

Chapter 3

Chief Controlling Officer based audit of Government Department

3.1 Horticulture and Farm Forestry Department

3.2 Public Health Engineering Department

Chapter 3

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3.1 Horticulture and Farm Forestry Department

Executive Summary

The Horticulture and Farm Forestry Department is responsible for increasing the area of cultivation and productivity of fruits, vegetables, spices, flowers, medicinal and aromatic plants through adoption of latest technologies and use of latest varieties of seeds.

The Chief Controlling Officer based Audit of the Department was conducted for the period of 2007-12 to examine the economy, efficiency and effectiveness of significant activities. The major audit findings are discussed below:

- There was shortage of key functionaries which ranged between 28 and 55 per cent.
Adequate staff should be posted for monitoring the activities of the Department.
(Paragraph 3.1.6.2)
- The Internal Audit Wing was not established to carry out periodic internal audits.
Internal Audit wing should be established to ensure the internal checks.
(Paragraph 3.1.6.3[a])
- Excessive mortality of perennial fruits and coastal horticulture crops led to non-achievement of objectives of area expansion under National Horticulture Mission.
(Paragraph 3.1.6.4[a])
- A mechanism for collecting reliable and realistic data for assessment of horticultural production at both district as well as at the State level was not developed.
Reliable mechanism should be developed for collecting realistic data.
(Paragraph 3.1.8.2)
- Tardy implementation of National Horticulture Mission scheme resulted in non utilisation of ₹ 63.85 crore.
Efforts should be made to utilise the scheme funds for the intended purpose.
(Paragraph 3.1.9.1[a])
- Infrastructure created for model nurseries at a total cost of ₹ 6.41 crore could not be optimally utilised as it failed to attain the minimum production capacity.
Functioning of Government nurseries should be monitored and reviewed periodically.
(Paragraph 3.1.9.1[i])
- There was irregular expenditure on gap filling (₹ 19.26 lakh), plantation of onions under NHM (₹ 43.06 lakh), procurement of shade nets (₹ 2.98 crore) and injudicious expenditure on procurement of power sprayers (₹ 67 lakh).
(Paragraphs 3.1.9.1[h], 3.1.9.1[e], 3.1.9.1[k][ii] and 3.1.9.1[l])

- There was non-achievement of targets under Integrated Post Harvest Management and creation of Market Infrastructure.

Post harvest management should be strengthened to ensure value addition to the farmer's produce and sufficient infrastructure should be created for marketing of these produce.

(Paragraph 3.1.9.1[m])

3.1.1 Introduction

Chhattisgarh State is divided into three agro climatic zones namely Chhattisgarh Plains, Bastar plateau and Northern Hills with distinct agro climatic features coupled with unique strength, weakness, opportunities and threats that would affect the development of horticulture in the region as well as in the State as a whole. Horticulture is gaining popularity owing to the high value of horticulture produces in comparison to agricultural crops.

3.1.2 Mandate and organisational structure of the Department

The mandate of the Horticulture and Farm Forestry Department is to motivate farmers to take up horticulture instead of traditional farming, acquaint the farmers with the techniques for taking up different types of horticulture crops, motivate the farmers for adoption of latest technology, publicise organic farming, distribute good quality seeds and planting materials, develop spices and medicinal and aromatic plants, demonstrate modern techniques, provide training to farmers and coordinate the facilities for storage, marketing and processing of horticultural produce.

In Chhattisgarh State, the Horticulture and Farm Forestry Department is functioning under Principal Secretary, Agriculture at the Government level. He is assisted by the Director, Horticulture and Farm Forestry, three Joint Directors at the State level and 11 Deputy Director/Assistant Director Horticulture at the district level.

3.1.3 Audit objectives

We conducted a Chief Controlling Officer based audit of the Horticulture and Farm Forestry Department to assess whether:

- Adequate infrastructure including planning, manpower, monitoring etc existed in the Department for effective implementation of the schemes/programmes,
- the funds received for schemes/programmes were utilised economically, efficiently and effectively; and
- the objectives/targets of various schemes/programmes were implemented efficiently and effectively and targets were achieved.

3.1.4 Audit criteria

The CCO based audit was evaluated with reference to audit criteria drawn from the following sources:

- Manual of the Department.
- Perspective Plan (2010-11 to 2014-15) and Annual Action Plans for the period 2007-08 to 2011-12.
- Guidelines of National Horticulture Mission, *Rashtriya Krishi Vikas Yojna*, Micro Irrigation Scheme, other orders issued by Government of India (GoI), State Government and the department for various schemes of Horticulture.
- Departmental Manuals, Chhattisgarh Treasury Code (2000), Chhattisgarh Financial Code and delegation of Financial Powers.

3.1.5 Audit scope and methodology

The CCO based audit was conducted by examining the records of the Horticulture and Farm Forestry Department. Initially seven districts where the National Horticulture Mission (NHM) scheme was already being implemented were selected along with two non-NHM districts. During the entry conference (24 May 2012), while discussing audit objectives/criteria and audit methodology, the Agriculture Production Commissioner-cum-Principal Secretary (APC) suggested to take up the audit of all the 11 NHM districts. As such, the audit coverage included all the 11 NHM¹ districts and two non-NHM² districts of the State. Further, the Directorate, Horticulture and Farm Forestry (DHFF), Assistant Director Horticulture (ADH), Seed Multiplication Farm, Bana, ADH, Principal Garden, Raipur and ADH, Canning and Food Preservation Training Centre, Raipur were also covered in the CCO based audit. A total of 17 out of 22 Drawing and Disbursing Officers (DDOs) in the Horticulture and Farm Forestry Department were covered. The period of coverage was for five years from 2007-08 to 2011-12.

The audit methodology included examination of reports and returns of each scheme/programme in the office of the Directorate, Horticulture and Farm Forestry and the selected districts. Government furnished (November 2012) replies to the audit findings which have been suitably incorporated wherever necessitated. The audit findings were discussed with the APC in the exit conference held on 20 February 2013.

3.1.6 Institutional weaknesses

In order to ensure soundness and aptness of the internal systems and controls in its key areas of activities an organisation needs to have sound infrastructure, sufficient manpower and adequate funds which help the organisation to manage and achieve its mandate in an economical, efficient and effective manner. Weaknesses of the Department noticed during our audit are discussed

¹ Bastar, Bilaspur, Durg, Jashpur, Kabirdham, Korba, Koriya, Raigarh, Raipur, Rajnandgaon, and Surguja

² Dhamtari and Kanker

in the succeeding paragraphs:

3.1.6.1 Planning

Preparation of Annual and Strategic Action Plan

NHM and RKVY guidelines stipulate that Annual Action Plans (AAP) for the State as well as the districts were to be prepared on the basis of ceiling of expenditure fixed in the guidelines of the Government of India (GoI) and for the State schemes, targets were to be fixed by the districts on the basis of guidelines of the State Government (GoCG).

The NHM guidelines envisage that the State Government should nominate or create a State Horticulture Mission (SHM), an autonomous agency to be registered under the Societies Registration Act, 1973 for implementing the Mission programme at the State and district levels. The SHM was created in June 2005. It was required to prepare Strategic/Perspective and annual State Level action Plan in consonance with the Mission's goals and objectives. Although a Strategic Plan detailing the implementation strategy for various schemes/activities was prepared by the SHM for the period 2010-15, no Strategic Plan/Perspective Plan was prepared for the period 2005-06 to 2009-10.

On this being pointed out (September 2012), the Government stated (November 2012) that the Action Plan for the year 2005-06 was got prepared through a consultant appointed by GoI. For the years 2008-09, 2009-10 and 2010-11, the AAPs were prepared at the State level which included the Action Plan till 2014-15.

During the exit conference (February 2013), the Agriculture Production Commissioner cum Principal Secretary (APC), while accepting the audit observation, stated that a road map has since been prepared for the period 2010-15.

3.1.6.2 Human Resource Management

Availability of adequate human resources is imperative for implementation and monitoring of schemes/programmes by the Department.

Scrutiny of records (May-August 2012) of the Directorate and the test checked districts revealed shortage of key functionaries at each level as per details given in the following table.

Table 1: Status of Officers and Staff as of March 2012

Post	State level						Test checked districts					
	As on March 2008 (pre-revised set-up)			As on March 2012 (revised set-up)			As on March 2008 (pre-revised set-up)			As on March 2012 (revised set-up)		
	Sanct- ioned	PIP	Strength (per cent)	Sanct- ioned	PIP	Strength (per cent)	Sanct- ioned	PIP	Strength (per cent)	Sanct- ioned	PIP	Strength (per cent)
DDH/ ADH	21	11	52	21	11	52	13	08	62	13	09	69
SHDO	70	49	70	70	39	56	58	38	66	58	30	52
HDO	92	61	66	92	66	72	68	48	71	67	50	75
RHEO	427	218	51	427	193	45	335	187	56	330	161	49

DDH/ADH-Deputy Director, Horticulture/Asstt. Director, Horticulture; SHDO-Sr. Horticulture Development Officer; HDO-Horticulture Development Officer; RHEO-Rural Horticulture Extension Officer

PIP-Person-in-position

(Source: Information furnished by Department and compiled by Audit)

The shortage of key functionaries ranged between 28 and 55 per cent.

At the State level, the shortage of DDH/ADH³, SHDO, HDO and RHEO as of March 2012 was 48, 44, 28 and 55 per cent respectively. In the test checked districts, against the new set up⁴ there was increase in the strength of DHOs and HDOs from 62 to 69 and 71 to 75 per cent respectively whereas there was decrease in the strength of SHDO and RHEO from 66 to 52 and 56 to 49 per cent respectively at the end of March 2012. Overall shortage as of March 2012 at the State level in respect of the above key functionaries ranged between 28 and 55 per cent inspite of the fact that many new schemes like *Rashtriya Krishi Vikas Yojna (RKVY)*⁵ and Vegetable Initiative for Peri-Urban Areas (VIPUA)⁶ were launched in the State during the period. Due to shortage of manpower, monitoring of scheme activities was not effectively done resulting in excessive mortality of horticulture crops as discussed in succeeding paragraphs.

On this being pointed out (September 2012), the Government while accepting (November 2012) the facts, stated that compared to the increase in budget provisions (1734 per cent) and area expansion (271 per cent) under horticulture, the existing staff strength was inadequate which resulted in ineffective control on the implementation of scheme activities. During the exit conference (February 2013), the APC also accepted the facts and stated that since new recruitment rules have been prepared, recruitments will be done accordingly.

3.1.6.3 Monitoring

(a) Absence of Internal Audit

As per internal control standards of INTOSAI⁷, internal controls are an integral component of an organisation's management processes which are established in order to provide reasonable assurance that the operations are carried out effectively and efficiently. Periodic inspection by the departmental

³ Hereinafter called District Horticulture Officer (DHOs)

⁴ Old set up was approved during October 2006 which was revised in June 2011 (new set up)

⁵ Launched in the State during 2007-08

⁶ Sub-scheme of RKVY launched in the state during 2010-11

⁷ International Organisation of Supreme Audit Institutions

officers is an important and effective tool with the management to ensure compliance of rules, procedures, guidelines and for proper implementation of the schemes.

Internal audit is a vital component of the internal control mechanism.

During test check (August 2012) of records at the Directorate, it was noticed that in the staff sanctioned, no provision for Internal Audit Wing (IA) was provided and established to carry out periodical internal audits in the Department during 2007-12. Due to non-establishment of an IA wing, the areas of weaknesses in the functioning of the Department would remain undetected.

On this being pointed out (September 2012), the Government stated (November 2012) that a proposal for additional posts has been submitted and sanction is awaited from the Government. In future, an IA Wing will be constituted after obtaining approval for the new set-up from the Government. During the Exit Conference (February 2013), APC also accepted the audit observation and stated that the IA Wing will be established in the Department as suggested by audit.

3.1.6.4 Monitoring activities

Systematic, result-oriented and intensified field monitoring is essential to assess the impact and the implementation of the schemes as per guidelines. Some of the observations indicating lack of monitoring by the Department are discussed below:

(a) Excessive mortality of perennial fruits and coastal horticulture crops led to non-achievement of objectives of area expansion under NHM

Excessive mortality of perennial fruits and coastal horticulture crops led to non-achievement of objectives of area expansion under NHM.

Para 8.16 of NHM guidelines envisage coverage of large areas under improved varieties of horticultural crops. A farmer will be eligible for receiving assistance, for taking up area expansion under the scheme. In respect of perennial crops, the assistance will be spread over a period of three years in the ratio of 60:20:20 in the first, second and third years respectively subject to survival of 75 *per cent* and 90 *per cent* crops during second and third years respectively. For proper monitoring of the progress of area expansion of horticulture crops, Crop Monitoring Reports (CMR) indicating the survival of horticulture crops were to be obtained from the field offices by the Mission Director, State Horticulture Mission.

During test check (May-August 2012) of records of 11 NHM districts, we observed that during the period 2005-06 to 2011-12, an amount of ₹ 50.48 crore was spent on area expansion of perennial fruits and coastal horticulture crops. On further checking of the CMRs pertaining to 398 out of the 803 clusters formed in the State, we observed that the survival rate of perennial and coastal horticulture crops was very low. The data pertaining to the remaining 405 clusters was not made available to us.

Table 2: Table indicating the range of survival of horticulture crops

Data available for cases of plantations	Number of cases where survival ranged between					
	0-10	11-20	21-30	31-50	51-80	81 & above
758	67 (09)	84 (11)	63 (08)	304 (40)	210 (28)	30 (04)

(Figures in bracket denotes percentage of the total cases)

From the available data of 758 cases of plantations of perennial and coastal horticultural crops for the 398 clusters for which CMRs were available, we observed that the survival of crops in respect of 68 *per cent* cases was below 50 *per cent* out of which in respect of nearly 20 *per cent* cases, the crop survival ranged between 0 and 20 *per cent*. Of the rest, in respect of nearly 28 *per cent* of the cases, the survival ranged between 51 and 80 *per cent* and only in four *per cent* cases, the survival percentage was above 80. Thus, it is evident from the above that survivability of perennial and coastal horticulture crops was on the lower side.

We observed that despite reminders being issued, the CMRs were not being furnished by the field offices to the Directorate. Due to low survival of perennial and coastal horticulture crops, the strategy of diversification from traditional crops to plantations in respect of these crops did not fructify.

On being pointed out (September 2012), the Government stated (November 2012) that the fruit plantations would bear fruits for commercial purpose only four-five years after their cultivation by which time the farmers lose their interest in its maintenance. It was also stated that despite successful plantation of horticulture crops during the first year, there was extensive damage to the fruit plantations in subsequent years due to open grazing by cattle, insufficient provision for fencing etc.

The Government's reply is not acceptable as it was the responsibility of the department to monitor the farmers' activities for successful implementation of the scheme. Further, the provision for fencing under the assistance has been fixed by the Technical Support Group (TSG)⁸.

During the Exit Conference (February 2013), APC stated that information would be called for from the District Offices to verify the correctness of figures regarding mortality.

(b) Idle expenditure of ₹2.34 crore on infrastructure

Infrastructure costing ₹ 2.34 crore remained idle for a period of six to 49 months.

Para 8.4 of the NHM guidelines states that availability of good quality planting materials was central to development of horticulture and efforts should be made to create necessary infrastructure in the nurseries.

Scrutiny of the records (May-August 2012) of nurseries of the test checked districts revealed that during the years 2007-12, infrastructure for nurseries in the form of mist and hardening chambers⁹, poly houses, green houses, screen

⁸ TSG is a group created under NHM for providing technical support to the State. It consists of experts and technical personnel to advice, formulate, appraise and monitor implementation of the mission's programmes.

⁹ Mist chamber is a chamber in which relative humidity is maintained artificially at high level with the help of mist installation and Hardening yards are used for strengthening of propagated plants.

houses etc were created in various nurseries. Further, during the period, infrastructure like extraction units for medicinal and aromatic plants was also created. We observed that though the infrastructure was established (2008-11) at a cost of ₹ 2.34 crore (**Appendix 3.1.1**) in nine nurseries, the same could not be utilised till date (February 2013) due to non-electrification, non-availability of requisite aromatic crops (raw material) and due to decline in the area expansion of medicinal and aromatic plants rendering them idle for a period of six to 49 months.

On this being pointed out (September 2012), the Government stated (November 2012) that there was delay in the installation of mist and hardening chambers since some of the technology was being imported. However, at present the mist and hardening chambers are being utilised through temporary electric connections and the plants produced are being utilised for distribution to beneficiaries under departmental schemes.

The reply of the Government is not acceptable as the mist and hardening chambers listed in **Appendix 3.1.1** were not operational during the period of audit as was intimated by the respective DDH/ADH. Further, documents in support of the Government's claim that the mist and hardening chambers were being utilised have also not been furnished.

In the exit conference (February 2013), while accepting the audit observation, APC stated that the matter will be taken up with the Energy Department to provide electric connections. Regarding non-availability of raw materials, APC stated that due to decline in the interest of farmers towards medicinal and aromatic crops, there was consequent low production of raw materials for distillation and extraction units. It was also stated that due to lack of inter-departmental coordination, especially with the Energy Department, electric supply could not be provided to the nurseries.

(c) Status of Departmental Enquiry cases

During test check of records of DHFF for the period 2007-12, we observed that 33 cases of disciplinary enquiry (DE) were pending against the staff for disposal (March 2012). The status of disciplinary proceedings as on March 2012 is as follows:

Table 3: Details of Inquiry Cases Pending For Settlement

Year	Opening Balance	No of DEs	Total Des	DEs finalized	DEs pending	Details of recovery, if any
2007-08	03	02	05	02	03	--
2008-09	03	04	07	0	07	--
2009-10	07	06	13	03	10	--
2010-11	10	02	12	07	05	a) ₹ 5000 ordered for recovery from Shri D.R. Hurmade, Retired, DDH. b) ₹ 3.28 lakh ordered for recovery from Shri P.N. Tiwari, SHDO
2011-12	05	03	08	0	08 ¹⁰	--

(Source: Information provided by Department)

¹⁰ Two cases have since been disposed during the period April-September 2012

Persistent pendency of DE cases (**Appendix 3.1.2**) indicates lack of monitoring and absence of timely action on the part of the Department to ensure speedy disposal of the cases.

On this being pointed out, the Government stated (November 2012) that in two cases recovery has been proposed and in respect of the other cases, the departmental enquiry is under process.

In the exit conference (February 2013), while accepting the facts, APC stated that the pending cases will be disposed of at the earliest under intimation to audit.

3.1.7 Compliance issues

For sound financial management and control, it is essential that expenditure conforms not only to financial rules and regulations but is also in consonance with orders issued by the competent authority. This helps in maintaining good financial discipline besides preventing financial irregularities, misappropriation and frauds. Some of the audit findings on non-compliance with rules and regulations are discussed in the succeeding paragraphs:

3.1.7.1 Financial Management

To provide a thrust to development of horticulture in Chhattisgarh State, National Horticulture Mission (NHM), a Centrally Sponsored Scheme (CSS) has been implemented (2005-06) in the State. Further, Micro Irrigation Scheme (MIS) (2005-06), *Rashtriya Krishi Vikas Yojna* (RKVY) (2007-08) and Vegetable Initiative in Peri-Urban Areas (VIPUA) (a sub-scheme under RKVY started in 2011-12) were also implemented in the State to promote horticulture.

