-	1,772.02	-	1,462.80	0.00	2,785.95
Total (2)	19,126.96	28,225.72	21,527.97	33,125.05	22,424.81	41,484.98	23,376.90	44,682.08	14,979.53	35,867.66
Grand Total (1+2)	34,844.07	42,185.94	39,582.17	49,341.46	46,216.84	62,648.69	49,115.24	67,768.52	47,229.92	61,139.16

Source: Annual Financial Statements and Finance Accounts.

1.1.2 Application of resources of the State Government

The total expenditure¹ of the State increased from ₹ 17,775 crore to ₹ 30,391 crore during 2012-13 to 2016-17. The revenue expenditure of the State Government increased by 81 per cent from ₹ 13,960 crore in 2012-13 to ₹ 25,272 crore in 2016-17.

The revenue expenditure constituted 79 to 84 per cent of the total expenditure during the year 2012-13 to 2016-17 whereas the capital expenditure in the same period was 15 to

¹ Total expenditure includes revenue expenditure, capital expenditure, loans and advances.

20 per cent. During this period, revenue expenditure increased at an annual average rate of 15 per cent whereas revenue receipts grew at an annual average rate of 13 per cent during 2012-13 to 2016-17.

1.1.3 Funds transferred directly to the State implementing agencies

The Government of India (GoI) had transferred significant funds directly to the State implementing agencies for implementation of various schemes/programmes in the past years. The system of direct transfers by GoI to implementing agencies was dispensed with from 2014-15. However, total funds of ₹ 1,629.70 crore was transferred directly by GoI to implementing agencies, including Central implementing agencies, in the State, out of which an amount of ₹ 719.50 crore (44.15 per cent) was released to the State implementing agencies. These amounts were not audited as they were routed outside State Budget.

1.1.4 Grants-in-Aid from Government of India

Grants-in-aid received by the State from GoI during 2012-13 to 2016-17 are depicted in **Table-1.1.2** below.

Table-1.1.2: Trends in Grants-in-aid receipt from GoI

Particulars	(₹ in crore)				
	2012-13	2013-14	2014-15	2015-16	2016-17
Non-Plan grants	869	981	944	1,043	824
Grants for State Plan schemes	3,040	3,558	4,083	1,173	1,532
Grants for Central Plan schemes	8	13	99	609	843
Grants for Centrally Sponsored Plan schemes	540	523	1,879	2,479	3,035
Total	4,457	5,075	7,005	5,304	6,234
Percentage of increase/decrease over previous year	9	14	38	(-) 24	18
Percentage of Revenue Receipts	28	29	35	25	25

Grants-in-aid from GoI had shown an increase over the period 2012-13 to 2014-15 but it decreased by ₹ 1,701 crore (24.28 per cent) during 2015-16 over the previous year. During the current year the receipts under Grants-in-aid from GoI again increased by ₹ 930 crore (17.53 per cent) over the previous year. There was increase in Grants for Centrally Sponsored Schemes (₹ 556 crore), Grants for State Plan Schemes (₹ 359 crore) and Grants for Central Plan Schemes (₹ 234 crore). Non-Plan grants declined by ₹ 219 crore.

1.1.5 Planning and conduct of Audit

The audit process starts with a risk assessment of various departments, autonomous bodies, schemes/projects that includes assessing the criticality/complexity of their activities, the level of delegated financial powers, internal controls and concerns of stakeholders besides taking into account the previous audit findings as well as media reports. Based on this risk assessment, the frequency and extent of audit are decided and an Annual Audit Plan is formulated.

After completion of audit, Inspection Reports (IRs) containing audit findings are issued to the heads of the audited entities with a request to furnish reply within one month. Whenever replies are received, audit findings are either settled or further action for compliance is advised. The important audit observations arising out of these IRs are processed for inclusion in the Audit Reports which are submitted to the Governor of Uttarakhand under Article 151 of the Constitution of India.

During 2016-17, compliance audit of 343 drawing and disbursing officers of the State and nine units of autonomous bodies were conducted by the Office of the Accountant General (Audit), Uttarakhand. Besides, two performance audits were also conducted.

1.1.6 Significant audit observations and response of Government to Audit

In the last few years, audit has reported on several significant deficiencies in the implementation of various programmes/activities as well as on the quality of internal controls in selected departments which have had negative impact on the success of programmes and functioning of the departments. The focus was on auditing specific programmes/schemes and offering suitable recommendations to the Executive for taking corrective action and improving service delivery to the citizens.

As per the Comptroller and Auditor General of India's Regulations on Audit and Account, 2007, the departments are required to send their response to draft performance audit reports/draft paragraphs proposed for inclusion in the Comptroller and Auditor General of India's Audit Reports within six weeks. It is also brought to the attention of the concerned Heads of Department that in view of likely inclusion of such paragraphs in the Report of the Comptroller and Auditor General of India to be placed before the Uttarakhand Legislature, it would be desirable to include their comments in the matter. The draft reports and paragraphs proposed for inclusion in the Report are also forwarded to the Additional Chief Secretaries/Principal Secretaries/Secretaries concerned for seeking their replies. Two draft performance audits² and 14 draft paragraphs including one Follow-up Audit for the Audit Report for the year ended 31 March 2017 were forwarded to the concerned administrative Secretaries. However, formal reply of the Government has been received in only one case³ (December 2017).

1.1.7 Recoveries at the instance of Audit

Audit findings involving recoveries that came to notice in the course of test audit of accounts of the departments of the State Government were referred to various departmental Drawing and Disbursing Officers for confirmation and further necessary action under intimation to audit. Recovery of ₹ 70.55 lakh was made by the Executive Engineer, Provincial Division, Public Works Department, Pithoragarh during the year 2016-17 at the instance of audit.

² Rejuvenation of River Ganga, National Rural Drinking Water Programme.

³ Medical, Health and Family Welfare Department.

1.1.8 Responsiveness of Government to Audit

The Accountant General (Audit), Uttarakhand, conducts periodical inspection of Government departments by test-check of transactions and verifies the maintenance of important accounting and other records as per prescribed rules and procedures. These inspections are followed by issue of Inspection Reports (IRs). The heads of offices and higher authorities are required to report their compliance to the Accountant General (Audit) within one month of receipt of the IRs. Serious irregularities are also brought to the notice of the Heads of the Departments by the Office of the Accountant General (Audit), Uttarakhand through a half yearly report on pending IRs.

Based on the results of the test audit, 8,552 audit observations contained in 3,067 IRs were outstanding as on 31 March 2017, details of which are given in **Table-1.1.3** below.

Table-1.1.3: Outstanding Inspection Reports/Paragraphs

Sl. No.	Name of Sector	Inspections Reports ⁴	Paragraphs	Amount involved (₹ in crore)
1.	Social Sector	1,705	5,452	10,415.13
2.	General Sector	429	843	913.00
3.	Economic Sector(Non-PSUs)	933	2,257	6,947.76
Total		3,067	8,552	18,275.89

The Government sets up audit committees to monitor and expedite the progress of the settlement of the IRs and of the paragraphs in the IRs. During 2016-17, 19 meetings of audit committee were held in which 91 paragraphs were settled. The departmental officers failed to take adequate action on observations contained in IRs within the prescribed time frame resulting in erosion of accountability.

It is recommended that the Government may look into the matter to ensure prompt and proper response to audit observations.

1.1.9 Follow-up on Audit Reports

1.1.9.1 Submission of suo-motu Action Taken Notes (ATNs)

According to the Rules of Procedure for Committee on Public Accounts, administrative departments should initiate *suo-motu* action on all audit paragraphs featuring in the Comptroller and Auditor General's Audit Reports regardless of whether these are taken up for examination by the Public Accounts Committee. The departments are also required to furnish detailed notes, duly vetted by audit, indicating the remedial action taken or proposed to be taken by them within three months of the presentation of the Audit Reports to the State Legislature.

It was, however, noticed that out of 371 audit paragraphs featuring in the Civil Chapters of Audit Reports from 2000-01 to 2015-16, *suo-motu* ATNs in respect of 130 audit paragraphs involving 46 Departments had not been received (as detailed in **Appendix-1.1.1**) upto 31 March 2017. The Audit Report for the year 2015-16 was placed

⁴ Outstanding Inspection Reports / Paragraphs have been taken from 2006-07.

before the Legislative Assembly on 2 May 2017. The related action taken explanatory notes have not been received (December 2017).

1.1.9.2 Action taken on recommendations of the PAC

Action Taken Notes, duly vetted by the Accountant General (Audit), on the observations/recommendations made by the PAC in respect of the audit paragraphs discussed by them are to be furnished to the Committee within six months from the date of such observations/recommendations. Out of 371 Audit paragraphs featuring in the Civil Chapters of Audit Reports for the years from 2000-01 to 2015-16, only 221 audit paragraphs had been discussed by the PAC up to 31 March 2017. Recommendations in respect of 124 Audit paragraphs were made by the PAC. ATNs on the recommendations of the Committees are pending from the State Government in respect of six paragraphs.

1.1.10 Status of placement of Separate Audit Reports of autonomous bodies in the State Assembly

Several autonomous bodies have been set up by the State Government. A large number of these bodies are audited by the Comptroller and Auditor General of India and their transactions, operational activities and accounts, regulatory issues and internal control, etc are scrutinised. The audit of accounts of one autonomous body (Uttarakhand Jal Sansthan) in the State has been entrusted (May 2012) to the Comptroller and Auditor General of India. Separate Audit Report (SAR) of Uttarakhand Jal Sansthan issued by Audit for the year 2014-15 is yet to be placed before the State Legislature.

1.1.11 Year-wise details of performance audits and paragraphs that appeared in Audit Reports

The year-wise details of performance audits and paragraphs that appeared in the Audit Reports for the last two years along with their money value are given in **Table-1.1.4** below.

Table-1.1.4: Details regarding performance audits and paragraphs that appeared in Audit Report during 2014-16

Year	Performance Audit		Paragraphs		Replies received	
	Number	Money value (₹in crore)	Number	Money value (₹in crore)	Performance Audit	Paragraphs
2014-15	03	371.70	12	135.00	03	10
2015-16	02	124.08	17	170.76	02	Nil

Two performance audits and 10 audit paragraphs involving money value of ₹ 151.09 crore have been included in this Chapter. Replies, wherever received, have been suitably incorporated at appropriate places.

PERFORMANCE AUDIT

PEYJAL DEPARTMENT

1.2 Rejuvenation of River Ganga

The Ganga Action Plan (GAP) for cleaning of the River Ganga was initiated by Government of India (GoI) in 1985. Subsequently, GoI had set up (2009) the 'National Ganga River Basin Authority' (NGRBA) as an empowered planning, financing, monitoring and coordinating authority for the River Ganga, to ensure effective measures for prevention, control and abatement of pollution in Ganga and rejuvenating the river to its natural and pristine condition. As a comprehensive approach to rejuvenating the River Ganga and all its tributaries, GoI approved (13 May 2015) the *Namami Gange* programme. A performance audit on rejuvenation of River Ganga brought out weaknesses in planning, implementation and monitoring mechanism of the programme. Some of the significant findings are given below:

Highlights

- ***The total plan size approved in the Annual Plan of Operation for Forestry Interventions for Ganga was a meagre 4.66 per cent of the area planned for the year 2016-17 in the Detailed Project Report.***
[Paragraph 1.2.6.5 (i)]
- ***Funds ranging from 25.46 to 58.71 per cent were lying unspent during the period 2012-13 to 2016-17 due to their non-utilisation by Executing Agencies.***
[Paragraph 1.2.7.1]
- ***The claim of the department in making all the 265 villages in 132 Gram Panchayats of seven districts open defecation free was found to be incorrect as 41 Individual House Hold Latrines out of 1,143 physically verified by audit were not constructed and 34 were still under construction. Further, no significant progress was made by the State in the construction of Community Sanitation Complexes and Solid and Liquid Waste Management structures.***
[Paragraph 1.2.8.1]
- ***Municipal garbage was being indiscriminately dumped on the slopes of the hills.***
[Paragraph 1.2.8.2]
- ***The Sewage Treatment Plants at Devprayag and Rishikesh were under utilised due to deficient planning and lack of coordination between the Executing agencies.***
[Paragraph 1.2.8.3 (a)]
- ***65 out of 112 Nallas identified in the priority towns were still to be tapped resulting in discharge of 26.292 million litre per day of untreated sewage into River Ganga or its tributaries.***
[Paragraph 1.2.8.4 (a)]
- ***The capacity of the Sewage Treatment Plants at Haridwar and Rishikesh was inadequate for handling the waste discharge of the town resulting in untreated sewage being discharged into the River.***
[Paragraph 1.2.8.4 (b)]

- *The Forest Department failed to achieve the goals set for the year 2016-17 in three out of four interventions by a margin ranging from 3.50 per cent in case of advanced soil work to 87 per cent in case of urban landscaping.*

[Paragraph 1.2.8.7]

- *Water quality monitoring stations were established at only three towns out of sampled ten towns.*

[Paragraph 1.2.10.1]

1.2.1 Introduction

The Bhagirathi River, which originates from the Gangotri glacier at *Gomukh* is considered to be the source of River Ganga. The Bhagirathi and the Alaknanda rivers join at Devprayag to form the River Ganga. The river traverses a length of 2,500 km from its origin at the Gangotri glacier to its entry into the Bay of Bengal, out of which a stretch of 294 km falls in the State of Uttarakhand. Though many small streams comprise the headwaters of Ganga in the State, the six longest tributaries in the State are Alaknanda, Dhauliganga, Nandakini, Pindar, Mandakini and Bhagirathi.

GANGA BASIN IN UTTARAKHAND



With growing environmental issues concerning the River Ganga, there has been increase in awareness and understanding about the problems. The entire exercise of Ganga rejuvenation comprises various short-term, medium-term and long-term measures.

Under *Namami Gange* the seven main thrust areas covering short and medium-term interventions are (1) Pollution abatement, (2) Maintenance of Flow, (3) River Front Development, (4) Capacity Building, (5) Research and Monitoring, (6) Biodiversity Conservation, and (7) Communication and Public outreach.

The Hon'ble High Court of Uttarakhand passed (02.12.2016) an order in a writ petition⁵ wherein directions were issued to the State Government as well as the GoI for taking measures for abatement of pollution in River Ganga and its tributaries.

1.2.2 Organisational Set up

The State Programme Management Group (SPMG), registered (March 2011) as a society, is responsible for management and implementation of the NGRBA programme. The six agencies involved in the implementation of the programme in the State of Uttarakhand are Construction and Maintenance Unit (Ganga) of Uttarakhand Peyjal Nigam for construction of the interception and diversion projects (I&D) and Sewage Treatment Plant (STP); Uttarakhand Jal Sansthan for operation and maintenance (O&M) of these projects; Irrigation Department for River Front Development; State Forest Department for implementation of Forestry Interventions for Ganga; Uttarakhand Environment and Pollution Protection Control Board for prevention of air and water pollution and *Swajal* Directorate under the Peyjal Department for rural sanitation facilities.

1.2.3 Audit Objectives

The Performance Audit was carried out to assess whether:

- there exists adequate planning and institutional and coordination mechanism for abatement of pollution and rejuvenation of River Ganga;
- adequate resources were available on time for the programme and the programme was implemented in an economical, efficient and effective manner;
- the directions of the Hon'ble High Court of Uttarakhand were followed; and
- the monitoring mechanism was adequate for implementation of the programme.

1.2.4 Audit Scope and Methodology

The performance audit of implementation of the programme during the period 2013-14 to 2016-17 was carried out in seven districts⁶ falling on the Ganga Basin out of 13 districts during April 2017 to June 2017 and August 2017 to September 2017. Out of 38 Infrastructure Projects being undertaken in 15 towns⁷ of Uttarakhand, a sample of 23 projects in ten towns⁸, as detailed in **Appendix-1.2.1**, was selected for audit on the basis of Probability Proportional to Size With Replacement (PPSWR) method. Besides, one Project, 'Forestry Interventions for Ganga' was also selected for detailed scrutiny. Out of 10,010 beneficiaries in 132 Gram Panchayats (GP) falling in seven Ganga Basin districts, physical verification of 1,362 beneficiaries of Individual House Hold Latrines

⁵ No.140 of 2015.

⁶ Chamoli, Rudraprayag, Pauri, Tehri, Uttarkashi, Haridwar and Dehradun.

⁷ (1) Muni Ki Reti, Dhalwala, (2) Rishikesh (3) Tapovan, (4) Gopeshwar, (5) Badrinath, (6) Karnprayag, (7) Uttarkashi, (8) Haridwar including Jwalapur area and BHEL, (9) Joshimath, (10) Devprayag, (11) Nandprayag, (12) Kirtinagar, (13) Rudraprayag, (14) Gaucher (15) Srinagar.

⁸ (1) Muni Ki Reti, Dhalwala, (2) Rishikesh, (3) Tapovan, (4) Gopeshwar, (5) Badrinath, (6) Karnprayag, (7) Uttarkashi (Badkot), (8) Haridwar including Jwalapur area and BHEL, (9) Joshimath, (10) Devprayag.

(IHHLs) in 16 villages of nine GPs⁹ selected on the basis of highest number of IHHLs constructed in GPs was carried out. Besides, physical verification of the selected infrastructure projects implemented in ten selected towns by seven¹⁰ *Nagar Palika Parishads (NPP)/Nagar Panchayats (NP)* was also carried out.

Before commencing the performance audit, audit objectives, criteria, scope and methodology were discussed (April 2017) with the Secretary, Peyjal Department, Government of Uttarakhand in an entry conference. Records were examined at the SPMG, the Uttarakhand Environment Protection and Pollution Control Board (UEPPCB), the Directorate of Urban Development and Project Management Unit (SWAJAL), Uttarakhand Peyjal Nigam (UPJN), Irrigation Department, Uttarakhand Jal Sansthan (UJS), Divisional Forest Offices, seven *Nagar Palika Parishads/Panchayats* and seven¹¹ District Project Management Units (DPMU). Besides, information obtained from the offices of the seven District Magistrates¹² and Executive Engineer, Uttarakhand Jal Vidyut Nigam Limited (UJVNL) Dehradun was also examined.

An exit conference was held with the Secretary, Peyjal Department and officers of the Executing Agencies (EA) on 29 November 2017 and views of the Government and the Executing Agencies have been suitably included in the report.

1.2.5 Audit Criteria

The audit criteria adopted for achieving the audit objectives were derived from the following sources:

- The Water (Prevention and Control of Pollution) Act, 1974;
- Environment Protection Act, 1986;
- National Ganga River Basin Authority (NGRBA) Programme Framework and guidelines;
- River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016;
- General Financial Rules;
- Guidelines and instructions issued by Central Pollution Control Board/State Pollution Control Board; and
- Uttarakhand High Court Judgment dated 02.12.2016.

Audit Findings

1.2.6 Planning

Success of any programme depends on putting in place robust institutional and planning arrangements and their efficient and effective working. Institutional arrangements in the context of water pollution control and abatement, and long term river conservation, are

⁹ Baleshwar, Chaka, Kevarmalla, Mala, Kinsur, Jhala, Bagodi, Badshahpur and Birpur Khurd.

¹⁰ (1) Municipal Corporation, Haridwar (2) NPP, Rishikesh (3) NPP, Muni Ki Reti (Tehri) (4) NPP, Gopeshwar (5) NPP, Karnprayag (6) NP, Badrinath (7) NPP, Uttarkashi (Badkot).

¹¹ DPMU, Chamoli, Rudraprayag, Pauri, Tehri, Uttarkashi, Haridwar and Dehradun.

¹² Dehradun, Haridwar, Tehri, Rudraprayag, Chamoli, Pauri and Uttarkashi.

interpreted as structures, approaches, practices or rules set in place by the decision makers and stakeholders at all levels to steer implementation activities such as assessing requirements against identified vulnerabilities and risks; planning for implementation; abatement and conservation measures; and monitoring and evaluation of implementation. The following deficiencies were observed in planning:

1.2.6.1 Delay in submission of Annual Plan

As per NGRBA framework, State level annual planning meeting was to be organised by the SPMG in early September every year with all relevant Urban local Bodies (ULBs) and Executing Agencies (EAs) to prepare the draft annual plan for the State. The SPMG was required to submit to National Mission for Clean Ganga (NMCG) the annual action plans by the end of September for the next financial year. It was noticed that timelines were not adhered to as there was a delay ranging from four to five months in submission of the annual plans (APs) for the period from 2012-13 to 2016-17. The Department in its reply stated that APs could not be framed on time as there was delay in submission of project proposals by EAs. This shows failure of the Department in ensuring timely submission of project proposals by the EAs. The Secretary, Peyjal Department during exit conference stated that required action would be taken to ensure timely submission of APs in future.

1.2.6.2 Non-Constitution of Budget Review Committee

As per the NGRBA framework, the SPMG of each implementing State should have a Budget Review Committee (BRC) consisting of heads of engineering, finance, procurement, monitoring, etc. to review the various aspects of the budget and submit its quarterly observations to the head of SPMG. It was noticed that no BRC had been formed in Uttarakhand and the APs and the budget were being prepared by the Finance Wing of the SPMG based on the proposals received from the EAs which was in contravention to the provisions provided in the framework. The Secretary, Peyjal Department during exit conference, stated that the BRC had been formed in September 2017.

1.2.6.3 Framework for coordination of activities

As per the NGRBA framework, a Programme level Tripartite Memorandum of Agreement (MoA) between the NMCG, the SPMG and the concerned ULB was to be executed for ensuring clarity of roles and responsibilities regarding execution, O&M and eventual transfer of investment to the local body. Similarly, a project level tripartite MoA was also to be executed between the SPMG, the EA and the concerned ULB.

Audit noticed that the said MoAs were not found enclosed with the Detailed Project Report (DPR) prepared after the year 2014. On being pointed out, the SPMG stated that a new draft MoA template was circulated (May, 2016) by the NMCG to all the SPMGs. The Secretary, Peyjal Department, during exit conference, stated that the new MoA has not yet been finalised by NMCG.

1.2.6.4 Communication and public outreach

As per NGRBA framework, communication and public outreach (CPO) aims to ensure effective abatement of pollution and conservation of the River Ganga through strategic communication and enhanced public participation and outreach. These activities focus on pollution control messages and sensitization of the public.

Audit observed that prior to 2017-18 no AP for CPO activities had been prepared. However, in May 2017, the SPMG formulated and submitted the AP for CPO activities to the NMCG which was yet to be approved (September 2017). It was further observed that the SPMG also submitted a separate proposal for Information, Education and Communication (IEC) activities for *Char Dham Yatra* 2017 which was approved by NMCG in June 2017. Thus, public participation and outreach activities were only partially initiated.

1.2.6.5 Shortfall in planning in the project-Forestry Interventions for Ganga

The DPR for “Forestry Interventions for Ganga” (FIG) was prepared by Forest Research Institute (FRI), Dehradun and is to be implemented for the period of five years (2016-17 to 2020-21). It consisted of four components *i.e.* natural landscaping, agricultural landscaping, urban landscaping and conservation activities. The DPR was formally approved and adopted on 22.03.2016. The Project Management Unit (PMU), FIG, Uttarakhand was responsible for implementation of the programme through 21 forest divisions of the State as per Annual Plan of Operations (APOs) which are being prepared by the concerned divisions and consolidated by the PMU and forwarded to NMCG for approval.

Scrutiny of the records of PMU, FIG, Uttarakhand revealed various shortcomings in planning as discussed below:

i) Mis-match between plan size of DPR and approved annual action plan of operation 2016-17

The targets mentioned in the DPR of FIG were required to be achieved through five APOs. Hence, the financial allocation for each APO was required to be commensurate with the annual targets approved in the DPR.

Audit found that, as per directions of NMCG, the APO for 2016-17, covering 9,674 hectare (ha) area¹³ at a cost of ₹ 84.47 crore was proposed against the coverage area of 32,633 ha targeted in the DPR during the same period at a cost of ₹ 358.91 crore. However, the NMCG further cut the proposed plan size and approved coverage of just 1,521 ha area at a cost of ₹ 15.93 crore with a cut of 92 *per cent* in natural landscaping, 98 *per cent* in agriculture landscaping and urban landscaping each, and 95 *per cent* in the case of conservation interventions as can be seen from the **Table-1.2.1** below:

¹³ 2,650 ha Advance Soil Work (ASW) for Natural Landscaping, 5,280 ha for Agriculture Landscaping, 170 ha for Urban Landscaping and 1,574 ha for Conservation Intervention.

Table-1.2.1: Shortfall in targets between DPR and approved APO for the year 2016-17

Components/Activity	Targets as per DPR for 2016-17 (Hectare)	Targets as per approved APO 2016-17 (Hectare)	Shortfall in Hectare (per cent)
Natural Landscape (advance soil work and eco task force)	12,149.50	1,000	11,149.50 (92)
Agriculture Landscape	15,100.00	300	14,800.00 (98)
Urban Landscape	1,079.58	21	1,058.58 (98)
Conservation Interventions	4,304.00	200	4,104.00 (95)

Hence, the total plan size approved in the 2016-17 APO was a meagre 4.66 *per cent* of the area planned for the year in the DPR. Such a vast mis-match between plan sizes of DPR and approved APO would ultimately affect the outcome planned for the first year of implementation (2016-17) and the subsequent activities and outcomes.

Project Director, PMU, FIG, Uttarakhand attributed (May 2017) the modest size of approved APO to non-availability of sufficient funds with the NMCG.

ii) Delayed submission of APOs

The APO for the year 2016-17 was to be submitted by 20 April 2016 which was extended to 10 May 2016. However, the State Forest Department was able to submit it only on 10 June 2016. The same was approved by NMCG on 14 July 2016. Since, the process of preparing APOs was delayed, the Department did not include activity of planting of saplings in the APO and, instead, planned for advance soil work only for the next year (July 2018). Plantation is carried out in the month of July-August in the State and advance soil work for the same is done 3-4 months prior to plantation. Hence, during the first year (2016-17) of implementation period, the State of Uttarakhand had to restrict itself to advance soil works only and the actual achievement, *i.e.* plantation, under the component of natural landscaping was nil.

The Project Director, PMU, FIG, Uttarakhand corroborated (May 2017) the audit observation.

iii) Non-formation of State Level Programme Steering Committee (SPSC)

The apex body of FIG at the State level *i.e.* State Level Programme Steering Committee (SPSC), which was responsible for approving the APOs and taking decision on matters related to implementation of the project, was not established by the State Government even after the first year of the implementation period. Hence, the APOs of the programme were submitted to the NMCG without approval by the SPSC and there was no scope for receiving and incorporating valuable inputs from other stakeholders such as representatives of other line departments, civil societies, NGOs, *etc.* which were to be a part of the SPSC.

iv) Functioning of Project Management Unit

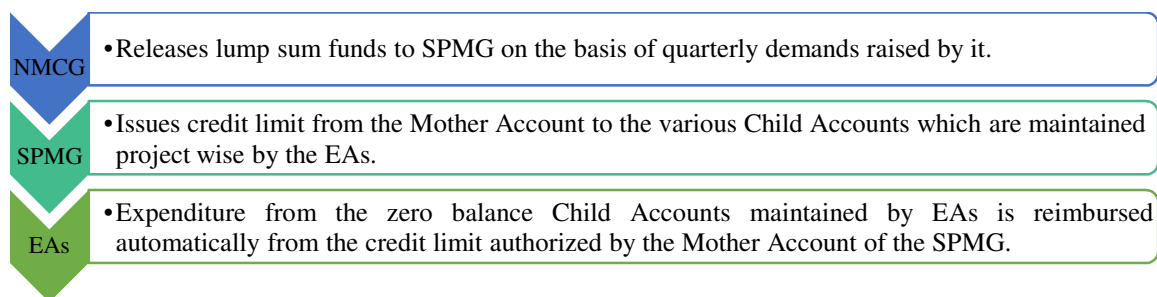
Project Management Unit (PMU) for Forestry Interventions for Ganga (FIG) at the Forest Department was working with just the Chief Conservator of Forests (CCF)/Project Director (PD) in command. The post of Project Coordinator (Conservator of Forests) and four posts of Project Managers remained vacant. The impact of such vacancies can be seen in delays in preparation of APO 2016-17, short achievements of physical targets and lack of monitoring of the works being executed as stated in *paragraphs 1.2.6.5 (ii), 1.2.8.7 and 1.2.10.3.*

v) **Non-constitution of CPIC and DIC under FIG**

Circle Project Implementation Committee (CPIC) and Division Level Implementing Committee (DIC) were not formed in any of the implementing circles/divisions. Hence, the task of preparing APOs was left to the Divisional Forest Officers (DFOs) without guidance from the CPIC and inputs from other stakeholders which were required as per the norms of the DPR.