The funding pattern for Centrally Sponsored Schemes (CSS) and State Plans are as detailed below:

Centrally Sponsored Schemes	
National Horticulture Mission <i>Components under NHM are-Production of planting material, Establishment of new gardens Rejuvenation/replacement of senile plantations, Creation of water resources, Protected cultivation, Promotion of Integrated Nutrient and Pest Management, Organic farming, Horticulture mechanisation, Technology dissemination through demonstration, Human resource development, Integrated Post Harvest Management, Establishment of marketing infrastructure.</i>	85:15 by GoI & State Government.
Micro Irrigation Scheme	50:30:20 by GoI, State and beneficiary (Small and marginal farmers) 40:10:50 by GoI, State and beneficiary (Other farmers)
Additional Central Assistance	
Rashtriya Krishi Vikas Yojna <i>Components under RKVY are-Establishment of new gardens, Hybrid seed production, Vegetable area expansion, Spice production, Flower area expansion,</i>	100 per cent by GoI

<i>Medicinal and aromatic plants area expansion, Establishment of processing units, Horticulture mechanisation, Modernisation and upgradation of old nurseries, Protected cultivation, promotion of organic farming and Human resource development.</i>	
State Plan Schemes/programmes	
1.Kela Utpadan ka Saghan Karyakram	100 per cent by State Government
2.Mela Pradashani Avam Prachar	
3.Bade Saharo Ke Aaspaas Sabji Utpadan	
4.Aalo Vikas Yojna	
5.Phal Paudh Ropan Yojna	
6.Masala Vikas Yojna	
7.Pushp Vikas Yojna	
8.Aushadhi Avam Sughandhit Faslo Ki Kheti	
9.Gharelu Bagwani Ki Aadarsh Yojna	
10.Saghan Falodyan Vikas Yojna	
11.Nursery me Unnat Avam Pramadhhit Beej Utpadan	

(a) Allotment and Expenditure

Details of budget provision and expenditure during 2007-12 pertaining to Central funds released through the State Budget for RKVY scheme (Central) and matching share of the State for NHM and MIS schemes (State) are shown below:

Table 4: Details of Allotment and Expenditure

(₹ in lakh)

Year		Budget Provision	Budget Released	Short release (per cent)	Actual expenditure	Short utilisation (per cent)
2007-08	Central ¹¹	1043.00	1043.00	0.00	1043.00	0.00
	State ¹²	2705.40	1726.55	36.18	1710.12	0.95
2008-09	Central	2368.86	2017.07	14.85	2017.07	0.00
	State	3139.20	2008.24	36.03	1997.25	0.55
2009-10	Central	5187.41	2527.74	51.27	2527.74	0.00
	State	3309.80	2319.76	29.91	2313.46	0.27
2010-11	Central	9472.37	9472.37	0.00	9472.37	0.00
	State	4950.41	2838.80	42.66	2824.51	0.50
2011-12	Central	11000.00	4237.67	61.48	4227.57	0.24
	State	5119.55	3966.46	22.52	3956.93	0.24
Total	Central	29071.64	19297.85	33.62	19287.75	
	State	19224.36	12859.81	33.11	12802.27	

(Source: Information furnished by the Directorate, Horticulture and Farm Forestry)

The above table indicates that there was short release of funds against the provision made by the State Government and the shortfall ranged between 23 and 43 per cent during 2007-12. In respect of Central share, the shortfall ranged between zero and 61 per cent. However, the utilisation of funds released ranged between 99 and 100 per cent in respect of both Central and State share.

Further, the Central share of NHM (85 per cent) and MIS were directly received by SHM and DHFF respectively from GoI as detailed in the following table:

¹¹ Central share indicates funds released for RKVY scheme through the State budget.
¹² State share indicates matching share of funds released by State Government for NHM and MIS

Table 5: Details of funds received directly from the Government of India*(₹ in lakh)*

Year	Opening balance	Provision	Sanction	Releases	Short release (%)	Available funds	Expenditure	Percentage of short utilisation
1	2	3	4	5	6	7=2+5	8	9
2007-08	4228.03	14194.32	9484.52	6633.98	30.05	10862.01	3239.64	70.17
2008-09	7622.37	14861.15	11138.87	3390.15	69.56	11012.52	8791.30	20.17
2009-10	2221.22	10839.10	7822.32	6976.21	10.82	9197.43	7631.32	17.03
2010-11	1566.11	10164.00	10164.00	10046.00	1.16	11612.11	9163.46	21.09
2011-12	2448.65	11650.00	11650.00	10800.00	7.30	13248.65	12284.88	7.27
Total		61708.57	50259.71	37846.34			41110.60	

(Source: Information provided by the Department and compiled by Audit)

The above table indicates that there was short release of funds ranging between one and 70 *per cent*. Despite short release of funds from GoI, the available funds could not be utilised fully. Short utilisation of funds was mainly due to lack of interest by farmers, as attributed by the Government, which lead to non-achievement of targets under various components of NHM. The percentage of short utilisation of funds also ranged between seven and 70 indicating inefficient planning and financial management.

On this being pointed out (September 2012), the Government stated (November 2012) that efforts will be made to obtain and utilise the entire funds sanctioned for different schemes.

(b) Irregular expenditure of ₹ 6.47 crore on cultivation of spices and non-perennial fruits

During the State Level Sanctioning Committee (SLSC) meeting held on 17 September 2008 for sanctioning of projects/plans under RKVY, Ministry of Agriculture, GoI while sanctioning the Annual Plans had reiterated that all the sanctioned plans should be implemented in those districts which are not covered by NHM. As per the directions/decision of SLSC, activities pertaining to the implementation of sanctioned plan under RKVY were not to be implemented in the districts where schemes of NHM are already being implemented.

Scrutiny of records of the test checked districts revealed that during the year 2010-11, 850 hectares were taken up under non-perennial fruits (Banana TC¹³) and Papaya on which ₹ 3.53 crore was incurred under RKVY in four districts (Korba, Raigarh, Surguja and Raipur). Further, in the same year area expansion of spices viz. Chilly, Coriander, Turmeric etc. was also taken up at a cost of ₹ 2.94 crore in these four districts in 2,350 ha under RKVY as detailed in *Appendix 3.1.3*.

Since under RKVY, components being implemented under NHM were not to be taken up as decided by the SLSC, an expenditure of ₹ 6.47 crore incurred on area expansion on non-perennial fruits and spices under RKVY was irregular.

On this being pointed out (September 2012), the Department stated (November 2012) that due to increase in the demand for chilly and banana

Irregular expenditure of ₹ 6.47 crore from RKVY for area expansion in NHM districts.

¹³ Tissue culture

crops from the districts, the same could not be met from the approved targets under NHM. As such, additional demand was met from the RKVY funds after obtaining permission from the SLSC. During the exit conference (February 2013), APC while accepting the audit observation stated that due to increase in the demand for chilly and banana crops, the same was met from RKVY funds.

Although provision was made in the approved plan for 2010-11 for non-perennial fruits and spices, the same were not specifically sanctioned for NHM districts. Further, no separate permission for taking up area expansion in NHM districts was incorporated in the minutes of the SLSC meeting (April 2011).

(c) *Diversion of funds under NHM*

Para 4.4 of the NHM guidelines envisages that the Executive Committee (EC) headed by Secretary, Department of Agriculture and Cooperation (DAC), Ministry of Agriculture, GoI is empowered to reallocate resources across States and components and approve projects on the basis of approved subsidy norms.

During scrutiny of records (June 2012) of DDH, Durg it was observed that in the year 2007-08, farmers took up cultivation of banana at their own expense and applied for subsidy. Due to the non-availability of funds under the component, the payment of first installment of assistance amounting to ₹ 7.53 lakh was made (September 2008) from the funds allotted for vermi-compost as per the orders (October 2007) of DHFF, Raipur. The second installment was not sanctioned initially on the grounds that subsidy for the year 2007-08 could not be paid in the year 2008-09. However, the President, District Mission Committee had sanctioned (August 2009) the second installment of ₹ 7.53 lakh from the budget for Human resource development. The required sanction from the appropriate authority (EC) for diverting the funds was not on record. Thus, total expenditure of ₹ 15.06 lakh incurred on banana cultivation by diverting the funds from other components of NHM without any sanction from the EC was irregular.

On this being pointed out (September 2012), the Government stated that Mission Director, SHM has powers to execute the schemes under NHM. It was also stated that allotment available for components which are not urgently required could be used for achieving the physical targets of other components whose financial allotment is awaited.

The reply of the Government is not acceptable because as per the NHM guidelines, the powers for allocation of State wise and component wise subsidy is vested with EC. APC accepted the audit observation during the exit conference (February 2013) and stated that necessary approval will be obtained from the National level for regularising the expenditure. Also, action will be taken against the official responsible for diversion of funds without approval from the appropriate authority.

(d) Non-utilisation of funds sanctioned for various programmes

Chhattisgarh State Treasury Code Rule 284 (1) states that no money should be drawn from the treasury until it is needed for immediate disbursement. Withdrawal of money in anticipation of expenditure or to avoid budget lapses is a serious irregularity and the person responsible for such withdrawal from the treasury will be subjected to disciplinary action. GoCG, Finance Department also issued instructions (June 2012) to all Departments to the effect that money drawn from the Consolidated Fund for State Plan Schemes which were deposited in bank accounts and were remaining unutilised till March 2012, were to be deposited in the accounts of the State Government along with accrued interest thereon. It was also directed that all committed expenditure of the Centrally Sponsored Schemes should be made at the earliest and the unutilised amount in the bank account as on March 2012 may be deposited in MH 8443-Civil Deposits (K-deposit) along with accrued interest. The orders were to be complied by June 2012.

Unutilised funds amounting to ₹ 4.62 crore were deposited into K-deposit or surrendered to the Government Account.

During scrutiny (August 2012) of the records of office of DHFF, we observed that the funds allotted to the districts for implementation of various scheme activities could not be utilised by the districts completely due to various reasons viz. non-receipt of permission from the Directorate for utilisation of funds allotted for maintenance of cashew plantations in Jagdalpur, not taking up the construction work of testing lab in Raipur, non-utilisation of funds for *Adarsh Krishi Gram* scheme etc. In compliance to GoCG orders, various DDOs deposited ₹ 4.62 crore under the Major Head-0401 and Major Head-8443 (Civil Deposits) of the State Government as detailed in **Appendix 3.1.4**.

Thus, the amount sanctioned and drawn under various schemes was not utilised and resulted either in surrendering of funds (₹ 90.95 lakh) into the Government account or transferring into K-deposit (₹ 3.71 crore). This indicated that the planning and financial management was not efficient.

On this being pointed out (September 2012), the Government stated (November 2012) that though scheme activities were in progress but as per Finance Department order, funds were deposited in the Government accounts.

The reply of the Government is not acceptable because the scheme funds were not utilised by the Department within a reasonable time resulting in funds remaining blocked. After the issue of the Finance Department's order, the same were deposited in the Government accounts. During the exit conference (February 2013), APC also accepted the above facts.

(e) Non-adjustment of Temporary Advances

Para 53 (iv) of the Chhattisgarh Treasury Code provides that temporary advance should be adjusted within three months from the grant of advance. Scrutiny of records of 15¹⁴ DDOs revealed that temporary advances were being given by the DDOs to their subordinate officials for meeting expenses

¹⁴ DDH Bastar, DDH Bilaspur, ADH Dhamtari, DDH Durg, ADH Jashpur, ADH Kabirdham, ADH Kanker, ADH Korba, ADH Koriya, ADH Pr. Garden Raipur, ADH Raigarh, DDH Raipur, ADH Rajnandgaon, DDH Sarguja and ADH SMF Bana, Raipur

on organisation of *Kisan Melas*, horticulture exhibitions, various training programmes and for labour payment. However, we observed that an amount of ₹ 9.61 crore (**Appendix 3.1.5**) was outstanding for adjustment at the end of the financial year 2011-12. Out of this, ₹ 9.21 crore was outstanding for more than three months to five years while ₹ 39.80 lakh was outstanding for more than five years. Thus, lack of effective control over the timely adjustment of the advances by the Department led to violation of financial rules.

On this being pointed out (August 2012), the Government stated (November 2012) that instructions have since been issued for adjustment of outstanding advances and action will be initiated against the responsible officials in case of non-adjustment within the prescribed period.

During the exit conference (February 2013), APC accepted the facts and stated that strict action would be initiated against the officials against whom advances are pending since long. It was also stated that the recovery will be done at the earliest. In respect of advances released to officials against whom previous advances were outstanding for adjustment, APC stated that action will be taken against erring officials who sanctioned further advances in such cases.

(f) Cash Management

Rule 284 (1) of the Chhattisgarh State Treasury Code provides that no money shall be drawn from the treasury unless it is required for immediate disbursement. Further, Rule 282, read with Rules 441 and 618, states that only permanent advances, *Pateli* commission and loans and advances are to be drawn through Simple Receipt Bill (CGTC-76).

In contravention to the above, scrutiny of the records of the test checked districts revealed that in nine¹⁵ districts an amount of ₹ 12.83 crore (**Appendix 3.1.6**) was drawn from the Treasury through bills prepared on CGTC-76 on Simple Receipt (SR) proforma during 2007-12. Subsequently, the amounts were paid to the subordinate officers for making payment of assistance to farmers, organising training, purchase of seeds from *Chhattisgarh Rajya Krishi Evam Beej Nigam* (Beej Nigam) and for other purposes under various schemes. The procedure adopted was in violation of the Chhattisgarh Treasury Rules. Further, as the amount drawn through SR bills was shown as final expenditure in the cash book, no adjustment vouchers were submitted to the Treasury.

On this being pointed out (August 2012), the Government stated (November 2012) that instructions had been issued by DHFF to all the DDOs for restricting the excess drawal of funds through SR bills. It was also instructed to avoid drawals through SR bills unless the funds are required for immediate disbursement.

While accepting the facts during the exit conference (February 2013), APC stated that instructions will be issued to subordinate offices for necessary compliance of the codal provisions.

¹⁵ Bastar, Bilaspur, Dhamtari, Durg, Kanker, Koriya, Raigarh, Raipur and Sarguja

(g) Stock verification not conducted

Rule 133 of the Chhattisgarh Financial Code provides for physical verification of all stores once in a year as prescribed by respective Heads of Departments. A certificate of verification of stores with its results should be recorded on the list, inventory or account, as the case may be, where such verification is carried out.

Scrutiny of records of the test checked districts revealed that stock verification was not conducted during the period 2007-12 and as such no certificate of verification was found in the stock registers.

On this being pointed out (September 2012), the Government stated (November 2012) that instructions have been issued by DHFF to district offices for periodical stock verification by all the Head of Offices. During the exit conference (February 2013), APC accepted the facts and stated that instructions will be issued to subordinate offices for taking necessary action for verification of the stock.

3.1.8 Service delivery**3.1.8.1 Area expansion of horticulture crops**

For increasing the area under horticultural crop plantation, the Department implements various schemes such as NHM, RKVY¹⁶ and State sector schemes¹⁷. The year wise targets and achievements for area expansion of horticultural crops under all the schemes during 2007-12, reported by the Directorate are as under:

Table-6: Target and achievement of area expansion for all schemes

Type of crop	2007-08		2008-09		2009-10		2010-11		2011-12		(in hectares)		
	T	A	T	A	T	A	T	A	T	A	Target	Achievement	Percentage
Fruits	17708	9302	17738	21582	15218	13045	15874	15719	9065	9790	75603	69438	92
Vegetables	4823	4685	4953	4935	8988	8611	38900	38554	30061	29878	87725	86663	99
Spices	17455	12547	15900	15327	14780	14074	35045	33406	27126	31674	110306	107028	97
M&A*	7031	100	7615	6956	24980	25184	4120	3967	1950	2450	45696	38657	85
Flowers	2244	14	1470	976	2397	2421	6600	4555	4713	6704	17424	14670	84

(Source: Information furnished by Department and compiled by audit). *Medicinal & Aromatic

T=Target A=Achievement

Achievement of area expansion of fruits, vegetables and spices was more than 90 per cent.

It is evident from the table that the achievements were encouraging as during the period 2007-12, total achievement of area expansion of fruits, vegetables and spices was more than 90 per cent. The area expansion of medicinal and aromatic plants and flowers on the other hand was 85 and 84 per cent respectively of their targets.

On this being pointed out (August 2012), the Department stated

¹⁶ Establishment of new gardens of perennial and non-perennial fruits, vegetable area expansion, spices area expansion, flowers area expansion and medicinal and aromatic plants area expansion.

¹⁷ Kela utpadan ka saghan karyakram, Bade saharon ke aaspas sabji utpadan, Aloo vikas yojna, Phal paud ropan yojna, pushp vikas yojna, Aushadi evam sugandith faslo ke kheti and sagan jalodhayana yojna

(September 2012) that in respect of medicinal & aromatic plants and flowers, the achievement was comparatively low due to less popularity and awareness amongst the farmers of the State for its cultivation. It was also stated that in future, training and extensive publicity will be done to ensure achievements of the targets.

During the exit conference (February 2013), APC intimated that targets are prepared on the basis of demand from the district offices. Regarding reasons for sudden spurt/dip in the target, it was stated that after the targets are compiled and fixed by the State Level Committees, the same are sent to the GOI where the targets get altered before being finalised. The final targets as approved by the GoI are complied by the State.

3.1.8.2 Production of various Horticulture Crops

The actual production of major crops in the State during 2007-08 to 2011-12 is as follows:

Table 7: Table showing total production of horticulture crops

(figures in MTs)

Type of crop	Achievements					Total	
	2007-08	2008-09	2009-10	2010-11	2011-12	Target	Achievement
Vegetables	46850	48807	98596	477684	389609	No	1061546
Spices	67628	104683	86696	210792	207465	targets	677264
M&A*	570	39580	145312	28919	18473	were	232854
Flowers	41	2840	8014	12435	19442	set	42771

(Source: Information provided by Department and compiled by audit. *Medicinal & Aromatic plants)

There was decline in the production of all types of crops except flowers.

The above table indicates that during 2011-12, there was decline in the production of all type of crops except flowers despite the fact that the achievement of area expansion for flowers was much less than the target. The decline in production of other types of crops ranged between two *per cent* (Spices) and 36 *per cent* (Medicinal and Aromatic) over the previous year.

Scrutiny of the records (May-August 2012) of the selected districts revealed that there was no prescribed procedure to calculate the per hectare productivity of the horticulture produce. DHOs had intimated (May-August 2012) that the data regarding production were obtained by field staff as per information provided by the farmers. No recorded documents were maintained by the farmers for verifying the authenticity of the production. Thus, in the absence of any set procedure to ascertain the per hectare production, the production data indicated above cannot be taken as reliable.

During the exit conference (February 2013), APC agreed that no prescribed mechanism existed for recording the data of production of horticulture crops and stated that the productivity figures are arrived at on the basis of information provided by farmers without any documentation. It was also stated that information will be sought from GoI and other States to ascertain the procedure adopted for calculation of productivity.

3.1.8.3 Per hectare productivity of horticultural crops in Chhattisgarh State as compared to the yield potential of the State

Para 8.4 of NHM guidelines envisages increasing both production and productivity through adoption of improved and appropriate technologies for ensuring quality.

Test check of the records (May 2012) of DHFF revealed that for the period 2007-12, no target was set for increasing the per hectare productivity. Per hectare productivity of various horticulture crops in Chhattisgarh State is indicated in **Appendix 3.1.7**.

In respect of most of the horticultural crops taken up in Chhattisgarh, the average productivity per hectare was lower than the actual yield potential of the State as recommended by the Indira Gandhi Agriculture University. Further, in many horticulture crops, the average productivity was also below the National Average.

On this being pointed out (September 2012), the Government stated (November 2012) that efforts are being made by the Department to reduce the gap between current production and yield potential of the State through supply of good quality hybrid and certified seeds and by supplying bio-fertilisers for improving the fertility of soil besides undertaking awareness campaigns.

During the exit conference (February 2013), APC while accepting the audit observation stated that necessary efforts will be made to attain the productivity level upto the yield potential of the State.