1.2.7 Financial Management

At the time of formation (February 2009) of the NGRBA, the Central and the respective State Governments shared the cost of river conservation and pollution control measures in the ratio of 70:30. After the launching (July 2014) of the *Namami Gange* programme, 100 per cent Central Government assistance is being provided to the SPMG for the entire life cycle cost of treatment of assets created by the State, and for 15 years' Operation & Maintenance. In another significant development post 2014, the SPMG was given the flexibility to utilise the funds available in the Mother account as per the needs of the different projects/activities. It channelises funds to the EAs through a sub-project specific zero balance bank account (Child account) for each project in the same bank with which the SPMG maintains its Mother account. Each EA maintains a project specific Child account for the purpose. Operation of the Mother and Child accounts is depicted in the following flow chart:-



1.2.7.1 Availability and Utilisation of funds

The NMCG releases funds to the SPMG on a lump sum basis for the projects approved by it. During the period from 2012-13 to 2016-17, the status of availability and utilisation of funds under various components is given in the **Table-1.2.2** below:

Table-1.2.2: Availability and Utilisation of funds

(₹ in crore)

Year	Opening balance	Funds received during the year					Total funds available	Funds utilised	Unspent balance	Percentage of unutilised funds
		Central share	State share	Interest	Other	Total				
2012-13	0.02	12.85	2.40	0.06	0.10	15.41	15.43	9.63	5.80	37.59
2013-14	5.80	17.05	8.68	0.24	0	25.97	31.77	23.68	8.09	25.46
2014-15	8.09	4.25	13.92	0.22	4.25*	22.64	30.73	13.62	17.11	55.68
2015-16	17.11	30.26	0	1.15	0.01	31.42	48.53	20.04	28.49	58.71
2016-17	28.49	35.37	5.98	0.80	0.01	42.16	70.65	39.86	30.79	43.58
Total		99.78	30.98	2.47	4.37	137.60	197.11	106.83		

Source: SPMG, Project Management Unit (Swajal) and CEO Namami Gange.

Note: The amounts shown in the table includes Non-EAP, EAP, DPR fund, NGP fund, Ghat beautification fund, Rural Sanitation fund and Forestry fund

*The amount of ₹ 4.25 crore was returned by Peyjal Nigam to SPMG on account of saving from the funds directly released by NMCG to Peyjal Nigam.

It is evident that there were unspent balances ranging from 25.46 to 58.71 *per cent* throughout the audit period. The SPMG stated that non-utilisation of funds by the EAs was due to limited resources and slow pace of work.

During exit conference, Secretary, Peyjal Department, agreed with the facts and stated that required action would be taken.

1.2.7.2 Linkage between GoI and State share

In March 2011, under the NGRBA Framework, SPMG was established in Uttarakhand for implementation of the approved annual action plan. Since 2012-13, the NMCG is receiving the NGRBA funds from the Ministry of Environment and Forest (MoEF) budget and transferring the same to the SPMG in the State. The State Government was also required to release its share of funds to the SPMG within two months of the receipt of the instalment from the NMCG under the NGRBA framework. It was noticed that the State was releasing its share on a lump-sum basis including its share of earlier years, without indicating the period to which the share relates, which was in contravention to the provision of NGRBA guideline. The status of State share against Central share is depicted in the **Table-1.2.3** below:

Table-1.2.3: Status of State share against Central share

(₹ in lakh)

Year	EAP ¹⁴ release				Non-EAP Release			
	Central share	Date	State share	Date	Central share	Date	State share	Date
2012-13	60.00	02.05.2012	16.67	13.06.2012	820.00	14.11.2012	189.87	07.02.2013
	94.70	01.03.2013	9.04	09.11.2012	310.00	22.03.2013		
			24.29	08.01.2013				
2013-14	527.00	28.02.2014	-	-	313.00	30.04.2013	300.00	22.05.2013
			-	-	181.00	30.04.2013	568.00	25.03.2014
			-	-	174.00	26.09.2013		
			-	-	236.00	23.10.2013		
			-	-	59.00	23.10.2013		
			-	-	215.00	30.12.2013		
2014-15	25.35	03.07.2014	27.16	07.11.2014	300.00	18.06.2014	664.00	14.10.2014
			27.84	07.02.2015	100.22	30.01.2015	297.00	07.02.2015
			226.00	07.02.2015				
2015-16					211.00	21.01.2016		
					485.00	01.03.2016		
2016-17			56.77	21.09.2016	36.00	02.06.2016	318.72	02.09.2016
					518.90	28.07.2016	181.28	15.09.2016
					535.00	07.02.2017	41.11	22.12.2016

Source: SPMG.

In the absence of description/bifurcation, the State share *vis-à-vis* specific central share could not be analysed. On being pointed out, the SPMG stated that due to financial constraints and limited resources, State share could not be released on time. It further added that due to non-release of State share, the works were interrupted and targets could not be achieved in time. The Secretary, Peyjal Department, during exit conference, directed SPMG to take up the matter with the State Government.

¹⁴ Externally Aided Programme.

1.2.7.3 Preparation of accounts

As per the NGRBA framework, the NMCG could release subsequent fund instalments only after (i) submission of audit report of previous financial year by the SPMG to the NMCG and (ii) reasonable utilisation of the first instalment of the reporting year. Audit noticed that in the absence of an internal auditor, the consolidated financial statements along with annual audit report were not being prepared by the SPMG. On being pointed out, the SPMG stated that the unaudited trial balance, income and expenditure and receipt & payment statements were submitted to NMCG as and when required. The procedure laid down in the NGRBA framework was, therefore, not being adhered to since funds were being released by NMCG without adhering to procedural requirements.

1.2.7.4 Accrual of Interest

As per the instructions of the Ministry of Finance, GoI, the State Governments are required to credit the interest earned on the GoI funds parked in bank accounts to the concerned accounting head¹⁵. During test-check of the records of nine sampled forest divisions out of 11 implementing divisions involved in FIG, it was noticed that the divisions opened Child accounts (Saving Accounts) in the concerned banks (Union Bank of India) for maintaining the funds released from Chief Conservator of Forests/Project Director (CCF/PD) *Namami Gange* and earned interest of ₹ 5.20 lakh up to July 2017. Audit observed that no directions were issued either by NMCG or CCF/PD *Namami Gange* regarding accounting of the interest amount which was lying in the bank accounts.

1.2.7.5 Other Irregularities

- It was noticed that NMCG in June 2011 issued instruction to SPMG for opening of two separate bank accounts (Mother account) one each for Non-EAP and EAP funds in the Union Bank of India, with link to EAs through zero balance Child account in the same bank. The purpose was to avoid delay in transferring funds to EAs for execution of works. In response, SPMG in August 2011 opened both the bank accounts with UBI. Instructions were issued by the SPMG to EAs to link Child account with Mother Account in November 2012 but the EAs opened the Child account after a delay of three years in June 2014. Till then, the SPMG provided the funds through cheque, which defeated the purpose of zero balance Child account.
- Presently, the following Mother accounts were maintained by SPMG.

Table-1.2.4: Details of Mother Accounts maintained by SPMG

Sl. No.	Name of Programme	Name of Bank	Date of Opening
1.	Non-EAP	Punjab National Bank	18.06.2014
2.	EAP	Bank Of India	24.09.2013
3.	Ghat Beautification	Axis Bank	02.03.2016
4.	National Ganga Plan	Axis Bank	02.03.2016

It was noticed that the Mother Account for Ghat beautification and National Ganga Plan was opened by SPMG in Axis Bank, which was a private bank. The Superintending

¹⁵ Major Head 0049 (Interest Receipt)-01 (Interest from State Governments)-800 (Miscellaneous receipt).

Engineer, Irrigation Division Uttarkashi (EA) had informed SPMG (May 2017) that the Child account could not be opened by the EA as there was no branch of the Axis Bank in Uttarkashi. Thus, opening of Mother Account in a private bank hampered the opening of Child account of the EA in the same bank thereby defeating the objective of avoiding any delay in release of money for execution of works.

- Audit noticed a difference of ₹ 7.42 lakh (Non-EAP) between the balance shown in the records of SPMG and the actual balance lying in the bank account (Mother Account). On being pointed out, the SPMG stated that the reconciliation would be done with the EAs and corrective measures would be taken.
- It was also noticed that the EAs were not reconciling their expenditure figures shown in physical and financial progress report with the work abstract/ledger. On being pointed out, the SPMG stated that necessary instructions had been issued in the review meeting and through correspondence.

The Secretary, Peyjal Department, during exit conference, directed the SPMG to open the accounts in the light of instructions issued by NMCG. Further, SPMG stated that the difference in amount would be reconciled with the bank.

1.2.8 Implementation of Programme

1.2.8.1 Rural Sanitation

For rejuvenation and development of River Ganga, the State Government forwarded (July 2014) to the Ministry of Drinking Water and Sanitation, GoI, the State Action Plan (SAP) for complete sanitation coverage of Gram Panchayats (GPs) falling in the Ganga basin in the State of Uttarakhand. As per the SAP, 265 villages in 132 GPs in seven districts located along the River Ganga and its tributaries were to be declared as *open defecation free* (ODF) by the year 2019. The SAP aimed at constructing 10,010 Individual House Hold Latrines (IHHLs), 132 Community Sanitation Complexes (CSCs) and 132 Solid and Liquid Waste Management¹⁶ (SLWM) units in the 132 GPs for improving cleanliness in the rural areas.

The physical targets and achievements in the construction of IHHLs, CSCs and SLWM structures are depicted in the **Table-1.2.5** below:

Table-1.2.5: Detail of physical targets and achievements of IHHLs, CSCs and SLWM

Sl. No.	Name of the Component	Target	Achievement	Achievement (in per cent)
1.	IHHLs	10,010	10,010	100
2.	CSC	132	10	08
3.	SLWM	132	02	02

It is evident that there was insignificant progress in the construction of CSCs and SLWM structures. The Department, however, declared (May 2017) all the 265 villages in the

¹⁶ SLWM includes construction of pits, vermi compost pits, drains, installation of dustbins and biogas plant and treatment of garbage/manure.

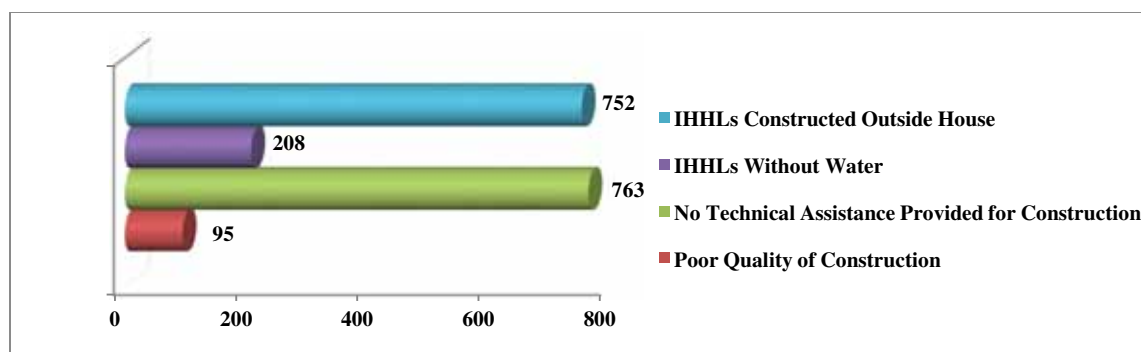
132 GPs along the River Ganga as ODF despite the fact that 41 out of 1,143 IHHLs physically verified by Audit were actually not constructed and 34 IHHLs claimed to have been completed were still under construction. Further, as per paragraph 14.4 of guidelines of *Swachh Bharat Mission (Gramin)*, an independent agency was required to be engaged for monitoring of sanitary status in the rural areas. However, in Uttarakhand, officials from *Swajal* carried out the prescribed physical verification in contravention of the above guidelines.

The Secretary, Peyjal Department, during exit conference, stated that initially the focus was on construction of IHHL and now the funds have been released and the DPRs of CSCs and SLWM have been prepared.

1.2.8.1 (a) Results of field verification

Out of 10,010 (as of 19 May 2017) beneficiaries of IHHLs, a sample of 1,362 beneficiaries was selected by audit for physical verification. However, repetition of names of 44 beneficiaries (43 beneficiaries repeated twice and one beneficiary repeated thrice) and non-availability of 174 beneficiaries at the time of physical verification reduced the effective sample size to 1,143. Physical verification revealed that 41 out of a sample of 1,143 beneficiaries (3.6 per cent) had still not initiated construction of IHHLs and construction of 34 IHHLs (three per cent) was yet to be completed. Hence, the actual number of beneficiaries with completed IHHLs was 1,068 only. Yet the Department declared (May 2017) all the 265 villages in the 132 GPs along the River Ganga as ODF. The result of physical verification of these 1,068 beneficiaries (as per the parameters given in *Appendix-1.2.2*) is given in the **Chart-1.2.1** below:

Chart-1.2.1: Results of of physical verification



As can be seen from the above, 71 per cent¹⁷ IHHLs were constructed without technical assistance, 70 per cent¹⁸ IHHLs were constructed outside the residential premises, 19 per cent¹⁹ IHHLs were without water facilities and construction quality of nine per cent²⁰ IHHLs was found below standard.

¹⁷ 763 out of 1,068 IHHLs.

¹⁸ 752 out of 1,068 IHHLs.

¹⁹ 208 out of 1,068 IHHLs.

²⁰ 95 out of 1,068 IHHLs.

1.2.8.2 Unscientific disposal of Municipal Garbage

The Draft Urban Municipal Waste Management Action Plan for the State of Uttarakhand was prepared in 2015. The Plan was revised (August 2017) in accordance with Solid Waste Management Rules 2016 and it was to be implemented by 92 ULBs in the State. During the scrutiny of the records and joint physical inspection of ten selected towns in seven NPPs, it was observed that disposal of the municipal solid waste was not being done as per prescribed scientific methods²¹ except in Gopeshwar and *Muni ki Reti*. Neither segregation of garbage in degradable and non-degradable categories was being made nor was manure being made out of degradable garbage. It was further observed in three²² out of ten selected towns that un-segregated municipal garbage was being indiscriminately dumped on the slopes of the hills which would ultimately fall into the River Ganga and its tributaries particularly during rainy season.



Dumping site on the bank of river Alaknanda at Badrinath



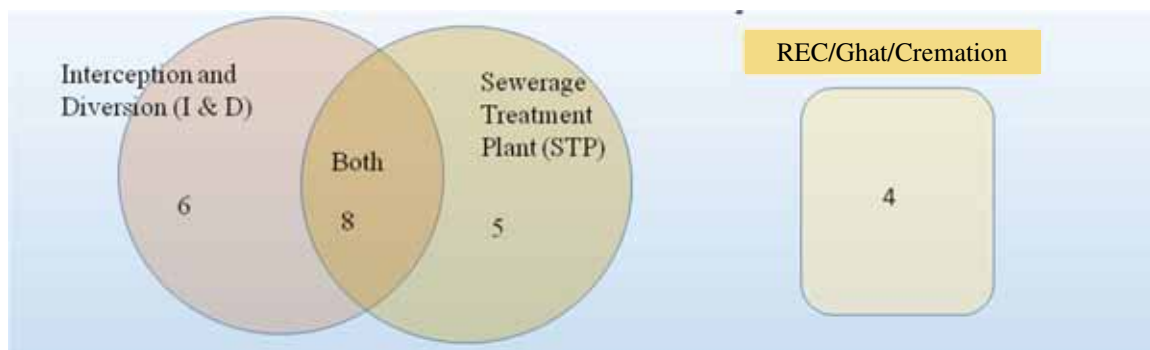
Dumping site on the bank of river Alaknanda at Karnprayag

1.2.8.3 Interception and Diversion Projects and Sewage Treatment Plants (STPs)

Interception and diversion of raw sewage is an important aspect of pollution abatement. STPs treat the intercepted/diverted sewage preventing spread of pollution. In the State, the Uttarakhand Peyjal Nigam (UPJN) is responsible for construction of sewerage network and STPs. The Uttarakhand Jal Sansthan (UJS) connects the establishments and households to the sewerage network laid and is also responsible for its operation and maintenance. The 23 sampled infrastructure projects including five completed (C) projects as on 31 March 2017 are shown below:

²¹ Collection, segregation, processing and disposal of Municipal solid waste which included construction of landfill and compost plant.

²² (1) NPP, Karnprayag (2) NP, Badrinath (3) NPP, Badkot.



I&D	Both(I&D and STP)	STP
<ul style="list-style-type: none"> Ahbab Nagar, Haridwar (C) Triveni Ghat, Rishikesh (C) Repair & Reconstruction Devprayag (C) Devprayag Sarai, Haridwar Jagjeetpur, Haridwar 	<ul style="list-style-type: none"> Tapovan (C) Gangotri Kirtinagar, Tehri Gopeshwar Karnprayag Rudraprayag Muni-ki-Reti, Dhalwala Rishikesh 	<ul style="list-style-type: none"> Devprayag (C) Upgradation Gyansu, Uttarkashi Upgradation, Srinagar Jagjeetpur, Haridwar Sarai, Haridwar

River Front Development/Ghat/Cremetoria

1. Devprayag to Uttarkashi
2. Uttarkashi to Maneri
3. Rudraprayag to Karnprayag
4. Karnprayag to Vishnuprayag

The following deficiencies were noticed:

(a) Underutilisation of Sewage Treatment Plants

- (i) The work of Sewage Treatment Plant (STP) at Devprayag, having treatment capacity of 1.4 million litre per day (MLD) for treating the sewage of three areas²³ was awarded (October 2011) to a contractor for an amount of ₹ 2.83 crore with a completion period of 12 months. Scrutiny of the records revealed that the work could not be started till February 2013 due to land dispute. Further, the land development work for the project which started in February 2013 came to a halt in June 2013 due to floods and was resumed in November 2013. Finally, the project was completed in May 2016. It was also noticed that out of three areas, the sewage load of only one area²⁴ was being treated at the STP as two separate STPs (75 KLD and 150 KLD) for treatment of sewage load of other two areas had been proposed (2014) and

²³ Shanti Bazar, Sangam Bazar and Bah Bazar.

²⁴ Bah Bazar (0.05 MLD).

sanctioned in 2015. As a result, only 0.05 MLD (3.57 per cent) sewage was being treated against the total capacity of 1.4 MLD. Further, joint physical inspection (July 2016) by the officers of UPJN (Ganga) and UJS revealed that the operation of STP could not be tested due to low input sewage.

On being pointed out, the Department stated that the *Shanti Bazar* and *Sangam Bazar* sewer networks could not be connected due to damage caused by the natural calamity. It further stated that it was technically unviable to reduce the capacity of the STP at Devprayag after commencement of work. As only 10 households of *Bah Bazar* area were connected (May 2017) to the sewer network after being handed over to UJS, the Department needs to ensure that all the sewer connections of the area are connected to the STP so that the entire sewage can be treated.

- (ii) An STP with a treatment capacity of 3.5 MLD at Tapovan in Rishikesh was completed and is operational since May 2016. Scrutiny of records revealed that the STP was not handed over by UPJN to the UJS for O&M till June 2017. It was further noticed that all the establishments/houses in the project area were not connected with the STP. As a result, only 0.29 MLD sewage was being treated against the total capacity of 3.5 MLD. On being pointed out, Project Manager (PM), Construction and Maintenance Unit (Ganga), stated that connections had to be made by the UJS. The Secretary, Peyjal Department, during exit conference, stated that the administrative heads of both UPJN and UJS had been instructed to undertake special drive to increase connections.

(b) Inordinate delay in completion of project

The Scheme of Sewerage System and an STP having treatment capacity of one MLD at Gangotri Dham at Uttarkashi was completed in October 2017 against the target date of 30 April 2014. Scrutiny of records of the PM, Uttarkashi revealed that the current daily average load of sewage generated in the town was 0.75 MLD. Due to inordinate delay in completion of the project, 0.75 MLD of untreated sewage for an additional period of three years was being discharged daily into Bhagirathi River, which is considered to be the source of River Ganga.

During exit conference, the Department stated that the delay was due to natural calamity and tough hilly conditions. The Department is required to factor in the difficult terrain conditions of the area before working out the targeted date of completion of any project. This contention was accepted by the Secretary, Peyjal Department during exit conference.

(c) Non-realisation of penalty

The Scheme of Sewerage System and STP for Gangotri Dham at Uttarkashi was awarded (July 2011) to a contractor at ₹ 6.92 crore (₹ 4.74 crore for construction and ₹ 2.18 crore for O&M). The contractor had submitted TDR (Term Deposit Receipt) for ₹ 69.21 lakh issued by the West Bengal State Cooperative Bank Limited, Coochbehar, West Bengal as security deposit against the contract bond which was verified by the division from the concerned bank. As per the agreement, the date of start of the work was July 2011 with

date of completion as July 2012. The work was not completed within the stipulated time by the contractor and several extensions were given with final date of completion as September 2015. It was noticed that the contractor did not complete the work even by the extended date and the General Manager (GM), Construction Division (Ganga), Haridwar rescinded the bond on 17 November 2015. A penalty of ₹ 69.21 lakh²⁵ was imposed by PM, UPJN, Uttarkashi. The TDR submitted by the contractor as security deposit was found to be fake at the time of realisation (August 2015). On being pointed out, PM, UPJN Uttarkashi while accepting the facts stated that the amount of penalty could not be recovered due to fake TDRs. This resulted in loss of ₹ 69.21 lakh to the State exchequer. GM, Construction Division (Ganga), during exit conference, stated that a departmental investigation was going on.

(d) Payment of interest free Mobilisation Advance

Rule 48 of the Uttarakhand Procurement Rules, 2008 strictly prohibits provision of interest free mobilisation advances (MA) to the contractors without sanction of the Government. However, it was found that an interest free MA amounting to ₹ 40.14 lakh for the construction of 3.5 MLD STP at Tapovan, Rishikesh was provided to the contractor. On being pointed out, the Department stated that the advance was given as per the agreement with the contractor. Scrutiny of records further revealed that the agreement was silent about the interest component. In the absence of any specific clause in the agreement and in violation of extant rules mentioned above, the payment of interest free MA to the contractor was irregular and resulted in an undue favour to the contractor.

(e) Extra burden on State exchequer due to faulty DPR

The Administrative Approval and Expenditure Sanction for construction of a 3.5 MLD STP at Tapovan area in Rishikesh was accorded by the GoI (March 2011) with a project cost of ₹ 23.02 crore (70:30 Ratio). It was observed that the DPR was prepared by the EA without carrying out any geological survey at the construction site. The geological survey carried out (November 2011) subsequently recommended construction of an RCC protection wall to safeguard the STP from soil erosion. The State Government constructed the RCC wall at a cost of ₹ 29.75 lakh. This resulted in an extra burden of ₹ 20.82 lakh²⁶ to the State exchequer. The Secretary, Peyjal Department, during exit conference, accepted the observation.

1.2.8.4 Discharge of sewage and drains opening into the Ganga and its tributaries

One of the major components for pollution in the River Ganga and its tributaries is the drains opening into the river. Audit observed the following:

- a) The UPJN had identified (2015) 112 *Nallas* in the priority towns²⁷ discharging 56.871 MLD of sewage into the River Ganga and its tributaries²⁸. During scrutiny of

²⁵ @ 0.50% per week of the contracted value (₹ 692.08 lakh) or maximum 10 per cent of the contracted value whichever is less.

²⁶ ₹ 29.75 lakh x 70 per cent = ₹ 20.82 lakh.

²⁷ Haridwar (including BHEL Ranipur), Rishikesh, Gopeshwar, Tehri (Tapovan-Rishikesh), Srinagar, Joshimath, Uttarkashi (Badkot), Muni ki Reti, Dhalwala, Gaucher, Karnprayag, Rudraprayag, Kirtinagar, Nand Prayag, Badrinath, Devprayag.

²⁸ Alaknanda and Bhagirathi.

the records of the SPMG, it was noticed that only 47 *Nallas* having discharge of 30.579 MLD had been tapped till the date of audit (June 2017). Thus, the remaining 65 *Nallas* were still discharging 26.292 MLD of sewage into the River Ganga or its tributaries.

There were 22 *Nallas* in Haridwar out of which 17 *Nallas* had been tapped and handed over to Jal Sansthan, Haridwar. Joint physical verification (June 2017) of remaining five²⁹ *Nallas* revealed that three³⁰ out of five *Nallas* were partially tapped and the sewage was over flowing without any treatment into the *Gang Nahar*. Two *Nallas* (Ramrakha and Matra Sadan) were not tapped at all and were discharging untreated water into *Gang Nahar* and River Ganga.



Matra Sadan Nalla discharging into river Ganga in Haridwar



Pandeywala Nalla discharging into Gang Nahar Haridwar

It was informed by the Assistant Engineer (AE), UPJN, Haridwar, that water of *Gang Nahar* was being used for irrigation purposes and its branches merge with River Ganga and River Yamuna near Kanpur and Agra respectively. Further, the water of the *Gang Nahar* was also supplied to Meerut, Ghaziabad, Noida and Delhi for drinking purposes. GM, Construction Division (Ganga), during exit conference, stated that the DPRs for 60 *Nallas* had been approved and DPRs for remaining five *Nallas* were under process at NMCG level.

- b) Scrutiny of records of the Maintenance Division (Ganga), UJS, Haridwar, revealed that two STPs having capacity of 18.0 MLD and 27.0 MLD at Jagjeetpur, Haridwar were handed over to the UJS in April 2011. Against a sewage load of 80 MLD being pumped into these STPs, only 45 MLD of sewage was being treated by these STPs. As a result, 35 MLD of the untreated sewage was being discharged into the river as



Untreated sewage mix with treated sewage at Jagjeetpur, Haridwar

²⁹ (1) Kasawan *Nalla*, (2) Ramrakha *Nalla*, (3) Pandey Wala *Nalla*, (4) Matra Sadan *Nalla* (5) Lal Mandir *Nalla*.

³⁰ (1) Kasawan *Nalla* (2) Pandey Wala *Nalla* (3) Lal Mandir *Nalla*.

observed during the physical verification of the site. The Project Manager, Construction and Maintenance Division, UPJN (Ganga) stated that the DPRs of STPs of 18 MLD and 27 MLD at Jagjeetpur were prepared in 1989 and 2005 on the basis of population census of 1981 and 2001 respectively. It was further added that the capacity had become inadequate because the quantum of waste water generated had gone up due to permanent resident population increasing considerably and surpassing the projected estimates and increase in floating population of tourists and visitors.

Similarly, in Rishikesh, approximately 16 MLD sewage was reaching the *Lakadghat* Oxidation Pond, whereas the capacity of the Oxidation Pond was only 6 MLD. Consequently, 16 MLD sewage, which was partially treated, was being discharged into open drains which flowed into the *Soung* River, a tributary of River Ganga. The PM, Maintenance Division (Ganga), Haridwar, during exit conference, agreed with the facts and stated that STPs of 68 MLD at Haridwar and 26 MLD at Rishikesh had been sanctioned and the work for STP at Haridwar had been awarded (October, 2017) and the tendering process for STP at Rishikesh was in progress.



Mixing of industrial waste of SIDCUL with the treated water at Sarai, Haridwar

- c) During scrutiny of the records of UJS, Haridwar it was noticed that 18.0 MLD sewage was being treated in the STP at Sarai and the treated sewage was being discharged into the *Sukhi* river which flows for around eight kilometres before falling into the River Ganga. A physical verification of the discharge route of the treated sewage revealed that enroute, the industrial waste from the State Industrial Development Corporation of Uttarakhand Limited (SIDCUL), Haridwar was also being let into this channel carrying the treated water, thus polluting the treated water. The Biochemical Oxygen Demand (BOD) level of water at this point was tested and found to be 22 mg/litre, which is significantly higher than the accepted norm of 10 mg/litre. During exit conference, Chief Engineer, Peyjal Nigam, however, stated that as per revised parameters the BOD level upto 20 mg/l is permissible. The SPMG stated that as per directions of National Green Tribunal (NGT), a notice had been issued to SIDCUL.
- d) During scrutiny of the records of UJS (Maintenance Division-Ganga) Haridwar, it was observed that the sewage of five colonies of Haridwar was being collected at the Sewage Pumping Station (SPS) in *Brahmpuri*. The collected sewage was being transported from *Brahmpuri* SPS through a rising main having a length of 1,100 metres to the manhole line near the *Dam Kothi*.

It was noticed that the said rising main was prone to frequent ruptures and during this period the SPS had to be closed which led to overflow of the sewage. The rising main

ruptured 53 to 60 times during the years 2011-12 to 2016-17. Further, every single repair took around 24 to 36 hours. Keeping in view the pumping capacity of SPS, number of ruptures and the average time taken to repair, it was informed by the division that around 260 million-litre untreated sewage was discharged during the years 2011-12 to 2016-17 into the *Laltaro* River which finally merges with the River Ganga.

On being pointed out, the Executive Engineer (EE), UJS, Haridwar agreed with the facts and stated that the rising main being too old had become prone to damage and was being replaced.

1.2.8.5 Flaring of Methane Gas

The UPJN constructed an STP of 18.0 MLD capacity at Jagjeetpur, Haridwar under Ganga Action Plan (GAP-I). The STP was handed over to the UJS in the year 2011. Scrutiny of records of the EE, Maintenance Unit (Ganga), UJS, Haridwar revealed that 350 to 400 cubic metre methane gas released per day was being flared in open air in the premises of the STP from the year 2011. As per the Environment Protection Act 1986, No Objection Certificate (NOC) to operate the STP was to be obtained from the UEPPCB. It was noticed that the Jal Sansthan had neither obtained the consent to operate the STP nor NOC from the UEPPCB from the date of taking over in the year 2011.

On this being pointed out, the Department stated that application for NOC had been made with the UEPPCB in May 2016. Cross verification with the records of Regional Officer, UEPPCB, Roorkee revealed that the online application was accepted (May 2016) and the Department was directed to deposit fee which was not done till date.

The plant was, therefore, running for the last five years without consent to operate and regularly flaring methane gas without following the extant air pollution control norms. The Secretary, Peyjal Department during exit conference, directed the Department to take necessary action.

1.2.8.6 Reuse of treated water and sludge

As per the Central Public Health and Environmental Engineering Organisation manual, provision for reuse of the treated water and the sludge from STPs in agriculture, horticulture, *etc.* should be made by the Implementing Agencies.

During scrutiny of records of UPJN, Rishikesh and UJS, Haridwar, it was observed that provisions for reusing the treated water from 3.5 MLD STP at Rishikesh and 18 MLD STP at Sarai, Haridwar had not been made and the treated water was being discharged into River Ganga or its tributaries. It was also observed that



Dumped sludge at Sarai, Haridwar

provision for reuse of sludge was also not made by both the units and sludge was being dumped alongside the STPs, causing threat to the environment. The Secretary, Peyjal

Department during exit conference, stated that the treated water was now being provided to the farmers as and when required by them. Further, it was also stated that private partners had been consulted for sale of sludge.

1.2.8.7 Physical progress under Forestry Interventions for Ganga

Under APO 2016-17, the NMCG approved implementation of forestry interventions in 1,521 ha area. The progress of interventions is given in **Table-1.2.6** below:

Table-1.2.6: Targets and Achievements

Landscape/activity	Targets as per approved APO	Achievements	Percentage of shortfall
Natural Landscape:			
Advanced Soil work (Hectare)	1,000.00	965.00	3.50
Plants in Nursery (Lakh)	27.45	19.55	29.00
Agriculture Landscape (Hectare)	300.00	304.00	-
Urban Landscape (Hectare)	21.00	2.75	87.00
Conservation Interventions (Hectare)	200.00	171.14	14.00

The Department failed to achieve the goals set for the year 2016-17 in three out of the four targeted interventions by a margin ranging from 3.50 *per cent* in the case of advanced soil work to 87 *per cent* in the case of urban landscape.

Urban landscaping was to be taken up in four districts, namely Tehri, Uttarkashi, Dehradun and Haridwar. Physical verification was taken up by Audit in Uttarkashi and Dehradun. In Uttarkashi although plantation was found to have been carried out as per provisions in the DPR, there were shortfall in the achievements *vis-à-vis* targets. Target for Uttarkashi Division was five hectares (three hectares for avenue plantation and two hectares for eco-park). Against this, only two hectares were brought under avenue plantation by March 2017 because of delayed release of funds. No activity was taken up for development of eco-park. In Dehradun avenue plantation had not been taken up. Out of three hectares targeted for development of eco-park only 0.75 hectares were developed.

On being pointed out, the Project Director, PMU, FIG, Uttarakhand stated (May 2017) that targets could not be achieved due to delay in establishment of programme management unit, arrangement of staff and issuance of technical guidelines.

1.2.8.8 Plantation issues under Forestry Interventions for Ganga

- (i) Paragraph 5.5.2 of the DPR Volume-I approved by NMCG provided that pits for plantation works should be dug sufficiently well before planting operation according to the standard practice in the plantation area, and the period between pit digging and scheduled planting time should not be more than four months so that soil run off through wind and water could be minimised. In Uttarakhand, the regular planting activity is conducted in July-August during the monsoons and, therefore, the ideal time for pit digging should be April or later.

During audit of the nine test-checked divisions, seven divisions reported digging of pits during January-March 2017. The pits for natural plantation were, therefore, dug 1-3 months prior to the recommended time which was in violation of the programme guidelines.

- (ii) DPR (Paragraph 5.5.2 of Volume-I) provided application of organic manure to boost plant growth in nurseries and plantations. Eco-friendly measures were to be adopted without resorting to use of synthetic chemicals.
- In the nine test-checked divisions, four³¹ divisions reported that a mixture of organic manures and synthetic chemicals were applied for the plantation. Use of synthetic chemicals by the divisions was in violation of provisions of the DPR.
- (iii) The activities of Bio-remediation and Bio-filtration, Industrial Plantation, Riparian Wildlife Management, Wetland Management and River Front Development, which were part of Urban Landscape and Conservation interventions, were not attempted at all despite the fact that these activities were crucial for mitigating the risk of pollution from contaminants flowing out from urban and peri-urban agglomerations and industrial clusters.
- (iv) A target of five hectares was set for avenue plantation³² for the Haridwar division for the year 2016-17, for which an amount of ₹ 12 lakh was allotted in February 2017. However, no plantation was done by the division and the amount allotted was surrendered in May 2017. On being pointed out, the division while accepting the facts stated that the National Highway Authority of India expressed its inability to provide the location. The reply is not acceptable as work of widening of National Highway was going on for the last several years and availability of locality should have been confirmed prior to preparing the APO.

1.2.8.9 Payment of wages through electronic mode under forestry interventions

Government of India issued instructions (November 2016) that all the field offices and contractors should open bank accounts for the employed workers and make payments through Direct Benefit Transfer (DBT)/electronic mode. The need for organising camps was also stressed for opening bank accounts of labourers. The instructions were forwarded (December 2016) by Project Director, PMU, FIG, Uttarakhand for strict compliance by the divisions.

Audit found that in seven³³ out of the nine test-checked divisions, works were got executed through contractors and ₹ 5.27 crore was paid as labour cost.

Two divisions³⁴ had executed all the works on departmental labour basis. However, the Divisions paid ₹ 82.43 lakh in cash claiming that bank accounts were not available with the labourers. This violated the instructions regarding payment of wages through DBT.

The Divisional Forest officers (DFOs) replied that payment had been made to contractors through electronic mode. However, none of the divisions had laid down conditions in the contracts that payment of wages to labourers would be made through DBT. No assurance, therefore, could be gained on whether the labourers received their wages through DBT.

³¹ Uttarkashi, Soil Conservation Uttarkashi, Tehri Dam II and Chidiyapur range of Haridwar.

³² Roadside Plantation.

³³ Uttarkashi, Soil Conservation Uttarkashi, Tehri Dam II, Rudraprayag, Tehri, Dehradun, Haridwar.

³⁴ Narendra Nagar Forest Division, Tehri Dam I Forest Division.

1.2.9 Compliance with directions of Hon'ble High Court of Uttarakhand

The Hon'ble High Court of Uttarakhand passed (02.12.2016) an order in a writ petition relating to cleanliness of River Ganga wherein directions were issued for taking measures for abatement of pollution in River Ganga and its tributaries. The directions of the Hon'ble High Court were, *inter alia*, related to STPs at Haridwar and Rishikesh; setting up of STP by Bharat Heavy Electricals Limited and Hydroelectric Projects; status of operation of defaulting industries which were served with closure notices; discharge of untreated sewage by industry/hotel/commercial establishment/ashrams; drains opening into River Ganga; ban of sale, use and storage of plastic carry bags; and bathing of cattle. The details of the findings are given in *Appendix-1.2.3*.

1.2.10 Monitoring and Evaluation

Effective monitoring and reporting of the programme is a key factor in achieving the objectives of the programme. Audit observed the following:

1.2.10.1 Water Quality Monitoring of River Ganga

The UEPPCB, which is a statutory organisation constituted under Section-4 of the Water (Prevention and Control of Pollution) Act, 1974 to implement Environmental laws and rules within the State of Uttarakhand, was monitoring the quality of water. During the scrutiny of records of the UEPPCB, it was observed that water quality monitoring at the monitoring stations was not being done at the entry and exit points of a particular town. It was, therefore, difficult to compare the water quality of a town at the entry and exit point. This lacuna also prevented measuring the effectiveness of the STPs and I&D projects in controlling water pollution originating from these towns. As per the UEPPCB's water quality monitoring report, the status of water quality was as under:

- Gangotri to Rishikesh stretch: 'A' grade
- Rishikesh to Haridwar: 'B' grade
- Haridwar downstream: 'C' grade

The report corroborates the fact that the water quality in the River worsened downstream. As a majority of active STPs are in Rishikesh and Haridwar, it also indicated that despite the operation of STPs, the pollution in the river in Rishikesh-Haridwar stretch continued unabated on account of various implementation issues as discussed.

Further, during the scrutiny of records of the UEPPCB, it was observed that out of sampled ten towns³⁵, water quality monitoring stations were established at only three stations³⁶. The Secretary, Peyjal Department, during exit conference, stated that the NMCG had assigned the programme to the Central Pollution Control Board.

³⁵ 1. Badkot (Uttarkashi), 2. Gopeshwar 3. Badrinath (Puri) 4. Karnprayag 5. Haridwar including BHEL and Rainipur 6. Rishikesh 7. Tehri Tapovan, Rishikesh 8. Muni Ki Reti, Dhaalwala 9. Devprayag 10. Joshimath.

³⁶ Rishikesh, Haridwar and Devprayag.

1.2.10.2 Budgetary monitoring

As per the NGRBA framework, the SPMG had to hire private firms of Chartered Accountants as internal auditors to assess the effectiveness of internal controls and to provide independent assurance on the adequacy of internal controls.

Audit noticed that internal auditors had not been appointed by the SPMG (June 2017). On being pointed out, the SPMG, while accepting the facts, stated that proposals were invited in September 2012 and May 2015 for appointing internal auditors but the selection was put in abeyance as the NMCG indicated that it would deploy its own internal audit team. The Secretary, Peyjal Department, during exit conference stated that the post of internal auditor had been filled in November 2017. The mechanism to assess the effectiveness of internal control was, therefore, not in place till November, 2017.

Further, it was also observed that the expenditure incurred by the EAs was not being reconciled with the records of SPMG regularly. On being pointed out, the SPMG stated that necessary instructions were being issued to the EAs for reconciliation of accounts on a regular basis.

1.2.10.3 Monitoring of Forestry Interventions for Ganga works

Paragraph 6.6 of the DPR Volume-I stipulated that detailed mechanism for an overall 25 per cent of in-house monitoring shall be finalised by the PMU in consultation with the State Project Steering Committee (SPSC). However, in absence of setting up of SPSC, no system of in-house monitoring and evaluation was in place in the State. None of the five modes of concurrent monitoring methods viz. IT enabled monitoring, remote sensing based monitoring, online monitoring through data reports portal, on ground monitoring and participatory monitoring could be taken up by the PMU as well as divisions. In absence of any monitoring, no assurance could be derived about the quality of the works undertaken and successful achievement of objectives.

On being pointed out, the Project Director, PMU, FIG, Uttarakhand stated (May 2017) that in-house mechanism of monitoring could not be established due to non-constitution of SPSC.

1.2.11 Capacity Building

Keeping in view the importance of capacity building in Urban Development Department, it was observed that two training programmes, which were a part of a Central Programme, were organised (November 2016 and April 2017) in 24 towns. The aim of the training programmes was to facilitate preparation of City Sanitation Plans³⁷ (CSPs) under a technical cooperation programme with an international firm [Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)]. However, it was observed that the said CSPs were yet to be finalised. On being pointed out, the Department replied that the CSPs would be ready by December 2017. It was also observed that 12 out of 15 priority

³⁷ Plan to strengthen/revitalise existing sanitation work by generating awareness regarding proper sanitation and providing trainings/orientation programmes to staff, elected representatives and all stakeholders with ultimate aim of keeping city clean and garbage free.

towns had been covered under these training programmes. Secretary, Peyjal Department, during exit conference, informed that the City Sanitation Plan was yet to be finalised.

- As per paragraph 5.5.4.2 [D(b)] Volume-I of the DPR, for Forestry Intervention, local level trainings for communities, division level training for forest department personnel, State level inception workshop and exposure trip within State and outside State were to be undertaken. It was found that only five local level trainings against targeted 50 trainings were organised during 2016-17 in the State. Also, only four out of the 11 implementing divisions organised division level training for the personnel of the department. Hence, the level of dissemination of awareness among general public as well as department personnel remained low. On being pointed out, the department replied that the said trainings were imparted from contingency funds as no budget was available for capacity building.

1.2.12 Human Resource Development

Staff Strength vis-à-vis Person-in-Position

The staff strength and person in position of the SPMG, as on 31 March 2017, is depicted in **Table-1.2.7** below:

Table-1.2.7: Details of Sanctioned Strength and Person-in-Position

Sanctioned strength		Person-in-Position		Excess (+)/Shortage (-)	
Technical	Non-Technical	Technical	Non-Technical	Technical	Non-Technical
8	11	4	9	(-) 4	(-) 2

It was observed that four key positions *viz.* River Front Development Specialist, Social Management Specialist, Assistant Manager (Civil) and Assistant Manager Technical had not been filled up till the date of audit (September 2017). The Secretary, Drinking Water during exit conference, stated that the posts had now been filled up.

The UEPPCB also lacked sufficient human resources to ensure compliance with various Environmental Acts and Rules. There was an acute shortage of staff in each cadre. The shortage in Scientific and Technical cadre ranged between 71 and 56 *per cent* due to which it was difficult for the UEPPCB to enforce the Environment Protection Acts and Rules in the areas adjoining River Ganga and its tributaries in an effective manner.

1.2.13 Achievement of Sustainable Development Goals

The objective of Sustainable Development Goals (SDGs) is to produce a set of universally applicable goals that balance the three dimensions of sustainable development: environmental, social, and economic. In total, 17 goals have been set as SDGs which are to be achieved by 2030.

The sixth goal of SDGs pertains to the concept of ‘clean water and sanitation’. It aims at ensuring availability and sustainable management of water and sanitation for all. However, instances of unscientific disposal of garbage in the catchment area of River Ganga, delays in completions of sanitation related infrastructure projects and non-tapping of *Nallas* leading to discharge of untreated sewage in River Ganga and its tributaries, as detailed in preceding paragraphs, indicate that more efforts are needed to achieve the goal of clean water and sanitation.

1.2.14 Conclusion

Annual Plan was not being submitted as per the prescribed timeline provided in the NGRBA framework. Prior to 2017-18, no AP for Communication and Public Outreach activities had been prepared. The total plan size approved in the APO for Forestry Interventions for Ganga was a meagre 4.66 *per cent* of the area planned for the year 2016-17 in the DPR. State share was being released on lump-sum basis which was in contravention to the NGRBA framework. The claim of the department in making all the 265 villages in 132 GPs in seven districts ODF was found to be incorrect. Lack of coordination between EAs led to poor utilisation of STPs resulting in discharge of untreated sewage into River Ganga. Out of 112 *Nallas* identified, 65 *Nallas* remained untapped resulting in discharge of 26.292 MLD untreated sewage into the River Ganga and its tributaries. Delay in commissioning STPs and inadequate capacity of existing STPs to treat sewage load led to discharge of untreated sewage into the Ganga and its tributaries. The municipal garbage and sludge from operational STPs was being dumped on the hill slopes and at the STP sites respectively. The water quality monitoring stations were yet to be set up in majority of the priority towns which made it difficult to ascertain the quality of water along the entire length of the River Ganga. There was persistent shortfall in human resources and monitoring and evaluation mechanism had been far from effective.

1.2.15 Recommendations

The Government may ensure:

- i. timely submission of proposals from the Executing Agencies so that the Annual Plan is submitted to National Mission for Clean Ganga in time;
- ii. execution of project level Memorandum of Agreements between the State Programme Management Group, Executing Agency and the concerned Urban Local Body for formalising coordination arrangements in the State;
- iii. better planning, execution and monitoring of Annual Plan in line with the targets set in the DPR for forestry intervention;
- iv. construction of targeted Community Sanitation Complexes and Solid Liquid Waste Management structures. It may ensure 100 *per cent* construction of Individual House Hold Latrines. Declaration of ODF should be based on physical verification by an independent monitoring agency;
- v. scientific disposal of municipal garbage after proper segregation;
- vi. capacity upgradation of Sewage Treatment Plants so that untreated sewage do not flow into the River; and
- vii. tapping and preventing the discharge of sewage from all the identified *Nallas* of priority towns into the River Ganga and its tributaries.

The matter was referred to the Government (September 2017); Reply was awaited (December 2017).

1.3 National Rural Drinking Water Programme

The Government of India (GoI) launched the National Rural Drinking Water Programme (NRDWP) in April 2009 for ensuring sustainability of water availability in terms of potability, adequacy, convenience, affordability and equity while also adopting decentralised approach involving Panchayati Raj Institutions (PRIs) and community organisations. Department of Drinking Water (Peyjal) and Sanitation is the implementing agency. A performance audit of the implementation of the programme in the State of Uttarakhand brought out weaknesses in planning, institutional mechanism, implementation, financial management and monitoring of the programme. Some of the significant findings were as below:

Highlights

- *Village and District Water Security plans comprising demographic, physical features, water sources, available drinking water infrastructure, etc. were not prepared. Further, Comprehensive water security plan for providing definite direction to the programme was not formulated.*

[Paragraphs 1.3.6.1 (a) & (b)]

- *Necessary institutional mechanism was found deficient in the State as State Water and Sanitation Mission was not set up as a Registered Society, important committees such as Village Water and Sanitation Committees and Source Finding Committee were not formed.*

[Paragraphs 1.3.6.2 (a) to (e)]

- *In the year 2012-13 and 2013-14, the State Government did not release its matching share amounting to ₹ 62.84 crore and ₹ 57.85 crore respectively. The overall fund management was also found deficient as during the period 2012-13 to 2016-17, the allocation of funds for different components of the programme was not in consonance with the norms of the programme.*

[Paragraph 1.3.7.2]

- *There was shortfall in achievement of targets of providing piped water supply and household connections by the year 2017. The State was able to provide 55 litre per capita per day water to only 14.71 per cent habitation against the goal of 50 per cent.*

[Paragraph 1.3.8.2]

- *Piped water supply schemes suffered from poor rate of completion and there were delays ranging from 5 to 12 years in completion of 20 schemes costing ₹ 185.45 crore.*

[Paragraph 1.3.8.3]

- *The Uttarakhand Jal Nigam failed to furnish justification for inadequate allotment/expenditure of funds for sustainability component. The expenditure on the sustainability component was not done as per the norms, as in the district Tehri, an expenditure amounting to ₹ 42.01 lakh was incurred out of Sustainability component on construction of small water schemes and water tanks which were not in consonance with the programme guidelines.*

[Paragraph 1.3.8.5]

➤ ***Monitoring mechanism was found deficient as this function was carried out by the executing agencies instead of the State Water and Sanitation Mission, which was the designated agency for implementation of the programme. Further, the Integrated Management Information System data lacked reliability in absence of requisite checks and verification.***

[Paragraphs 1.3.9.3 to 1.3.9.5]

1.3.1 Introduction

In 2009, the Accelerated Rural Water Supply Programme was modified as the National Rural Drinking Water Programme (NRDWP). The programme is being implemented through its six components *viz.* (i) Coverage (for providing safe and adequate drinking water supply to unserved, partially served and slipped back habitations), (ii) Sustainability (to encourage States to achieve drinking water security at the local level), (iii) Water Quality (to provide potable drinking water to water quality affected habitations), (iv) Operation and Maintenance (expenditure on running, repair and replacement costs of drinking water supply project), (v) Water Quality Monitoring and Surveillance (to carry out water quality surveillance at the field level as well as setting up and operating water quality testing laboratories in the State) and (vi) Support (to support different activities which will be required to be carried out in order to enable the rural communities to have access to assured availability of potable drinking water). The main objectives of the programme are ensuring drinking water security to every rural household by utilising multiple sources of water, ensuring sustainability of the system and source, institutionalisation of water quality programme through community participation, creation of awareness among masses, training of manpower and ensuring transparency in implementation through Integrated Management Information System (IMIS).

Programme implementation strategy

For the Twelfth Plan Period (2012-17), the GoI recommended (i) the need to increase drinking water supply service in rural areas from 40 lpcd³⁸ to 55 lpcd; (ii) focus on piped water supply (PWS) and (iii) conjoint³⁹ approach on drinking water supply and sanitation. The Ministry prepared a Strategic Plan for the rural drinking water sector having the following timeline:

To ensure that ***(By the year 2017)***

- at least 50 *per cent* of rural households were provided with piped water supply;
- at least 35 *per cent* of rural households had piped water supply with a household connection; less than 20 *per cent* would use public taps and less than 45 *per cent* would use hand pumps or other safe and adequate private water sources;
- all services met set standards in terms of quality and number of hours of supply every day;

³⁸ Litres per capita per day.

³⁹ Combined approach for works to be carried out for both drinking water and sanitation related projects.

- all households, schools and anganwadis in rural India had access to and used adequate quantity of safe drinking water;
- Panchayati Raj Institutions and local communities were provided support and environment to enable them to manage at least 60 *per cent* of rural drinking water sources and systems.

1.3.2 Organisational arrangements

In Uttarakhand, the State Government is implementing the programme through the State Water and Sanitation Mission (SWSM), under the Ministry of Panchayats. There are three Executing Agencies (EAs) viz. the Uttarakhand Panchayats Sansadhan Vikas evam Nirman Nigam (UJN) carrying out the works of coverage and sustainability component, the Uttarakhand Jal Sansthan (UJS) carrying out the works of operation and maintenance and water quality monitoring and surveillance component and *Swajal* carrying out the works of coverage and support component. In Uttarakhand, no areas have been identified as water quality affected area. The UJN has been nominated as nodal agency for carrying out the works under the programme.

1.3.3 Audit objectives

The performance audit was taken up with the objective to ascertain whether:

- planning was adequate and necessary institutional mechanism existed for effective implementation of the programme;
- fund management was economical and effective;
- implementation of the programme was effective and efficient; and
- adequate and effective mechanism existed for monitoring and evaluation of the programme.

1.3.4 Audit Scope and Methodology

The performance audit of the programme was carried out during April 2017 to August 2017 and covered the period from 2012-13 to 2016-17. Out of 13 districts in the State, four districts⁴⁰ were selected for audit.

The implementation of the programme in the State was reviewed by test-check of the records of SWSM, Uttarakhand and eight divisions (two from each selected district) of UJN selected from above four selected districts⁴¹ by Probability Proportional to Size Without Replacement (PPSWOR) method. For conducting beneficiary survey, 70 habitations from 20 Gram Panchayats (GPs) were selected after selection of 10 blocks from four selected districts on the basis of PPSWOR method with size measure as

⁴⁰ 25 *per cent* of the districts from each region (Kumaon and Garhwal) (subject to a minimum of two) were selected by Probability Proportional to Size Without Replacement method on the basis of expenditure incurred. Almora and Nainital from Kumaon region and Pauri and Tehri from Garhwal region were selected.

⁴¹ Almora (had four divisions), Tehri (had four divisions), Nainital (had three divisions) and Pauri (had five divisions).

number of drinking water supply schemes taken up. Two GPs from each block were selected by Simple Random Sampling Without Replacement (SRSWOR) method. 60 habitations got selected from 15 GPs (four habitations from each GPs) and 10 habitations from five GPs having less than four habitations, by SRSWOR method. Further, records of the concerned divisions of the UJS and Swajal in the selected districts were also scrutinised.

The audit objectives, criteria and scope/methodology of the performance audit were discussed with the Secretary, Peyjal Department, in an entry conference held on 20 April 2017. The audit findings were discussed with the Secretary, Peyjal Department and other officers of the Department in an exit conference on 29 November 2017. The views of the Government/Executing Agencies have been suitably included at appropriate places in the report.

1.3.5 Audit criteria

The audit criteria were derived from the following sources:

- Guidelines of NRDWP issued in 2009 and 2013; strategic plans, notifications, orders and circulars issued by the Ministry of Drinking Water and Sanitation;
- State Government orders relating to implementation of the NRDWP;
- Physical and financial progress reported under Management Information System (MIS) available on website of the programme (*indiawater.gov.in*).

Audit Findings

1.3.6 Planning

1.3.6.1 Preparation of Comprehensive Water Security Plans

(a) In order to ensure active participation of the villagers in planning, implementation, operation and maintenance of the rural water supply schemes, the programme guidelines provide for making Village Water Security Plans (VWSPs) which, *inter alia*, have to include the demographic, physical features, water sources, available drinking water infrastructure and other details of the village. The VWSPs of the districts were to be consolidated at district level which would form the basis for formulation of the District Water Security Plans (DWSPs).