3.1.9 Status of implementation of schemes/programmes

For the CCO based audit, we reviewed the following schemes and components:

Name of the Scheme	Name of components covered
National Horticulture Mission	Production of planting material, Establishment of new gardens, Creation of water resources, Organic farming, Establishment of processing units, Horticulture mechanisation, Human resource development, Integrated post harvest management and Establishment of marketing infrastructure.
Rashtriya Krishi Vikas Yojna	Establishment of new gardens of fruits, Vegetable area expansion, Spices production, Flowers area expansion, Medicinal and aromatic plants area expansion, Hybrid seed production, Modernisation and upgradation of old nurseries, Establishment of processing unit, Horticulture mechanisation and Human resource development.
State Plan Scheme	Phal paudh ropan yojna

Observations noticed during our review of the schemes/programmes are discussed in the following paragraphs:

3.1.9.1 National Horticulture Mission

GoI launched (June 2005) National Horticulture Mission (NHM), a Centrally Sponsored Scheme, for holistic development of horticulture through area based regionally differentiated strategies, which include research, technology promotion, extension, post harvest management, processing and marketing, in consonance with comparative advantage of each State/region and its diverse agro-climatic features to enhance horticulture production, improve nutritional security and income support to farm households.

(a) Tardy implementation of National Horticulture Mission scheme resulting in non utilisation of ₹ 63.85 crore

Under NHM, GoI contributes 85 *per cent* of the funds and the balance 15 *per cent* is met by the State Government. Funds are released as per the approved Annual Action Plans (AAP). The State Horticulture Mission (SHM) is responsible to ensure that the expenditure is incurred in accordance with the sanctioned AAPs

During the years 2005-12, out of the total funds of ₹ 471.73 crore allotted to the SHM for implementation of the scheme activities, an amount of ₹ 149.86 crore was disbursed to the District Mission Committees (DMC) and against which expenditure of ₹ 86.01 crore (42.60 *per cent*) was incurred by DMCs (**Appendix 3.1.8**). This resulted in non-utilisation of ₹ 63.85 crore mainly in respect of components *viz.* Post Harvest Management (PHM), Fruit Area Expansion, Protected cultivation, community water tanks, cashew nut, Model Nursery, vermi compost etc., indicating tardy implementation of the scheme activities. Reasons for non-utilisation of the funds, as discussed during the State Level Executive Committee Meeting (October 2010) and as intimated by Government, were attributable to non-achievement of the targets due to lack of interest among the farmers, less assistance under PHM, non-receipt of proposals from districts etc.

The Government while accepting (November 2012) the audit observation stated that instructions have been issued to the DMCs and DHOs to utilise the available funds in the current financial year itself. During the exit conference (February 2013), APC agreed to the audit observation and stated that necessary action for utilisation of the un-utilised funds will be taken and also instructed the Director to look into the matter at the earliest.

(b) Targets and achievement under area expansion of horticulture crops

During the period 2007-12, the target and achievement in respect of area brought under horticulture cultivation under NHM are as under:

Table 8: Target and achievement of area expansion of horticulture crops under NHM
(in hectare)

Type of crop	2007-08		2008-09		2009-10		2010-11		2011-12		Total target	Total achievement
	T	A	T	A	T	A	T	A	T	A		
Fruits	14176	5774	15530	19467	13010	10791	8300	8109	5519	6273	56535	50414
Flowers	2230	0	1455	960	2250	2279	5523	3478	3680	5671	15138	12388
Spices	11020	6112	11000	10407	6720	6369	16045	14406	11770	16318	56555	53612
M&A*	6856	0	7200	6649	24080	24339	3020	2880	850	1350	42006	35218
Total	34282	11886	35185	37483	46060	43778	32888	28873	21819	29612	170234	151632

(Source: Information furnished by Department and compiled by audit.)

*Medicinal & Aromatic plants

From the above, it is evident that during the period 2007-08 to 2011-12, against the targets for area expansion of fruits, flowers spices and medicinal and aromatic crops, the achievements were 89, 82, 95 and 84 *per cent* respectively. This indicates that efforts of the Department in achieving the targets fixed in respect of area expansion on various horticulture crops were encouraging.

(c) Unfruitful expenditure on area expansion of Medicinal and Aromatic plants

Para 8.16 of the NHM guidelines envisages coverage of large areas under improved varieties of horticultural crops. The assistance is provided for bringing new areas under horticultural crops like fruits, flowers, spices, aromatic plants, and plantation crops like cashew, cocoa and arecanut. For medicinal and aromatic plants, assistance upto 75 *per cent* of the cost subject to a maximum of ₹ 11,250/ha limited to 4 ha per beneficiary is provided.

Test check of the records of 11 NHM districts revealed (May-August 2012) that during the years 2007-08 to 2011-12, the achievement of area expansion under medicinal and aromatic plants for these districts was as detailed below:

Table 9: Table indicating declining trend of Area Expansion of Medicinal and Aromatic plants

Year	Eucalyptus Citridora	Lemon grass	Aloe vera	Patchouli	Khus	Palmarosa	Jamarosa	Expenditure (₹ in lakh)
2007-08	4200	1500	800	400	900	2500	612	1187.297
2008-09	1788	1900	900	213	550	1350	0	698.552
2009-10	1700	600	0	0	200	0	0	220.236
2010-11	800	750	0	0	200	200	0	277.272
2011-12	200	450	0	0	50	100	0	97.01
Total	8688	5200	1700	613	1900	4150	612	2480.367

(Source: Information provided by Department and compiled by audit)

Lack of infrastructure and marketing facilities led to decline in area expansion of Medicinal and Aromatic crops.

It is evident from the above table that there was a continuous decline in the area expansion during the years 2007-08 to 2011-12. In respect of aloe vera and patchouli, the area expansion was *nil* during the years 2009-10 to 2011-12 whereas in respect of Jamarosa¹⁸, no area expansion was taken up since 2008-09. The total expenditure incurred on area expansion of above medicinal and aromatic crops was ₹ 24.80 crore as per details given in **Appendix 3.1.9**.

¹⁸ Jamarosa is an aromatic cash crop

During the meeting of the State Executive Committee (24 January 2006), it was decided to establish 80 oil extraction units under Post Harvest Management and seven Aloe vera gel extraction units in the State. However, only 15¹⁹ processing/extraction units were established till date (November 2012). Further, one Aloe Vera Juice extraction unit in Kanker and two distillation units and non evaporative boilers in Kabirdham district were non-functional since October 2009 and March 2008 for want of electrification and non-availability of aromatic crops (raw materials) respectively.

A Memorandum of Understanding with three agencies for marketing of medicinal and aromatic produce was entered (2006-07) which however lapsed during 2008-09. Since then, purchase of horticulture produce of medicinal and aromatic variety has not been done by the agencies. Thus, due to lack of proper infrastructure for processing the medicinal and aromatic farm produce, the farmers lost interest resulting in decline in area expansion of medicinal and aromatic crops. Thus the objective of enhancing production, coverage and productivity of medicinal and aromatic plants in the NHM districts could not be achieved. Besides, the strategy of diversification from traditional crop to plantations also failed.

On this being pointed out (September 2012), the Government stated (November 2012) that during the initial years, the targets were fixed after discussions with the farmers. Due to lack of interest shown by the farmers in subsequent years, the targets were proportionately reduced. Further, due to lack of maintenance of crops by farmers, the desired profit also could not be earned.

The fact remains that there was lack of planning in establishment of new gardens of medicinal and aromatic plants as infrastructure in the districts for processing and marketing the farm produce was not sufficient as intimated by some of the DHOs. It also indicated that proper market assessment was not made before venturing into the area expansion programme for medicinal and aromatic plants. During the exit conference (February 2013), APC accepted the audit observation and stated that the decline in area expansion was mainly due to decline in farmers' interest and added that in future targets will be fixed keeping in mind the demand as well as availability of infrastructure.

(d) Wasteful expenditure of ₹ 8.33 crore due to excessive mortality of horticulture crops

As per paragraphs 8.15 (2005-06) and 8.16 (revised w.e.f 2010-11) of NHM guidelines, assistance for establishing new gardens is provided at ₹ 22,500 per ha (₹ 30,000 w.e.f. 2010-11) for perennial and non-perennial crops, and ₹ 11,250 per ha (₹ 12,500 w.e.f. 2010-11) for spices and aromatic plants. For perennial and non-perennial crops, assistance is provided in three installments of 50:20:30 (60:20:20 w.e.f. 2010-11) subject to survival rate of 75 per cent in the second year and 90 per cent in the third year. The provision for monitoring of the scheme activities had been fixed at 100 per cent to be done by RHEOs, 75 per cent by SHDO/GS, 25 per cent by DDH/ADH, 10 per cent by CEO,

¹⁹ 12 Lemon grass & E. Citridora distillation/extraction plants and three Aloe vera juice/gel extraction units

Excessive mortality of horticulture crops led to wasteful expenditure of ₹ 8.33 crore.

Janpad Panchayat and five per cent by CEO, Zila Panchayat.

During test check of records of DDH, Bastar and ADH Rajnandgaon, we observed from the Crop Monitoring Report (CMR) that there was excessive mortality of crops. Out of the available CMR data of crops planted in different clusters in Bastar district, the survival rate was below 60 per cent in 99 per cent cases. Further, in Rajnandgaon district, the survival rate of crops ascertained from the available CMRs ranged between 20 and 70 per cent. Since the permissible limit for mortality after the first year of plantation under perennial crops is only 25 per cent, a survival rate below 75 per cent clearly indicated that the cropping had failed. Consequently, such cases automatically get excluded from the scheme activities and are not eligible for further assistance under the scheme. This issue has been highlighted subsequently in Para 3.1.9.1(f). Similarly, in case of spices and aromatic plants, the entire cropping had failed as there is no provision for mortality. We further observed that in Rajnandgaon district, the plantations were not done during the ideal planting period²⁰ as envisaged in the departmental guidelines (*Safal Bagbaani ke Upaay*). Thus, excessive mortality of horticulture crops in Bastar and Rajnandgaon district led to wasteful expenditure of ₹ 8.33 crore (**Appendix 3.1.10**) on the cost incurred for area expansion.

On this being pointed out (September 2012), the Government stated (November 2012) that excessive mortality was due to lack of interest by farmers in maintenance of the crops besides open grazing of cattle. It was also stated that most of the fields were affected by termites for which the farmers did not initiate the plant protection facilities which also resulted in mortality of crops.

The reply of the Government indicates lack of monitoring of the extension activities of the scheme. During the exit conference (20 February 2013), APC, while accepting the facts stated that action will be taken for providing better fencing facilities by involving the farmer's contribution also and thus reduce the mortality rate.

(e) Irregular expenditure of ₹ 43.06 lakh on plantation of onions under Spice Development

As per Para 8.16 of the NHM guidelines, assistance is provided for bringing new areas under horticultural crops like fruits, flowers, spices, aromatic plants, and plantation crops like cashew, cocoa and arecanut. The revised guidelines issued in the year 2010 states that assistance under spices will be provided for seed spices and rhizomatic spices as well as for perennial spices. The scheme guidelines nowhere provides for assistance for onions.

During scrutiny of records (May-August 2012) of DHO, Bastar, Durg, Kabirdham and Rajnandgaon, we however, observed that during the year 2008-09, onion cultivation was taken up under Spices and expenditure of ₹ 43.06 lakh was incurred as detailed in **Appendix 3.1.11**.

Since there was no provision for cultivation of onions under NHM under spice

²⁰ Ideal planting period for mango-May-June; Guava & Lime-July-August; Ginger-May; Coriander-October-November; Rajnigandha-February-April; Citridora-June-July

cultivation, the entire expenditure of ₹43.06 lakh incurred on onion plantation was irregular.

On this being pointed out (September 2012), the Government stated (November 2012) that as there was demand from farmers for onion seeds, the same were provided and necessary approval from the State Level Executive Committee (SLEC) was also obtained (July 2009). Further, area expansion taken up for onions was indicated in the progress reports furnished to GoI.

The fact remains that the NHM guidelines empowers only the Executive Committee at the National level with discretionary powers to approve projects for which norms have not been fixed. NHM guidelines do not provide for assistance for onion under the spices cultivation programme. APC, while accepting the audit observation during the exit conference (February 2013), stated that necessary approval from the National level will be obtained for regularising the expenditure.

Approval from the national level was however awaited as of March 2013. There is also a need for proper demand assessment for providing the necessary assistance.

(f) Non-release of assistance amounting to ₹ 2.37 crore to farmers due to excessive mortality of horticulture crops

Para 8.16 of the NHM guidelines envisages coverage of large areas under improved varieties of horticultural crops. The assistance for cultivation of perennial fruits will be for a maximum area of four ha per beneficiary, spread over a period of three years in the ratio of 60:20:20 in the first, second and third year. Assistance for the second year will be subject to 75 per cent survival of the new gardens and for the third year, assistance will be subject to 90 per cent survival of plants.

Scrutiny of the records of DHFF, Raipur and the NHM districts revealed that during the years 2007-08 to 2011-12, the following expenditure was incurred for establishment of new gardens of perennial fruits:

Table 10: Table showing non-release of assistance during the second and third years

(₹ in lakh)

Year	Area covered (ha)	Amount incurred on area expansion	Allotment for assistance after 1st year	Assistance given after 1st year	Allotment for assistance after 2nd year	Assistance given after 2nd year	Total undistributed assistance
2007-08	2708	304.67	0	0	123.59	0	123.59
2008-09	12970	1453.55	95.47	2.38	28.35	28.35	93.09
2009-10	9105	1024.35	113.36	113.36	60.83	40.55	20.28
2010-11	4890	470.58	84.69	84.69	**	**	—
		3253.15	293.52	200.43	212.77	68.9	236.96

(Source: Information furnished by Department and compiled by audit)

The above table indicates that in respect of plantations done during the year 2007-08, no assistance was released after the first and second year. Similarly for the year 2008-09, against the allotment of ₹ 95.47 lakh, only ₹ 2.38 lakh could be provided as assistance. Further, for the plantations done during 2009-10, against the allotted assistance of ₹ 60.83 lakh, only ₹ 40.55 lakh could be released. Thus, during the period 2007-08 to 2010-11, a total of

₹ 2.37 crore could not be provided as assistance to the farmers. According to the Department, the reason for non-release of assistance was due to mortality of crops in excess of the limit prescribed for release of subsequent assistance.

During the exit conference (February 2013), APC while accepting the audit observation stated that necessary action will be taken in future to reduce the mortality in order to provide the complete assistance as per norms.

(g) *Rejuvenation/rehabilitation of old and senile plantations*

Para 8.19 of NHM guidelines provide for taking up productivity improvement programmes through removal of senile plantations, re-plantations with fresh stock supported with appropriate and integrated combination of inputs, pruning and grafting techniques. The programme was to be implemented through individual farmers, Farmers' Co-operatives, Self help groups, NGOs, growers' associations and commodity organisations. The assistance for rejuvenating senile plantations will be 50 *per cent* of the cost subject to a maximum ceiling of ₹ 15,000/ha limited to 2 ha per beneficiary.

Scrutiny (July 2012) of the records of DHO, Bastar revealed that against the target of 200 and 100 hectares for the years 2006-07 and 2008-09 respectively for rehabilitation/rejuvenation of old and senile plantations, ₹ 30 lakh was received during 2006-07 and ₹ 15 lakh was received during 2007-08. Besides this, ₹ 7.50 lakh each was received during 2010-11 and 2011-12. Against the total receipt of ₹ 60 lakh under this component, expenditure of ₹ 11.16 lakh was incurred on procurement (February 2009) of 30 power operated chain saw pruners from Beej Nigam. Out of the 30 chain saws pruners, only one pruner was issued (June 2010) to a farmer group. The remaining 29 pruners were issued (June 2011) to the Agriculture College, Jagdalpur.

It was decided (February 2011) in the meeting of the District Mission Committee, Bastar, Jagdalpur to take up the rejuvenation work of old and senile plantations through the Agriculture College, Jagdalpur. An estimate for the work was prepared and submitted (May 2011) to the Agriculture College, Jagdalpur along with demand draft amounting to ₹ 33.08 lakh for taking up the rejuvenation work. However, rejuvenation work could only be taken up departmentally in six hectares out of the target of 300 hectares till July 2012. Thus, the amount sanctioned during 2006-07 and 2007-08 could not be utilised till date (February 2013) for the intended purpose of rejuvenation of senile plantations, thereby locking ₹ 48.08 lakh (₹ 33.08 + ₹ 7.5 + ₹ 7.5) and idling of the pruners valuing ₹ 10.79 lakh.

The Government informed that a specialist team has been constituted to take up the rejuvenation work and the same will be completed within the financial year. During the exit conference (20 February 2013), APC while agreeing to the audit observation stated that action will be taken to obtain information regarding the current status of rehabilitation work undertaken by the Agriculture College, Jagdalpur.

The reply of the Government substantiates the audit observation on locking of funds and idling of the pruners.

(h) Irregular expenditure of ₹19.26 lakh on gap filling due to excessive mortality of cashew plants

Para 8.16 of the NHM guidelines envisages coverage of large areas under improved varieties of horticultural crops. A farmer will be eligible for receiving assistance for cultivation which will be spread over a period of three years in the ratio of 50:30:20 in the first, second and third year respectively. Assistance for the second year will be payable subject to 75 per cent survival of the new gardens and for the third year the assistance will be payable subject to 90 per cent survival of the plants.

Scrutiny of the records of the test checked districts revealed that for Bastar district, the targets and achievement in respect of cashew cultivation during 2006-07 to 2008-09 were as follows:

Table 11: Table indicating target and achievement of cashew plantation in Bastar district

Year	Target (ha)	Achievement (ha)	Remarks
2006-07	500	500#	#Target of 2005-06
2007-08	2000	1883	--
2008-09	2000	853+117*	*Balance target of 2007-08

(Source: Information provided by Department)

In order to achieve the target during the years 2006-07 to 2008-09, the following cashew grafts were procured from various agencies for the purpose of area expansion as well as for gap filling:

Table 12: Table indicating procurement and utilisation of cashew grafts for gap filling

Year	No. of grafts	Agency	Cost per plant (₹)	Total cost (₹)	No of plants utilised for			Total	Remarks
					Area expansion	Gap filling after			
						1 st year	2 nd year		
2006-07	50,000	Hirwai Nursery	19.10	9,55,000	50,000 (06-07)	--	--	50,000	--
2006-07	1,00,000	Hirwai Nursery	19.10	19,10,000	1,88,300	27,070	--	2,15,370	20,000 grafts dead
2007-08	1,22,870	Orissa State Dev. Corpn.	18.80	20,99,960					
2007-08	10,450	Krishi V.V.	14.00	1,46,300					
2007-08	3,050	Deptl nursery	16.00	48,800					
2008-09	1,78,418	Bana Farm	18.90	33,72,100	85,300 (08-09) 11,700 (07-08)	77,800 (including 2 nd year gap filling for 2006-07 plantations)	--	1,63,100	3,618 grafts dead
Total grafts used for gap filling						1,04,870			

(Source: Information provided by Department and compiled by audit)

The assistance for the second year is subject to survival of 75 per cent plants and assistance for the third year is subject to survival of 90 per cent plants. As

per the recommendations (June 2006) of the Technical Support Group (TSG), 100 grafts were to be planted per hectare.

During the year 2006-07, 500 ha were covered under cashew plantations on which 50,000 cashew grafts were planted. For 500 ha of cultivation, permissible gap filling after the first year was 25 ha i.e., 2,500 grafts. Further, gap filling in the third year was permissible only after survival of 90 *per cent* plants at the end of the second year. Thus, only 5,000 grafts could be utilised for gap filling after the second year. Similarly, in respect of 1883 ha plantations during the year 2007-08, permissible gap filling after completion of the first year was 47,075 being 25 *per cent* of total cashew grafts planted i.e. 1,88,300.