It was observed that the VWSPs were not being prepared in the State and consequently, the DWSPs had also not been formulated. Non-preparation of VWSPs and DWSPs defeated the main objective of decentralised planning of the programme.

(b) The programme guidelines also envisage preparation of Comprehensive Water Security Plan (CWSP) to provide a definite direction to the programme and also ensure regular monitoring of the progress towards the goal of achieving drinking water security to every rural household. The State Government was required to prepare a State specific policy framework for implementation of the various schemes and based on this framework and the broad goal set by the State, a five year CWSP was to be prepared.

Further, during each financial year, the sub-goal and the priorities were also required to be fixed in consultation with the Centre.

It was observed that the Department had neither prepared any policy framework nor formulated any five year CWSP as envisaged in programme guidelines. The Department, therefore, failed to provide a long term direction to the programme. Also, it could not ensure regular monitoring of the progress made by the State in achieving drinking water security to every rural household. However, Annual Action Plans (AAPs) were being prepared by the UJN each year to implement the programme. It was noticed that only 16 per cent⁴² of the schemes approved by State Level Scheme Sanctioning Committee were taken up for execution during the period 2012-13 to 2016-17.

The Managing Director (MD) UJN, stated that the VWSPs which were to be prepared by the Village Water Sanitation Committees (VWSCs) with the help of NGOs could not be prepared as the community was not equipped to collect the required data for preparation of VWSPs and NGOs could not be engaged due to paucity of funds. Resultantly, the VWSPs, DWSPs and the CWSP could not be prepared.

1.3.6.2 Institutional Mechanism for delivery of the Programme

Rural drinking water is a State subject and was included in the Eleventh Schedule of the Constitution of India among the subjects that may be entrusted to Panchayats by the States. Government of India supplements the efforts of the State Governments with technical and financial assistance for provision of safe drinking water in the rural areas of the country. The existing institutional set-up *vis-à-vis* envisaged institutional mechanism for delivery of the programme is given in **Table-1.3.1** below:

Table-1.3.1: Institutional mechanism required for delivery of the programme

Sl. No.	Name of Institution	Level	Present status
1.	State Water and Sanitation Mission (SWSM)	State	Existing
2.	State Level Scheme Sanctioning Committee (SLSSC)	State	Existing
3.	Source Finding Committee (SFC)	State	Not Existing
4.	State Technical Agency (STA)	State	Not Existing
5.	Water and Sanitation Support Organisation (WSSO)	State	Not Existing
6.	District Water and Sanitation Mission (DWSM)	District	Existing
7.	Block Resource Centre (BRC)	Block	Not Existing
8.	Village Water and Sanitation Committee (VWSC)	Village	Existing

(a) State Water and Sanitation Mission

The programme guidelines provide that the SWSM was required to be set up at the State level as a Registered Society, under the aegis of the Department implementing rural water supply in the State, for providing policy guidance, convergence of water supply activities including coordination with various State Government Departments, besides monitoring and evaluation of physical and financial performance and management of the water supply projects. In the State, the SWSM was formed in February 2010 comprising of two

⁴² The SLSSC approved 4,787 schemes during the period 2012-13 to 2016-17 and 2,668 schemes were included in Annual Action Plans (AAPs) of the State out of which only 772 schemes were taken up for execution.

committees; namely apex committee with eight members and executive committee with 16 members including five nominated members representing various⁴³ fields.

It was observed that the SWSM was not set up as a Registered Society. Without registering as a society, as required under programme guidelines, the SWSM was handling financial issues of the programme. Further, the Mission was neither monitoring the implementation nor evaluating the physical and financial progress of the programme. Instead, the monitoring of the programme was assigned to the UJN. UJN acted as a nodal agency as well as an executing agency of the programme. Thus, there is conflict of interest in the responsibilities assigned to UJN and this lacuna had a direct impact on transparency and reliability of data as mentioned in *paragraph 1.3.9.3 to 1.3.9.5*.

In the exit conference, the MD UJN and Executive Engineer (EE) SWSM claimed that the programme was being collectively monitored by both the EAs. However, the reply is not tenable as SWSM was actually not involved in monitoring of the programme which was against the provisions of the guidelines.

(b) Source Finding Committee and State Level Scheme Sanctioning Committee

The programme guidelines provide for setting up two committees namely Source Finding Committee (SFC) and State Level Scheme Sanctioning Committee (SLSSC) at the State level. SFC was required to review the functioning/performance of existing water supply schemes for ensuring availability of potable drinking water in adequate quantity in the rural habitations of the State and all the Rural Water Supply (RWS) projects/schemes and support activities under the programme were to be approved by SLSSC after approval of SFC. Besides, the progress, completion and commissioning of the approved schemes were also to be reviewed by the SLSSC. For carrying out assigned functions, meeting of the SLSSC was required to be held at least twice in a year. It was observed that neither the SFC was constituted nor the work of SFC delegated to any other agency. 4,787 schemes, amounting to ₹ 1,676.40 crore were approved by SLSSC without any inputs of the SFC which were considered instrumental for delivery of the programme as per the programme guidelines. The SLSSC which was constituted in February 2010, met only seven times during the period 2012-13 to 2016-17 instead of 10 times as required. In its reply, SWSM stated that due to non-availability of members, the stipulated meetings could not take place.

(c) District Water and Sanitation Mission

The programme guidelines provide that a District Water and Sanitation Mission (DWSM) shall be constituted at the district level⁴⁴, to analyse and consolidate the VWSPs, prepare

⁴³ Information Education and Communication (IEC), Human Resource Development (HRD), MIS, Media and Non-Government Organization (NGO).

⁴⁴ To be headed by chairman of Zila Parishad (ZP) and all MPs/MLAs and MLCs of the District, Chairperson of the Standing Committees of the ZP, District Collector, District Officers of Education, Health, Panchayati Raj, Social Welfare, ICDS, PHED, Water Resources, Agriculture, Information and Public Relation as members of DWSM.

DWSPs, converge the related programme and review the status of the progress of the schemes under the programme through quarterly meetings. DWSMs were constituted in May 2005 in all the 13 districts of the State.

It was observed that DWSMs were not performing the monitoring function as envisaged in the programme and the entire programme was executed and monitored by UJN which was designated as the nodal agency for executing the programme. Further, in absence of VWSPs, analysis, consolidation and preparation of DWSPs were not carried out by the DWSM.

(d) Block Resource Centre

As per guidelines of the programme, Block Resource Centre (BRC) was required to be set up in each block to provide operational flexibility for implementing the programme and to provide support to GPs on water and sanitation issues. However, no BRCs were set up in Uttarakhand (December 2017) and no other agency had been engaged in place of the BRCs.

In exit conference, the MD UJN stated that due to insufficient funds for support activities, BRCs could not be established. The reply was not tenable as funds remained unutilised at the end of each year as indicated in *paragraph 1.3.7.2*.

(e) Village Water and Sanitation Committee

A Village Water and Sanitation Committee (VWSC)⁴⁵, was required to be set up as a standing committee/sub-committee in each GP for planning, monitoring, implementation, operation and maintenance of the water supply scheme to ensure the active participation of villagers. It was observed that VWSCs were not set up in 1,291 (16 *per cent*) out of 7,971 GPs in the State.

In the exit conference, the MD UJN accepted the audit observation and assured that VWSCs would be established in rest of the GPs.

The various shortcomings in the delivery mechanism and lack of monitoring by SWSM and DWSMs had an adverse impact in the implementation of the programme during 2012-13 to 2016-17 as discussed in subsequent paragraphs.

1.3.7 Financial Management

1.3.7.1 Introduction

NRDWP is a centrally sponsored scheme and prior to 2015-16, funding was shared between Centre and States in 50:50 ratio for programme fund (Coverage, Water Quality and Operation & Maintenance). 100 *per cent* funding was provided by Government of India for Sustainability component (under programme fund), Support and Water Quality Monitoring and Surveillance (WQM&S) (under Support fund). From April 2015, the

⁴⁵ To consist of six to 12 persons (at least 50 *per cent* members should be women) comprising members of Panchayat, SCs, STs and poor sections of the village.

funding was shared in the ratio of 90:10 between the Centre and State. In addition, the GoI provides Additional Central Assistance for restoration of damaged rural drinking water supply systems caused due to natural calamities. The assistance is provided out of two *per cent* of the total Central Rural Water Supply outlay earmarked for contingencies arising due to natural calamities/disaster.

1.3.7.2 Fund flow and Financial performance

As per the funding pattern of the scheme, GoI released its share to the State, which in turn released the funds to SWSM including its own share. SWSM maintained two separate accounts, one for programme⁴⁶ and another for support⁴⁷ activities. The funds were further released to executing agencies (EAs) as per their demand.

During the period 2012-17, the details of fund released by the GoI and State Government to SWSM are given in **Table-1.3.2** below:

Table -1.3.2: Details of receipt and expenditure under NRDWP fund

(₹ in crore)

Year	Opening Balance	Receipt		Misc. Receipt (Bank interest and other receipts)	Total	Expenditure		Total Expenditure	Closing Balance (percentage)
		Centre	State			Centre	State		
2012-13	239.26	74.28 ⁴⁸	0.00	8.72	322.26	147.99	0.00	147.99	174.27 (54)
2013-14	174.27	79.83 ⁴⁹	0.00	8.88	262.98	138.71	0.00	138.71	124.27 (47)
2014-15	124.27	111.48 ⁵⁰	99.76	6.99	342.50	145.00	24.16	169.16	173.34 (51)
2015-16	173.34	60.06 ⁵¹	41.65	5.73	280.78	99.79	68.95	168.74	112.04 (40)
2016-17	112.04	88.19 ⁵²	9.78	10.97	220.98	103.16	40.76	143.92	77.06 (35)
Total		413.84	151.19	41.29		634.65	133.87		

Source: Accounts of SWSM.

It is evident from the above table that;

- In the years 2012-13 and 2013-14, the State Government did not release its matching share for components under Programme Fund amounting to ₹ 62.84 crore and ₹ 57.85 crore respectively. There were unspent balances ranging from ₹ 77 crore (35 *per cent* of total available fund) to ₹ 174 crore (54 *per cent* of total available fund) during the years 2012-13 to 2016-17.

The component-wise allocation of the programme fund at the State level was to be done as depicted in **Chart-1.3.1** below:

⁴⁶ **Programme Fund** includes coverage, water quality, operation and maintenance and sustainability components.

⁴⁷ **Support Fund** includes support and Water Quality Monitoring & Surveillance components.

⁴⁸ Programme Fund: ₹ 62.84 crore (excluding ₹ 7.66 crore for Sustainability), Support Fund: ₹ 3.78 crore and Sustainability: ₹ 7.66 crore.

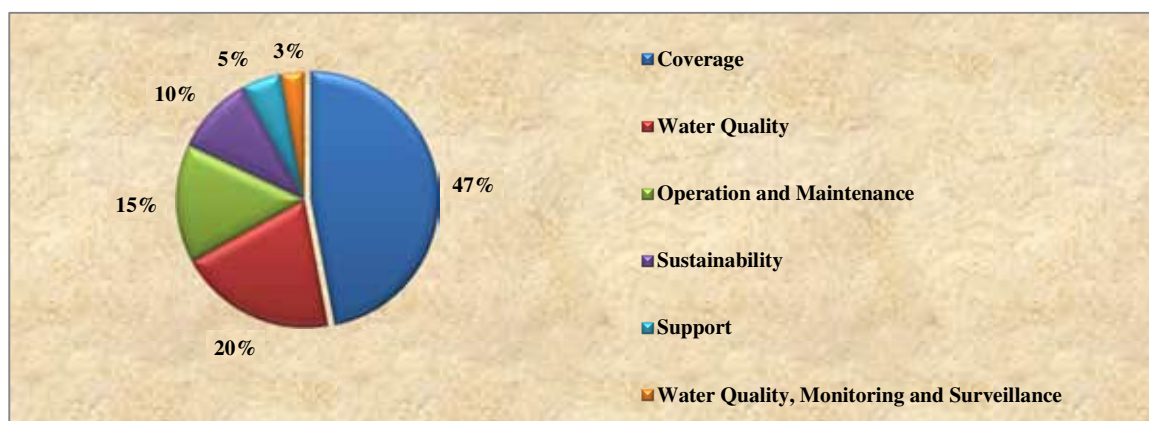
⁴⁹ Programme Fund: ₹ 57.85 crore (excluding ₹ 7.90 crore for Sustainability), Natural Calamity: ₹ 14.08 crore and Sustainability: ₹ 7.90 crore.

⁵⁰ Programme Fund: ₹ 95.75 crore (excluding ₹ 10.64 crore for Sustainability), Support Fund: ₹ 2.54 crore, Sustainability: ₹ 10.64 crore and WQM & S Fund: ₹ 2.55 crore.

⁵¹ Programme Fund: ₹ 50.94 crore (excluding ₹ 5.66 crore for Sustainability), Support Fund: ₹ 2.16 crore, Sustainability: ₹ 5.66 crore and WQM & S Fund: ₹ 1.30 crore.

⁵² Programme Fund: ₹ 60.03 crore (excluding ₹ 6.67 crore for Sustainability), Support Fund: ₹ 2.45 crore and Sustainability: ₹ 6.67 crore, WQM & S Fund: ₹ 2.72 crore and Natural Calamity: ₹ 16.32 crore.

Chart-1.3.1: Details of Component-wise allocation of the programme fund at the State level



The allocation of funds to the various components of the scheme was not in consonance with the programme guidelines as given in **Table-1.3.3** below:

Table-1.3.3: Component wise allocation of fund (₹ in crore)

Year	Total fund	Coverage, Water Quality		O&M		Sustainability		WQM&S		Support	
		Actual release	percentage	Actual release	Percentage	Actual release	percentage	Actual release	Percentage	Actual release	Percentage
2012-13	83.00	57.10	69	12.23	15	8.28	10	2.07	2	2.30	3
2013-14	88.71	52.73	59	12.94	15	8.62	10	0.46	0.5	-0.12 [@]	0
2014-15	218.23	191.56	88	34.16	16	-12.94 [*]	00	2.62	1	2.83	1
2015-16	107.44	90.68	84	17.20	16	-4.15 [#]	00	1.39	1	2.32	2
2016-17	108.94	62.22	57	13.87	13	7.43	7	3.03	3	2.89	3

Source: Information collected from SWSM.

@ In the year 2013-14, ₹ 0.44 crore was transferred from Support component to WQM & S component and ₹ 0.32 crore was received as a miscellaneous receipt in Support component.

* In the year 2014-15, ₹ 10.64 crore was released for sustainability component while ₹ 23.58 crore was transferred to coverage component.

In the year 2015-16, ₹ 5.66 crore was released for sustainability component while ₹ 9.81 crore was transferred to coverage component.

It was observed that:

- allocation for coverage and water quality components ranged from 57 per cent to 88 per cent, instead of keeping the allotment to 67 per cent as per provisions of the guidelines;
- allocation to O&M component ranged from 13 per cent to 16 per cent against the norm of 15 per cent;
- allocation to WQM&S component ranged from 0.5 per cent to three per cent against the norm of three per cent; and
- allocation to support component was always below the norm of five per cent and in the year 2013-14, no funds were allotted.

The EE, SWSM accepted the facts during exit conference and stated that allocation of funds could not be exercised at the State level as per guidelines since component wise

regulation of funds falls under the purview of GoI. The reply of the Government is not tenable as the guidelines provide that component-wise funds should be allocated at the State level in the prescribed percentage as mentioned above.

1.3.7.3 Short release of Support Fund by the GoI

In the financial year 2016-17, the GoI allocated ₹ 4.89 crore to the State for Support Fund under the programme out of which only ₹ 2.45 crore had been released (May 2016). Audit scrutiny revealed that GoI did not release the balance amount to State as it failed to contribute its own share for this component. Thus, failure of the State to release its matching share for Support Fund resulted in, the State being deprived of the central grant amounting to ₹ 2.44 crore.

The Director, Water and Sanitation Support Organisation (WSSO), during exit conference, accepted the facts.

1.3.7.4 Delayed release of funds by the State Government to SWSM

As per the terms and conditions of GoI, the State Government had to release the central share including state share to the SWSM within 15 days of receiving the central share. In case of delay in transferring the central share to the SWSM, the State Government had to pay a penal interest at the rate of 12 *per cent* per annum and the interest amount along with the principal had to be transferred to SWSM. During the period 2014-17, the GoI had released ₹ 150.15 crore (as detailed in *Appendix-1.3.1*) to the State, which was transferred to the SWSM by the State after a delay ranging from eight to 267 days (beyond 15 days). On account of delay in transferring funds, the State was liable to pay an interest amounting to ₹ 2.45 crore to the SWSM. However, the State did not pay any interest to the SWSM till date (December 2017).

The Secretary Peyjal Department, during exit conference, agreed with the facts and stated that required action would be taken.

1.3.7.5 Accounts of SWSM

The programme guidelines provide that the accounts of SWSM were to be audited by a Chartered Accountant selected from a panel approved by the CAG, and the audit certificates were to be furnished in a format comprising Auditor's report, receipt and payment account, income and expenditure account, balance sheet, notes on accounts and auditor's observations. During the scrutiny of accounts of SWSM, it was observed that the state matching share was not reflected separately. Instead all the releases under Externally Aided Programme, State and District Plan were treated as State share in receipt and payment account and income and expenditure account of SWSM. Thus, the figures for State share as shown in accounts pertained to multiple funds. The actual receipt of State's matching share could not, therefore, be worked out from the Balance Sheet of the SWSM.

During exit conference, the EE assured that required action would be taken.

1.3.7.6 Non-utilisation of funds earmarked for mitigating natural calamities

During the period 2012-17, the details of funds released by the Centre and the State are given in **Table-1.3.4** below.

Table-1.3.4: Details of funds provided for Natural Calamity (₹ in crore)

Financial Year	Opening Balance	Receipt		Misc. Receipt (Bank interest and other receipt)	Total Available Fund (TAF)	Expenditure		Closing Balance (percentage of TAF)
		Central	State			Central	State	
2012-13	41.05	0.00	0.00	1.02	42.07	30.68	0.00	11.39 (27)
2013-14	11.39	14.08	0.00	0.00	25.47	9.12	0.00	16.35 (64)
2014-15	16.35	0.00	0.00	0.00	16.35	11.06	0.00	5.29 (32)
2015-16	5.29	0.00	0.00	0.00	5.29	1.61	0.00	3.68 (70)
2016-17	3.68	16.32	1.81	1.37	23.18	2.01	0.00	21.17 (91)

Source: Information collected from UJN.

It was noticed that funds ranging from 27 per cent to 91 per cent were lying unutilised, as executing agencies neither utilised these funds nor surrendered these to the Government.

The SWSM stated that during 2016-17 the GoI had released ₹ 16.32 crore in February 2017 and hence this could not be utilised. However, there were large balances pertaining to the period 2012-13 to 2015-16 which were neither utilised nor surrendered.

1.3.7.7 Other Miscellaneous irregularities

Construction Division (CD), UJN, Almora transferred (September 2015) a sum of ₹ 40 lakh to CD, UJN, Bhikiyasain on loan basis. After a period of two months, the borrowing division returned only ₹ 30 lakh to CD, UJN, Almora. It was observed that even after a lapse of two years, the balance amount of ₹ 10 lakh was lying with the borrowing division without intimating its utilisation. In reply, the division stated (June 2017) that the matter was being taken up with the concerned division. Audit could not ascertain the utilisation of this amount in absence of any specific reply.

The Secretary, Peyjal Department, during exit conference, directed the officers concerned to reconcile and resolve the issue on priority.

1.3.8 Implementation

1.3.8.1 Coverage of habitations

The programme aimed to provide safe and adequate drinking water supply from either a public or a community source within a distance of 100 metre from each household to un-served, partially served and slipped back⁵³ habitations.

The position of coverage (as per 40 lpcd) of habitations in the State with drinking water facilities during 2012-17 is given in **Table-1.3.5** below:

⁵³ Habitation which becomes partially covered from fully covered habitations and not covered from partially covered and fully covered habitations.

Table-1.3.5: Status of coverage of Habitations in the State with drinking water facilities

Year	Total number of habitations	Number of fully covered habitation (as per 40 lpcd)	Percentage of fully covered habitation	Number of partially covered habitation	Percentage of partially covered habitation
2012-13	39,142	26,997	69	12,145	31
2013-14	39,142	2,483	6	36,659	94
2014-15	39,142	24,195	62	14,947	38
2015-16	39,309	21,323	54	17,986	46
2016-17	39,209	21,345	54	17,864	46

Source: Information collected from UJN.

During the period 2012-17, the Executing Agencies (EAs) incurred an expenditure of ₹ 537.90 crore⁵⁴ on the ‘Coverage Component’ while the coverage of fully covered habitations decreased from 69 *per cent* of total habitations in 2012-13 to 54 *per cent* of total habitations in 2016-17.

Further, it was noticed that during the year 2012-13 to 2014-15, there were wide variations in the numbers of fully covered and partially covered habitations. Also, total number of habitations was shown to have declined in 2016-17. These indicate that reliability of data was not beyond doubt. No information was available regarding number of uncovered habitations.

In exit conference, the MD UJN accepted that data pertaining to the period 2012-13 to 2014-15 were incorrect and stated that these could not be rectified due to problem in software. However, despite this submission, no effort was made by the UJN for ensuring data integrity.

1.3.8.2 Targets and achievements

As per the strategic plan, the following targets were fixed by the GoI which were to be achieved by the State by December 2017.

- at least 50 *per cent* of rural households to be provided with piped water supply (PWS);
- at least 35 *per cent* of rural households to have piped water supply with a household connection; and
- all households, schools and anganwadis in rural India to have access to adequate quantity of safe drinking water.

Further, as per goal set by the Ministry for Twelfth Five Year Plan, 50 *per cent* of the rural population should be provided with piped water supply of 55 lpcd.

It was noticed that against the target of providing piped water supply (PWS) to 50 *per cent* households, the executing agency, UJN was showing its progress in terms of the number of habitations and rural population of the State instead of households. The achievements as on 31 March 2017 in respect of targets/goals are described below:

⁵⁴ 2012-13: ₹ 97.00 crore, 2013-14: ₹ 97.48 crore, 2014-15: ₹ 109.11 crore, 2015-16: ₹ 134.76 crore and 2016-17: ₹ 99.55 crore.

Targets	Achievements
At least 50 per cent of rural households to be provided with piped water supply.	95 per cent and 74 per cent in respect of habitations and rural population respectively.
At least 35 per cent of rural households to have piped water supply with a household connection.	13.80 per cent
All schools in rural areas to have access to adequate quantity of safe drinking water.	95 per cent
All anganwadis in rural areas to have access to adequate quantity of safe drinking water.	69 per cent
As per goal set by the Ministry for Twelfth Five Year Plan, 50 per cent of the rural population should be provided with piped water supply of 55 lpcd.	14.71 per cent habitations were getting 55 lpcd.

With respect to providing 55 lpcd drinking water, the MD UJN, in exit conference, stated that priority was to provide 40 lpcd drinking water to every habitation and 55 lpcd would be considered subsequently.

1.3.8.3 Poor rate of completion of Multi and Single Village schemes

During the period 2012-17, 243 Piped Water Supply Schemes were undertaken under the programme as detailed in **Table-1.3.6** given below:

Table-1.3.6: Status of PWS schemes under NRDWP during 2012-17

Type of Schemes	No. of Schemes	No. of completed Schemes	Percentage of completion
Multi Village Scheme (MVS)	89	22	25
Single Village Scheme (SVS)	154	72	47
Total	243	94	39

Source: Information collected from SWSM.

During the years 2012-17, the overall percentage of completion of various schemes was only 39 per cent. Besides, completion of 20 schemes⁵⁵ costing ₹ 185.45 crore was

⁵⁵ 18 MVS costing ₹ 181.52 crore, 2 SVS costing ₹ 3.93 crore, total cost ₹ 185.45 crore.

pending for the last five to 12 years. Execution of MVS was poor and recorded completion percentage of only 25. Reasons for delay as stated by the UJN were paucity of funds (in 34 *per cent* schemes), source and land dispute (in 20 *per cent* schemes), delay in transfer of land by Forest Department (in 10 *per cent* schemes), and non-execution of work of distribution lines by the PRIs (in 36 *per cent* schemes).

On this pointed out in exit conference, the Secretary, Peyjal Department stated that due to paucity of funds, the schemes could not be completed within scheduled time. The reply was not tenable as SWSM had unspent funds at the end of each financial year during 2012-17 as brought out in **Table-1.3.2**.

Poor completion rate of MVS can be attributed to poor planning and lack of coordination, since it involves several agencies like Forest Department, private landowners and PRIs, *etc.*

Non-completion of above schemes within the stipulated time adversely affected the achievement of the targets fixed and the State failed to supply the required quantity of water as per the set standards within the scheduled time.

1.3.8.4 Schools and Anganwadis

Under the programme implementation strategy, all government schools and anganwadis of rural areas were required to be provided with adequate quantity of safe drinking water by the year 2017. Scrutiny of records of SWSM and executing agencies revealed that this issue was not taken up on priority. As against 16,985 government schools⁵⁶ of rural areas, 888 schools were running without water facilities as on December 2017. Similarly, against the requirement of providing water facilities to 17,069 anganwadis, UJS was able to provide water facilities to 11,857 anganwadis⁵⁷ (69 *per cent*) only.

As such, 888 Government schools and 5,212 anganwadis were yet to be provided with water facilities. The SWSM/UJN stated that this matter was not included in the Annual Action Plans.

In the exit conference, the Secretary, Peyjal Department accepted the facts and assured that appropriate action would be taken.

1.3.8.5 Sustainability

Sustainability implies ensuring availability of safe drinking water in adequate quantity throughout the year with optimum cost. Sustainability of drinking water sources and schemes is a process which facilitates the existing/new drinking water supply projects to provide safe drinking water in adequate quantity, even during distress periods, through conjunctive use of groundwater, surface water and roof water harvesting. The programme guidelines provide that 10 *per cent* of the available NRDWP funds was to be utilised each year towards sustainability component. Further, the guidelines also provide

⁵⁶ As per information provided by the Education Department, Government of Uttarakhand.

⁵⁷ As per information provided by the Women Empowerment and Child Development Department, Government of Uttarakhand.

that States which proposed to utilise less than 10 *per cent* funds against the sustainability component, had to furnish justification to the Ministry of Drinking Water and Sanitation, GoI. The details of expenditure incurred towards the sustainability component during the period 2012-17 are given in **Table-1.3.7** below:

Table-1.3.7: Details of total fund received from Centre/State, allocation and utilisation in respect of sustainability

(₹ in crore)

Year	Opening balance of Sustainability component	Total fund released (Central + State) for all components	Fund released for sustainability out of total available fund	Percentage of fund made available for sustainability	Actual expenditure	Closing balance
1	2	3	4	5 (4 *100/3)	6	7=(2+4)-6
2012-13	42.77	83.00	8.28	10	3.09	47.96
2013-14	47.96	88.71	8.62	10	7.87	48.71
2014-15	48.71	218.23	-12.94*	00	16.29	19.48
2015-16	19.48	107.44	-4.15*	00	6.03	9.30
2016-17	9.30	108.94	7.43	07	5.76	10.97
Total		606.32	7.24		39.04	

Source: Information collected from SWSM.

* In the years 2014-15 and 2015-16, ₹ 10.64 crore and ₹ 5.66 crore were released for sustainability component. However, ₹ 23.58 crore and ₹ 9.81 crore respectively were transferred to coverage component from this component.