Scrutiny of the records of DDH, Bastar however, revealed that due to excessive mortality of cashew plants planted during 2006-07 and 2007-08, gap filling in excess of the permissible limit was done as detailed below:

Table 13: Details of area covered under cashew plantation and gap filling

Year	Area covered	Total cashew grafts used	Permissible limit for gap filling after 1 st year (25 % of area covered)	Gap filling done after 1 st year	Permissible limit for gap filling after 2 nd year (10 % of area covered)	Gap filling done after 2 nd year
2006-07	500	50,000	12,500	27,070	5,000	16,515
2007-08	1,883	1,88,300	47,075	61,285	--	--

(Source: Information provided by Department and compiled by audit)

From the above table, it is evident that gap filling in respect of cashew plantations done during 2006-07 and 2007-08 was not permissible as minimum survivability of plants required for gap filling could not be achieved. Thus, inadmissible expenditure of ₹ 19.26 lakh (*as detailed below*) on a total of 1,04,870 cashew grafts was incurred on gap filling.

Table 14: Table indicating total cost of cashew grafts procured for gap filling

Gap filling done during	Source of cashew grafts	No of grafts	cost	Total cost (total of col.4) (in ₹)	Unit cost (in ₹)	No of grafts used for gap filling	Cost incurred (in ₹)
1	2	3	4	5	6	7	8
2007-08	Orissa State	1,22,870	20,99,960	22,95,060	16.83	27,070	4,55,588
	Own nursery	3,050	48,800				
	Agriculture College	10,450	1,46,300				
2008-09	Bana Nursery	1,78,418	NA	NA	18.90	77,800	14,70,420
Total							19,26,008

(Source: Information provided by Department and compiled by audit)

On this being pointed out (September 2012), the Government stated (November 2012) that there was excessive mortality due to open grazing, termite attack and improper care by farmers besides lack of monitoring due to insufficient field staff. It was also stated that gap filling beyond the permissible limit was done to ensure survivability of cent *per cent* plants. During the exit conference (February 2013), APC agreed to the audit observation and stated that gap filling beyond the permissible limit was done

to ensure survivability of plants in order to continue the scheme activities.

However, the fact remains that gap filling done without ensuring required survivability led to inadmissible expenditure of ₹ 19.26 lakh.

(i) Production and Distribution of Planting Material

With a view to provide quality planting materials viz. plantlets, plants and seeds of various crops to the farmers, the Government established 117 nurseries in the State. These farms were provided with polyhouses, net houses, propagation houses and irrigation facilities. However, due to inefficient performance of the Government nurseries in the test checked districts, the desired quantity of planting material could not be produced as discussed in the succeeding paragraphs:

Performance of Government Nurseries

The production and distribution of good quality seeds and planting materials are an important component of the NHM. To meet the requirement of planting materials for bringing additional areas under improved varieties of horticultural crops and for rejuvenation programme for old and senile plantations, assistance is provided for setting up of new nurseries under the public as well as private sector.

As per Para 8.6 of NHM guidelines, the model nurseries to be established under the public sector were eligible for 100 *per cent* assistance subject to a maximum of ₹ 18 lakh per unit (revised to ₹ 25 lakh per unit w.e.f. year 2010-11) for a maximum area of four ha. The nurseries established will be required to produce one lakh plants per hectare per year (50,000 plants per hectare per year w.e.f. 2010-11).

Test check of the records of 11 NHM districts revealed that the nurseries were provided assistance amounting to ₹ 6.41 crore during 2006-07 to 2011-12 under NHM for Model Nursery for enhancing the production capacity of planting materials as detailed in ***Appendix 3.1.12***. We however, observed that in some of the nurseries, the mist chambers, hardening yards, polyhouses etc established under Model Nurseries were non-functional due to non-availability of electricity. Overall, the nurseries did not produce the minimum number of plants even after increasing their production capacity as indicated in the table below:

Table 15: Shortfall in capacity utilisation of nurseries during 2007-12

Name of the District	No. of nurseries taken up under Model Nursery	Expenditure on infrastructure	Combined total production capacity of plants	Actual production of plants	Shortfall (per cent)
Bastar	07	65,45,291	92,00,000	4,09,804	87,90,196 (96)
Bilaspur	10	84,02,737	1,30,00,000	21,49,689	1,08,50,311 (83)
Durg	08	63,82,388	1,08,00,000	23,74,253	84,25,747 (78)
Jashpur	06	62,93,236	58,00,000	5,74,751	52,25,249 (90)
Kabirdham	04	38,02,888	60,00,000	5,33,876	54,66,124 (91)
Korba	05	44,47,763	72,00,000	11,40,377	60,59,623 (84)
Koriya	05	47,80,708	50,00,000	4,67,701	45,32,299 (91)
Rajnandgaon	04	33,61,601	50,00,000	6,13,086	43,86,914 (88)
Raigarh	08	72,32,737	98,00,000	9,40,195	88,59,805 (90)
Raipur	07	69,96,924	68,00,000	5,15,539	62,84,461 (92)
Surguja	06	58,84,174	74,00,000	6,76,321	67,23,679 (91)
Total	70	6,41,30,447	8,60,00,000	1,03,95,592	7,56,04,408 (88)

(Source: Information provided by Department and compiled by audit)

Infrastructure costing ₹ 6.41 crore under Model nurseries remained largely under utilised.

Against the production capacity of four/two lakh plantlets each year, the shortfall in plant production ranged from 78 *per cent* in Durg to 96 *per cent* in Bastar District. Overall there was a shortfall of 88 *per cent* in capacity utilisation of the nurseries in all the NHM Districts. We also observed that green house, screen house, mist chambers and hardening yards totaling nine installed in these nurseries were non-functional due to want of electric supply [as discussed in para 3.1.6.4 (b)]. This led to under utilisation of the capacity created at a total cost of ₹ 6.41 crore.

On this being pointed out (September 2012), the Government stated (November 2012) that during 2006-07 to 2011-12, there has been an increase in the production of plants in the nurseries indicating increased production capacity due to establishment of Model Nurseries. However, due to various reasons including lack of inter-departmental coordination there was interruption in electric supply as well as non-availability of electric supply for which the matter is being taken up with Secretary, Energy Department.

The fact remains that even though there has been increase in the production of plants in the nurseries, the capacity utilisation of nurseries was far from satisfactory. During the exit conference (20 February 2013), APC, while agreeing to the audit observation, stated that reasons for under- utilisation of model nurseries will be examined and further stated that matter will be taken up with the Energy Department for providing electricity to those nurseries which are not functioning optimally due to lack of electric supply.

(j) Creation of Water Resources

Unfruitful expenditure of ₹ 3.81 crore on bore wells

The NHM guidelines provide for assistance for creating water sources through construction of community tanks, farm ponds/reservoirs with plastic/Reinforced Cement concrete lining to ensure life-saving irrigation to horticulture crops. As per Para 8.17 of NHM guidelines an assistance of ₹10²¹

²¹

₹ 15 lakh w.e.f. 2010-11 (para 8.20 of revised guidelines)

**Unfruitful
expenditure of ₹ 3.81
crore on Bore wells
and pumps due to
non-availability of
electric connections.**

lakh per unit for an area of 10 ha was to be provided on community basis. The maintenance of the water source created was the responsibility of the community. GoI had approved (August 2008) the proposal of GoCG for installation of community bore wells in place of community water harvesting structures.

Scrutiny of the test checked districts revealed that in nine districts, a total of 1747 successful bore wells were dug during the period 2007-12. Out of these, in respect of 688 bore wells dug at a cost of ₹ 3.20 crore, pumps were not installed. Further, it was also observed that although pumps were installed in 70 bore wells, no electric connection was available. The cost incurred on such bore wells was ₹ 61 lakh²² (including cost of pumps). Non-installation of pumps and non-availability of electric connection resulted in unfruitful expenditure of ₹ 3.81 crore (*Appendix 3.1.13*) on 758 bore wells.

When we pointed this out (September 2012), the Government stated (November 2012) that before providing assistance to the farmers group under community bore wells, a contract is entered into with the farmer's group to the effect that they will be responsible for electrification. It was also stated that due to the poor economic condition of the farmers, electricity could not be arranged for which directions have been issued for provision of electricity from other schemes being implemented by various Departments.

It is thus evident from the reply that there was lack of planning, coordination and monitoring of activities for making the bore wells operational for the benefit of farmers. Provision of electric connections at the sites was also not ensured by the Department before providing assistance for bore well digging, which resulted in unfruitful expenditure of ₹ 3.91 crore on the bore wells. During the exit conference (20 February 2013), APC accepted the audit observation and stated that in future, bore wells will be dug only after assessing the feasibility of electricity connection.

(k) Organic farming

(i) Unfruitful expenditure of ₹9.31 crore on supply of HDPE²³ vermi-bed and shade nets

Organic farming in horticulture is becoming increasingly important. The basic rule of organic production is that natural inputs are to be applied and synthetic inputs are totally prohibited.

As per Para 8.29 of the NHM guidelines, for vermi compost units/organic production units, assistance will be at the rate of 50 per cent of the cost subject to a maximum of ₹ 30,000 per beneficiary for each unit. For smaller units, assistance will be on pro-rata basis. For HDPE vermi-bed, the cost will be ₹ 10,000 per bed.

As per the recommendations (22 June 2006) of the TSG, materials proposed to be provided as assistance for establishment of vermi-compost unit was HDPE tetra packs, shade nets and vermi-culture. Assistance was limited to ₹ 5,000

²² Expenditure on digging of bore wells ₹ 41,25,805 and for pump installation ₹ 19,62,676

²³ High Density Poly Ethylene

Non-provision of vermi culture led to unfruitful expenditure of ₹ 9.31 crore on portable vermi beds and shade nets.

per unit.

Scrutiny of the records of the selected NHM districts revealed that during 2007-08 to 2011-12 under organic farming, vermi-beds, shade nets and vermi-culture were distributed to the beneficiaries. We however, observed that in cases as detailed in **Appendix 3.1.14**, although vermi beds and shade nets were distributed to the beneficiaries, earthworms (vermi culture) were not supplied. Also, department did not initiate any action to arrange the supply of the balance quantity of vermi culture to make the vermi compost units operational. In the absence of vermi culture, production of vermi compost was not possible. Thus, a total of 28,843 vermi compost units costing ₹ 8.87 crore and 1,23,061 sqm shade nets costing ₹ 43.56 lakh distributed during 2007-08 to 2010-11 could not be utilised, thereby defeating the intended purpose of production of vermi compost. Thus, the entire expenditure of ₹ 9.31 crore on purchases of vermi beds and shade nets during 2007-08 to 2010-11 was rendered unfruitful as of September 2012.

Photographs indicating unutilised vermi-beds



Portable HDPE vermi-compost unit filled with sand at village Ransargipal of Tokapal Block, Bastar. (29 July 2012)



Portable HDPE vermi-compost unit lying unutilised in village Joratarai of Rajnandgaon District. (16 May 2012)

On this being pointed out (September 2012), the Government stated (November 2012) that a proposal is being prepared for making the non-functional vermi compost units functional.

The supply of HDPE vermi beds without ensuring supply of vermi culture indicates lack of planning and monitoring in the implementation of vermi compost units and this had resulted in unfruitful expenditure of ₹ 9.31 crore.

During the exit conference (February 2013), APC also accepted the audit observation and stated that scheme being unsuccessful, the same has since been discontinued.

(ii) Procurement of low density shade nets (75 per cent)

As per the minutes of the meetings (February 2009 and May 2010) of TSG constituted under NHM, HDPE beds, earthworms and green shade net (90 per cent density) were to be provided as assistance to the beneficiaries for establishment of vermi-compost units in the farmer's field, under organic farming.

During scrutiny of the records of 11 NHM districts, we observed that during the period 2009-10 to 2011-12, against the TSG recommendations, a total of

9,53,725 sqm of shade nets of 75 per cent density instead of 90 per cent density were procured by the Directorate and issued to the field offices for onward distribution to the beneficiaries. The total cost of the shade nets (75 per cent) procured from *Chhattisgarh Rajya Krishi Evam Beej Nigam* (nodal agency) was ₹ 2.98 crore (**Appendix 3.1.15**).

Procurement and distribution of 75 per cent density of shade nets instead of 90 per cent density as recommended by the TSG was thus irregular and expenditure of ₹ 2.98 crore incurred by the Department on its procurement was in violation of the norms prescribed by TSG.

On this being pointed out (September 2012), the Government stated (November 2012) that after utilising the earlier specified shade nets, it was experienced at field level that partial shade was essential for making the worms active. On the basis of demand from the District Officers as per their practical experience, 75 per cent shade net was supplied. It was also stated that good results are being obtained after using 75 per cent shade nets.

The reply of the Government is not acceptable as the procurement of shade nets was not done as per the recommendations of the TSG constituted specially for providing technical guidance. Thus, expenditure incurred on its procurement was irregular.

During the exit conference (February 2013), APC while accepting the facts stated that approval from appropriate authority will be obtained and intimated to audit.

(1) Horticulture mechanisation

Injudicious procurement of power sprayers

The NHM guidelines under Horticulture Mechanisation (Para 8.53 of revised guidelines of NHM 2010) provide for assistance for power operated machines and tools including Power Saw and Plant Protection equipments. Assistance in this regard is to be provided to such associations, farmer groups, self-help groups and women farmer groups having at least 10 members involved in cultivation of horticultural crops, recognised/registered by the District Mission Committees, provided the balance 50 per cent of the cost of machines and tools is borne by them.

Our scrutiny of the records of the test checked districts revealed that DHFF issued (March 2008) supply order for 6,815 power sprayers to Beej Nigam under 'Innovative Technology'. The supply order was later cancelled (April 2008). Reasons for cancellation of supply order are awaited, though called for (January 2013). However, before cancellation of the supply order, Beej Nigam had already supplied (March 2008) 650 and 800 power sprayers to Surguja and Durg respectively. As per the directions (August 2008) of DHFF/Mission Director, SHM, the supplied power sprayers were to be distributed amongst farmers groups created during 2006-07 and 2007-08 under Community Borewells in Surguja, Durg, Kabirdham, Korba, Jagdalpur, Bilaspur and Raigarh districts and to adjust this amount from the funds available under the component of area expansion, for which assistance is provided to farmers under NHM. The total cost of the 1450 power sprayers

was ₹ 66.99 lakh²⁴.

We further observed that the distribution of power sprayers was not uniform in the seven NHM districts where power sprayers were supplied. The status of distribution is detailed below:

Table 16: Table showing of status of distribution of power sprayers

District	Quantity supplied	Quantity distributed	Quantity remaining idle	Value of undistributed Power sprayers (₹)
Bastar	150	42	108	4,98,960
Bilaspur	200	40	160	7,39,200
Durg	75	75	0	0
Kabirdham	75	0	75	3,46,500
Korba	100	100	0	0
Raigarh	200	200	0	0
Surguja	650	0	650	30,03,000
Total	1,450	457	993	45,87,660

(Source: Information provided by Department and compiled by audit)

It is evident from the table that the purchase of the power sprayers was initiated without any planning. This is substantiated by the fact that the supply order was cancelled. The distribution of power sprayers was also not uniform as some of the districts had distributed the entire quantity supplied to them whereas in respect of other Districts, the distribution was partial or nil. Thus, the entire procurement of the power sprayers was injudicious and unwarranted. Further, due to non-distribution, 993 power sprayers costing ₹ 45.88 lakh remained idle till date (February 2013).

After we pointed this out (September 2012), the Government stated (November 2012) that the power sprayers were procured as per demand from the districts. Power sprayers were to be distributed to farmers' groups under 'plant protection equipment'. It was further stated that some of the DHOs had distributed the power sprayers to farmer groups.

The reply of the Government is silent about the undistributed power sprayers. The power sprayers were procured without any planning as the supply order was later cancelled and the power sprayers already supplied were not completely distributed to the targeted beneficiaries till date (February 2013). Further, the decision to adjust the cost of the power sprayers under plant protection equipments was an afterthought as directions to this effect were issued only after the cancellation of the supply order.

While accepting the facts during the exit conference (February 2013), APC stated that the matter will be further examined and intimated to audit.

(m) Non-achievement of targets under Integrated Post Harvest Management and Creation of Market Infrastructure

As per Para 8.54 of the NHM guidelines, Post harvest management (PHM) includes packaging, grading, transportation, curing and ripening and storage. These facilities are essential for increasing marketability of horticulture produce, adding value to produce, increasing profitability and reducing losses.

Similarly, as per Para 8.61 of the NHM guidelines, assistance under the

²⁴ at the rate of ₹ 4620 per power sprayer

component 'Creation of Market Infrastructure' is provided with the objectives of inducing investments from private and cooperative sectors in the development of marketing infrastructure for horticulture commodities, strengthening existing horticulture markets etc. to enable farmers to realise better price and to create general awareness among farmers, consumers, entrepreneurs and market functionaries on market related agricultural practices.

Scrutiny of records of the Directorate and the NHM districts revealed that during the period 2007-12, the Department made provision of ₹ 33.25 crore for seven out of 12 components in post harvest activities. The physical achievement against the targets in respect of various components ranged between zero and 17 *per cent*. Scrutiny further revealed that the Department also made provision of ₹ 22.20 crore for four out of eight components in Market infrastructure activities. The physical achievement against the targets under the components ranged between zero and 40 *per cent*.

Though provision was made and funds were available but due to non-achievement of physical targets, ₹ 16.62 crore (approximately 50 *per cent*) (**Appendix 3.1.16**) of the funds under PHM and ₹ 9.68 crore (approximately 44 *per cent*) of the funds under 'Creation of Market Infrastructure' remained unutilised (**Appendix 3.1.17**). The reasons for non achievement of the targets under PHM, as analysed during the SLSC meeting (October 2010), were mainly due to lack of interest amongst the farmers/businessmen owing to assistance being restricted to only 40 *per cent* of the project cost and in respect of market infrastructure, it was due to lack of interest amongst the farmers/businessmen owing to which project proposals were not received from the districts.

This indicates that physical and financial targets in the AAP were made without assessing the field level requirements resulting in lack of support mechanism to add value to the farmer's produce and marketing infrastructure for farmers to realise better price for their horticulture produce.

On this being pointed out (September 2012), the Government stated (November 2012) that till 2007-08, the horticulture produce was distributed at the State level itself. However, for subsequent years, extensive publicity was made regarding the facilities available to private industrialists for creating infrastructure under PHM. This resulted in establishment of seven cold storages, 275 pack houses, 570 zero energy cool chambers alongwith two wholesale markets in the State till date (November 2012).

The Government further stated (November 2012) that two wholesale markets-one each at Bilsapur and Raipur have been established whereas in respect of village *haat*, no proposals have been received from the districts. For establishment of one retail outlet in the private sector, sanction has since been provided.

During the exit conference (February 2013), APC accepted the facts and stated that necessary action will be taken for utilisation of the funds and achievement of the targets.

3.1.9.2 National Agriculture Development Plan (Rashtriya Krishi Vikas Yojna)

The Horticulture and Farm Forestry Department handles various schemes under RKVY, viz, Establishment of new gardens, Community Orchid Development, Hybrid seed production, Vegetable area expansion, Spices production, Flowers area expansion, Modernisation and up-gradation of old nurseries, protected cultivation, etc.

Scrutiny of the records of the test checked districts revealed that during the period 2007-12, there was cent *per cent* achievement of the targets for area expansion of horticulture crops²⁵ during the years 2007-08 and 2009-10 to 2011-12. However, no target was fixed for area expansion during the year 2008-09 and there was no achievement against it.

Table 17: Targets and Achievements for area expansion under RKVY

(area in hectare)

Crop	2007-08		2008-09		2009-10		2010-11		2011-12	
	T	A	T	A	T	A	T	A	T	A
Fruits	1932	1932	--	--	--	--	5000	5000	500	500
Vegetables	1003	1003	--	--	3135	3135	28000	28000	17014	17014
Spices	2135	2135	--	--	2460	2460	8000	8000	2156	2156
A&M	--	--	--	--	400	400	400	400	250	250
Flowers	--	--	--	--	131	131	1050	1050	1000	1000

(Source: Information provided by Department and compiled by audit)

Further, the status of budget received and expenditure incurred under RKVY during the period 2007-08 to 2011-12 was as below:

Table 18: Table indicating status of budget provision and expenditure

(₹ in lakh)

Year	Budget		Expenditure
	Provision	Released	
2007-08	1043.00	1043.00	1043.00
2008-09	2368.86	2017.07	2017.07
2009-10	5187.41	2527.74	2527.74
2010-11	9472.37	9472.37	9472.37
2011-12	11000.0	4237.67	4227.57
Total	29071.64	19297.85	19287.75

(Source: Information provided by Department and compiled by audit)

The table indicates that against the total provision of ₹ 290.72 crore for the period 2007-12, only ₹ 192.98 crore, being 66 *per cent* of the provisioned amount was released by GoI. Almost the entire allocated funds were however utilised during 2007-08 to 2011-12.

(a) Performance of the Government Seed Multiplication Farm, Bana, Raipur

A Plug Type Vegetable Seedling Production Unit was established (March 2010) at the Government Seed Multiplication Farm, Bana at a cost of ₹ 5 crore with an annual production capacity of 70 lakh seedlings per year.

²⁵

Fruits, vegetables, spices, flowers, aromatic and medicinal crops

On scrutiny of records of ADH, Bana, we observed that though the unit was established in March 2010, production of seedlings could commence only w.e.f. April 2011 due to problems in supply of electricity. Further, against the production capacity of 70 lakh seedlings per year, 49.23 lakh seedlings (**Appendix 3.1.18**) could only be produced upto May 2012 (13 months). The average monthly production was 3,78,703²⁶ seedlings against the actual capacity of 5,83,333²⁷ seedlings.

The commencement of production after one year of establishing the Plug Type Unit due to non-availability of electricity indicates lack of planning.

On this being pointed out (September 2012), the Government stated (November 2012) that initially the capacity of the installed mist chamber and hardening yard was not proportionate to the capacity of the seedling unit. However since a new mist chamber is being constructed through RKVY, the entire unit will function in its full capacity in future.

During the exit conference (February 2013), APC stated that after the completion of the additional mist chamber, the unit will be working in its full capacity. It was also stated that the unit is functioning as a 'Centre of Excellence' and its performance is being reviewed by representatives from other States.

(b) Unfruitful expenditure of ₹25 lakh on Hybrid seed production

For the purpose of vegetable hybrid seed production program, a Memorandum of Understanding (MoU) was signed (June 2011) between ADH, Seed Multiplication Farm, Bana, Raipur (SMF) and M/s Nirmal Seeds Private Limited where ADH was nominated as the implementing and funding agency for execution of the project under Public-Private-Partnership (PPP). While the ADH was responsible for providing irrigation facilities, green/poly house, shade net, farm machineries, implements, manures, fertilisers and other cost of cultivation besides providing skilled and unskilled labours, the agency was responsible for supply of parents of hybrid seeds, technical guidance for hybrid seed production and to procure the seeds obtained from cultivation as per the pre-determined procurement policy. The validity of the MoU was till the completion of the project in the financial year 2011-12. Funds amounting to ₹ 25 lakh was sanctioned under RKVY during the year 2010-11 for taking up the Hybrid Seed Production.

Scrutiny of the records of ADH, Vegetable Seed Production Farm, Bana, Raipur revealed that as per the MoU, the agency was to organise seed production program as under:

Sl. No.	Name of crop	Area in Hectare
1	Hybrid Okra	2.00
2	Hybrid Chilly	0.50
3	Hybrid Brinjal	0.50
4	Hybrid Bitter Gourd	1.50
5	Hybrid Capsicum	0.50
	Total	5.00

We however, observed that the actual sowing of seeds was done by the agency

²⁶ 4923135 seedlings produced in 13 months

²⁷ 7000000 seedlings per year i.e. average of 583333 seedlings per month

during July-September 2011, i.e. after the appropriate (as prescribed in the departmental guidelines) sowing period of May-June for which ADH, Bana had also taken up the issue (August 2011) with the agency, reminding them to complete the seed sowing work as per the MoU. An amount of ₹ 25 lakh was incurred by ADH, Bana by way of providing skilled/un-skilled labour, fuel, screen house and other expenses being the cost of cultivation for hybrid seeds.

However, against the total sowing of seeds for cultivation of hybrid seeds, the following quantity of hybrid seeds could only be produced till February 2012:

Table 19: Table indicating the actual yield of hybrid seeds

Type of hybrid seed	Area under production (ha)	Proposed average yield (qtl/ha)	1 ha=2.41 acre		Yield in quintals
			Proposed total yield	Actual yield (Percentage)	
Okra	2.00	18.075	36.15	0.165 (0.46)	35.985
Chilly	0.50	3.615	1.8075	No yield	1.8075
Brinjal	0.50	10.845	5.4225	0.32 (6)	5.1025
Bitter Guard	1.50	13.255	19.8825	0.483 (2)	19.3995
Capsicum	0.50	NA	NA	No yield	--

(Source: Information provided by the Department and compiled by Audit)

The table indicates that against the proposed yield, actual yield was very less and the yield percentage ranged between zero and six. As per MoU, the agency was required to procure the hybrid seeds so produced. However, till date (February 2013), the same was not done by the agency.

It is evident that the entire vegetable hybrid seed production program taken up under the PPP failed to achieve its objective and the expenditure of ₹ 25 lakh incurred by ADH, Bana was rendered unfruitful.

During the exit conference (February 2013), APC accepted the facts and stated that since the hybrid seed production programme was taken up for the first time, the desired production of hybrid seeds could not be achieved due to lack of experience and lack of technical expertise. However, directions have been issued for recovering the value of seeds produced from the agency as per the terms of the agreement of PPP.

The reply of the Government indicates that there was lack of planning and expertise in taking up the vegetable hybrid seed production programme which led to unfruitful expenditure.

(c) Unwarranted procurement of plug type plastic trays costing ₹48.80 lakh for Plug type seedling production unit at Bana and excess expenditure of ₹43.68 lakh on its purchase

For production of vegetable seedlings through vegetative propagation, supply order was issued (November 2009) by DHFF to 'NERAMAC²⁸' for establishment of 'Plug Type Vegetable Seedling Production Unit' at Bana. The supply order *inter-alia* included supply of 75,000 Plug type plastic trays at the rate of ₹ 3.98 per tray and equal quantity of corrugated paper box for packing the plastic trays at the rate of ₹ 8.98 per box for use in the Plug type

Non-achievement of desired yield led to unfruitful expenditure of ₹ 25 lakh on hybrid seed production.

²⁸

North Eastern Regional Agricultural Marketing Corporation Limited

seedling production unit. The capacity of each Plug type plastic tray was 99 seedlings.

Scrutiny of records of ADH, Bana revealed that a total of 49,23,135 seedlings were produced in the Plug Type Seedling Production Unit during April 2011(*operational date*) to May 2012 which indicates that approximately 49,729²⁹ set of trays were used in its production. Thus, out of 75,000 trays, 25,271 trays remained unused in the nursery. The annual production capacity of the plug type unit is 70,00,000 seedlings.

It was however noticed that despite availability of 25,271 trays, the Department purchased (February 2011) additional 1,15,303 Plug type plastic trays (99 cavity) costing ₹48.80 lakh. The unit cost of plastic trays provided with the Plug Type production unit was at the rate ₹ 4.47 (₹ 3.98+12.5 *per cent* VAT) whereas the additional plastic trays were purchased at a rate of ₹ 42.75 and ₹ 39.75 per tray. Thus, purchase of 1,15,303 additional Plug type plastic trays was not only unwarranted but also resulted in excess expenditure of ₹ 43.68 lakh³⁰.



Plug type plastic trays lying at Seed Multiplication Farm, Bana, (2 June 2012)

On this being pointed out (September 2012), the Government stated that ₹ 1.69 crore was sanctioned under RKVY by the SLSC for future expansion of the Plug type seeding production unit and the plastic trays have been procured from a Government institute keeping in view the future expansion.

The reply of the Government is not acceptable as taking into account the production capacity of the Plug Type Seedling Unit, the total trays accumulated can be sufficient for approximately two³¹ years. Thus, the purchase of the plug type trays in excess of immediate requirement was in violation of the extant financial rules. The reply of the Government is silent about the excess expenditure incurred on the procurement of plastic trays.

While agreeing to the fact during the exit conference (February 2013), APC stated that the matter will be examined to ascertain the reasons for excess procurement and that too at a higher price.

²⁹ 4923135 seedlings ÷ 99 = 49729 trays

³⁰ 42.75 - 4.47 = 38.28 * 100000 = 38,28,000 & 39.75 - 4.47 = 35.28 * 15303 = 5,39,889
Total excess cost = 38,28,000 + 5,39,889 = 43,67,889

³¹ Total seedling production capacity of the plug type unit = 7000000 annually i.e., 70707 trays will be consumed. Hence, 140574 trays will be consumed in 140574/70707 = 1.98 years

3.1.9.3 Vegetable Initiative in Peri-Urban Areas

Unfruitful expenditure of ₹ 10.19 crore under ‘Vegetable Initiative in Peri-Urban Areas’ programme

The programme ‘Vegetable Initiative for Peri-Urban Areas’ is a sub-scheme under RKVY which was taken up in the year 2011-12 to develop the project for vegetable supply to an identified city. In order to implement the programme, Director of Horticulture was to prepare a perspective/strategic plan based on the baseline survey to assess the extant of vegetable supply chain to the identified city, identify bottlenecks and potential vegetable growing clusters, existing as well as potential. This required organisation of vegetable growers into farmers’ association/groups, identification and selection of aggregators and tie-up with Farmers Associations/Groups.

For the first year, Raipur city was identified for which vegetable growers chain in eight adjoining districts viz, Mahasamund, Dhamtari, Durg, Kabirdham, Bilaspur, Raipur, Rajnandgaon and Kanker were to be developed under this scheme. For the purpose of baseline survey, one agency and for creating farmers produce organisations (FPOs), two private agencies were engaged through Small Farmers Agrobusiness consortium (SFAC) by the DHFF.

Scrutiny of records (July 2012) of seven³² out of the eight districts revealed that the physical target of 5,760 hectares and financial target of ₹ 7.20 crore was achieved for vegetable cultivation under this scheme during 2011-12. However, the agencies engaged for establishing farmers’ organisations neither conducted any survey work in six³³ out of the eight districts nor furnished any report on the creation of FPOs and details of tie-ups with market aggregators in respect of the remaining two districts.

However, without completion of survey work, constitution of the farmers’ association or their FPOs and selection of market aggregators by the agencies, the DHOs had distributed planting and input materials and incurred expenditure as detailed below:

Expenditure incurred on vegetable cultivation without creation of FPOs and tie-ups with market aggregators led to unfruitful expenditure of ₹ 10.19 crore.

Component	Expenditure incurred (₹ in lakh)
Seed Production of vegetables	104.00
Vegetable cultivation	720.00
Protected cultivation	60.35
Promotion of INM/IPM	10.00
Organic farming	114.00
Training of farmers	10.50
Total	1,018.85

After the mobilisation of FPOs, tie-ups with aggregators were to be ensured in such a way that the farm produce reached the targeted city for fulfilling the demand for vegetables. Without any FPOs, any tie-ups with aggregators and establishment of farmer’s markets etc, it was not possible to ensure that the vegetables, produced under this scheme, reached its intended destination. Thus, the main objective of the scheme got defeated and the expenditure

³² Bilaspur, Dhamtari, Durg Kabirdham, Kanker, Raipur and Rajandgaon

³³ Bilaspur, Durg, Kabirdham, Kanker, Raipur and Rajnandgaon

incurred was rendered unfruitful.

During the exit conference (February 2013), APC stated that one of the two agencies could not complete the allotted work of creation of FPOs and selection of market aggregators which led to non-fulfilment of the scheme objectives.

3.1.9.4 State Plan Schemes

For improving the economic condition and ensuring higher returns from limited land available with the farmers, the State is implementing various schemes for cultivation of fruits, vegetables and spices like Fruit Development, Vegetable Development, Banana production programme, Flower Development plan etc.

During the period 2007-12, the target and achievement of various horticulture crops under the State Plan schemes was as indicated below:

Table 20: Targets and Achievements under State Plan Schemes

Crop	2007-08		2008-09		2009-10		2010-11		2011-12		Total		Percent- age achieve- ment
	T	A	T	A	T	A	T	A	T	A	T	A	
Fruits	1600	1596	2208	2115	2208	2254	2574	2610	3046	3017	11636	11592	99.62
Vegetables	3820	3682	4953	4935	5853	5476	10900	10554	13047	12864	38573	37511	97
Spices	4300	4300	4900	4920	5600	5245	11000	11000	13200	13200	39000	38665	99
A&M	175	100	415	307	500	445	700	687	850	850	2640	2389	90
Flowers	14	14	15	16	16	11	27	27	33	33	105	101	96

T=Target; A=Achievement; A&M=Aromatic and Medicinal crops

(Source: Information furnished by Department and compiled by audit)

It is evident from the above that during the period 2007-08 to 2011-12, the target fixed in respect of area expansion of all types of horticulture crops was largely achieved.

(a) Unfruitful expenditure of ₹54.55 lakh on assistance to beneficiaries for Mango plantation under State sponsored scheme

The guidelines of the State sponsored scheme for fruit plantation 'Phal Paudh Ropan Yojna' provides for assistance to farmers for fruit plantation. For mango plantation, assistance of ₹ 10,938 per hectare (25 per cent of total cost) is to be provided to the beneficiaries in five years subject to 80 per cent survivability of the plants in subsequent years.

We however, observed from the records of DHOs, Bastar, Bilaspur and Raipur that during the years 2007-08 to 2010-11, a total of 1547 hectares was taken up under area expansion of mango. However, due to excessive mortality of mango crops, assistance after the first and in some cases after the second and third installments could not be provided to the farmers. Thus, due to excessive mortality of mango plants, the expenditure of ₹54.55 lakh (**Appendix 3.1.19**) incurred under the scheme failed to achieve the objective of area expansion thereby rendering the entire expenditure unfruitful.

During the exit conference (February 2013), APC accepted the audit observation and stated that subsequent assistance could not be provided as the

survivability of the plants were below the required percentage for release of subsequent assistance. Government also attributed the high mortality to improper care by farmers.

3.1.10 Conclusion

The Horticulture and Farm Forestry Department was set up to promote horticulture by motivating farmers for taking up horticulture instead of traditional farming, distribution of good quality seeds and planting materials, adoption of latest technology, providing training to farmers etc., and to oversee implementation of various Central and State schemes. Though, Strategic Action Plan for the period 2010-11 to 2014-15 was prepared for implementation of National Horticulture Mission, no such plan was prepared for the period 2005-06 to 2009-10 by the State Horticulture Mission. The Department suffered due to shortage of manpower at various levels resulting in ineffective monitoring of the scheme activities. Internal audit, a vital component of internal control mechanism, was absent. Except for medicinal and aromatic crops and flowers, achievement of targets under area expansion in respect of other horticulture crops was very good. Lack of proper monitoring by the Department led to excessive mortality of horticulture crops under National Horticulture Mission. Non-adherence to rules /regulations/ instructions by the Departmental authorities led to irregular expenditure on cultivation of spices and non-perennial fruits, diversion of funds, non-adjustment of temporary advances and extensive drawal through Simple Receipt bills.

Under National Horticulture Mission, we noticed there was non-utilisation of funds, and unfruitful expenditure due to non-availability of required infrastructure for operationalisation of created assets and under *Rashtriya Krishi Vikas Yojna*, we noticed unwarranted procurement of plug type plastic trays, unfruitful expenditure on hybrid seeds production and under “Vegetable initiative in peri-urban areas” programme. In respect of State Plan schemes, we noticed that the assistance given to the beneficiaries for mango plantation was rendered unfruitful due to high mortality of plants.

3.1.11 Recommendations

We recommend that the Department should:

- *Ensure deployment of adequate manpower to ensure smooth implementation of various schemes/programmes.*
- *Reinforce the mechanism to collect reliable and realistic data for assessment of horticulture production.*
- *Take steps to ensure achievement of capacity utilisation in plant production by the nurseries.*
- *Strengthen post harvest management to ensure value addition to the farmers produce and create adequate infrastructure for marketing of the produce.*

3.2 Public Health Engineering Department

Executive Summary

Public Health Engineering Department is responsible for monitoring and managing various water resources for extending safe drinking water facilities to the rural/urban population of the State and implementation and maintenance of various Central and State schemes being implemented for the purpose of water supply, sanitation, ground water recharging/water conservation and improvement of the environment.

The Chief Controlling Officer based Audit of the Department was conducted for the period 2007-12 to examine the economy, efficiency and effectiveness of significant activities. The major audit findings are discussed below:

- Detailed habitation survey was not conducted.
Detailed habitation survey should be conducted to update the database.
(Paragraph 3.2.6.1[b])
- Shortage of key functionaries ranged between 29 and 50 per cent.
Adequate staff should be posted for monitoring the activities of the Department.
(Paragraph 3.2.6.2)
- There was no Internal Audit Wing to carry out periodic internal audit.
Internal Audit wing should be established to ensure internal checks.
(Paragraph 3.2.6.4[a])
- There were persistent savings ranging from 14 to 31 per cent due to non-utilisation of fund.
Realistic budget estimates should be prepared through budgetary and financial controls.
(Paragraph 3.2.7.1[a][i])
- The projects and schemes remained incomplete even after incurring expenditure of ₹ 133.39 crore.
Efforts should be made to complete the projects within the stipulated time.
(Paragraphs 3.2.8.2[a])
- There was undue aid to the contractor amounting to ₹ 12.99 crore due to non-adherence to the provisions of USOR and agreement.
Provisions of USOR and agreement should be strictly adhered to.
(Paragraphs 3.2.8.2[b] & [d])
- State level and sub-divisional laboratories were not established and there was shortfall in quality tests of water sources.
State level and Sub-divisional laboratories should be established and regular monitoring of all water sources should be ensured.
(Paragraphs 3.2.8.4[a] & [b])
- There was wasteful expenditure of ₹ 23.21 lakh due to expiry of undistributed Field testing Kits and reagents.
The Field Testing kits and reagents should be utilised before expiry.
(Paragraph 3.2.8.4[e])
- Excessive procurement of stock amounting to ₹ 2.77 crore was made.
Procurement of stock should be made after due assessment of requirement.
(Paragraphs 3.2.8.5 [b] and 3.2.8.6 [b])

3.2.1 Introduction

Public Health Engineering Department (PHED) of Government of Chhattisgarh is the principal agency for monitoring and managing various water resources for extending safe drinking water facilities to the rural/ urban population of the State. The Department is entrusted with the work of implementation and maintenance of various schemes out of the funds provided by the Government of India (GoI) and State Government, for the purpose of water supply, sanitation, ground water recharging/ water conservation and improvement of environment.

The status of availability of drinking water facilities in India and Chhattisgarh as per Census 2011 is detailed below:

Table 1: Details of households having drinking water facilities in India and Chhattisgarh

(figures in crore)

Category	India		Chhattisgarh	
	Population	Percentage	Population	Percentage
Total no. of households	24.67	-	0.56	-
No. of households having drinking water facilities within premises	11.49	46.57	0.11	19.64
No. of households having drinking water facilities near premises	8.84	35.83	0.31	55.36
No. of households having drinking water facilities away from premises	4.33	17.55	0.15	26.79

(Source: Website of Registrar General & Census Commissioner, India)

It may be seen from the above table that the percentage of households in Chhattisgarh having drinking water facilities within the premises was far below the National level. However, the percentage of households having drinking water facilities near/away from premises was above the National percentage.

Keeping in view the objective of providing drinking water facilities, PHED, Chhattisgarh is implementing four major schemes viz. National Rural Drinking Water Programme (NRDWP), Urban Water Supply Schemes, Rural Water Supply Schemes (RWSS) and Total Sanitation Campaign (TSC).