It was observed that

- In the year 2016-17, the allotment was below the norm of 10 *per cent*. Besides, the actual expenditure was also lower than the allotment in 2012-13, 2013-14 and 2016-17. During 2013-14 and 2014-15, funds were diverted from this component to coverage component. During the period 2012-17, ₹ 39.04 crore were spent on sustainability which was six *per cent* of the total available fund. An important aspect of the programme which aimed to provide safe drinking water in adequate quantity throughout the year was, therefore, not paid adequate attention. The UJN failed to furnish justification for inadequate allotment/expenditure of funds for sustainability. It was noticed that, five existing water supply schemes in selected districts became non-functional due to drying of sources. Inadequate focus on sustainability component could impact availability of safe drinking water throughout the year in long run.

Audit scrutiny further revealed that even the expenditure on sustainability component was not done as per the norms, as in the district Tehri, an expenditure amounting to ₹ 42.01 lakh was incurred (during 2012-17) out of funds meant for sustainability component on construction of small water schemes and water tanks which were not in consonance with the programme guidelines.

1.3.8.6 Water Quality Monitoring, Surveillance and Laboratories infrastructure

The GoI provides financial assistance to the State for monitoring and surveillance of quality of water in habitations and for setting up and upgrading water quality testing laboratory at State, district and sub-district level. For this purpose, three *per cent* of NRDWP funds was to be allocated. The details of funds received and utilised are given in **Table-1.3.8** below:

Table-1.3.8: Details of total fund received from Centre/State, allocation and percentage of allocation in respect of WQM & S

(₹ in crore)

Year	Total fund released (Central + State)	Fund allotted for WQM & S	Percentage of Allotment
2012-13	83.00	2.07	2
2013-14	88.71	0.46	0.5
2014-15	218.23	2.62	1
2015-16	107.44	1.39	1
2016-17	108.94	3.03	3

Source: Information collected from SWSM.

It is evident that the allotment towards WQM&S was below the norm of three *per cent* (except in 2016-17) of the total NRDWP funds. The meagre allotment of funds under this component had a direct impact on water quality monitoring as State referral laboratory was still under construction (date of start of construction: December 2016; scheduled date of completion: December 2018); all the 13 district laboratories were equipped to carry out water testing on only 19 parameters against the requirement of 34 and the testing of vital parameters such as Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Lead, Nickel, Zinc, Oil & Grease, *etc.*, were not being carried out. Further, as per the norms of the programme, each source should be tested once in a year for detecting chemicals and twice in a year, pre and post monsoon, for detecting bacteriological contamination. However, the periodicity of testing of water samples of each source was not followed in four selected districts (as detailed in **Appendix-1.3.2**). During 2012-17, the shortfall in water testing was 95 *per cent* in Almora, 92 *per cent* in Nainital, 91 *per cent* in Pauri and 93 *per cent* in Tehri. Moreover, these laboratories were also not accredited with the National Accreditation Board for Testing and Calibration Laboratories.

In exit conference, the Chief General Manager, UJS claimed that the district level laboratories were required to carry out water testing for only 19 parameters. This contention of UJS indicates lack of awareness on the mandated requirement. Water testing on 19 parameters is actually required to be carried out by sub-district level laboratories and district level laboratories are mandated to test water quality on 34 parameters as prescribed by Uniform Drinking Water Quality Monitoring Protocol which was to be followed as per NRDWP guidelines.

1.3.8.7 Work Execution

Unratified expenditure

The construction work of *Laxmoli Hadim ki dhar* water supply scheme (under MVS) was undertaken by the CD, UJN, *Muni ki Reti*, Rishikesh, at an estimated cost of ₹ 21.81 crore under the order issued by State Government in September 2012. Consequently, ₹ 1.35 crore was released (May 2011) to CD, *Muni ki Reti* and the division incurred total expenditure of ₹ 26.23 lakh⁵⁸. In 2013, this work was transferred (August 2013) to the CD, Devprayag. While taking over the work, CD, Devprayag noticed that

⁵⁸ Cartage: ₹ 1.33 lakh, Contingency: ₹ 8.06 lakh, Work charge: ₹ 3.93 lakh and Centage: ₹ 12.91 lakh.

actually no work had been executed by the previous division and it claimed refund (April 2014) of amount shown as spent by previous division. However, even after lapse of three years there has been no further progress on the matter. On this being pointed out, CD, Devprayag stated that the matter would be pursued further with CD, UJN, *Muni ki Reti*, Rishikesh.

In the exit conference, the Secretary, Peyjal Department and MD, UJN assured that corrective action would be taken under intimation to audit.

1.3.9 Internal control Mechanism

Effective monitoring and reporting of the programme is a key factor in achieving the objectives of the programme. Audit observed the following shortcomings.

1.3.9.1 Project Monitoring and Evaluation

As per the programme guidelines, the State Government was required to take up evaluation and monitoring studies through reputed organisations/institutions on the implementation of the Rural Water Supply (RWS) programme and corrective measures were required to be taken based on the reports on these studies. It was observed that no independent agency was engaged by the Department for such studies. As a result, the implementation of the programme could not be reviewed at the apex level and corrective actions, could not be suggested to the State Government. Further, this deprived the State Government of an important feedback mechanism and affected overall implementation of the programme in the State as discussed in *paragraphs 1.3.8.1 to 1.3.8.7*.

1.3.9.2 Convergence with other programmes and schemes

The programme guidelines provide for convergence with other programme/schemes⁵⁹ implemented by the State and convergence of all the related programmes at district level. However, it was observed that no convergence with other programmes/schemes implemented by the State had been provided by enabling the EAs to carry out water tests in PHCs under NRHM or utilise the services of labour for execution of the schemes under MGNREGS, *etc* as per provisions of the guidelines.

1.3.9.3 Integrated Management Information System

The GoI had developed an online monitoring system called “Integrated Management Information System” (IMIS) for effective monitoring and to ascertain whether the objectives of the programme were being achieved. In the State, the UJN had been nominated as a Nodal Agency for planning, implementing and monitoring of the programme and all the data regarding physical and financial progress of the programme were being uploaded online by the UJN at divisional and State level. The following deficiencies were noticed in the data uploaded on IMIS.

⁵⁹ MGNREGS, Integrated Watershed Management projects of Department of Land Resources, Ministry of Rural Development, Central and State Finance Commission funds, NRHM, various Watershed and Irrigation schemes of the Ministry of Agriculture, various schemes of the Ministry of Water Resources *etc.*

1.3.9.4 Comparison of financial data of SWSM with IMIS data

It was observed that there was a mismatch of financial figures as depicted in IMIS and as per the accounts of SWSM which needed reconciliation. As per IMIS, the details of Central and State receipts and expenditure thereof are given in **Table-1.3.9** below:

Table-1.3.9: Details of release and expenditure as per IMIS

Year	Opening Balance	Release		Misc.	Total	Expenditure		Total Exp.	Closing Balance
		Centre	State			Centre	State		
		2012-13	239.27			74.28	40.74		
2013-14	174.27	87.61	77.18	1.03	340.09	138.59	52.71	191.30	124.32
2014-15	124.32	111.48	131.34	0.00	367.14	138.05	72.32	210.37	97.76
2015-16	97.76	60.06	45.21	5.73	208.76	99.79	82.14	181.93	63.75
2016-17	63.75	88.19	9.98	0.68	162.60	99.95	106.30	206.25	52.66
Total		421.62	304.45			624.37	428.27	1,052.64	

(₹ in crore)

Source: indiawater.gov.in (IMIS data).

While comparing the above data with the data of financial accounts of SWSM as depicted in **Table-1.3.2** above, it was observed that there were differences in figures of Central Release, State Release and Expenditure in almost all the years. Further, the following deficiencies were also noticed in IMIS data:

- During the period 2012-17, State’s matching share was not included in the opening and closing balances of IMIS.
- The year-wise release (Central release for the year 2013-14) and expenditure related to the State’s share were not matching with actual release and expenditure as per the accounts of the SWSM.
- In the years 2013-14, 2014-15 and 2016-17, expenditure from Central share and the miscellaneous receipt of the programme was not matching with the accounts of SWSM.

The IMIS data, therefore, did not represent true and fair picture of the accounts of the grants released by the Centre and the State. The audit observation in this regard was accepted by the MD UJN and EE SWSM and it was stated that necessary corrections would be carried out.

1.3.9.5 Analysis of physical data in IMIS

Audit observed instances of mismatch of physical data in the IMIS with data obtained from other agencies/physical survey conducted by audit as discussed below:

- The data regarding the total number of schools in rural areas were shown in the IMIS as 6,545, while as per records of Education Department, the total number of schools were 16,985.
- The data of number of schools without water facilities had been shown in the IMIS as 1,239, while as per records of Education Department, the number was 888.
- As per IMIS data, five anganwadis out of 10 were with water facilities. However, as per Department of Women Empowerment and Child Development, Uttarakhand, there were 17,069 anganwadis in the State, out of which 5,212 anganwadis were without water facilities.

- During the beneficiary survey, it was observed that the number of households of 66 habitations was found to be at variance with IMIS data. The actual number of households was more in 54 habitations (ranging from one to 67) and it was less in 12 habitations (ranging from one to 49) than the numbers shown in IMIS. In district Pauri, five habitations⁶⁰ of two GPs of Pabo block had slipped back into ‘Not Covered (NC)’ habitations as the existing water supply scheme was non-functional due to obsolescence, while in IMIS, the above habitations were shown as ‘Partially Covered (PC)’ habitations. Further, the names of four habitations⁶¹ which were shown in IMIS were not found in the concerned GPs.

It was also observed that although the UJN was planning, implementing and monitoring the programme and updating the data in IMIS, there were no further checks to ascertain the reliability of the data entered by the field units. In absence of any counter checks or verification, there was no mechanism to ensure reliability of data. The MD UJN and EE SWSM, during exit conference, stated that necessary corrections would be carried out.

1.3.10 Achievements of sustainable development goals

The objective of Sustainable Development Goals (SDGs) is to produce a set of universally applicable goals that balance the three dimensions of sustainable development: environmental, social, and economic. In total, 17 goals have been set as SDGs which are to be achieved by 2030.

The 6th goal of SDGs pertains to the concept of ‘clean water and sanitation’. It aims at ensuring availability and sustainable management of water and sanitation for all. However, non-availability of proper institutional mechanism for implementation of NRDWP, shortfall in achievement of targets, poor completion rate of projects as detailed in preceding paragraphs, indicate that more efforts are needed to achieve the goal of ensuring availability of clean water to the rural communities.

1.3.11 Conclusion

The National Rural Drinking Water Programme suffered from weaknesses in planning and deficiencies in institutional delivery mechanism. Village and District Water Security Plans comprising demographic, physical features, water sources, available drinking water infrastructure and other details of the village, and five year comprehensive water security plan were not formulated and the State had not ensured community participation in implementation of the programme during 2012-17. Financial management was not efficient as there were instances of delay in release of funds and distribution of funds among the components of the programme in violation of guidelines. Five *per cent* rural schools and 31 *per cent* rural anganwadis were still without drinking water facilities and

⁶⁰ Habitation Barsudi, Gaire, Rajibata and Rikhot (GP Chaufinda) and habitation Moltha (GP Barsudi).

⁶¹ Kaparkhali from GP Daseeli (Almora district), Kandoli talli from GP Kandoli and Nisjat from GP Gajeli (Pauri district) and Khyaldhar from GP Chachkanda (Tehri district).

the State was far behind the goal of providing 55 lpcd to 50 *per cent* rural population by 2017. Water Quality testing was inadequate as the State laboratory was still under construction and the water quality testing laboratories in districts were not equipped for carrying out water testing for 34 parameters as required as per programme guidelines. The achievement against targets fixed for testing of drinking water source for bacteriological and chemical contamination was negligible in selected districts. Internal control mechanism including conducting evaluation and monitoring studies by reputed organisations/institutions had not been put in place. The data in Integrated Management Information System regarding financial and physical progress of the programme were not reliable.

1.3.12 Recommendations

The State Government/Department may consider:

- Strengthening institutional mechanism as envisaged in the programme guidelines. It may ensure preparation of village and district water security plans to achieve decentralised planning and comprehensive Water Security Plan delineating deliverables with specific timelines;
- Strengthening the monitoring and evaluation mechanism under the ambit of State Water and Sanitation Mission for periodical review of progress of the scheme;
- Setting up of adequate water quality testing laboratories and strengthening of the existing laboratories at all levels to ensure water quality tests as per the programme guidelines; and
- Ensuring the reliability of Integrated Management Information System data by introducing counter checks/verification by any agency/authority other than executing agencies.

The matter was referred to the Government (September 2017); Reply was awaited (December 2017).

COMPLIANCE AUDIT

PEYJAL DEPARTMENT

1.4 Construction of toilets under Swachh Bharat Mission (Gramin)

The planning and implementation of Swachh Bharat Mission (Gramin) by the State was found inadequate as against the target of 546 Community Sanitary Complexes and 4,485 Solid and Liquid Waste Management structures only 63 and 50 respectively were constructed upto March 2017. The declaration of State as Open Defecation Free in May 2017 was incorrect. Failure to update beneficiary data on Government of India portal resulted in non-inclusion of more than one lakh beneficiaries. The financial management was also found inadequate as the State did not release its share of ₹10.58 crore during the year 2016-17.

1.4.1 Introduction

Government of India (GoI) launched (2012) the "Nirmal Bharat Abhiyan" (NBA) in place of the on-going Total Sanitation Campaign (TSC) programme with the objective of covering the rural communities more comprehensively through new strategies and adopting a saturation approach⁶². Subsequently, the Prime Minister of India launched the Swachh Bharat Mission (Gramin) [SBM (G)] on 2 October, 2014 to accelerate efforts towards achieving universal sanitation coverage and put greater focus on rural sanitation. The SBM (G) aims to achieve the status of Swachh Bharat, i.e. improving the level of cleanliness in the rural areas through Solid and Liquid Waste Management (SLWM) activities and making the Village Panchayats (VPs) Open Defecation Free (ODF) by the year 2019. The Government of Uttarakhand declared on 31 May 2017 that it had achieved the ODF status.

A compliance audit focusing on the implementation of Mission activities in Uttarakhand during the period 2014-15 to 2016-17 was carried out during April 2017 to June 2017 to assess the achievements of the State. Out of total 13 Districts, two districts; one each in Kumaon and Garhwal region⁶³ with maximum achievement⁶⁴ and two districts one each in these regions⁶⁵ with minimum achievement were selected as sample for audit scrutiny. Further, in each selected district, two blocks and in each block, five VPs were selected using similar criteria. For physical verification, a sample of 400 beneficiaries was randomly selected from 40 VPs of eight blocks⁶⁶ in the selected districts. Besides, scrutiny of records of the State Project Management Unit (SPMU), Dehradun was also carried out.

⁶² Approach to adopt community led and community saturation by placing emphasis on awareness generation, triggering behavior change and demand generation for sanitary facilities in houses, schools, anganwadis, places of community congregation and for solid and liquid waste management activities.

⁶³ Kumaon region: Almora, Garhwal region: Tehri.

⁶⁴ Achievement in respect of construction of Individual House Hold Latrines (IHHLs) against the target.

⁶⁵ Kumaon region: Udham Singh Nagar, Garhwal region: Haridwar.

⁶⁶ Udham Singh Nagar: Sitarganj and Bajpur, Haridwar: Narsan and Bahadarabad, Almora: Hawalbagh and Lamgarh, Tehri: Narendra Nagar and Bhilangana.

1.4.2 Planning

To assess the status of sanitation and hygiene practices in the State, a Base Line Survey (BLS) was conducted in 2013-14. On the basis of the BLS, a Project Implementation Plan (PIP) was submitted (June 2016) to GoI, which determined that 4,89,108 Individual Household Latrines (IHHLs), 831 Community Sanitary Complexes (CSCs) and 7,900 Solid and Liquid Waste Management (SLWM) facilities were required to be constructed in the State during the Mission period. The GoI, Ministry of Drinking Water and Sanitation instructed (May 2015) all the States to update the data of baseline survey by 30 June 2015.

Audit revealed that the SPMU forwarded (August 2015) a list of 1,79,868 households, which were identified based on revised survey conducted between June 2015 and August 2015 to GoI for inclusion in the list of already identified beneficiaries. These additions were not included in the PIP by GoI as the revised data was furnished after the deadline prescribed by the GoI was over (30 June 2015). Further, as per the SBM (G) guidelines, the States were also required to update the data of the beneficiaries in the month of April every year. The SPMU failed to carry out this annual updating of data on time. This resulted in non-inclusion of these 1,79,868 additional households. As a result, the targets set were lower than that required to achieve the Mission targets. On this being pointed out, the SPMU stated that a letter was sent to GoI for updating the BLS data and action was awaited from GoI. The reply was not acceptable as SPMU furnished the list of additional beneficiaries to GoI after the set deadline.

1.4.3 Funding Pattern

All the components, except CSCs, under SBM (G), are funded by the GoI and the State Government in the ratio of 90:10. In the case of CSCs, the ratio is 81:9, and the remaining ten *per cent* is financed by VPs. The provision of incentives for construction of IHHL and CSCs was ₹ 12,000 and ₹ two lakh respectively. Key components under SBM (G) along with their respective percentage share against the total allocation as well as funding pattern for each sub-component are given in **Table-1.4.1** below:

Table-1.4.1: Funding Pattern

Component	Amount Earmarked as <i>per cent</i> of the SBM (G) Project	Contribution Share (<i>per cent</i>)		
		GoI	State	Beneficiary House Hold/Community
IEC, Start Up Activity and Capacity Building	Up to 5% of total project Cost	90	10	00
IHHL	₹ 12,000	90	10	00
CSC	Maximum Unit Cost ₹ two lakh	81	09	10
SLWM	VPs with 150 families: ₹ 7 lakh, VPs with 300 families: ₹ 12 lakh, VPs with 500 families: ₹ 15 lakh, VPs with more than 500 families: ₹ 20 lakh	90	10	00
Administrative Charge	Up to 2% of the Project Cost	90	10	00

As per provision of the GoI guidelines, the SPMU issued direction that the payment of Incentive money (IM) to the families should be made after construction of the IHHL units and in the case of families belonging to economically weaker section, the IM will be provided to the VPs in the form of a lump-sum advance.

1.4.3.1 Availability and Utilisation of Funds

The year wise details of availability and utilisation of funds under the Mission during the years 2014-15 to 2016-17 are given in **Table-1.4.2** below:

Table-1.4.2: Availability and Utilisation of funds

(₹ in crore)

Year	Opening balance	Receipt					Expenditure (in percentage)	Balance (in percentage)
		GoI	State	Interest	Other	Total		
2014-15	13.08*	40.52	7.17	0.40	0.04	61.21	55.24 (90.25)	5.97 (9.75)
2015-16	5.97	49.37	5.49	0.49	0.01	61.33	51.18 (83.45)	10.15 (16.55)
2016-17	10.15	216.69	10.82	0.97	(-) 0.01 ⁶⁷	238.62	183.46 (76.88)	55.16 (23.12)

* *SBM (G) programme started in October 2014. Opening balance and allotment for the year 2014-15 includes amount of the earlier programme (NBA).*

As is evident from the above table, the unspent balances increased from nine *per cent* in 2014-15 to 23 *per cent* in 2016-17. The Department in its reply attributed the reason for unspent balances to receipt of funds at the end of the financial year. It further stated that construction of IHHLs was given priority over construction of CSC and SLWM. The reply is not acceptable as even if the funds had been received at the end of the financial year, these could have been utilised in the next year. However, this was not done as seen from rise in unspent balances in the above table. Besides, the Department failed to reimburse the incentive money to 2,02,953 beneficiaries, which was 45 *per cent* of the total IHHLs constructed. In the selected four districts alone, 1,36,910 beneficiaries were yet to receive incentive money amounting to ₹ 159.85 crore.

1.4.3.2 Non-release/Delay in release of State Share

As per paragraph 13.1.1 of the guidelines of SBM (G), the State was required to contribute its share of 10 *per cent* for the implementation of the programme within 15 days from the release of the Central share. It was observed that during the period 2014-17, the GoI released ₹ 306.58 crore against which the State Government had to release ₹ 34.06 crore. Against the State share, the State Government released only ₹ 23.48 crore as of April 2017 and an amount of ₹ 10.58 crore was yet to be released by the State Government for the year 2016-17. Further, in the year 2016-17, the State released its share with delays ranging from 10 days to 110 days.

1.4.3.3 Non-submission of Utilisation Certificates

Paragraph 5.4.3 of the SBM (G) guidelines stipulates that funds, in the form of advances, were to be provided to the VPs to accelerate the construction of IHHLs. As per the Memorandum of Understanding (MoU) entered into between the District Project Management Units (DPMU) and the VPs, the latter was required to construct IHHLs within 15 to 30 days of receipt of the funds and also submit Utilisation Certificates (UCs) to the concerned DPMU accordingly. It was observed that UCs amounting to ₹ 9.96 crore were still pending in the selected districts as of June 2017.

⁶⁷ The minus figure in the year 2016-17 is because the SPMU partly returned the registration fee of NGOs which was collected in the years 2014-15 and 2015-16.

On this being pointed out, the respective DPMUs confirmed the facts and stated that the UCs would be obtained from the concerned VPs.

1.4.4 Implementation of Mission programmes

There are mainly four components of activities under the SBM (G); (i) IHHL (ii) CSCs (iii) SLWM structures and (iv) Information, Education and Communication (IEC).

1.4.4.1 Individual Household Latrine

To make the VPs hygienic, annual targets were prepared under the IHHL component. Incentive @ ₹ 12,000 per IHHL was made available to:

- All the Below Poverty Line (BPL) households
- Above Poverty Line (APL) households, restricted to
 - Scheduled Castes/Scheduled Tribes,
 - Small and marginal farmers,
 - Landless labourers with homestead,
 - Households with physically handicapped head of the family and
 - Women headed households.

As per the approved PIP, 4,89,108 IHHLs were required to be constructed in the State out of which 4,50,804 toilets (92 per cent) were reported constructed till March 2017. The State was declared ODF in May 2017. However, as mentioned above, 1,79,868 beneficiaries were not included in the PIP, and therefore the actual coverage was only 67.39 per cent. Reliability of data in respect of construction of IHHLs was also doubtful as it was observed that district Almora was declared ODF on 22 December 2016 whereas a sum of ₹ two crore was released between 26 December 2016 and 3 January 2017 to 241 VPs for construction of 5,672 toilets, which had not been completed till June 2017. This indicates that district Almora had not achieved ODF status in December 2016.

1.4.4.1 (a) Results of physical survey of Individual Household Latrine

During physical verification of 40 VPs, it was observed that 253 out of 400 (63.25 per cent) IHHLs⁶⁸ were without water facilities and 27 households⁶⁹ were using their toilets partially due to various misconceptions. Further, in the physically verified 40 VPs, information obtained from *Gram Pradhans* revealed that 1,694 households⁷⁰ (4.12 per cent) out of 41,150 households residing in the villages were without toilets and were not covered under the Mission. This indicates that ODF status had not been fully achieved.

1.4.4.2 Community Sanitary Complexes

Community Sanitary Complexes (CSCs) are an integral component of SBM (G). CSCs comprising an appropriate number of toilet seats, bathing cubicles, washing platforms, washbasins, etc. can be set up in a village at a place acceptable and accessible to all.

⁶⁸ Haridwar-55, New Tehri-56, Udham Singh Nagar-87 and Almora-55.

⁶⁹ Haridwar-11, New Tehri-04, Udham Singh Nagar-11 and Almora-01.

⁷⁰ Haridwar-857, Tehri-170, Udham Singh Nagar-504 and Almora-163.

Ordinarily, such complexes are to be constructed only if there is lack of space for construction of IHHLs and the Community/VP makes a specific demand for the same, and is ready to shoulder the responsibility for their operation and maintenance. As per the PIP, 831 CSCs were to be constructed by the year 2019, out of which, as per Annual Implementation Plan (AIP) for the years 2014-15 to 2016-17, 546 CSCs were to be constructed by the end of March 2017. It was noticed that only 63 CSCs were constructed as of March 2017, which was only 11.54 *per cent* of the target. In the selected districts, only 42 (19.72 *per cent*) out of 213 CSCs were constructed. Thus, without construction of the CSCs and without ensuring their usage, the basic spirit and goal of the SBM was not achieved. On this being pointed out, the SPMU stated that emphasis was laid on the construction of IHHLs in the State, and efforts were made to cover more and more households with individual latrine facilities which resulted in low physical progress under the CSC component. Reply of the department was not acceptable as 831 CSCs were to be constructed only in those VPs where the beneficiaries did not have land available for the construction of individual latrines.

1.4.4.2 (a) Results of physical survey of the CSCs

Physical verification of seven CSCs in three selected districts⁷¹ was carried out. No deficiencies were found in three CSCs. The shortcomings noticed in the other four CSCs were as below:

- One CSC having two toilet seats in Makhdumpur village of Narsan block, and another having six toilet seats in Jaswahwala village of Bahadarabad block, both in district Haridwar, were constructed in the years 2014-2015 and 2015-16 respectively, in inaccessible locations and were without water supply and electricity connection.
- A CSC having six seats was constructed in 2014-15 at Dhimri village of Gadarpur block in district Udham Singh Nagar. It had no water supply and electricity connection, and was not being used.
- In the year 2016-17, a CSC having two seats was constructed in Mall Village Panchayat of Hawalbagh block in district Almora, which was being used for storage purpose.

1.4.4.3 Solid and Liquid Waste Management

As per the SBM (G) guidelines, SLWM was one of the key components aimed at improvement in the general quality of life in the rural areas. SLWM was to be undertaken in project mode in each VP. Under this component, activities like constructing common compost pits, low cost drainage, soak channels/pits, reuse of wastewater, and system for collection, segregation and disposal of household garbage were to be taken up.

As per the PIP, 7,900 SLWM structures were to be constructed by the year 2019, out of which 4,485 SLWM structures, as per the Annual Implementation Plans for the years 2014-15 to 2016-17, were to be constructed by the end of March 2017. It was noticed that

⁷¹ Haridwar, Udham Singh Nagar and Almora.

only 50 SLWM structures, which constituted only 1.11 *per cent*, were constructed as of March 2017. In the selected districts, only 27 out of 1,512 (1.79 *per cent*) SLWM structures⁷² were constructed. On this being pointed out, the Department stated that construction of IHHLs was accorded priority by the State Government. Reply of the Department is not acceptable as SLWM is also a key component for collection, segregation and safe disposal of household garbage and for setting up decentralised systems like household composting and biogas plants and these had a direct linkage with other interventions planned under the SBM. As such, SLWM should have been accorded equal priority.

1.4.4.4 Open Defection Free Status

The Ministry of Drinking Water and Sanitation, GoI, has defined that Open Defecation Free (ODF) status can be achieved only when there are no visible faeces found in the environment/village and every household as well as public/community institution use safe technology option for disposal of faeces.

The Government of Uttarakhand declared the State as ODF on 31 May 2017. However, considering the fact that 1,79,868 households were not included in the target of construction of IHHL and there were significant shortfalls in construction of CSCs and SLWMs, as explained in *paragraphs 1.4.2, 1.4.4.2 and 1.4.4.3* above, the declaration of status of ODF in the State was, therefore, incorrect.

1.4.4.5 Information, Education and Communication

Information, Education and Communication (IEC) activities are important components of the programme which envisage bringing about community-wide behaviour change through information and awareness generation to trigger demand for sanitary facilities for households in the rural areas. Under this intervention, construction and use of toilets in a sustained manner was to be emphasised by creating public awareness through various activities such as Song and Drama, Puppet shows, Banners and other activities by DPMUs, apart from appointment of *Swachhta Doot*⁷³, and formation of Village Water and Sanitation Committee in each village to educate the villagers. Scrutiny of records revealed that IEC activities were not fully carried out in the selected districts. An amount of ₹ 1.40 crore (24.69 *per cent*) of the earmarked funds were utilised on IEC activities such as awareness meetings, hoardings, distribution of IEC material, songs and dramas, *etc.* against a total allocation of ₹ 5.67 crore during the period 2014-15 to 2016-17. Further, it was also observed that in the selected districts, neither *Swachhta Doots* were appointed nor were Village Water and Sanitation Committee formed. The impact of inadequate IEC activities was visible during physical survey wherein 27 households out of 400 households (6.75 *per cent*) were not using the toilet due to various misconceptions.

⁷² Vermi compost pits, Garbage pits, Soak pits and outlet drains.

⁷³ *Swachhta Doot* was to be nominated by the GP/Village Water and Sanitation Committee for identifying the beneficiaries and for creating awareness about the programme.

1.4.5 Achievements of sustainable development goals

The objective of Sustainable Development Goals (SDGs) is to produce a set of universally applicable goals that balance the three dimensions of sustainable development: environmental, social, and economic. In total, 17 goals have been set as SDGs which are to be achieved by 2030.

The sixth goal of SDGs pertains to the concept of ‘clean water and sanitation. It aims at ensuring availability and sustainable management of water and sanitation for all. However, inadequate planning, deficiencies in financial management, implementation and monitoring and non-inclusion of eligible beneficiaries in the program, as detailed in preceding paragraphs, indicate that more efforts are needed to achieve the goal of ensuring availability of proper sanitation facilities to the rural community.

1.4.6 Monitoring and Evaluation

1.4.6.1 Non-formation of Monitoring Units

As per paragraph 14.3 of the SBM (G) guidelines, supervision is necessary for effective implementation of the Mission programme. Dedicated specialised monitoring units with specialists at both the State and the district levels were to be formed for monitoring the Mission activities. Monitoring Report was to be prepared by these units on quarterly basis. Scrutiny of records in the selected districts revealed that neither the requisite monitoring units were constituted nor were the quarterly monitoring reports generated, which indicate inadequate monitoring of the programme.

The selected DPMUs accepted that they did not constitute the monitoring units but did not furnish reasons for the same.

1.4.6.2 Periodic Evaluation

As per paragraph 16.1 of the guidelines, States were required to conduct periodical evaluation studies on the implementation of Mission programme. Evaluation studies were to be conducted through reputed institutions, the names of which were required to be furnished to the GoI. Scrutiny of records revealed that periodic assessment was not taken up by the SPMU as envisaged in the guidelines. On this being pointed out, the SPMU accepted the fact that the third party inspections, as envisaged in the guidelines were not carried out. It however stated that a third party inspection was carried out by the Academy of Management Studies (AMS) from 15 June 2015 to 15 October 2015.

The reply of the SPMU is not acceptable as the said report was not related to the periodic evaluation under SBM (G). It pertained to a survey of a World Bank sponsored project named Uttarakhand Rural Water Supply and Sanitation Project and the survey covered only one component *i.e.* IHHL.

1.4.7 Conclusion

The planning and implementation of Swachh Bharat Mission (Gramin) by the State of Uttarakhand was found wanting. The State Programme Management Unit failed to

update the beneficiary data on Government of India portal on time which resulted in non-inclusion of more than one lakh beneficiaries. There was considerable shortfall in the implementation of two vital components viz. Community Sanitary Complexes and Solid and Liquid Waste Management. The declaration of the State as Open Defecation Free in May 2017 was incorrect. The Information, Education and Communication activities were not carried out in the selected districts adequately. The financial management was found deficient as the State did not release its share during the year 2016-17. Moreover, it could not establish dedicated specialised monitoring units.

The audit findings were referred to the Government (July 2017); Reply was awaited (December 2017).

DEPARTMENT OF ENERGY

1.5 Follow-up audit of the performance audit of Hydropower Development through Private Sector Participation

1.5.1 Introduction

A Performance Audit on “Hydropower Development through Private Sector Participation”, covering the period from 1993 to March 2009, was brought out as a Stand-alone Audit Report for the year ended 31 March 2009. The Report was placed before the State Legislative Assembly in September 2010. The audit findings have not been taken up for discussion by the Public Accounts Committee as of June 2017.

1.5.2 Objective, scope and methodology of audit

A follow-up audit was conducted from April to May 2017 with the objective of assessing the implementation of 13 recommendations accepted by the Government in the exit conference (November 2009) against 23 observations included in the Stand-alone Audit Report 2009. Audit involved test-check of records in the offices of the Government of Uttarakhand (GoU), the Managing Director, Uttarakhand Jal Vidyut Nigam (UJVN) Limited and the Uttarakhand Environment Protection and Pollution Control Board (UEPPCB). Physical verification of five⁷⁴ out of 13 hydropower projects, selected in the earlier Performance Audit, was also conducted as part of audit. The period covered in audit was from 2009-10 to 2016-17.

Audit Findings

1.5.3 Implementation of audit recommendations

The status of action taken by Government against 23 accepted audit observations reported in earlier Report has been arranged in following three categories:

⁷⁴ Rajwakti, Deval, Birahiganga, Bhilangana-III & Birahiganga-II.

A. Insignificant or no progress

Audit findings made in earlier Report	Recommendation made	Current status as informed by the Department	Audit findings/comment
(i) The Srinagar hydropower project developer had been given terms that were more favourable than the terms of the standard Implementation Agreement (IA) being entered into by the GoU with other project developers. (Para 4.3 of previous audit report).		GoU has prepared a draft State Water Policy, 2016 in which it is proposed that “the ownership of water does not vest in an individual but in the State”. After implementation of the said policy, the conditions will be uniform for all projects in future.	The draft policy is yet to be approved. Further, no attempt has been made by the State Government to moderate the terms of IA entered into with the promoters of various hydropower projects before 2016. In case of Srinagar Project, the project proponent is yet to carry out all the changes made/instructions issued by the Union Government/State Government (June 2017).
(ii) Given the current policy of the State Government of pursuing hydro-power projects indiscriminately, the potential cumulative effect of multiple run-of-river power projects can turn out to be environmentally damaging. Presently, 42 hydro-power projects are in operation, 203 are under construction or clearance stage, while several others are at the conceptual stage. (Para 5.3.2 of previous audit report).	<p>1. The head pond, weir and intake associated with the diversion ought to be designed to minimise impacts, including those affecting aquatic life, sediment movement and flooding.</p> <p>2. In accordance with the Government of India (GoI) guidelines, an additional 1 per cent free power from the project may be provided and earmarked for Local Area Development Fund.</p>	<p>1. GoU had issued orders (April/May 2013) regarding maintaining minimum water flow in the case of two rivers (Saryu & Ramganga) valleys. For other river (Alaknanda & Bhagirathi) valleys, the matter is still pending before the Hon’ble Supreme Court. The Ministry of Environment, Forest & Climate Change (MOEF&CC) has formed a committee to examine the environmental issues related to hydroelectric projects in the State. Report of the committee is still awaited.</p> <p>2. Local Area Development Fund policy for hydropower projects in Uttarakhand has been prepared. Approval of the same is under consideration.</p>	<p>1. The recommendation is still not implemented. During physical verification of five projects, it was verified that there was no downstream river flow in the diversion reach.</p> <p>2. The recommendation is yet to be implemented as the policy is yet to be approved.</p>
(iii) No specific measures had been planned/designed in any project to cope with the risk of flash floods. (Para 5.7 of previous audit report).		During examination/ approval of Detailed Project Report (DPR), estimation of design, flood and flood frequency analysis has been	The follow up on this observation is still in progress.

		done as per the standard guidelines and calculation/formulas. After disaster 2013, MOEF, GoI has constituted a committee to give recommendations regarding environment safeguard and disaster mitigation plan, which is under progress.	
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B. Partial Implementation

Audit findings made in earlier Report	Recommendation made	Current status as informed by the Department	Audit findings/comment
(i) The core competence of several of the entities allotted projects by single stage clearance based on technical and financial strength of the prospective developers such as in steel production, tourism, sugar manufacture, water supply projects, general construction <i>etc.</i> and they had no prior experience of working in the power sector. (<i>Para 3.2.1</i> of previous audit report).		The projects were allocated by the erstwhile Uttar Pradesh Government. After creation of Uttarakhand, the State continued with the same developers by entering into a fresh IA with them. Hence, there is no scope to amend/change the ownership of the original developers. However, provision has been made for change in ownership of projects in the New Hydropower Policy, 2015.	The Department has provided for necessary safeguards in the new policy. Audit found no evidence of any effort made by the State Government to ensure that promoters of existing projects bring in necessary expertise for operating hydropower projects.
(ii) There were instances of undue extensions, without charging for liquidated damages, for implementing the projects in the garb of capacity revision, implying loss of royalty and deprivation of anticipated benefits from electricity. In addition, the Government also faced the prospect of incurring huge financial losses on account of upfront premium. (<i>Para 3.4</i> of previous audit report).	On account of the implications for upfront premiums and financial capabilities of the developers, the Government should consider and frame guidelines for dealing with all such cases where huge increases in capacities are proposed. A uniform and firm policy for granting extensions and terminating agreements needs to be put in place.	GoU has formed a new policy on capacity enhancement in the year 2012, in which there is a provision of upfront premium to be paid on pro-rata basis.	The Department has implemented the audit recommendation for new projects. However, audit observed that the government is yet to enquire into the cases reported by audit where promoters proposed huge increases in capacities of the projects.
(iii) The State's policy on hydropower projects was silent on the vital issue of	1. The individual and cumulative impact on the	GoU had issued orders (April/May 2013) regarding maintaining minimum water	The recommendation has not been fully implemented. During physical verification

<p>maintaining downstream flow in the diversion reach. (Para 5.3.1 of previous audit report).</p>	<p>downstream river flow should be seriously considered to ensure that the projects do not result in disastrous impact on the environment. 2. Minimum flow in the diversion reach should be computed and prescribed taking into account the groundwater recharge potential of the river, irrigation, ecology and silt load factor.</p>	<p>flow in the case of two rivers (Saryu & Ramganga) valleys. For other river (Alaknanda & Bhagirathi) valleys, the matter is still pending before the Hon'ble Supreme Court. The Ministry of Environment, Forest & Climate Change (MOEF&CC) has formed a committee to examine the environmental issues related to hydroelectric projects in the State. Report of the committee is still awaited.</p>	<p>of five projects, it was observed that there was no downstream river flow in the diversion reach.</p>
<p>(iv) Out of total 48 projects allotted during 1993 to 2006, only five projects (10 per cent) were completed and operational after lapse of 15 years. Consequently, the envisaged power generation worth 2,005.05 Mega Watt (MW) could not be achieved. (Para 4.1 of previous audit report).</p>	<p>Reasons behind delays in implementation of hydro projects should be thoroughly examined so as to put in place a more responsive monitoring mechanism for avoiding delays in upcoming projects.</p>	<p>Presently, out of 53 projects (2,588.45 MW) allocated to the private developers, 18 projects (881.65 MW) are under operation and remaining 35 projects (1,706.80 MW) are in various stages of being set up viz. under construction & under development/initial stages. GoU had taken review meetings with project developers from time to time and given directives to complete the projects within specified time.</p>	<p>There is an increase in the number of operational hydro projects in the State. But a significant number (35) of projects are still in development/under construction stages. The GoU has not been able to push the developers to fast track the projects in the State. As a result, Uttarakhand is a power deficit State despite huge hydropower potential.</p>
<p>(v) No evidence of any punitive action being undertaken against any of the developers for defaulting on IA conditions. The Liquidated Damages (LD), as a consequence of undue delays in commissioning of projects, were not recovered in a single case. (Para 4.2.1 of previous audit report).</p>	<p>Executive should prescribe procedure to fix accountability in cases of violation of conditions stipulated in the IAs.</p>	<p>Notices had been issued to various developers to deposit liquidated damages. Replies have been submitted by the developers though none of the developers has deposited the LD. The matter was discussed at Government level and it was decided (January 2013) to make a policy for granting time extension. However, policy could not be finalised.</p>	<p>None of the developers has deposited the required Liquidated Damages since the matter was pointed out seven years ago. Even the policy for granting time extension to developers to comply with State Government directives has not been approved.</p>
<p>(vi) Out of eight projects which were under construction/operation, the Consent to Establish (CTE) the projects from the Board</p>		<p>As per the Environment Protection Act, there is no statutory requirement for environmental clearance for the projects upto 25 MW.</p>	<p>Although there is significant improvement on the issue of according CTE, consents are yet to be issued to remaining seven projects. Given the</p>

was obtained only by five. Besides, Consent to Operate (CTO) was only obtained by one project even though four projects were operational. (Para 5.1 of previous audit report).		However, as per Water (Prevention and Control of Pollution) Act 1974, Consent to Establish is necessary whereas Consent to Operate is not mandatory in case of white category. Presently, out of 22 projects which were under construction/operational, the CTE has been given in case of 15 projects.	sensitivity attached to riverine ecology in the State, slow progress in the matter only underscores the lack of urgency on part of the government in this critical area.
(vii) The plantation activity was highly deficient, as 38 per cent of projects reported hardly any plantation; posing severe hazards both for natural ecology and stabilisation of hill slopes. (Para 5.4.1 of previous audit report).		Out of eight projects (related to the period 1993-2009), plantations were done in all the projects except Loharkhet. Presently (2009-2017), plantations were done in 18 projects out of 28 projects.	Afforestation and plantation activities were still deficient. 10 out of 28 projects had not undertaken the mandatory plantation activities. Thus, the danger posed by unstable hill slopes persisted in the project areas. Damage caused to natural ecology because of project activities was still to be made good.
(viii) Forest land clearances were received with delays ranging from 85 days to 295 days in many cases. (Para 6.1.2 of previous audit report).	The State Government may urgently constitute a nodal authority for addressing the problems of land acquisition, forest clearance and resettlement & rehabilitation for all the projects.	Standard Operating Procedure has been prepared and uploaded on the website of the Forest Department. Further, through video conferencing, departments and project proponents were informed to rectify the shortcomings in the process. Despite remedial action taken by the Department, there were still delays ranging from 125 to 171 days in six cases at the State level, and six to 3,248 days in 27 cases at MOEF, GoI level.	Delays were still observed in obtaining forest land clearances at the levels of the State Government as well as the MOEF, GoI.

C Full Implementation

Audit findings made in earlier Report	Recommendation made	Current status as informed by Department	Audit findings/comment
(i) The authorities had not diligently carried out the Pre-feasibility (PFR) studies based on the ground survey of the river basin, its topography and hydrology for accurate evaluation of the hydropower potential of a river/stream as significant alterations ranging	Pre-feasibility studies should be carried out with due diligence so that reliable data can be obtained for computation of power potential of projects.	New notification was issued in 2012 for capacity enhancement. GoU made necessary provisions in the policy in 2015 whereby projects are being bid after preparation and approval of Detailed Project Report.	The Department has implemented the audit recommendation for the new projects.

from 22 per cent to 329 per cent in the capacity of 85 per cent of projects, raised serious doubts on the credibility of PFR studies. (Para 3.1 of previous audit report).			
(ii) Projects allotted during 2003-06 were awarded to applicants with core interest in sectors other than power. (Para 3.2.2 of previous audit report).		Technical marking criteria for technical qualification of the bidders have been modified (November 2014) whereas past experiences were elaborated. After modification, no such instances were noticed.	The Department has provided the required safeguards for new projects.
(iii) No specific institutional mechanism to verify the basis of capacity enhancement as variations were noticed in the norms for computing the power potential in the capacity enhancement proposals of project developers. (Para 3.3 of previous audit report).	Sufficient data on stream flows and biota should be collected for a reasonable period of time prior to construction and this baseline data should be used in planning and mitigation processes.	New notification was issued (September 2012) by GoU for capacity enhancement of project to save revenue loss and strengthening of the <i>Urja Cell</i> within the Department of Energy to examine technical feasibility of project.	The Department has implemented the audit recommendation.
(iv) The failure of the nodal agency to enforce the conditions of regular and timely submission of quarterly progress reports by the project developers resulted in non-assessment of the progress of projects by the Government to avoid delays in their implementation. (Para 4.2.2 of previous audit report).	A proper monitoring mechanism needs to be put in place to ensure that lapses on the part of Independent Power Producers during civil construction and operations are avoided.	GoU has issued orders (2008 & 2015) for strengthening of <i>Urja Cell</i> to examine technical feasibility and monitoring of projects. Regular inspection and monitoring of projects are being performed by the officers of the UJVN Limited and the <i>Urja Cell</i> .	The Department has implemented the audit recommendation.
(v) Negligence towards environmental and safety concerns was yet another consequence of weak monitoring by the nodal agency in ensuring adherence to prudent utility practices. (Para 4.4 of previous audit report).		GoU conducted Cumulative Environmental Impact studies for various rivers and made provisions in IAs for maintaining Safety and Quality Assurance.	The Department has implemented the observation. During joint physical inspection, it was verified that channel of Rajwakti Project was now covered.
(vi) The execution phase was found characterised by generation losses of 10.57 million units of power worth ₹ 2.64 crore, mainly attributable to grid failure, transmission obstruction due to low voltage and hindrances by local people indicating inadequate maintenance of		The Department is continuously coordinating with various operational project developers and prepares monthly generation reports. Transmission issues were also sought from the developers and discussed with the concerned officials to rectify the same. As per the	The Department has implemented the observation.

<p>grid infrastructure. (Para 4.5 of previous audit report).</p>		<p>Uttarakhand Electricity Regularity Commission (UERC) Regulations 2013, Uttarakhand Power Corporation Limited (UPCL) may bear the claim of deemed generation if found justified. However, if UPCL raises any objection, then the developer may submit their petitions before UERC.</p>	
<p>(vii) Negligence of environmental concerns was obvious as the muck generated from excavation and construction activities was being openly dumped into the rivers contributing to increase in the turbidity of water. The projects seemed oblivious of the fact that such gross negligence of environmental concerns lead to deterioration of water quality and adverse impact on the aquatic biota. (Para 5.3.3 of previous audit report).</p>	<p>There is an urgent need for UEPPCB to strengthen its monitoring mechanism to ensure appropriate and timely action against projects that violate and are negligent of environmental concerns.</p>	<p>MOEF & CC has issued standard terms of reference for Environment Impact Assessment/Environment Management Plan (EIA/EMP) report for projects/activities requiring environment clearance under EIA Notification 2006. UEPPCB had also issued directives for proper muck disposal at the time of issuance of consent.</p>	<p>The Department has implemented the audit recommendation. During joint physical verification of five projects, it was verified that no muck was being dumped near the river banks in case of these projects.</p>
<p>(viii) Stone crushers had been established within the project premises of two projects namely Bhilangana-III and Srinagar. (Para 5.3.4 of previous audit report).</p>		<p>GoU has issued Uttarakhand Stone Crusher License Policy 2016 for all the hydropower projects including specifying minimum distance from the river for installation of stone crushers.</p>	<p>The Department has implemented the observation. During joint physical verification of five projects, it was verified that no stone crusher was established within the project premises in these cases.</p>
<p>(ix) Negligence in applying appropriate construction norms and structuring the project without appropriate technical counter measures may expose projects to enhanced seismic vulnerability. (Para 5.5 of previous audit report).</p>		<p>Geological Survey of India/Urja Cell examines the Detailed Project Report (DPR) of hydro projects and issues necessary directions/ approval for safe design of project component according to seismicity. Regular follow-up/monitoring is being done by the officials of UJVN/Urja Cell through correspondence (seeking quarterly progress reports etc.) except in one case at Srinagar, Pauri, where official visits to the site were made.</p>	<p>While Urja Cell and UJVNL do monitor through correspondence and tours as intimated to audit, no records of the same are maintained. As a result, audit could not verify the same.</p>

(x) Safety measures adopted by the project developers vary greatly despite the projects being situated in the same seismic zone. In the absence of adequate checks, the implementation of the same cannot be guaranteed. (Para 5.6 of previous audit report).		The response of the State Government is the same as above.	The Department has initiated action on the audit observation.
(xi) In the absence of a well-laid down policy, land acquisition proved to be a major obstacle, derailing project development from its time schedule. (Para 6.1.1 of previous audit report).	The State Government may urgently constitute a nodal authority for addressing the problems of land acquisition, forest clearance and resettlement & rehabilitation for all the projects.	To reduce delay in land acquisition, State Government issued Resettlement and Rehabilitation Policy 2013 for hydroelectric projects.	The Department has implemented the recommendation.
(xii) In a certain case, grid infrastructure for power evacuation was not installed well in time resulting in energy losses and deferment of royalty payments to the Government. (Para 6.2 of previous audit report).	It is an essential requirement that reliable grid infrastructure should be made available well before the expected synchronisation of the hydropower projects to avoid energy losses in absence of evacuation facilities.	Meetings were convened for providing transmission facilities to the developers before commission of projects. UPCL and Power Transmission Corporation of Uttarakhand Limited (PTCUL) have planned their transmission systems to ensure evacuation and transmission of power from the hydro projects.	The Department has implemented the audit recommendation.

1.5.4 Conclusion

Of the total recommendations and observations made by the audit, the extent of implementation of the accepted audit observations and recommendations by the Government was 52 *per cent*; 35 *per cent* recommendations were partially implemented; and 13 *per cent* were not implemented as on June 2017. Although the State Government had made progress in addressing some of the concerns raised in audit; yet significant amount of work remains to be done on policy matters regarding water rights, local area development fund, ensuring downstream river flow, timely completion of projects, recoveries of liquidated damages, issuance of consent to establish/operation, reducing risks from damages due to flash floods, plantation, and delay in forest land clearances.

The matter was referred to the Government (June 2017); Reply was awaited (December 2017).

MEDICAL, HEALTH & FAMILY WELFARE DEPARTMENT

1.6 Suspected embezzlement on hiring of vehicles

Payment made without determining authenticity of the claims resulted in suspected embezzlement of ₹1.25 crore on hiring of vehicles.

Article 46-A of the Financial Handbook Volume-V provides that, as a general rule, every payment, for whatever purpose, must be supported by a voucher setting forth full and clear particulars of the claim.

Scrutiny of records (August 2013) of the Chief Medical Officer (CMO), Udham Singh Nagar revealed that payment of 18 bills of hiring of taxis amounting to ₹ 6.96 lakh was made against dubious bills. The matter was reported (December 2013) to the Director General, Medical, Health and Family Welfare (DG, MH & FW). Further, during the course of audit of CMO Dehradun (May 2015), it was noticed that 41 bills of hiring of taxis amounting to ₹ 18.60 lakh were also paid against dubious bills. Considering the gravity of the matter, the audit coverage was widened and records of two more CMOs⁷⁵ along with further information obtained from the CMO Udham Singh Nagar and Dehradun were examined (August 2016 to November 2016). Scrutiny of records revealed that the bills for hiring of taxis, amounting to ₹ 1.25 crore⁷⁶ (including ₹ 6.96 lakh and ₹ 18.60 lakh as stated above), were passed by the DDOs without ascertaining the authenticity of the bills and payments were made to the travel agencies. Further, audit noticed the following shortcomings:

- Amount of ₹ 58.44 lakh was paid against 183 bills where no vehicle registration number was mentioned;
- Payment of ₹ 48.52 lakh was made against 142 bills where no vehicle registration number and date of journey were mentioned;
- Payment of ₹ 3.11 lakh was made against bills where the same vehicle was running in two or three different locations in different districts at the same time and on the same date; and
- In case of bills involving 37 vehicles, where registration numbers of the vehicles were mentioned, the registration numbers of vehicles were cross checked by obtaining relevant information from the Regional Transport Office (RTO), Dehradun. It was found that payments of ₹ 3.68 lakh involving 12 vehicles were made against bills where the vehicles were registered as Scooter/Three Wheeler/Private car and payments of ₹ 11.12 lakh were made for 21 vehicles which were not even registered with the RTO.

⁷⁵ Tehri and Haridwar.

⁷⁶ Dehradun ₹ 22.64 lakh, Haridwar ₹1.78 lakh, Tehri ₹ 17.41 lakh, Udham Singh Nagar ₹ 82.76 lakh.

The above irregularities indicate that payments were made by the DDOs against claims preferred by travel agencies, without checking the authenticity of the claims as per extant financial rules, resulting in suspected embezzlement of ₹ 1.25 crore.

The matter was referred to the Government (March 2017) which stated (April 2017) that a departmental inquiry was set up (April 2014) and another State level inquiry headed by Joint Secretary, Medical Education was also set up in May 2016. It was further stated that on the basis of inquiry, departmental disciplinary proceedings had been initiated and charge sheets were issued to the concerned Medical Officers. However, financial loss of ₹ 1.25 crore to the exchequer was yet to be recovered (August 2017).

PUBLIC WORKS DEPARTMENT

1.7 Unjustified excess expenditure of ₹1.69 crore

Award of works at higher rates in disregard of financial norms resulted in excess expenditure of ₹1.69 crore.

District Magistrate, Rudraprayag accorded (April 2014) administrative and financial sanction of ₹ 15.09 crore for improvement of the *Rudraprayag-Gaurikund*, National Highway-107 (Km 1 to 25) by BM⁷⁷ and BC⁷⁸ that was damaged in natural disaster of June 2013 to be executed in five parts. Technical Sanctions (TS) of ₹ 10.24 crore (₹ 2.51 crore, ₹ 2.74 crore and ₹ 4.99 crore) in three parts (for Km 1 to 18) and of ₹ 4.85 crore (₹ 2.38 crore and ₹ 2.47 crore) in two parts (for Km 19 to 25) were accorded (April 2014) by the Chief Engineer, Garhwal Region (CE) and the Superintendent Engineer (SE), Rudraprayag respectively.

Scrutiny of records (December 2015) of the Executive Engineer (EE), Provincial Division (PD), Public Works Department (PWD), Rudraprayag revealed that due to urgency pertaining to execution of the said works before the commencement⁷⁹ of the *Char Dham Yatra*⁸⁰, the SE proposed (April 2014) to award the works at the rates quoted by firms which were ready to commence the work immediately. The proposal was accepted (22.04.2014) by the CE. Two agreements⁸¹ were accordingly entered into (22.04.2014) by the SE the very same day. Within less than a week of entering into the agreements at the rates quoted by selected firms, the Department finalised (26.04.2014) the revised Schedule of Rates (SOR) for the year 2014-15 on the basis of the prevalent market rates following due process. It was, however, observed that rates of Prime Coat, Tack Coat, BM and BC, which were finalised in various parts of the improvement work before the revision of the SOR, were higher by 15 to 31 *per cent* than the revised SOR.

⁷⁷ Bituminous Macadam.

⁷⁸ Bituminous Concrete.

⁷⁹ April-May.

⁸⁰ Pilgrimage to four holy destinations (Badrinath, Kedarnath, Gangotri and Yamunotri) in Uttarakhand.

⁸¹ Agreement No.-02/SE/2014-15 for Km 1 to 10 and Agreement No.-03/SE/2014-15 for Km 11 to 25.

The Department, thus, failed to apply due diligence in ascertaining the prevailing market rates while finalising the agreements for the improvement works.