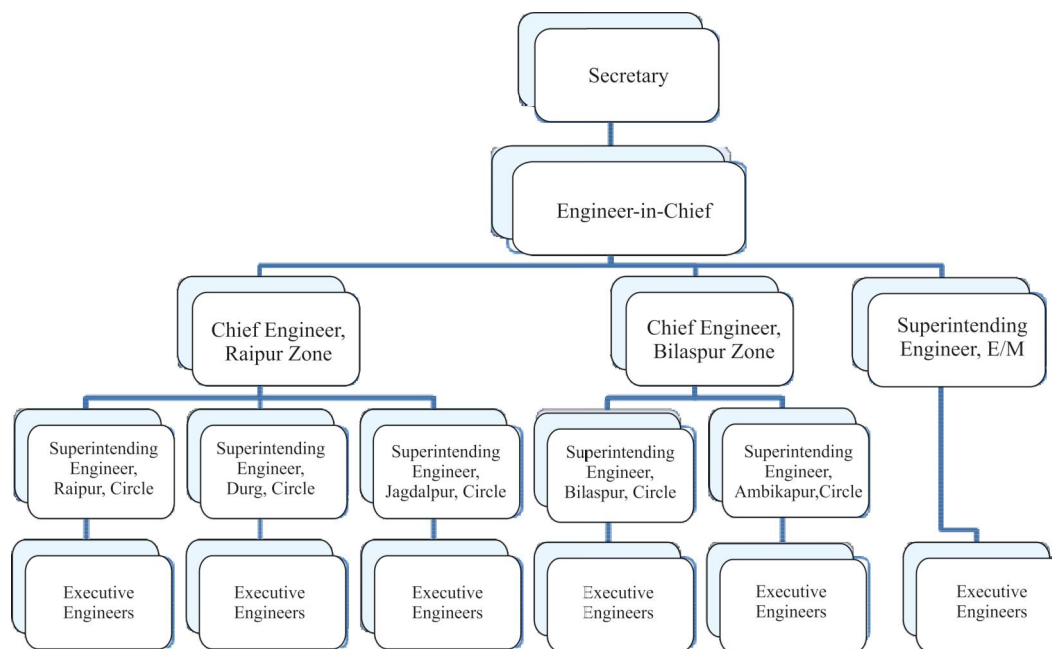
3.2.2 Mandate and organisational structure of the Department

PHED is the principal agency of the Government and is responsible for, *inter alia* preparation and execution of the water supply and sanitation projects in the State, maintenance of these projects either by itself or through local agency and carrying out work assigned in the Command Area Development.

The PHED is headed by the Secretary while Engineer-in-Chief (E-in-C) is the administrative head of the Department. The Department has two zones, six circles, 22 civil divisions and five mechanical divisions. The Engineer-in-Chief (E-in-C) is assisted by two Chief Engineers (CEs) at the Zonal level, six Superintending Engineers (SEs) at the circle level and 27 Executive Engineers

(EEs) at the divisional level. The organisational structure of the Department is depicted below:

Chart 1: Organisational Structure of PHE Department in Chhattisgarh



3.2.3 Audit objectives

The audit objectives were to evaluate whether:

- Planning was proper and adequate;
- Adequate manpower was available;
- Internal audit was in place and monitoring was effective;
- Financial management was efficient and effective;
- Programme management was efficient, effective and economical;
- and
- Store management was efficient and effective.

3.2.4 Audit criteria

The sources of audit criteria adopted for the CCO based audit of the PHED were as under:

- Works Department Manual (1983)
- Annual Action plans.
- Programme guidelines and administrative orders issued by GoI and the State Government.
- Chhattisgarh Financial Code (2000).
- Schedule of Rates (2002)

3.2.5 Audit scope and methodology

In order to conduct the Chief Controlling Officer (CCO) based Audit of PHED, nine¹ districts out of 16 were selected for audit. Apart from this, the Engineer-in-Chief office, the Chief Engineer offices (both Raipur and Bilaspur zone) and Superintending Engineer offices (one each from Raipur and Bilaspur zone) were also covered. The period of coverage was five years from 2007-08 to 2011-12. The audit was conducted from April 2012 to July 2012. Various aspects including planning, financial management, programme management, human resource management and internal controls were covered in the CCO based audit of PHED. An entry conference was held (21st May 2012) with the Secretary, PHED wherein the audit methodology, objectives, and coverage were discussed. The exit conference was held (21st February 2013) with the Secretary, PHED and the views of the departmental authorities were incorporated in the relevant observations.

3.2.6 Institutional Weaknesses

In order to ensure soundness and aptness of the internal systems and controls in its key areas of activities, an organisation needs to have sound infrastructure, sufficient manpower and adequate funds which help the organisation to manage and achieve its mandate in an economical, efficient and effective manner. Weaknesses in the Department noticed by us during the CCO based Audit are discussed in the succeeding paragraphs:

3.2.6.1 Planning

NRDWP guidelines stipulates that adequate water for drinking, cooking and other basic domestic needs on a sustainable basis is to be provided to every person. Scrutiny of records related to planning revealed deficiencies such as non-preparation of Village Action Plans (VAPs), District Water Security Plans (DWSPs) and inadequate survey etc. which are discussed below:

(a) Deficiencies in planning

NRDWP guidelines (2009-12) provides that Village Action Plans (VAPs), which include demographic, physical features, water sources, and other details of the villages i.e. available drinking water infrastructure and water sources and proposed work to augment the existing infrastructure and water sources were to be prepared for ensuring drinking water security. Based on all VAPs of the district, the District Water Security Plan (DWSP) was to be prepared by the concerned EEs. The guidelines further provides that States will have to plan for each year taking into consideration the ongoing schemes, new schemes as well as which will require augmentation and link to the habitations which are proposed to be covered under the schemes.

During scrutiny of records of the test checked districts we found that no VAPs and DWSPs were prepared during the period 2009-12 though, the AAPs for

¹ Ambikapur, Bilaspur, Dantewada, Dhamtari, Janjgir-Champa, Kawardha, Korea, Mahasamund, Raipur

NRDWP were prepared during the years 2009-12.

In the absence of VAP and DWSP, the physical and financial targets set in AAP as discussed in the subsequent paragraphs were not achieved and the objective of providing safe drinking water to the targeted people could only be achieved partially.

During the exit conference, the Government accepted the audit observation and stated (February 2013) that VAP was to include the availability of surface water sources as well as ground water which is a huge exercise and would involve high cost. However, the survey has been done for 10 villages in Rajnandgaon with the help of UNICEF recently.

The fact remains that without assessing village level demands, proper assessment cannot be made for State level AAPs.

(b) Detailed habitation survey not conducted

As per NRDWP guidelines (2009), the States were required to reverify the list of habitations entered online as a central database on the website² of the Department of Drinking Water and Sanitation, GoI and indicate the status of coverage in terms of covered or not covered habitations. If not covered, the specific reason as due to quality of water or quantity of water should be indicated. This process was required to be completed latest by March 2009.

The detailed habitation survey was not conducted since 2003.

During audit we observed that the Department had carried out detailed habitation survey in the year 2003. As per the survey, out of 5021 water quality affected habitations in the State, 4932 (98.20 *per cent*) were iron affected whereas the number of habitations affected by flouride, arsenic and hardness were 17 (0.34 *per cent*), 11 (0.22 *per cent*), 61 (1.22 *per cent*) respectively. However, detailed habitation survey was not carried out since 2003. In the absence of detailed survey of habitations, the present status of water quality affected areas, difficult and water stress areas and dark and grey areas required for planning could not be identified by the Department and did not form part of the AAPs.

During the exit conference, the Government stated (February 2013) that involvement of various other Departments is required for detailed habitation survey which is a huge exercise. It was further stated that the survey is conducted every 10 years and directions for conducting the next survey are awaited from GoI.

The fact remains that the AAPs which required incorporation of present status of water quality affected areas, difficult and water stress areas and dark and grey areas, did not contain such specific data due to non-conducting of detailed survey.

3.2.6.2 Human Resource Management

Inadequate staff strength

For effective functioning of the Department, implementation of the schemes

² www.ddws.nic.in

and monitoring activities, adequate human resources are necessary.

The position of sanctioned strength vis-à-vis persons in position in the Department as on March 2012 was as under:

Table 2: Status of manpower as on 31st March 2012

Sl. No.	Name of the post	Sanctioned Strength	Persons in position	Vacancy	Percentage of vacancies
1	Chief Engineer	4	2	2	50
2	Superintendent Engineer	11	12	--	--
3	Executive Engineer	42	27	15	36
4	Assistant Engineer	146	94	42	29
5	Sub Engineer	476	334	142	30
6	Draftsman/Assistant Draftsman	92	49	43	47
7	Head Clerk/ Senior/ Junior Assistant and others	307	159	148	48

(Source: Compiled from the records furnished by the Department)

There were vacancies in key posts ranged between 29 to 47 per cent.

It is evident from the above table that vacancies in key posts such as Assistant Engineer/ Sub Engineer/ Draftsman and Assistant Draftsman were significant, ranging from 29 to 47 per cent.

During the exit conference, Government stated (February 2013) that steps are being taken to fill up the vacancies.

3.2.6.3 Monitoring

Monitoring of Water Quality Monitoring & Surveillance

As per the Monitoring of Water Quality Monitoring & Surveillance (WQM&S) guidelines issued by the Department of Drinking Water Supply, Ministry of Rural Development, GoI (2008), for effective implementation of Water Quality Monitoring and Surveillance (WQM&S), field inspection by the District Water and Sanitation Mission (DWSM) and State Water and Sanitation Mission (SWSM) was to be done at least once in a quarter and once in six months respectively.

Details of visits made by the DWSM and SWSM during the last five years in the test checked districts are given below:

Table 3: Details of reviews to be conducted and actually conducted by DWSM and SWSM

Sl. No.	Name of the district	Target of reviews to be conducted by DWSM as per above instruction during 2007-12	No of reviews conducted by DWSM during 2007-12	Target of reviews to be conducted by SWSM as per above instruction during 2007-12	No of reviews conducted by SWSM during 2007-12
1	Ambikapur	20	0	10	0
2	Bilaspur	20	0	10	0
3	Dantewada	20	0	10	0
4	Dhamtari	20	0	10	0
5	Janjgir Champa	20	0	10	0
6	Kawardha	20	6	10	0
7	Korea	20	0	10	0
8	Mahasamund	20	0	10	0
9	Raipur	20	0	10	0

(Source: Compiled from the records furnished by the department)

There was inadequate monitoring under WQM&S.

It is evident from the above table, that in test checked districts, no review was conducted by DWSM except in Kawardha district where only six reviews were conducted against the target of 20. No review was conducted by SWSM.

This indicates that monitoring of WQM&S was highly inadequate.

During the exit conference, Government stated (February 2013) that necessary instructions would be issued for monitoring of WQM&S.

3.2.6.4 Internal Controls

Internal controls in a department *inter alia* includes internal audit, inspection of higher authorities etc. to ascertain and evaluate the level of compliance of rules and procedures in the organisation. Scrutiny of records revealed the following:

(a) Internal audit

There was no internal audit wing in the Department.

Test check revealed that the Department did not have any internal audit wing of its own and during the last five years, none of the test checked divisions were audited.

During the exit conference, the Government stated (February 2013) that steps would be taken to complete the audit of all field offices by the end of the financial year by deploying additional staff and creating an internal audit wing.

(b) Inspection by higher authorities

We observed that the higher authorities viz. E-in-C, CEs and SEs had not inspected the divisions during the last five years. The details of visits made by the higher authorities to the divisions during the last five years are given below:

Table 4: Details of visits to districts by higher authorities

Sl. No.	Name of the division	Visits made by E-in-C	Visits made by the Chief Engineer	Visits made by the Superintending Engineer
1	Ambikapur	0	0	0
2	Bilaspur	0	0	0
3	Dantewada	0	0	3
4	Dhamtari	0	0	2
5	Janjgir-Champa	0	0	1
6	Kawardha	0	1	1
7	Korea	0	0	0
8	Mahasamund	0	0	0
9	Raipur	0	0	0

(Source: Compiled from the records furnished by the Department)

From the above, it may be observed that E-in-C, PHED had not inspected any of the test checked divisions. However, the CE had visited Kawardha division once (May 2012) and SE had visited Dantewada thrice, Dhamtari twice and once each to Janjgir-Champa and Kawardha division during the last five years.

During the exit conference, no specific reply was given by the Government.

3.2.7 Compliance Issues

For sound financial management and control, it is essential that expenditure conforms not only to financial rules and regulations but is also in consonance with orders issued by the competent authority. This helps in maintaining good financial discipline besides preventing financial irregularities, misappropriation and frauds. Some of the audit findings on non-compliance with rules and regulations are discussed in the succeeding paragraphs:

3.2.7.1 Financial Management and Budgetary Controls

GoI and the State Government provides funds for schemes to be implemented by the Department. While funds are shared by the GoI and the State Government for Centrally Sponsored Schemes, in respect of State schemes, the funds are provided by the State Government. The funding pattern of various Centrally sponsored schemes and State schemes for providing safe drinking water, sanitation etc. is given in the following table:

Table 5: Funding pattern of Centrally Sponsored and State Schemes

Sl. No.	Name of Scheme	Component	Funding Pattern
Centrally Sponsored Schemes			
1.	National Rural Drinking Water Programme (NRDWP)	Coverage, Water quality, Operation and Maintenance.	50:50 by the GoI and the State Government
		Sustainability	100 per cent by the GoI
2.	Total Sanitation Campaign (TSC)	Individual latrines for BPL/disabled households	60:20:20 by the GoI, the State Government and the beneficiaries respectively
		Individual latrines for APL	100 per cent by the beneficiaries.
		School Sanitation including Anganwadi	70:30 by the GoI and the State Government
State Schemes			
3.	Rural Water Supply Schemes	Piped Water supply scheme not covered under NRDWP	100 per cent by State Government
		Spot Source Scheme for small villages not covered under NRDWP	100 per cent by State Government
		Drilling of tubewells	100 per cent by State Government
		Operation & Maintenance	100 per cent by State Government
4.	Urban Water Supply Scheme	-	70:30 by the State Government and loan by the Local bodies

(Source: Guidelines issued by GoI and State Government)

PHED is responsible for initial estimation and control over expenditure against the grant or appropriation placed at its disposal. Our scrutiny of budgetary allocations and their utilisation revealed deficiencies such as consistent savings, inappropriate provision, and non reconciliation of cheques and remittances etc. as discussed below:

(a) Budgetary Management

(i) The financial outlay provided by the GoI and the State Government to the Department for the last five years was under:

Table 6: Year-wise Allotment and Expenditure

(₹ in crore)

Year	GOI			State			Total		
	Allotment	Expenditure	Savings (Per cent)	Allotment	Expenditure	Savings (Per cent)	Allotment	Expenditure	Savings (Per cent)
2007-08	111.71	107.29	4.42 (3.95)	342.03	279.84	62.19 (18.18)	453.74	387.13	66.61 (14.68)
2008-09	148.58	123.18	25.40 (17.09)	380.58	329.76	50.82 (13.35)	529.16	452.94	76.22 (14.40)
2009-10	223.98	104.74	119.24 (53.23)	275.51	240.06	35.45 (12.87)	499.49	344.80	154.69 (30.97)
2010-11	128.70	100.45	28.25 (21.94)	284.11	238.71	45.40 (15.98)	412.81	339.16	73.65 (17.84)
2011-12	130.23	123.98	6.25 (4.80)	244.44	175.36	69.08 (28.25)	374.67	299.34	75.33 (20.11)
Total	743.20	559.64	183.56	1526.67	1263.73	262.94	2269.87	1823.37	446.50

(Source: Compiled from the records furnished by the department)

It may be seen from the above table, that an allotment of ₹ 2269.87 crore was provided to the PHE department by the GoI and the State Government during

the period 2007-08 to 2011-12. Against this, an expenditure of ₹ 1823.37 crore was incurred. As analysed by us, the saving of ₹ 446.50 crore occurred mainly due to non completion of urban/rural water supply schemes, non-incurring of expenditure under water quality and sustainability and non-achievement of targets under TSC. The details of scheme-wise funds allocated and the expenditure incurred is given in **Appendix 3.2.1 and 3.2.2**.

During the exit conference, the Government stated (February 2013) that the main reason for savings was due to delay in sanction of the schemes/new items by the Government. It was further stated the budget for the next year is prepared by increase of 10 to 15 *per cent* of the current year's budget on *ad hoc* basis and assured that steps would be taken to utilise the funds to the maximum extent.

(ii) Unrealistic supplementary budget provision (Grant No. 20- PHE)

The budget provision and expenditure for Grant No. 20 pertaining to PHE Department was as follows:

Table 7: Year-wise Budget provision and expenditure

(₹ in crore)

Year	Original	Supplementary (Per cent)	Total	Expenditure	Savings (Per cent)
2007-08	201.38	27.14 (13.48)	228.52	208.23	20.29 (8.88)
2008-09	250.56	18.92 (7.55)	269.48	247.56	21.92 (8.13)
2009-10	242.77	25.90 (10.67)	268.67	251.85	16.82 (6.26)
2010-11	212.17	45.63 (21.51)	257.80	239.70	18.10 (7.02)
2011-12	275.42	39.02 (14.17)	314.44	301.28	13.16 (4.18)

(Source: Appropriation Accounts of the respective year)

It is evident from the above table that:

1. There was lack of foresight in making original budget estimates which necessitated supplementary provisions under the grants ranging from 7.55 to 21.51 *per cent* of the original grant in each of the years from 2007-08 to 2011-2012.
2. Although supplementary provisions ranging from ₹ 18.92 crore to ₹ 45.63 crore were made, savings ranged from ₹ 16.82 crore to ₹ 21.92 crore at the end of the financial years indicating that requirement of funds through supplementary provisions was not assessed properly in all the years. During 2008-09, although the total expenditure of ₹ 247.56 crore incurred was within original provision of ₹ 250.55 crore, a supplementary provision of ₹ 18.92 crore was made unnecessarily.

During the exit conference, Government stated (February 2013) that in the year 2008-09, the supplementary provisions were made due to sanction of new posts. However, the posts could not be filled up.

(b) Shortfall in achievement of targets under ‘Water Quality’ and ‘Sustainability’

‘Water Quality’ includes works as alternate water source development, dug well, installation of Iron Removal Plant (IRP)/ Fluoride Removal Plant (FRP) etc. ‘Sustainability’ includes hydro fracturing of tubewells, rejuvenation of old hand pumps, sub-surface dykes, boulder check cum dykes, percolation tanks, stop dams etc.

The NRDWP guidelines provide for 40 *per cent* of total allocation under two components viz. ‘Water Quality’ (20 *per cent*) and ‘Sustainability’ (20 *per cent*) which form a major part of the scheme.

In nine test checked districts, we observed that though provision of ₹ 51.94 crore for ‘Water Quality’ was made in the AAP for the years 2010-11 and 2011-12, expenditure amounting to ₹ 1.12 crore (March 2012) in four³ test checked districts was incurred while in the remaining four⁴ test checked districts, actual expenditure could not be ascertained due to combined reporting of expenditures for Water Quality and Coverage. We further observed that in all the test checked districts, provision of ₹ 59.34 crore for ‘Sustainability’ was made in the AAP, but expenditure amounting to ₹ 9.40 crore (15.84 *per cent*) only was incurred (March 2012). The details of provisions made in AAP and expenditure under both the heads in the test checked districts is detailed below:

There was shortfall in achievement of targets under ‘Water Quality’ and ‘Sustainability’.

Table 8: Provision and expenditure under Water Quality and Sustainability

(₹ in lakh)

Districts	Water Quality			Sustainability		
	Provision	Expenditure	Percentage	Provision	Expenditure	Percentage
Ambikapur	1515.00	26.99	1.78	1039.20	94.71	9.11
Bilaspur	1097.50	NA	NA	1434.80	135.58	9.45
Dantewada	1401.01	NA	NA	300.75	76.62	25.48
Dhamtari	142.75	NA	NA	280.65	56.56	20.15
Janjgir-champa	261.50	NA	NA	440.16	61.67	14.01
Kawardha	309.18	28.80	9.31	351.25	89.25	25.41
Koria	389.90	45.17	11.58	552.37	53.77	9.73
Mahasamund	77.25	10.90	14.99	397.25	54.41	13.69
Raipur	0.00	0.00	--	1137.51	317.44	27.91
Total	5194.09	111.86	2.15	5933.94	940.01	15.84

(Source: Compiled from the records furnished by the department)

It was evident from the above that there was wide variation between provision made and expenditure incurred under ‘Water Quality’ and ‘Sustainability’.

During the exit conference, the Government stated (February 2013) that progress would be made under both the components.

(c) Non-reconciliation of Cheques and Remittances

As per paragraph number 23.20.05 of the Central Public Works Account (CPWA) Code, the schedule of Reconciliation of Cheques and Cash

³ Ambikapur, Korea, Kawardha, Mahasamund

⁴ Bilaspur, Dantewada, Dhamtari, Janjgir-Champa

Remittances in Form-51 is to be sent with the Monthly Accounts to the Accountant General (Accounts & Entitlement) by the Public Works Divisions.

Scrutiny of records revealed that the amount of Cash and Cheques remittances were not reconciled and there were differences amounting to ₹ 58.94 crore in Cash remittances (Part-1) and ₹ 10.18 crore in Cheque remittances (Part-II) (*Appendix 3.2.3*)

We also observed that the accounts were not reconciled with the treasury in eight⁵ districts and the period for which reconciliation was pending ranged from 13 to 60 months whereas in seven⁶ districts the reconciliation was not done for two to seven months. However, reconciliation was done regularly in Dantewada.

During the exit conference, Government accepted the audit observation and stated (February 2013) that the process of reconciliation has been started. However, for early completion of the reconciliation, directions would be issued.

(d) Outstanding Miscellaneous Public Works Advances

As per Paragraph 13.4 of the CPWA Code, Miscellaneous Public Works Advances (MPWA) is a sub-head of a temporary character and is debited with the value of stores sold on credit, expenditure incurred on deposit works in excess of funds received, loss of cash/store items and sums recoverable from Government servants. The transactions are to be ultimately settled either by way of recovery in cash or by adjustments.

Scrutiny of monthly accounts of all the 16 districts revealed that an amount of ₹ 33.93 crore in 1142 individual cases remained outstanding as on March 2012 (*Appendix 3.2.4*). In the nine test checked districts, we observed that an amount of ₹ 16.88 crore was outstanding in 575 cases and no steps were taken by the Department to effect recovery or to adjust the outstanding amount.

During the exit conference, Government stated (February 2013) that most of the advances were due to non-payment by the concerned departments for deposit works.

3.2.8 Service Delivery

Programme Management

PHED implements State schemes i.e. Urban Water Supply Schemes and Rural Water Supply Schemes (RWSS) (not covered under the NRDWP) and Centrally Sponsored schemes i.e. NRDWP and TSC. The Urban Water Supply Schemes are executed to supply potable drinking water to every household in urban areas. RWSS comprised of Piped Water Supply Schemes (PWSS), Spot Source Schemes⁷, drilling of tubewells, operation and

⁵ Ambikapur, Dhamtari, Kawardha, Rajnandgaon, Kanker, Raigarh, Jashpur, Durg

⁶ Bilaspur, Janjgir-Champa, Korea, Mahasamund, Raipur, Jagdalpur, Korba

⁷ Spot Source Schemes refers to schemes in which water is supplied from a distant source in case of non-availability or non-potability of the water in the area.

maintenance etc. The components of NRDWP scheme were Coverage, Water quality, Operation and maintenance, Sustainability and Support. TSC is implemented to increase sanitation coverage in rural areas.

The irregularities/shortcomings noticed in implementation of these schemes are discussed below:

3.2.8.1 Status of Habitations and drinking water coverage

As per Accelerated Rural Water Supply Scheme (ARWSP) norms (upto 2008), habitations with a supply of 40 litre per capita per day (lpcd) of water were categorised as Fully Covered (FC), those with 10 lpcd or more but less than 40 lpcd were categorised as Partially Covered (PC) and those below 10 lpcd were categorised as Not Covered (NC). After 2008, under NRDWP, the GoI shifted the conventional norms of litres per capita per day (lpcd) to drinking water security i.e. basic minimum requirement of water in a sustainable manner at the household level for drinking, cooking and other purposes. The challenges were to be met by Urban Water Supply Scheme (for medium and small towns), PWSS and Spot Source scheme (for medium and small villages) and drilling of tubewells.

The status of habitations and drinking water coverage during the year 2011-12 as compared to 2007-08 (five year period) was as follows:

Table 9: Status of Habitation and Drinking Water Coverage in Chhattisgarh

Particulars	2007-08	2011-12
1	2	3
No. of villages	19744	19744
No. of villages covered	19744	19744
No. of habitations	72775	72329
No. of habitations fully covered	62906	72329
No. of habitations partially covered	7288	-
No. of habitations not covered	2581	-
No. of habitations having iron affected water quality	4932	8747
No. of habitations having fluoride affected water quality	17	18
No. of habitations having hard water	61	65
No. of habitations having affected arsenic/nitrate	11	8
No. of schools not having drinking water facility	2965	4612
No. of Anganwadi centres not having drinking water facilities	NA	23413
No. of functional hand pumps	184401	218571
No. of small and medium towns	110	169
No. of AUWSP* sanctioned in medium and small towns	110	128
No. of completed AUWSP	43	69
No. of ongoing AUWSP	31	37
No. of AUWSP yet to be started	36	22
No. of PWSS sanctioned	1539	2357
No. of PWSS completed	1125	1736
No. of ongoing PWSS	255	130
No. of PWSS yet to be started	159	291
No. of sanctioned Spot source schemes	1963	2467
No. of completed Spot source schemes	1228	1900
No. of ongoing Spot source schemes	486	230
No. of Spot source schemes yet to be started	249	337

*Augmented Urban Water Supply Programme
(Source: Administrative Report of the Department)

It is evident from the table that:

1. 59 (37+22) Water supply schemes, 421 (130+291) PWSS schemes and 567 (230+337) Spot source schemes for medium and small town, medium Villages and small Villages respectively were still ongoing/ yet to be started. Thus, the population required to be covered under the above schemes was yet to be benefited.
2. Moreover, in 41 (169-128) medium and small towns, required water supply schemes were yet to be initiated up by the department.
3. As on March 2012, 8747 habitations were supplied the contaminated water having iron, 18 with fluoride, 65 with hard water and eight with arsenic/nitrate affected water.
4. In 4612 Schools and 23413 Anganwadi Centres (AWCs) drinking water facility was not available.

During the exit conference, the Government stated (February 2013) that the coverage of habitations has improved further and current status of habitations and drinking water coverage would be furnished to audit.

However, the current status of habitations and drinking water coverage was not furnished to audit (March 2013).

Execution of Schemes

3.2.8.2 Urban Water Supply Schemes

The Urban Water Supply Programme is implemented in the State with funding pattern of 70 *per cent* Grants-in-aid by the State Government and 30 *per cent* loans taken by the local body. The Urban Water Supply Scheme consists of construction of Intake well on the water source, raw water mains for carrying water for treatment, Water treatment plant (WTP), clear water mains for carrying treated and chlorinated water for storage, Over Head Tanks (OHT) for storage of water and distribution network for supplying water to the habitations of the town.

In the nine test checked districts, we scrutinised 12 Urban Water Supply Schemes and one Sullage Conveyance, Treatment and Disposal scheme. As of July 2012, the status of the works was as shown in the following table:

Table 10: Status of Urban Water Supply Schemes

(₹ in crore)

Sl. No.	Name of District	Name of Project	Projected population	Year of sanction	Project cost	Revised project cost	Expenditure	Due date of completion	Current status
1	Ambikapur	Ambikapur Augmentation WSS-Outer	42103	2007-08	14.90	25.72	21.59	July 2010	Incomplete
2		Sitapur Augmentation WSS	8675	2007-08	4.82	5.66	4.42	September 2010	Incomplete
3	Bilaspur	Mungeli Augmentation WSS	31613	2007-08	4.44	6.52 awaited	4.20	March 2010	Incomplete
4	Dantewada	Dantewada WSS	8225	2006-07	2.19	4.39	4.32	August 2009	Incomplete
5		Bade Bachel WSS	10298	2007-08	3.66	-	2.14	-	Incomplete
6	Dhamtari	Dhamtari Augmentation WSS	100629	2008-09	17.24	31.36	18.44	May 2011	Incomplete
7	Janjgir-Champa	Champa Augmentation WSS		2007-08	8.51	-	4.85	March 2010	Incomplete
8	Kawardha	Kawardha Augmentation WSS	32415	2006-07	15.01	-	15.30	February 2009	Incomplete
9		Sullage Conveyance, Treatment & Disposal Scheme for Sakri River in Kawardha	100000	2007-08	4.89	-	1.77	August 2010	Incomplete
10	Korea	Manendragarh WSS	30755	2007-08	8.94	-	6.11	March 2009	Incomplete
11	Mahasamund	Mahasamund Augmentation WSS	47203	2006-07	18.00	25.24	17.67	September 2009	Incomplete
12	Raipur	Birgaon Augmentation WSS	57189	2006-07	16.74	29.31	26.93	September 2009	Incomplete
13		Kasdol Augmentation WSS	11403	2007-08	4.75	7.73	5.65	April 2010	Incomplete
Total			480508		124.09		133.39		

(Source: Compiled from the records furnished by the department)

Non-completion of works after stipulated period and non-imposition of penalty for delay, extra cost, non-deduction of amount for testing, undue aid to contractors, execution of works without preparation of detailed estimates etc. noticed during scrutiny of records pertaining to these schemes are discussed below:

(a) Non-completion of works resulted in unfruitful expenditure of ₹133.39 crore and non-imposition of penalty ₹8.01 crore for delay

As per clause 2 of the agreement (Form A⁸), the time allowed for carrying out the work shall be strictly observed by the contractor. In the event of failure to complete the work within the stipulated period, the Executive Engineer shall levy penalty on the contractor, as compensation of an amount equal to 1/16 *per cent* of the value of work per week in respect of work costing ₹ 25 lakh and above. The provision further provides that the total amount of compensation shall be limited to six *per cent* of the total value of the work.

⁸ Percentage Rate tender

As per Clause 13 of the agreement (Form F⁹), the work shall be finished within the period stipulated in the agreement and in case of default, liquidated damages per day as stipulated in the agreement shall be levied limited to 10 *per cent* of the estimated value of the work.

During scrutiny, we noticed that administrative approval in the 12 test checked Urban Water Supply Schemes and one Sullage Conveyance, Treatment and Disposal scheme in the selected districts was accorded for ₹ 124.09 crore by the PHED, Government of Chhattisgarh (GoCG).

There was unfruitful expenditure due to non-completion of work and non-delivery of intended benefits to the targeted beneficiaries.

During audit of records of PHED, we observed that the 13 schemes comprised of 112 major components/ works out of which Notice Inviting Tender (NITs) for 92 works amounting to ₹ 91.89 crore were invited. Out of the remaining 20 works, while three works were at different stages of tendering, tenders for 17 works were not invited till the date of audit (July 2012). We further observed that out of 92 works, 49 works were completed and the progress in respect of 37 works ranged between 51 to 99 *per cent*. However, the progress in respect of four out of the six remaining works was low, ranging between 33 to 48 *per cent* while two works were not started. Though the stipulated period of completion of 13 schemes was between March 2009 to May 2011, none of the schemes was completed even after incurring of expenditure aggregating to ₹ 133.39 crore (*Appendix 3.2.5*).

Scrutiny further revealed that although the schemes were incomplete even after lapse of 14 to 36 months of the stipulated period of completion, out of 13 schemes, in 11 schemes the competent authority had neither given any time extension nor imposed any penalty against the contractors as stipulated in the agreement. In Dantewada, in two water supply schemes, penalty was imposed at lesser rates i.e. 0.5 to 1.5 *per cent* contrary to the provisions of the agreement. This had resulted in non-imposition of penalty amounting to ₹ 8.01 crore on the contractors and led to extension of undue financial benefit (*Appendix 3.2.6*).

It was evident from the above that non-completion of the works not only resulted in unfruitful expenditure amounting to ₹ 133.39 crore but also led to denial of intended benefits to the targeted beneficiaries.

During the exit conference, the Government stated (February 2013) that some of the water supply schemes were at completion stage and water supply is being provided to the people partially. It was further stated that necessary instructions would be given to obtain certificate after completion of all the schemes.

The reply was not acceptable as there was nothing in the records produced to audit to indicate whether any time extension was allowed by the department or any penalty was imposed on the contractors due to delay in completion of the works.

⁹ Lump sum tender

(b) Undue aid of ₹ 9.04 crore to contractor due to non-deduction of testing charges

As per Clause 5 of General Notes of Unified Schedule of Rates (USOR) in respect of work of Water Supply and Sewerage (w.e.f. 01.09.2002), the contractor, on completion, or whenever required by the Engineer-in-Charge, shall prove all materials, pipes, fittings, joints and other accessories etc. to be clear, clean, perfect in working condition and strong enough to withstand the tests so specified here-in-under different items of specification. The contractor shall rectify any defects as to the materials or workmanship, so noticed, and the defective portions shall be re-tested at his expense. Till such time the test is completed an extra 10 per cent of the bill amount shall be withheld from the contractor's running bill and the same would be released only after testing to the entire satisfaction of the Engineer-in-Charge.

There was undue aid to contractor due to non-deduction of testing charges.

Scrutiny of records revealed that the above mentioned clause was not made part of the agreement in eight¹⁰ test checked districts. It was also observed that in 65 agreements of raw and clear water main, WTPs and distribution network in these districts, 10 per cent of the amount for testing was not deducted from the Running Account bills of the contractor as provided in the above clause. However, in Bilaspur, though the above clause was incorporated in the common set of conditions of the agreement, 10 per cent for testing was not deducted from the bills of contractor.

Thus, the provision of USOR was not made part of the agreements in eight test checked districts except Bilaspur and the required amount i.e. 10 per cent of value of work done for testing was not deducted from the contractor's bills. This had resulted in undue aid of ₹ 9.04 crore to the contractors (**Appendix 3.2.7**).

During the exit conference, the Government accepted the audit observation and stated (February 2013) that instructions will be issued for deductions from the contractors' bills accordingly.

(c) Extra cost of ₹ 1.72 crore due to preparation of inflated estimates

As per clause 2.027 of the WD Manual the rates in an estimate should generally agree with the Schedule of Rates. Where for any cause the latter is not considered suitable or sufficient, the deviation should be explained in detail in the estimates, and if there is no relevant rate in the SOR for a particular item of work in the estimate, the proposed rate should be supported by an analysis.

Scrutiny of records in three divisions¹¹ revealed that estimated cost of five works¹² as per USOR of PHED was ₹ 17.10 crore. However, while preparing

¹⁰ Ambikapur, Dantewada, Dhamtari, Janjgir Champa, Kawardha, Korea, Mahasamund, Raipur

¹¹ Dantewada, Kawardha, Mahasamund

¹² Construction of Intake well, Jackwell and RCC foot Bridge under Mahasamund Augmentation WSS, Canal Intake, Raw water Gravity Mains, WTP, RCC Sumpwell, Clear Water Mains and OHSR (550 KI) and Distribution System under Kawardha

the Detailed Project Report (DPR), the above estimated cost was enhanced by 25 to 70 *per cent* (₹ 1.72 crore) without any justification by the divisions. Since the tendering procedure was available to get the most competitive price, there was no justification to revise the estimates in an *ad hoc* manner without following the provisions of the WD Manual. Thus, the enhancement in estimates in an *ad hoc* manner facilitated the contractors in quoting higher rates which resulted in extra cost of ₹ 1.72 crore (**Appendix 3.2.8**).

During the exit conference, Government stated (February 2013) that the estimates would be prepared from the new SOR which has been enforced from February 2013.

(d) Undue aid of ₹ 3.95 crore to the contractors by preparing break up schedule of payment in violation of provisions of the agreement

As per Clause 15 of the conditions of agreement (Form-F: Lumpsum contract), the contractor shall be paid 90 *per cent* of the total value of the work done and the amount remaining due shall be paid to the contractor within 12 months after completion of the work.

There was undue aid to contractor due to violation of provision.

During scrutiny of the records of 39 agreements in eight¹³ test checked districts, we observed that the above clause of the agreement was not adhered to and the break up schedule of payment for execution of various stages of works was prepared by taking 100 *per cent* of the tendered cost of the work and payments were made to the contractors stage wise as per the break up schedule of the agreements. Thus, due to not taking the above clause into consideration while preparing the break up schedule for payment of these works, the contractors received payment of 100 *per cent* of the value of work done instead of 90 *per cent* as mentioned in the above clause. This resulted in undue aid of ₹ 3.95 crore to the contractors (**Appendix 3.2.9**).

During the exit conference, the Government accepted the audit observation and stated (February 2013) that the breakup schedule would be prepared as per the provisions in the agreement.

Other points of interest noticed in execution of Urban water supply schemes:

(e) Avoidable extra cost of ₹ 24.13 lakh due to laying of pipeline on both sides of road

The work of providing, laying and jointing pipe line (distribution main) under Mungeli Augmentation Water Supply Scheme was awarded (October 2010) to a contractor¹⁴ with contract amount of ₹ 2.11 core. The stipulated period of the completion of the above work was 11 months including rainy season. The work was under progress and the contractor was paid ₹ 1.02 crore (November 2011).

Augmentation WSS, Sullage Conveyance, Treatment & Disposal scheme for prevention of Pollution of Sakri River and Construction of Intake well, Jackwell and RCC Bridge under Dantewada WSS

¹³ Ambikapur, Dantewada, Dhamtari, Janjgir-Champa, Kawardha, Korea, Mahasamund, Raipur

¹⁴ Agreement No. 27 DL/2010-11

The work was sanctioned with 20981 m of length DI K-7 pipe which included 3574 m of 150 mm and 786 m of 200 mm DI K-7 pipe.

Scrutiny of records revealed that during execution, the Department laid pipes on both sides of the road on some stretches. As a result, the length of 150 mm K-7 & 200 mm K-7 pipe had increased from 3574 m to 4500 m and 786 m to 1400 m respectively. The increased length was not provided in the original estimate and was executed without approval of the competent authority. Thus, execution of pipeline work on both sides of the road resulted not only in avoidable extra expenditure but the work executed to the extent of ₹ 24.13 lakh was also unauthorised. The details are given below:

Table 11: Details of avoidable extra cost

(₹ in lakh)					
Sl. No.	Description	Original Length (in m)	Revised Length (in m)	Increase in Length (in m)	Total
1	150 mm K-7 DI pipe	3574	4500	926	832
2	200 mm K-7 DI pipe	786	1400	614	1037
					1407150
	Add tender per cent 71.5 per cent above				2413262

(Source: Compiled from the records furnished by the department)

During the exit conference, the Government stated (February 2013) that the pipeline was laid on both sides keeping in view the importance of the road and for providing facility to the residents.

Since the DPR was prepared after detailed survey of the site, there should not have been any deviation during execution. Hence, the reply is not acceptable.

(f) Excess payment of ₹ 22.94 lakh to contractor due to change in scope of work in Dantewada Water Supply Scheme

The DPR of the work of Dantewada Water Supply Scheme included intake well, approach bridge and approach road estimated at a cost of ₹ 28.12 lakh. The technical sanction of ₹ 35.15 lakh (25 per cent above estimated cost on prevailing tender rate) was accorded (September 2007).

The E-in-C, PHED, inspected the site and instructed (December 2006) to shift the intake well upstream by 100 m which changed the location of the intake well from within the river to the bank of the river. As per the instruction, item of jack well was to be executed in place of approach bridge and approach road.

The work of construction of intake well, treatment plant, overhead service reservoir etc. was awarded (December 2007) to a contractor on lump sum basis for ₹ 1.75 crore. The stipulated period of completion was 12 months excluding rainy season. The work was under progress and the contractor was paid ₹ 1.67 crore (July 2012).