This resulted in an unjustified expenditure of ₹ 1.69 crore⁸² as the works were awarded and executed at rates higher than the prevailing market rates on the basis of which the SOR was subsequently revised within less than a week of awarding of the work.

On this being pointed out, the Division stated (December 2015) that the Government had granted permission to the SE to enter into agreements on the basis of selection through quotation at market rates. The reply was not acceptable as there was no evidence on record that showed that due diligence was ensured to compare the rates quoted by the contractors with those prevailing in the market as the selected contractors had quoted their rates on 11 April 2014, and on the very same day, the SE had sought approval of the Government to execute the agreements with these contractors. Moreover, though the works were cited as urgent and to be completed within 20 days, the same took two to three months to execute, well into the duration of the *Char Dham Yatra*. Further, the Engineer-in-Chief intimated (16.06.2017) that all the Regional Chief Engineers had been instructed (17.02.2014) to survey the market and submit the basic rates of resources prevailing in their region by 30.03.2014 for revision of the SOR 2014-15. This shows that the SE was well aware of the prevailing market rates as on March 2014. Despite this, the SE proposed the award of works at higher rates in April 2014.

The Department, therefore, failed to comply with prudent financial norms, and incurred an unjustified expenditure of ₹ 1.69 crore on the works by accepting higher rates in undue haste.

The matter was referred to the Government (April 2017); Reply was awaited (December 2017).

1.8 Unauthorised excess expenditure

The division unauthorisedly incurred an excess expenditure of ₹0.59 crore in violation of financial rules as well as conditions stated in the Chief Engineer's letter of approval.

Paragraph 317 of the Financial Hand Book (FHB) Volume-VI stipulates that in case of works, the excess over the amount to which expenditure sanction has been given requires revised expenditure sanction of Government. Further, for the purposes of above rule, the

82

Sl. No.	Item of work	Agreement Rate (in ₹)	SOR (May 2014)	Difference in Rate	Executed quantity	Amount (in ₹)
1.	Prime Coat	60.00	45.80	14.20 (31%)	32,587.28	4,62,739.38
2.	Tack Coat	16.00	13.20	2.80 (21%)	54,763.60	1,53,338.08
3.	BM	12,000.00	9,869.00	2,131.00(22%)	626.83	13,35,774.73
		12,100.00	9,869.00	2,231.00 (23%)	1,866.065	41,63,191.02
4.	Tack Coat	13.00	10.90	2.10 (19%)	1,50,042.35	3,15,088.94
5.	BC	16,400.00	14,293.33	2,106.67 (15%)	1,998.36	42,09,885.06
		16,500.00	14,293.33	2,206.67 (15%)	2,841.333	62,69,884.29
Total						1,69,09,901.50

Chief Engineer is authorised to sanction excess over the original expenditure up to 10 *per cent* (modified to 15 *per cent* as per delegation of financial powers, 2010) subject to the condition that the increase is purely related to rise in the cost of material and labour.

The Government of Uttarakhand accorded an administrative approval and financial sanction (March 2013) of ₹ 4.60 crore⁸³ for the construction of Pauri-Devprayag optional road (*Vaikalpik Marg-12 Km*) at *Kot* block in Pauri-Garhwal under the State Scheme. The Technical Sanction (TS) for the same amount was accorded (September 2013) by the Chief Engineer, Garhwal Region (CE), Public Works Department (PWD), Pauri for the said work.

Scrutiny of records (November 2016) of the Executive Engineer (EE), Provincial Division, PWD, Pauri revealed that the division entered into 12 agreements with the contractors (September, November and December 2013) to execute the above work. The work was started in September 2013 and completed in July 2014. Further, it was noticed that an expenditure of ₹ 0.84 crore⁸⁴ was incurred on 13 extra items out of which ₹ 0.72 crore was incurred on nine⁸⁵ items which were included in approved Detailed Estimate (DE) but were not part of the Schedule 'B'⁸⁶ of the agreements and the remaining ₹ 0.12 crore was incurred on four⁸⁷ other items which were neither part of the approved DE nor were included in the Schedule 'B' of the agreements. An expenditure of ₹ 5.12 crore was incurred on the work, which exceeded the actual sanctioned cost of ₹ 4.53 crore⁸⁸ for work. In the process, the division incurred an excess expenditure of ₹ 0.59 crore on extra items which were not part of the Schedule 'B' of the contracts signed with the contractors. The division sought (November 2014) the approval of CE for the excess expenditure (13.02 *per cent* of sanctioned cost for work). The CE accorded (December 2014) approval subject to the condition that the excess expenditure would relate only to price escalation in material and labour. However, as there was no change in rates of material and labour, the payments made were against the conditions contained in the approval accorded by CE and in violation of extant provision stipulated in paragraph 317 of the FHB Vol-VI.

⁸³ ₹ 4.53 crore were provisioned for work and ₹ 0.07 crore for contingency.

⁸⁴ Actual expenditure incurred on extra items: ₹ 0.84 crore (₹ 0.59 crore was the expenditure incurred in excess of sanctioned amount and balance amount of ₹ 0.25 crore was met from saving of other items executed as per agreements).

⁸⁵ Earth work in Hill side cutting, construction of 1 m span scupper, construction of Catch pit, cement plum masonry 40 *per cent* plum & 60 *per cent* 1:3:7 cement concrete, Excavation in foundation for Retaining Wall, Random Rubble Stone Masonry laid dry, Random Rubble Stone Masonry laid in 1:6, Hand packed stone filling, construction of *katcha* Drain.

⁸⁶ Schedule 'B' is a part of the agreement containing the quantity and rates of the items to be executed by the contractor.

⁸⁷ Laying of G.I. wire crates, Tack Coat @ 40 *per cent* Kg/sqm, PCC 1:2:4, Providing concrete for plain/reinforced concrete in open foundation.

⁸⁸ Excluding the sanctioned amount for contingency in the approved estimate.

On this being pointed out, the division stated (November 2016) that the excess expenditure was approved by the CE. The reply is not acceptable as the CE is authorised to approve excess expenditure upto 15 per cent where the cost escalation was purely related to increase in the unit rate of the items. Further, the CE had accorded approval subject to the condition that the excess expenditure would purely relate to rise in cost of material and labour. However, the unit rate of none of the items included in approved estimates had increased. The increase in cost of the work was purely on account of execution of additional items.

The division, therefore, unauthorisedly incurred an excess expenditure of ₹0.59 crore in violation of the extant financial rules and the conditions contained in the approval accorded by the CE.

The matter was referred to the Government (April 2017); Reply was awaited (December 2017).

1.9 Unfruitful Expenditure of ₹0.70 crore

The Division awarded work of strengthening of a road at a cost of ₹2.83 crore despite issue of notice by National Green Tribunal for violation of Forest (Conservation) Act, 1980. Consequently work had to be subsequently halted after incurring expenditure of ₹0.70 crore. As a result, this expenditure was rendered unfruitful.

Government accorded administrative approval and financial sanction (December 2011) of ₹ 3.72 crore for strengthening including widening of *Premnagar-Gadoli-Buakhal* bypass motor road using Bituminous Macadam (BM) and Semi Dense Bituminous Concrete (SDBC) in district Pauri-Garhwal. Technical Sanction (TS) of ₹3.13 crore was accorded (May 2012) by the Chief Engineer, Garhwal Region (CE), Public Works Department (PWD), Pauri for the above work.

Scrutiny of records (December 2016) of the Executive Engineer (EE), Construction Division, PWD, Pauri, revealed that the National Green Tribunal (NGT) had issued a notice on 10 May 2012 to the respondents⁸⁹ while admitting an application alleging gross violation of the Forest (Conservation) Act, 1980 in the construction of the said motor road. Section 2 of the Forest (Conservation) Act, 1980 states that no State Government or other authority can issue orders directing any forest land or portion thereof to be used for any non-forest purpose without prior approval of the Central Government. In this case the work which involved 750 metres of forest land on different stretches of the road was approved without obtaining prior approval of Central Government. The matter was scheduled for hearing on 12 July 2012. Despite receiving the notice on 01 June 2012, the Division entered into an agreement on 07 June 2012 for an amount of ₹2.83 crore with the contractor for execution of the above work with the scheduled dates of start and

⁸⁹ Respondent-1 (Union of India), Respondent-2 (State of Uttarakhand), Respondent-3 (District Magistrate, Pauri), Respondent-4 (CD, PWD Pauri), Respondent-5 (DFO, Pauri), Respondent-6 (Nagarpalika, Pauri) and Respondent-7 (Sub Registrar, Pauri).

completion as June 2012 and June 2013 respectively. The work was started on 07 June 2012. A month later, the NGT directed (04 July 2012) that the respondents shall not undertake any further construction of the road. It, however, permitted maintenance of the existing road. Subsequently, the NGT, in its order dated 13 September 2012, directed that the broadening of the existing road shall be discontinued till the next hearing. In compliance of the NGT order, the Division directed the contractor to stop (21 September 2012) broadening of the road but allowed it to continue with the work of soling. However, just three days later the Division paid (24 September 2012) secured advance of ₹ 0.41 crore without interest to the contractor for the material (soling, inter, grit and maxphalt) brought to the site and the contractor continued to execute the work till 07.11.2012 on the existing road. The measurement of the work executed by the contractor was taken (January 2017) after lapse of five years, and payment of ₹ 0.70 crore made (March 2017) after adjusting the secured advance.

On this being pointed out, the Division stated (December 2016) that they had already sent the letter of acceptance of tender to the contractor due to which they had to enter into the agreement with the contractor. The reply was not acceptable as the Department had received the notice from NGT before entering into the agreement with the contractor. The Division should not have commenced the work till the matter was disposed off by the NGT. Moreover, it was clearly mentioned in the e-tender Notice that the Department reserved the right to reject the tender without assigning any reason thereafter. Initiating a work and making secured advance and related payments even as the NGT was deliberating upon the merits of the application challenging the said work was not prudent and it led to an unfruitful expenditure of ₹ 0.70 crore.

The matter was referred to the Government (May 2017); Reply was awaited (December 2017).

1.10 Unjustified excess expenditure

Unjustified excess expenditure of ₹0.80 crore due to use of costlier material (Bituminous Macadam) in place of Water Bound Macadam.

Government of Uttarakhand (GoU) accorded (September 2013) financial and administrative approval of ₹ 13.94 crore for improvement of Champawat-Khetikhan motor road (length-30 Km) in Champawat district by Bituminous Macadam (BM) and Semi Dense Bituminous Concrete (SDBC) under the State Plan. Chief Engineer (Kumaon Region), Public Works Department (PWD), Almora accorded (December 2013) Technical Sanction of the same amount for the work. The division entered into an agreement⁹⁰ with the contractor at an amount of ₹ 13.44 crore to execute the work. As per the agreement, the stipulated date of completion of work was June 2015.

Scrutiny of records (September 2016) of the Executive Engineer (EE), Provincial Division (PD), PWD, Champawat revealed that as per the provisions of the Detailed Estimate, the bituminous works were to be executed in 3.75 metre width over the entire

⁹⁰ CB No. 08/SE-III dated 28.12.2013.

length (30 km) of the road. An additional quantity (10 per cent) of BM had also been provisioned for Profile Corrective Course (PCC) as per requirement. Further, a provision for laying Water Bound Macadam (WBM) (1,761 cum) for filling pot holes was also made in the estimate. However, as per the 9th running bill paid (August 2016) to the contractor, against the provision of 1,761 cum WBM, only 603.52 cum (34 per cent) WBM work had been executed. In addition, the Department had also incurred an expenditure of ₹ 3.96 lakh on patch repair during the course. Further, the executed quantity of BM was in excess by 20.40 per cent (over and above the 10 per cent allowed for PCC) of requirement as detailed in the **Table 1.10.1** below:

Table-1.10.1: Details of unjustified excess use of Bituminous Macadam

Sl. No.	Particulars	Calculation	Quantity
1.	Quantity of BM executed as per 9 th bill		7,947.38 cum
2.	Quantity of BM as per area covered by tack coat	1,20,016.47 sqm. x 0.050 m= 6,000.82 cum	6,000.82 cum
3.	Add 10 per cent for PCC	6,000.82 x 10/100= 600.08 cum	600.08 cum
4.	Excess quantity of BM	7,947.38-6,600.90	1,346.48 cum
5.	<i>Expenditure incurred on additional quantity of BM executed</i>	<i>₹1,346.48 x @ ₹7,582.26⁹¹</i>	<i>₹1,02,09,361.44</i>
6.	<i>If BM was replaced with WBM (@ ₹1,504 per cum)</i>	<i>1,346.48 cum x ₹1,504</i>	<i>₹20,25,105.92</i>
		<i>(+) 9 per cent above</i>	<i>₹1,82,259.53</i>
		<i>Total</i>	<i>₹22,07,365.45</i>
		<i>Unjustified excess Expenditure (row 5-6)</i>	<i>₹80,01,995.99</i>

6,600.90 cum of BM should have been used including 10 per cent additional provision for PCC involving expenditure of ₹ five crore⁹². Instead, 7,947.38 cum of BM was used. Thus, 1,346.48 cum BM was used in excess of provision resulting in excess expenditure of ₹ 0.80 crore.

On this being pointed out by the audit, the EE stated (September 2016) that the variation in the quantity of BM was due to excessive undulation and depressions on the existing PC⁹³ and P₁P₂⁹⁴ road that could not be corrected by using WBM.

The reply of the division is not acceptable as clause 501.8.2.4 (ii) of Ministry of Road Transport and Highways data book stipulates that the PCC shall be constructed as an integral part of the overlay course *i.e.* using BM if its maximum thickness is not more than 40 mm. In other cases, the PCC shall be constructed as a separate layer, adopting such construction procedures and using such equipment as approved by the Engineer, to lay the specified type of material for the course. In this case, since the thickness was 100 mm (more than 40 mm) for each chainage of the road, use of BM instead of WBM was a violation of the above clause. Besides, the excess quantity of BM pointed out by audit is after allowing 10 per cent additional provision for PCC and is based on the area covered by the tack coat. Further, in the technical sanction it was clearly stipulated that WBM was to be used for filling work of the damaged portion of the road for which the Department had made a provision.

⁹¹ Rate of BM= ₹ 6,956.20 per cum and the bond was executed @ 9 per cent above.

⁹² Quantity of BM (6,600.90 cum) x @ (₹ 7,582.26) = ₹ 5,00,49,740 (Say ₹ five crore).

⁹³ Premix Carpet.

⁹⁴ Painting-1 and Painting-2 on road.

Moreover, the Department did not execute eight items⁹⁵ of work included in the above said agreement and also included in the Detailed Estimate amounting to ₹ 1.24 crore which was partly used to meet the expenditure on excess quantity of BM used.

The use of costlier material *i.e.* 1,346.48 cum BM in excess of the provision costing ₹ 0.80 crore was, therefore, unjustified.

The matter was reported to the Government (June 2017); Reply was awaited (December 2017).

1.11 Non-achievement of objectives

Due to delay in construction of a bridge, the objectives of social and economic development of the unconnected villages could not be achieved even after a lapse of nine years from the date of initial sanction. An expenditure of ₹1.09 crore had already been incurred on the work so far.

Government of Uttarakhand accorded (March 2008) administrative approval and financial sanction of ₹ 1.81 crore for the construction of a 70 metre span suspension bridge at *Tamadhaun-Golna-Khalduwa* motor road of *Golna* village in *Seyalde-Deghat* of Almora district.

Scrutiny of records (November 2016) of the Executive Engineer (EE), Provincial Division (Division), Public Works Department, Ranikhet revealed that the execution of the project was held up due to opposition by local people in handing over land for the project. To resolve the issue, a committee⁹⁶ visited (January 2010) the proposed site after two years of sanction of the project, and recommended construction of a 72 metre span Steel Girder bridge instead of 70 metre span Suspension Bridge. As the projected length of the bridge had increased, as also the rates of materials and labour had gone up, the division forwarded a fresh estimate of ₹ 3.56 crore (June 2011) to the Government for approval. However, before approval of the revised estimates by the Government and before finalising the design of the superstructure, the Superintending Engineer (Almora)

95

Sl. No.	Item	Quantity	Rate	Amount (in ₹)
1.	Providing and laying Mechanically Woven Double Twisted Hexagonal Shaped Gabions	80 Nos	5,064.30	4,05,144.00
2.	Low Porosity providing and applying primer coat with Bitumen emulsion (SS-1) on prepared granular base	2,888 sqm	29.30	84,618.40
3.	RCC grade M 20 Providing and laying in position cement concrete of specified grade 1 Cement 1.5 Coarse sand and 3 Graded Stone Aggregate 20mm nominal size	193 cum	5,197.50	10,03,117.50
4.	Construction of KC Type concrete drain-pucca drain <i>etc</i>	4,300 Rmt	1,149.00	49,40,700.00
5.	Construction of U-shaped pucca drain (size 45 x 45 cm with 15 cm bottom & 20 cm side) <i>etc</i>	3,560 Rmt	1,564.00	55,67,840.00
6.	Construction of U-shaped pucca drain (size 75 x 75 cm with 15 cm bottom, 20 cm kharanza & 20 cm side) <i>etc</i>	140 Rmt	2,798.00	3,91,720.00
7.	Providing and fixing of retro-reflectorised cautionary sign as per IRC 67 made of encapsulated lens type reflective sheeting vide Clause 1701.2.3 fixed over aluminium sheeting 1.5 cm thick 600 mm x 600 mm square	10 Nos	2,497.80	24,978.00
8.	Providing and fixing of retro-reflectorised cautionary sign as per IRC 67 made of encapsulated lens type reflective sheeting vide Clause 1701.2.3 fixed over aluminium sheeting 1.5 cm thick 600 mm circular	3 Nos	2,356.20	7,068.60
Total				1,24,25,186.50

⁹⁶ SE, 1st circle, PWD, Almora; SE, 2nd circle, PWD, Nainital and EE, PD, PWD, Ranikhet.

accorded (8 December 2011) a partial technical sanction of ₹ 1.42 crore for construction of abutment (substructure), approach road and protection works based on previous approved estimates. The division entered into an agreement⁹⁷ (22 December 2011) for an amount of ₹ 1.24 crore for the same with the stipulated date of completion as December 2012. The above work was completed with a delay of 18 months (June 2014) and an amount of ₹ 1.09 crore was paid to the contractor (March 2015). In the interregnum, the Government revoked the earlier approval and accorded (24 December 2011) a revised administrative and financial approval of ₹ 3.42 crore. In a related development, the superstructure design of the 72 m Span Steel Girder bridge prepared by the Construction Division, Kapkot, which was to be adopted for construction, was not found legible and could not be used for erecting the bridge. The Division, thereafter, obtained the design of the superstructure from Indian Institute of Technology (IIT), Banaras Hindu University (BHU) in December 2013. The design of the superstructure envisaged use of much larger quantities of structural steel⁹⁸ than planned for. Further, the prices of materials had also increased in the interregnum. This necessitated a further revised estimate of ₹ 4.97 crore which was again sent (September 2015) to the Government for approval. The same had not been received till date (May 2017).

On this being pointed out, the Division stated (November 2016) that the work would be completed after the receipt of the Government approval of the revised estimate.

The reply was not acceptable as the bridge could not be constructed despite receipt of the initial sanction nine years ago. The work on substructure had been initiated without awaiting necessary government approvals and designs. The substructure is lying idle for more than three years since its completion, leaving it prone to the vagaries of nature.

Thus, the objective of ensuring social and economic development of the unconnected villages, could not be achieved even after a lapse of nine years from date of initial sanction.

The matter was reported to the Government (June 2017); Reply was awaited (December 2017).

UTTARAKHAND PEYJAL SANSADHAN VIKAS EVAM NIRMAN NIGAM

1.12 Unfruitful expenditure

Due to faulty alignment, the Drinking Water Scheme failed to supply drinking water to the targeted populace resulting in unfruitful expenditure of ₹1.42 crore. Further an additional expenditure of ₹6.50 lakh was incurred on construction of a Tubewell for providing water to the targeted populace.

The Government of Uttarakhand accorded (March 2010) administrative approval and financial sanction of ₹ 2.43 crore⁹⁹ for construction of Sangrali-Pata drinking water

⁹⁷ 11/SE-01/11 dated 22/12/2011.

⁹⁸ In the approved DPR the load was 210.38 ton whereas it was 247.00 ton in the design provided by the IIT (BHU).

⁹⁹ ₹ 1.92 crore (Source, Gravity main and CWR) + ₹ 0.45 crore (Distribution) + ₹ 0.06 crore (Catchment and Total Sanitation Programme).

scheme in Uttarkashi district with instructions that all standard technical formalities such as inspection of the site, preparation of a detailed estimate including drawing/design of the work, conducting a geological survey, obtaining technical sanction, *etc.* should be ensured before the commencement of work. The objective of the scheme was to supply drinking water to 2,314 habitants of Sangrali, Pata and Bagyalgaon gram panchayats. The work was to be commenced in October 2010 and was scheduled to be completed by April 2012.

Audit scrutiny of the records (March 2017) of the Executive Engineer (EE), Construction Division, Uttarakhand Peyjal Sansadhan Vikas Evam Nirman Nigam, Uttarkashi revealed that the main components of the work namely construction of Source, Gravity main and Clear Water Reservoirs (CWR) were to be executed through the engaged contractors for which an amount of ₹ 1.92 crore was sanctioned. The Nigam commenced the work in October 2010, which was completed in July 2014. Audit observed that the Nigam had undertaken the work without carrying out any detailed physical and geological inspections of the work site. This resulted in faulty alignment of the gravity main and consequently 19,736.95 metres of water supply pipe (gravity main) out of total constructed 23,232.75 metres could not be used as the gravity main failed to discharge water from the source up to the CWR. As a result, the target population of the said gram panchayats could not get drinking water through the constructed water supply pipe line on which an expenditure of ₹ 1.42 crore had been incurred. The Department had not fixed any responsibility for the faulty execution of the work. The division had to construct a Tubewell at a cost of ₹ 6.50 lakh as an alternative arrangement for supply of water to the targeted populace.

On this being pointed out in audit, the EE accepted the facts and stated (March 2017) that the water supply through the said drinking water scheme was not feasible as the pipe lines were laid at a very sharp gradient. The EE further informed that a departmental enquiry was in progress and the responsibility would be fixed after the enquiry.

Failure to carry out prior physical and geological inspection of the site before commencing the construction at the work-site, resulted in grave faults in the alignment of the main supply line leading to failure of the entire scheme, thereby rendering an expenditure of ₹ 1.42 crore incurred on the work unfruitful.

The matter was referred to the Government (June 2017); Reply was awaited (December 2017).

URBAN DEVELOPMENT DEPARTMENT

1.13 Solid Waste Management in Nagar Nigams of Dehradun and Haridwar

Nagar Nigams (NNs), Dehradun and Haridwar did not have any action plan outlining the intended actions, deliverables and time frames for ensuring effective implementation of the programme. The meagre amount spent on infrastructure was largely responsible for non-achievement of intended Solid Waste Management targets in both the NNs. Nine vehicles costing ₹1.21 crore, were lying idle in NN Haridwar since June 2013. Plant capacity within the municipal limits of NN Dehradun, was fixed at 200 MT per day whereas 257 MT waste was actually being generated per day. Both the NNs had failed to establish processing units even after 16 years of implementation of Municipal Solid Waste (Management and Handling) Rules 2000. As a result, collection, segregation, storage, transportation, processing and disposal of municipal solid wastes were not carried out as per the prescribed norms. Shortages in equipment, vehicles, dustbins and manpower in both NN's coupled with poor monitoring mechanism contributed to poor management of solid waste.

1.13.1 Introduction

Government of India (GoI) notified the “Municipal Solid Waste (Management and Handling) Rules 2000” (MSW Rules) in September 2000 for managing the increasing quantum of waste generated due to urbanisation. The State of Uttarakhand also prepared (March 2015) an Action Plan for Solid Waste Management (SWM) for collection, segregation, storage, transportation, processing and disposal of municipal solid waste in compliance with the direction of the National Green Tribunal (NGT).

A theme based compliance audit on the implementation of Solid Waste Management (SWM) by the Nagar Nigams (NN) of Dehradun and Haridwar during the period 2014-15 to 2016-17 was carried out from April 2017 to July 2017 by test-check of records of both the NNs. Besides, information was also collected from the Urban Development Directorate (UDD), Dehradun and the Uttarakhand Environment Protection and Pollution Control Board (UEPPCB).

1.13.2 Planning

1.13.2.1 Non-preparation of Action Plan

As per paragraph 26.1 of the Manual of “Municipal Solid Waste Management” (Manual), planning is a conscious process for meeting future requirements and objectives. Further, it should guide intended actions specifying time frames and priorities. Scrutiny of records revealed that there was no action plan in place in the State for the first fifteen years since the MSW rules came into effect (2000). It was only in March 2015 that the State framed the action plan, that too on the directions of the NGT.

On this being pointed out, the Department stated that there was no provision in the MSW Rules 2000 regarding preparation of an action plan. The reply of the department should be seen in light of the fact that the Manual on SWM clearly advocates preparation of an action plan for the execution of SWM.

1.13.2.2 Public Information, Education and Communication Programs (IEC)

Paragraph 18.3.1 of the Manual provides for involvement of public in large scale through awareness programs for successful implementation of the program.

It was observed that adequate emphasis was not given by NNs for creating public awareness towards segregation and consignment of the waste. Against the allocation of ₹ 1.40 lakh in 2015-16, NN Dehradun spent only ₹ 1.14 lakh during the year. Meanwhile, NN Haridwar neither had budgetary provision nor incurred any expenditure on the activity during the period.

1.13.2.3 Underestimation of composting plant capacity

For setting up of a solid waste processing unit, composting sites and scientific landfills, NN Dehradun awarded (October 2016) the contract for developing the necessary infrastructure at Sheeshambada to a firm on BOT (Build, Operate and Transfer) mode. The project was required to be completed by July 2017 at an estimated cost of ₹ 36 crore (State share: ₹ 21.97 crore and remaining share to be contributed by the firm).

Scrutiny of records revealed that the plant capacity was fixed at 200 MT per day (October 2016) whereas 257 MT waste was being generated per day during 2016-17 within the municipal limits of NN Dehradun. Further, solid wastes of nearby urban areas¹⁰⁰ were also planned to be disposed off in this plant. Thus, the plant at Sheeshambada, Dehradun which is yet to be completed (June 2017), would not be in a position to cater to the needs of solid waste management in Dehradun. This indicates inadequate planning. Out of ₹ 21.97 crore to be borne by the State on its construction, an expenditure of ₹ 10.76 crore had been incurred by the State till date.

On this being pointed out, NN Dehradun replied that the capacity of plant would be increased from 200 MT to 300 MT per day in future. However, no evidence of any initiative taken by the NN could be produced to audit though repeatedly called for.

1.13.3 Financial Management

Nagar Nigams of Dehradun and Haridwar are funded from the Central Finance Commission (CFC), the State Finance Commission (SFC), the *Swachh Bharat* Mission (SBM), Jawaharlal Nehru National Urban Renewal Mission (JnNURM) (80 per cent Central Share and 20 per cent State Share for JnNURM projects related with SWM) other agencies like Mussoorie Dehradun Development Authority (MDDA), and its own resources¹⁰¹. Scrutiny of records of both the NNs revealed the following:

¹⁰⁰ Nagar Palika Parishad Mussoorie, Nagar Palika Parishad Vikas Nagar and block Sahaspur.

¹⁰¹ **Own Sources** – All types of taxes, rents from lease, fees, penalties and road cutting charges etc.

1.13.3.1 Availability and utilisation of funds

Year-wise details of availability and utilisation of funds¹⁰² in the two test-checked ULBs during the years 2014-15 to 2016-17 are depicted in the **Table-1.13.1** below:

Table-1.13.1: Availability and utilisation of funds in Nagar Nigam Dehradun and Haridwar

DEHRADUN											(₹ in crore)
Year	Opening Balance	Funds received from					Expenditure			Closing Balance	
		Central Government	State Government	Own resources	Others	Total	Exp. on Salary (Percentage of Total Expenditure)	Exp. on Infrastructure Development for SWM (Percentage of Total Expenditure)	Total Exp.		
2014-15	6.33	1.87	17.95	9.76	0.00	35.91	27.40 (93)	2.05 (7)	29.45	6.46	
2015-16	6.46	2.55	25.51	10.77	1.00	46.29	32.43 (91)	3.20 (9)	35.63	10.66	
2016-17	10.66	7.11	22.41	10.36	0.00	50.54	32.76 (80)	8.08 (20)	40.84	9.70	
Total		11.53	65.87	30.89	1.00	132.74	92.59 (87)	13.33 (13)	105.92		

HARIDWAR											(₹ in crore)
Year	Opening Balance	Funds received from					Expenditure			Closing Balance	
		Central Government	State Government	Own resources	Others	Total	Exp. on Salary (Percentage of Total Expenditure)	Exp. on Infrastructure Development for SWM (Percentage of Total Expenditure)	Total Exp.		
2014-15	1.67	1.61	8.65	3.17	0.00	15.10	12.00 (92)	1.00 (8)	13.00	2.10	
2015-16	2.10	4.68	8.84	2.90	4.97	23.49	11.83 (74)	4.21 (26)	16.04	7.45	
2016-17	7.45	0.45	7.37	2.91	0.21	18.39	10.27 (59)	7.08 (41)	17.35	1.04	
Total		6.74	24.86	8.98	5.18	56.98	34.10 (74)	12.29 (26)	46.39		

Source: Information collected from NNs Dehradun and Haridwar.

Note: Year-wise details of above funds have been provided in Appendix-1.13.1.

Analysis of funds received and expenditure incurred revealed that both the NNs did not rationalize expenditure incurred on various heads intended for SWM to ensure cohesive implementation of the programme. Neither the Government/Directorate issued any instructions in this regard nor the Action Plan contained any clear directions on utilisation of funds earmarked for SWM. It is seen from the table that, NNs, Dehradun and Haridwar spent only 7, 9 and 20 per cent and 8, 26 and 41 per cent of their total expenditure on SWM related infrastructure development during the years 2014-15 to 2016-17 respectively. Expenditure on salary accounted for more than 90 per cent of total expenditure in Dehradun NN during 2014-15 and 2015-16. During 2016-17, it accounted for around 80 per cent of total expenditure. Haridwar NN spent around 92 per cent, 74 per cent and 59 per cent of total expenditure on salary during the three years. The meagre amount spent on infrastructure was largely responsible for non-achievement of intended SWM targets in the two NNs as mentioned in the succeeding paragraphs.

1.13.3.2 Non-submission of Utilisation Certificates (UCs)

Scrutiny of records of the NNs Dehradun and Haridwar revealed that utilisation certificates amounting to a total of ₹ 139.90 crore¹⁰³ were not submitted by the NNs of Dehradun and Haridwar as detailed in **Table-1.13.2** below:

¹⁰² **Central funds-** CFC, SBM, Municipal Solid Waste Management and JnNURM; **State funds-** Avsthapana/Dustbin Purchase, SFC, Grants for Sanitation and Chief Minister's Grant (CMG); **Own Resources;** and **Others-** Mussoorie Dehradun Development Authority (MDDA), Kaanvad Mela, Vidhayak Nidhi, Ardh Kumbh Mela and Char Dham Yatra.

¹⁰³ NN, Dehradun: ₹ 96.75 crore and NN, Haridwar: ₹ 43.15 crore.

Table-1.13.2: Status of pending UCs during 2014-15 to 2016-17

Year	NN Dehradun				NN Haridwar			
	Funds available	Expenditure	UCs sent	UCs Pending	Funds available	Expenditure	UCs sent	UCs Pending
2014-15	35.91	29.45	1.87	27.58	15.10	13.00	0.94	12.06
2015-16	46.29	35.63	0.83	34.80	23.49	16.04	1.68	14.36
2016-17	50.54	40.84	6.47	34.37	18.39	17.35	0.62	16.73
Total	132.74	105.92	9.17	96.75	56.98	46.39	3.24	43.15

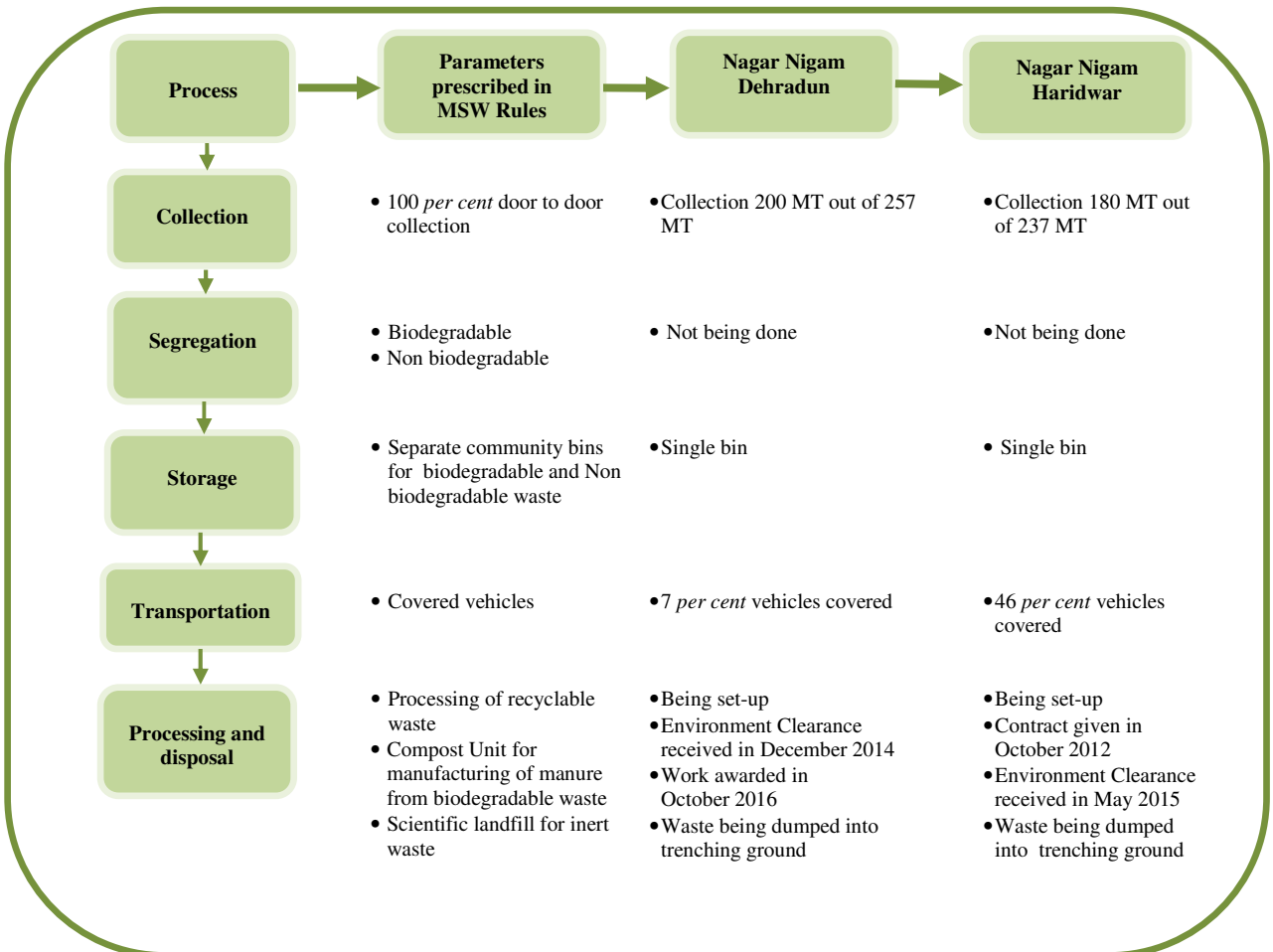
(₹ in crore)

With respect to funds received from Central Government during the period 2014-15 to 2016-17, it was found that the NNs received ₹ 18.27 crore from GoI (Table-1.13.1), out of which UCs for only ₹ 12.41 crore pertaining to 13th and 14th CFC were submitted.

Non-submission of UCs is a major internal control failure, as it cannot be vouched if funds were indeed spent for intended purposes. On this being pointed out, both the NNs replied that due to negligence UCs were not being sent on regular basis. It was assured that they would be furnished on regular basis in future.

1.13.4 Implementation of MSW

The MSW Rules envisage collection, segregation, storage, transportation, processing and disposal of municipal solid waste. The MSW rules are to be implemented by every municipal authority within its territory. The parameters prescribed in MSW Rules 2000 and the execution there against are shown below:



1.13.4.1 Shortfall in Collection of Municipal Solid Waste

Schedule II of MSW Rules, 2000 provides that littering of MSW shall be prohibited in cities. Further, the municipal authorities shall ensure collection of wastes on regular basis and at pre-informed timings. Burning of the wastes shall also be prohibited. Stray animals shall not be allowed to move around the waste dumping site.

Generation and collection of waste in the municipal areas of NNs Dehradun and Haridwar for the period from 2014-15 to 2016-17 is depicted in **Table-1.13.3** below.

Table-1.13.3: Details of generation and collection of wastes in municipal areas of NN Dehradun and Haridwar during the periods from 2014-15 to 2016-17

Items	Dehradun			Haridwar		
	2014-15	2015-16	2016-17	2014-15	2015-16	2016-17
Population of Municipality area (as per Census 2011)	5,75,000			2,31,338		
Solid waste generated per day (in MT)	257	257	257	190	210	237
Solid waste collected per day (in MT)	200	200	227	135	150	180
Shortfall in collection (in per cent)	22	22	12	29	29	24

Source: Information collected from NNs Dehradun and Haridwar.

It is evident from the above table that 12 to 22 per cent of waste in NN Dehradun and 24 to 29 per cent of waste in NN Haridwar was not collected during 2014-17. The uncollected waste was left in common community bins. Also, this waste was found scattered in various public places, posing severe threat to public health and environment apart from spoiling the overall ambience of the cities.

On this being pointed out, both the NNs accepted the facts. Further, NN Dehradun attributed the shortfall to insufficient resources (shortage of man power, bins, vehicles, etc). On the other hand, NN Haridwar attributed the shortfall in lifting of solid waste to non-completion of scientific landfill and compost plant.

Non-utilisation of procured vehicles

NN Haridwar had signed (October 2012) an agreement with M/s K.R.L. Waste Management Private Limited (Firm) for Integrated Solid Waste Management in BOT (Build, Operate and Transfer) mode. Under the project, the Firm was to make arrangements for storage of waste at source, regular street sweeping and drain cleaning, secondary storage of waste in covered containers, transportation of waste, and treatment and disposal of waste which included construction of landfill and compost plant. The concession period was for 15 years. The total capital cost of the project was ₹ 16.72 crore which was to be paid in installments by the NN. Till date (December 2017) NN had paid ₹ 9.58 crore to the firm.



Photograph No. 1: Vehicles procured for SWM, were lying idle at compost plant campus in Haridwar

Scrutiny of records of NN Haridwar revealed that construction of landfill had not yet been started (July 2017) in NN Haridwar. Meanwhile, the firm procured (June 2013) 22 vehicles from above funds for collection and transportation of solid waste in 30 wards of the NN. It was however observed that the firm was collecting waste from only 22 out

of the 30 wards of the city. In remaining eight wards, the collection was being done by the NN itself. Further, out of 22 vehicles, nine vehicles costing ₹ 1.21 crore were lying idle since their purchase due to non-collection of waste from the eight wards of the NN. These vehicles were parked in open at the compost plant campus as depicted in Photograph No. 1. As a result, there was shortfall in collection of waste.

On this being pointed out, NN Haridwar replied that the vehicles would be utilised once collection of wastes from the remaining eight wards¹⁰⁴ commences after setting up of the scientific landfill (SLF) and compost plant. The reply is not tenable as in spite of lapse of more than four years, NN Haridwar could not ensure collection of waste from all 30 wards by the firm as was required as per terms of agreement. It also failed to ensure utilisation of all the vehicles for collection of waste. Besides, with passage of time, the road worthiness of these nine idle vehicles parked in the open would suffer.

1.13.4.2 Non-segregation and storage of Municipal Solid Waste

In Nagar Nigam Dehradun and Haridwar, the work of collecting waste was being done by outsourced agencies. Segregation of garbage at source is primarily meant to keep the two broad categories of solid waste in different containers viz. biodegradable waste in one container and non-biodegradable waste in another container. Broadly, the solid waste generated can be categorised into four types: (a) domestic and trade waste (b) construction waste (c) bio-medical waste and (d) industrial waste. MSW Rules prohibit manual handling of solid waste and envisage adoption of proper precautions for ensuring safety of workers. Audit, however, observed that segregation of waste at source was not being implemented in the test-checked NNs.

Solid waste collected by agencies in NN Dehradun and Haridwar was being dumped at roadsides in single overflowing bins without segregating the same into biodegradable, recyclable and other categories. Stray animals were found in the dumping area as depicted in Photograph No. 2 and 3. Manual handling of waste without use of proper safety kits like masks, gloves and gumboots was also observed as depicted in Photograph No. 4.



Photograph No. 2: Nagar Nigam, Dehradun



Photograph No. 3: Nagar Nigam, Haridwar



Photograph No. 4: Nagar Nigam, Dehradun

¹⁰⁴ (i) Balmiki Basti, (ii) Maidaniyan (Jwalapur), (iii) Gaughat, (iv) Khadkhadi, (v) Bhupatwala, (vi) Mehtan (Jwalapur), (vii) Loghamandi and (viii) Kassawan (Jwalapur).

On this being pointed out in the course of audit, NN Dehradun replied that underground bins in the city were under construction in order to minimise the scattering of the waste in the open. The NN Haridwar replied that users were dumping solid waste outside the bins, which was again being put inside by the *Safai* workers. Reply is not acceptable and indicates failure of the NN's to monitor performance of the outsourced agencies and impose penalty for non-performance/inadequate performance.

1.13.4.3 Shortage of covered vehicles for transportation of Municipal Solid Waste

Primary transportation of solid waste involves movement from source of generation to the intermediate storage facility. Secondary transportation involves carriage of solid waste from intermediate storage facility to the waste treatment plants/land fill sites. Further, Schedule II of MSW Rules provides that vehicles used for transportation of wastes shall be covered so as not to be visible, or be exposed to open environment. The vehicles shall be so designed that multiple handling of wastes, prior to final disposal, is avoided.

Both the NNs were found transporting solid waste in uncovered vehicles, resulting in spilling of the waste along the way as depicted in Photograph No. 5 and 6.



Photograph No. 5: Nagar Nigam, Dehradun



Photograph No. 6: Nagar Nigam, Haridwar

Out of total available vehicles, only 58 and 64 *per cent* vehicles were operational in NNs Dehradun and Haridwar respectively. Further, only 7 and 46 *per cent* were covered vehicles in Dehradun and Haridwar respectively, as depicted in **Table-1.13.4** below.

Table-1.13.4: Details of vehicles which were on road, off road, covered and uncovered

Name of Districts	Number of Vehicles	On Road (in <i>per cent</i>)	Covered vehicles in <i>per cent</i> of on road vehicles
Dehradun	99	57 (58)	04 (07)
Haridwar	61	39 (64)	18 (46)

Source: Information collected from NN Dehradun and Haridwar.

On this being pointed out, both the NNs accepted the facts and replied that concerned personnel have been instructed to cover the vehicles transporting waste and further stated that tarpaulins had been provided for this purpose.

1.13.4.4 Processing and Disposal of Municipal Solid Waste

(i) As per MSW Rules, suitable technology has to be adopted to make use of waste so as to minimise the burden on landfills. Biodegradable wastes should be processed by composting, vermin-composting, anaerobic digestion or any other appropriate biological processing for stabilisation



Photograph No. 7: Trenching Ground at Dehradun

of wastes. Mixed waste containing recoverable resources should be recycled.

It was observed that processing of wastes was not being carried out in both the NNs and all collected solid waste was being dumped at the trenching grounds without carrying out mandated segregation.

On this being pointed out, both the NNs replied that processing of wastes would be carried out after setting up of Scientific Landfills¹⁰⁵ (SLF) and compost plants. However, audit found that the work for setting up of such plant was not yet started in NN Haridwar and in NN Dehradun, it was still incomplete. The work had started in October 2016 and due date of completion had already expired in July 2017. As a result, the available trenching grounds were overburdened and waste also remained uncollected.

(ii) All the collected solid waste was being dumped in trenching grounds without segregation and processing by both the NNs. Contrary to the provisions mentioned in Schedule III of Municipal Solid Wastes (Management and Handling) Rules, 2000, which provide keeping away waste land-fills from habitation clusters, the present trenching ground in Dehradun was located in an inhabited area *i.e.* at *Sahastradhara* Road as depicted in Photographs No. 7 and 8.

(iii) On physical verification of the trenching grounds in both the NNs, it was observed that there was no fencing to restrict the entry of stray animals as depicted in Photographs No. 8 and 9.

(iv) Audit found that solid waste was being disposed off by burning it in the trenching ground at Sarai Village of NN Haridwar (Photograph No. 10) and near Rock Valley apartment of NN Dehradun. This not only violated the instructions issued by the NGT (December 2016) and the State Government's directives but also posed environment hazards.

On this being pointed out, both the NNs confirmed the facts about non-starting/non-completion of SLFs and compost plants and stated that waste would be managed properly



Photograph No. 8: Trenching Ground at Dehradun



Photograph No. 9: Trenching ground at Haridwar



Photograph No. 10: Waste burning in trenching ground at Haridwar

¹⁰⁵ A scientific landfill is developed for controlled disposal and scientific treatment of municipal solid waste (MSW).

only after setting up of the SLF. The reply should be seen in light of the fact that the NN's do not yet have SLF and compost plants although they cater to towns having population exceeding five lakh and two lakh. NN, Haridwar has not yet started developing an SLF. The NN's have not taken measures to fence the existing trenching grounds to prevent entry of stray animals.

1.13.5 Shortfall in Training

Paragraph 19.5.1 of the MSW manual provides that short and medium term courses should be designed by the Nagar Nigams for sanitary workers and supervisory staff. Concerted efforts should also be made by the local bodies with regard to providing special training to unqualified staff and refresher courses for the entire staff.

Scrutiny of records of both the Nigams revealed that during the period 2014-15 to 2016-17, no funds were allocated and no training courses were organised to enhance the capability of the staff engaged in the execution of SWM work.

On this being pointed out, both Nigams replied that no proposal was received from the UDD in this regard. Reply is not tenable as the local body itself is responsible for conducting the required training courses and should have made necessary arrangements for imparting the trainings.

1.13.6 Shortage of manpower, equipment, bins and vehicles

Sufficient manpower, equipment, bins and vehicles are basic requirements for proper functioning of any SWM project. Status of these requirements in both the Nigams is depicted in **Table-1.13.5** below.

Table-1.13.5: Status of manpower, equipment, bins and vehicles required for proper management of solid waste

Descriptions	Requirement		Availability		Shortage (in percentage)		
	NN Dehradun	NN Haridwar	NN Dehradun	NN Haridwar	NN Dehradun	NN Haridwar	
Manpower	1,215	1,000	785	817	430 (35)	183 (18)	
Dustbins	Dumper placer (DP-8.1 MT)	90	-	60	-	30 (33)	-
	4.5 / 3.5 Cum bins	-	275	-	207	-	68 (25)
	Compactor placer (CP-1.1 MT)	190	100	90	40	100 (53)	60 (60)
Vehicle	145	80	99	61	46 (32)	19 (24)	
Equipment	16	225	7	178	9 (56)	47 (21)	

Source: Information collected from records of NN Dehradun and Haridwar.

The above table depicts shortages in equipment, vehicles, dustbins and manpower that ranged from 32 to 56 *per cent* in NN Dehradun and 18 to 60 *per cent* in NN Haridwar. Shortage of manpower, vehicles and other equipment were major contributory factors for ineffective solid waste management as already discussed in the above paragraphs.

On this being pointed out, the Nigams replied that the shortage was due to lack of funds and the matter was being pursued with the State Government. The reply was not acceptable as both the Nigams had sizeable unspent balances at the end of each year as described in *paragraph 1.13.3.1*.

1.13.7 Contract Management

The shortcomings observed by Audit in the contracts signed by the NNs with the firms contracted for proper management of solid waste and execution of other related deliveries are described below:

1.13.7.1 Contract Management related to NN Dehradun

(i) Agreement without ensuring Environment Clearance:

GoI accorded (May 2008) sanction of ₹ 24.60 crore for SWM in the city of Dehradun under the Jawaharlal Nehru National Urban Renewal Mission (JnNURM) scheme. NN Dehradun (Nigam) received ₹ 15.99 crore¹⁰⁶ for this purpose during the period from October 2008 to March 2014. Without ascertaining environment clearance of land, the NN signed (March 2011) an agreement with a firm for managing solid waste in the city for a period of 15 years and also transferred ₹ 9.66 crore to it.

Scrutiny of records revealed that the Nigam failed to get necessary environment clearance from the Ministry of Environment and Forests (MoEF) for the land even after two and half years of signing of the agreement. As a result, the firm, after giving due notice to the Nigam as per the terms and conditions of the agreement, exit the contract agreement (February 2014). The firm had also purchased (May 2011 to July 2012) 60 vehicles at the cost of ₹ 3.06 crore. Additional ₹ 6.60 crore were also spent by the firm during the currency of the agreement. However, the details of this expenditure of ₹ 6.60 crore were not available with the NN. The balance amount of ₹ 6.33 crore was lying idle with the Nigam since March 2014. This defeated the very purpose for which funds were provided to the Nigam.

(ii) Irregularity in payment: Despite termination of the agreement, the Nigam continued to engage the manpower which had been previously engaged by the firm for collection of wastes and also paid them remuneration amounting to ₹ 1.51 crore for the period from August 2014 to May 2015 by transferring funds in favour of the firm. This was irregular since the agreement with the firm had terminated in February 2014.

On this being pointed out, the NN Dehradun replied that since manpower was required on an urgent basis for collection of waste, workers had to be hired and payment was made through the firm.

1.13.7.2 Contract Management related to NN Haridwar

Sub-Standard work: A piece of forest land located in the *Shyampur* range near *Chandighat* (as depicted in Photograph No. 11) falling within the jurisdiction of the Forest Division, Haridwar was being used as dumping site by the NN Haridwar till January 2016.



Photograph No. 11: Dumping site at Chandighat, Haridwar

¹⁰⁶ ₹ 12.79 crore Central Share and ₹ 3.20 crore State Share (80:20).

This was objected to by the Forest Department. Thereafter, the NN Haridwar stopped dumping waste at this site and started dumping it at its own land at *Sarai*. A provision of ₹ 60.00 lakh was made for providing soil cover at the *Chandighat* site. The work was awarded to a firm (August 2016) which completed the assignment in September 2016.

Physical verification of the site revealed (July 2017) that the soil cover at the dumping site was inadequate as the dumped waste was visible at several places. Since this dumping site is very near to the catchment of river *Ganga*, the possibility of waste being washed into the river in the rainy season cannot be ruled out.

On this being pointed out, the NN Haridwar replied (July 2017) that the work was supervised by a Project Implementation Unit of the NN and the matter regarding execution of inferior quality work would be taken up with the executing firm.

1.13.8 Impact on Environment

MSW Rules-2000 provides management of leachate collection and its treatment through periodical monitoring of ground water in and around the dumping site. Checks on ambient air quality also need to be carried out by the concerned authority.

It was observed that neither of the two NNs nor the State Pollution Control Board (SPCB) had carried out any quality tests of the ground water and ambient air parameters in the areas surrounding the existing trenching grounds. No provision for leachate management had been made at the respective trenching grounds. In absence of checking and monitoring of these parameters, the impact of waste generated pollution on environment and human health could not be established.

On this being pointed out, the SPCB replied that the waste processing facilities and the waste disposal sites were under construction in both the NNs, and as and when the facilities are developed and commissioned, the State Pollution Control Board would commence monitoring of ambient air and water quality parameters as per stipulated procedures and requirements. The reply is not acceptable as monitoring of ground water and ambient air quality is the responsibility of NNs and SPCB irrespective of existence of waste processing facilities and waste disposal sites.

1.13.9 Achievement of Sustainable Development Goals

The objective of Sustainable Development Goals (SDGs) is to produce a set of universally applicable goals that balance the three dimensions of sustainable development: environmental, social, and economic. In total, 17 goals have been set as SDGs which are to be achieved by 2030.

The eleventh goal of SDGs pertains to the concept of ‘sustainable cities and communities’. It aims at making our cities and human settlements inclusive, safe, resilient and sustainable. However, the current system of collection and disposal of waste in both the NNs, as detailed in preceding paragraphs, indicates that there was shortfall in collection of waste as well as non-disposal of waste in scientific ways, both of which pose serious threats to the environment. Neither any quality tests of the ground water and ambient air parameters in the areas surrounding the existing trenching grounds was

carried out nor provision for leachate management had been made at the respective trenching grounds. These are matters of concern and indicate that more efforts are needed to make these cities clean, resilient and sustainable.

1.13.10 Monitoring Mechanism

MSW Rules stipulate that Annual Reports in prescribed form should be furnished by the Municipal Authority to the Secretary in charge of the Department of Urban Development, indicating *inter-alia*, the quantity and composition of solid waste, storage facilities, transportation, details of slums, *etc.*, with a copy to the State Pollution Control Board on or before 30 June every year. The State Board, in turn, was required to prepare the annual report with regard to implementation of MSW Rules, 2000 and forward it (by 15 September each year) to the Central Pollution Control Board. Scrutiny of the test-checked records revealed no evidence of compliance with the above procedure.

On this being pointed out, the NNs acknowledged that Annual Reports were not being sent due to lack of awareness and would be furnished in future.

1.13.11 Non-Compliance with recommendations made in the Performance Audit (2008)

Following recommendations were made in the performance audit of “Management of Waste” published in the CAG’s Audit Report (2008):

- Segregation should be given greater publicity through awareness campaigns organised in conjunction with residents’ associations and NGOs, so that segregated plastic waste is sent to recycling plants, biodegradable waste is composted and rest is dumped in sanitary landfills as per specifications.
- A time-bound plan should be drawn up for setting up waste processing and disposal facilities. Meanwhile, steps to improve the existing dumpsites to monitor and minimise air, water and soil contamination around the sites should be taken.

Records of both the NNs revealed that the above recommendations were not being complied with as reported in *paragraphs 1.13.4.2 and 1.13.4.4* of this report even after lapse of eight years.

Conclusion

The ULBs were not complying with the MSW Rules. Segregation of solid waste was not being done at source and door to door collections in all wards were also not being carried out. Appropriate technology was not adopted for disposal and processing of wastes due to non-setting up/non-completion of SLFs and compost units. The solid wastes were collected partially, transported in open vehicles and dumped without segregation. The staff engaged at the trenching ground did not use safety kits. The monitoring mechanism was also deficient which resulted in delay and poor implementation of the programme.

The matter was referred to the Government (August 2017); Reply was awaited (December 2017).