Scrutiny of records revealed that while inviting tender (March 2007), the item of intake well with estimated cost of ₹ 35.15 lakh was included in the scope of work. Though the item of jack well as suggested by E-in-C was not included in the scope of the work, however, the same was executed. No separate

estimate for executing this item was prepared by the Department. It was further observed that the item of approach bridge and approach road were not excluded from the estimate and the payment to the contractor was made as per breakup schedule of the agreement without adjusting the non-executed items. This had resulted in excess payment amounting to ₹ 22.94¹⁵ lakh to the contractor.

During the exit conference, the Government accepted audit observation and stated (February 2013) that action would be taken and recovery would be made from the final bill of the contractor.

3.2.8.3 Rural Water Supply Schemes

PHED executes Rural Water Supply Schemes (RWSS) under the State schemes and Centrally Sponsored Schemes. RWSS, *inter alia*, includes drilling of tubewells, laying and jointing of pipelines, construction of overhead tanks etc. Under RWSS, two schemes i.e. Piped Water Supply Schemes (PWSSs) for medium and small town having population of more than 2000 (as per Census 2001) and Spot Source Scheme for small towns having population of less than 2000 are being implemented. After completion of the RWSS works, PHED hands these projects over to the Gram Panchayat (GP) for maintenance.

Scrutiny of records revealed several deficiencies such as extra cost on construction of OHT, closure of schemes due to non-maintenance, non-completion of schemes, drilling of unsuccessful tubewells and irregular expenditure etc. as discussed in the succeeding paragraphs:

(a) ***Extra cost of ₹ 11.03 crore due to irregular execution of OHT in PWSS for villages having population less than 2000 and delay in completion***

PHED, GoCG issued instructions (April 2007) to follow the criteria of population while preparing DPRs of PWSS schemes for villages. Accordingly, for villages having population of more than 2000, the PWSS consisting of construction of Over Head Tank (OHT), laying and jointing of pipelines and drilling of tube-well should be executed.

Scrutiny of records in the test checked districts revealed that in 106 PWSS, although the population of the concerned villages was less than 2000, the schemes were executed with OHT in disregard to the above instructions of the Government. The implementation of PWSS scheme with OHT in the small villages resulted in extra expenditure of ₹ 11.03 crore (**Appendix 3.2.10**). We also noticed that although the stipulated period of completion of these schemes was ranging between three and six months, the schemes were not completed even after lapse of 24 to 36 months (July 2012).

During the exit conference, the Government stated (February 2013) that the population of villages was based on 2001 census and the actual population has increased. On the basis of the present population, the PWSS may be

There was extra cost due to execution of PWSS in villages having population less than 2000.

¹⁵ Cost of approach bridge & road = ₹ 9.69 lakh + ₹ 1.50 lakh = ₹ 11.19 lakh
Total cost = ₹ 11.19 + 25 per cent prevailing rate + 64 per cent tender premium = ₹ 22.94 lakh

implemented in these villages.

The contention of the Department is not acceptable as the DPRs were prepared taking into account the actual population of the villages.

(b) Closure of Piped Water Supply scheme/ Spot Sources due to non-maintenance

PWSS/ Spot Source Scheme were closed due to non-maintenance.

As per the guidelines issued by GoCG (April 2007), PWSS/ Spot Source schemes were to be handed over to the GPs of the concerned village by PHED after completion. Every GP was provided ₹ 15,000 and ₹ 7,500 annually for operation and maintenance of the PWSS and Spot Source scheme respectively. The guidelines further provide that availability of sufficient water sources in the concerned village would be the main criteria for taking up the scheme.

Scrutiny of records of the test checked districts revealed that out of 1792 PWSS/Spot Source Schemes handed over to GPs, 229 schemes (*Appendix 3.2.11*) were closed due to non-payment of electricity bills, non-functioning of motor pumps, non-availability of electricity connection, non-maintenance and dried water source.

Thus, due to non-maintenance of schemes by the GPs, the people of 229 villages could not avail the benefit of drinking water facilities of PWSS scheme.

During the exit conference, Government accepted the audit observation and stated (February 2013) that the PWSS were handed over to the GPs for maintenance and an amount of ₹ 15000 and ₹ 7,500 per annum for PWSS and Spot Source schemes respectively were being given to GPs for maintenance. The maintenance was to be done by the GPs from this fund and user charges were to be collected from the water users, which was not being done.

3.2.8.4 Water Quality Monitoring and Surveillance

The Water Quality Surveillance Programme (2008-12) aims at ensuring a consistently acceptable level of drinking water quality and requires continuous and systematic programme of water quality testing. Monitoring involves laboratory and/or spot testing of water samples collected from different locations. As per National Rural Water Quality & Surveillance Programme (2004, Department of Drinking Water Supply, Ministry of Rural Development), the objectives of water quality monitoring are:

- To assess the impact of activities by man upon the quality of water and its suitability for required uses;
- To determine the quality of water in its natural state which might be available to meet future ends;
- To keep under observation the sources and pathway of specified hazardous or harmful substances

Scrutiny of records of Water Quality Monitoring and Surveillance (WQM&S) Programme of the test checked districts revealed deficiencies such as non-establishment of laboratories, huge shortfall in water testing,

non-procurement of reagents, shortfall in distribution of Field test Kits and wasteful expenditure etc. which are discussed below:

(a) Non-establishment of State level and Sub-divisional Laboratories

The WQM&S (2008-12) guidelines provide for a State level laboratory which would test at least 10 *per cent* of the samples tested by the district water quality testing laboratories including positively tested samples apart from routine cross-verification of the test results. They would also be involved in testing concentrations of rare elements and extend all necessary help in providing water quality testing reports to the State Governments during the periods of natural calamities and disasters.

The WQM&S guidelines provides for testing of 100 *per cent* sources at sub-divisional laboratories both for biological and chemical as well as physical parameters.

State level and Sub-divisional laboratories were not established.

During scrutiny of records, we observed that no laboratory was established at the State level for conducting water quality tests in the State and for cross verification of tests conducted by Divisional/ District level laboratories (July 2012). In the test checked districts, we however observed that laboratories were established at Divisional level whereas no laboratory was established at the Sub-divisional level and the water quality tests were conducted by Divisional/ district level laboratories.

The absence of laboratories at the State and Sub-divisional level resulted in non-testing of water samples. Thus, the quality of water supplied could not be verified.

During the exit conference, Government stated (February 2013) that State level and 18 sub divisional laboratories would be started soon.

(b) Shortfall in monitoring of water sources/quality tests conducted by Gram Panchayats and Divisional level laboratories

The WQM&S (2008-12) guidelines provide that existing Field Test Kits should continue to be used for primary detection of chemical and biological contamination of all the drinking water sources in the villages by GPs. The guidelines further provide for testing of 100 *per cent* sources at sub-divisional laboratories both for biological and chemical and physical parameters and 10 *per cent* of the samples to be tested which include positively tested samples by the district laboratories. The guidelines also provide that all drinking water sources should be tested at least twice a year for bacteriological contamination and once a year for chemical contamination.

Shortfall in monitoring of water sources/ quality tests

During scrutiny of records in eight test checked districts, we observed that all the water sources available were not tested even once in a year by GPs. Since the GPs were not testing the water sources and the Sub-divisional laboratories were not set up, the onus of conducting the tests rested only on the Divisional laboratories. Consequently, there was huge shortfall in the number of tests conducted by these laboratories. The details of tests done on water sources from 2007-08 to 2011-12 is shown below:

**Table 12: Details of Monitoring by Gram Panchayats and Divisional level laboratories
from 2007-08 to 2011-12**

Districts	No. of water sources available	Monitoring/ testing by GP			Monitoring/ testing by Divisional Laboratory		
		Number of water sources monitored / tested	Shortfall	Percentage shortfall	Number of water sources monitored / tested	Shortfall	Percentage shortfall
Ambikapur	20860 to 25391	0	20860 to 25391	100	395 to 3147	20465 to 22244	88 to 98
Bilaspur	15225 to 16801	NA	15225 to 16801	100	650 to 1881	14575 to 15581	89 to 96
Dantewada	8201 to 12650	NA	8201 to 12650	100	121 to 2026	6175 to 12437	75 to 99
Dhamtari	7478 to 8080	0 to 3807	4081 to 7693	52 to 100	0 to 300	7478 to 7786	96 to 100
Janjgir-Champa	9903 to 11171	0	9903 to 11171	100	0 to 9032	1893 to 9903	17 to 100
Kawardha	6589 to 9315	NA	6589 to 9315	100	0 to 511	6589 to 8804	95 to 100
Korea	8820	51 to 432	8388 to 8769	95 to 99	51 to 432	8388 to 8769	95 to 99
Mahasamund	16748 to 19259	0 to 2157	16748 to 19259	88 to 100	0 to 4314	16748 to 18963	76 to 100

(Source: Compiled from the records furnished by the department)

It is evident from the above table that the shortfall in monitoring/ testing by GPs was 100 *per cent* in five test checked districts (Ambikapur, Bilaspur, Dantewada, Janjgir-Champa and Kawardha). In three test checked districts (Dhamtari, Korea and Mahasamund), the percentage of shortfall ranged between 52 and 100. We further observed that the percentage of shortfall in water quality testing ranged between 75 and 100 in eight test checked districts. In Janjgir-Champa, the percentage of shortfall was ranging from 17 to 100. In Raipur, it was stated that 100 *per cent* water sources were tested by GPs but no test reports and testing records were produced to audit for verification (May 2012).

Thus, due to shortfall in conducting of tests by GPs and Divisional Laboratories, the possibility of use of contaminated water by the habitations cannot be ruled out.

During the exit conference, Government accepted the audit observation and stated (February 2013) that the tests were not being done by the GPs and to increase the number of tests, mobile testing vans have been procured.

(c) *Non-procurement of reagents for laboratory*

Reagents are required in the laboratory for testing the water samples for bacteriological, physical and chemical contamination for different parameters such as PH, total hardness, iron, chlorine, nitrate, arsenic, flouride etc.

During scrutiny of records of eight¹⁶ districts, it was observed that reagents required for water quality tests in Divisional Laboratories were not procured for periods ranging from two to five years during the review period (*Appendix 3.2.12*). However, reagents were procured in Dhamtari district.

Thus, the Divisional Laboratories were not having chemicals/ reagents for

¹⁶ Ambikapur, Bilaspur, Dantewada, Janjgir-Champa, Kawardha, Korea, Mahasamund, Raipur

conducting quality test on water samples and non-procurement of reagents may result in non-testing of water sources for quality.

During the exit conference, the Government accepted the audit observation and stated (February 2013) that the reagents were not procured due to shortage of funds which has now been resolved under NRDWP and the required reagents are now being procured.

(d) Shortfall in distribution of Field Testing Kits to Gram Panchayats

The WQM&S guidelines provide for Field Testing Kits (FTKs) to be used for primary detection of chemical and biological contamination of all drinking water sources in the villages by GPs. One FTK per GP shall be provided and in addition, one, three and two demo kits shall be provided at State, District and Block level respectively.

During scrutiny of records of six districts, we observed that FTKs were not distributed to all the GPs. We also observed that in some cases, the FTKs were not distributed to GPs despite their availability in stock. The details of distribution of FTKs to GPs during the year 2007-12 were as follows:

Table 13: Details of FTKs procurement and distribution

District	Year of procurement	No. of FTKs procured/ received by district/ division	No. of GPs in the district/ division	No. of FTKs distributed to GPs	No. of GPs with no FTKs in the district/ division	Balance of FTK
1	2	3	4	5	6=(4-5)	7 = (3-5)
Ambikapur	2009-10	867	1090	867	223	0
Bilaspur	2009-10 to 2010-11	1180	856	618	238	562
Kawardha	2008-09 to 2010-11	400	368	150	218	250
Mahasamund	2009-10 and 2011-12	450	491	350	141	100
Raipur	2009-10	1150	1204	1150	54	0

(Source: Compiled from the records furnished by the department)

Thus, non-distribution of FTKs to all the GPs resulted in non-testing of water sources for primary detection of chemical and biological contamination of all the drinking water sources in the villages.

During the exit conference, the Government stated (February 2013) that the matter would be examined.

(e) Wasteful expenditure of ₹23.21 lakh due to expiry of undistributed Field Testing Kits/ reagents

During scrutiny of records of three divisions, we observed that all the FTKs and reagents procured were not distributed to Sub divisions/ GPs for quality testing of water as envisaged in the guidelines. The details of FTKs procured and not distributed are as below:

Table 14: Details of FTKs & reagents procured and expired

District	Type	Year of procurement & receipt	Units procured	Units distributed	Units not distributed	Units expired	Rate	Total amount (in ₹)
Bilaspur	FTK	2009-10 & 2010-11	1180	618	562	562	2614.5	1469349
Kawardha	FTK Reagent	2010-11	200	68	132	132	1245	164340
Raipur	FTK Reagent	2010-11	1000	823	177	550 ¹⁷	1250	687500
	Total		2380			1244		2321189

(Source: Compiled from the records furnished by the department)

There was wasteful expenditure on FTKs and reagents.

It may be seen from the table that in the above three districts, 2380 FTKs were procured out of which 1244 FTKs were not distributed and the validity of their useful life (one year) had also expired.

Moreover, we observed that in Raipur, 1000 FTK reagents were procured out of which 373 reagents were issued (May and June 2012) i.e. after expiry of the useful life (February 2012) of the FTK reagent.

Thus, non-issue of 1244 FTK and FTK reagent not only resulted in wasteful expenditure of ₹ 23.21 lakh but also defeated the purpose and objectives of WQM&S.

During the exit conference, the Government stated (February 2013) that the matter would be examined.

(f) Non-installation of Iron Removal Plants

Ground water is affected by impurities such as iron, flouride, arsenic etc. As per the Administrative Report of the Department (2011-12), the number of habitations affected by iron had increased from 4932 habitations in 2003-04 to 8747 in 2011-12 in the State. Further, the AAP stipulates that the Stand Alone System Iron Removal Plant (IRP) (NEERI Model)¹⁸ is to be installed in hand pumps to purify water containing high content of iron.

During scrutiny of records of eight divisions, we observed that there was shortfall in installation of IRPs during 2009-10 to 2011-12 as detailed below:

¹⁷ 373 reagents were issued after expiry

¹⁸ The IRP (NEERI Model) is an Iron Removal Plant developed by National Environmental Engineering Research Institute, Nagpur.

Table 15: Target and Achievement of Stand Alone System IRP (Neeri Model)

District	2009-10			2010-11			2011-12		
	IRP Planned	IRP installed	Shortfall	IRP Planned	IRP installed	Shortfall	IRP Planned	IRP installed	Shortfall
Ambikapur	150	0	150	300	0	300	200	0	200
Bilaspur	195	15	180	190	20	170	197	29	168
Dantewada	213	0	213	470	0	470	469	0	469
Dhamtari	25	0	25	75	0	75	70	0	70
Janjgir Champa	25	0	25	50	0	50	0	0	-
Kawardha	50	0	50	120	0	120	70	0	70
Korea	25	0	25	50	0	50	107	4	103
Mahasamund	13	0	13	35	0	35	35	0	35
Total	696	15	681	1290	20	1270	1148	33	1115

(Source: Compiled from the records furnished by the department)

It would be seen from the above table that in seven out of nine test checked districts, the shortfall in installation of IRP was 100 *per cent*, whereas in Bilaspur and Korea, the shortfall ranged between 85 and 96 *per cent*. In Raipur, there was no iron affected habitation.

Photographs showing reddish platform of hand pumps due to high content of Iron in water at a village in Block Sitapur, District Korea



Thus, there was shortfall in IRPs installed in iron affected sources. As such, the possibility of use of drinking water with high content of iron cannot be ruled out.

During the exit conference, the Government stated (February 2013) that construction and installation of IRPs is a specialised work for which limited numbers of personnel are available. However, IRPs would be installed soon.

3.2.8.5 Total Sanitation Campaign

With a view to accelerate sanitation coverage in rural areas for Below Poverty Line (BPL) and Above Poverty Line (APL) families, schools and Anganwadis Centres (AWCs), eliminate open defecation to minimise risk of contamination of drinking water sources and food, convert dry latrines to pour flush latrines and to eliminate manual scavenging practice, GoI launched Total Sanitation Campaign (TSC) in 1999. The cost of the construction of sanitary toilets was to be shared in the ratio of 60:20:20 by GoI, State Government and the beneficiary in case of BPL, 100 *per cent* cost was to be borne by the

beneficiary in case of APL and 60:30:10 by GoI, State Government and the beneficiary in case of schools and AWCs.

(a) Non achievement of targets

During the year 2007-08, the GOI sanctioned ₹ 678.78 crore for construction of 34.24 lakh sanitary toilets (BPL-15.54 lakh, APL-18.12 lakh, School-0.48 lakh, AWCs- 0.10 lakh) and these were to be completed by March 2012. Accordingly, the GOI and State Government released ₹ 283.49 crore and ₹ 143.22 crore respectively against which an expenditure of ₹ 375.14 crore was incurred (March 2012).

The progress of TSC during the period 2007-08 to 2011-12 is detailed below:

Table 16: Target and Achievement under TSC

Sl. No.	Category	Target (in lakh no.)	Achievement (in lakh no.)	Percentage of achievement
1	BPL	15.54	10.52	67.70
2	APL	18.12	8.30	45.81
3	Schools	0.48	0.49	100
4	Anganwadis	0.10	0.10	100

(Source: Compiled from the records furnished by the department)

It may be seen from the above table that while the targets in respect of schools and AWCs were fully achieved, the percentage of achievement in respect of BPL and APL was however 68 and 46 respectively.

During the exit conference, the Government stated (February 2013) that necessary instructions would be issued to achieve the targets.

(b) Blocking of fund of ₹2.29 crore due to procurement of Latrine Pan Set without requirement

There was blocking of funds due to excessive procurement of latrine pan sets.

As per Rule 118 of the Chhattisgarh Financial Code Volume-I, purchases should be made only after assessment of definite requirements.

Scrutiny of records revealed that Latrine Pan Sets required for TSC were purchased by the Department without proper assessment of the requirement. The details of latrine pan sets procured, used and balance available in stock during the last five years in test checked districts are given below:

Table 17: Details of pan sets procured and utilized

(₹ in lakh)

District	Number of pan sets procured	Number of pan sets used	No of pan sets lying in stock	Average Rate (in ₹)	Amount
Dantewada	15800	0	15800	244.37	38.61
Dhamtari	32939	30431	2508	200.57	5.03
Korea	32300	13800	18500	204.38	37.81
Mahasamund	7280	0	7280	221.57	16.13
Raipur	59923	0	59923	218.71	131.06
Total	148242	44231	104011		228.64

(Source: Compiled from the records furnished by the department)

During test check of five districts, we observed that 1,48,242 latrine pan sets were purchased out of which 1,04,011 latrine pan sets valuing ₹ 2.29 crore

were not utilised for one to five years. The Stock registers in Ambikapur, Bilaspur, Janjgir-Champa and Kawardha were not produced to Audit.

Thus, the procurement of latrine pan sets without assessing requirement led to blocking of funds of ₹ 2.29 crore.

During the exit conference, the Government stated (February 2013) that the verification is being done in the State as a whole and thereafter action will be taken.

3.2.8.6 Store Management

A sound system of store management involves efficient planning of purchase requirements, economic procurement, control over issues, timely accounting and safe physical custody. Our scrutiny revealed the following:

(a) Physical verification of stores

Rule 126 and 133 of the Chhattisgarh Financial Code Volume-I lays down that the physical verification of stores and stock should be ensured once in a year by the head of the office through any designated officer.

The status of physical verification in the test checked districts was as follows:

Table 18: Details of physical verification conducted

District	Year of last physical verification conducted
Ambikapur	2011-12
Dantewada	2008-09 to 2011-12
Dhamtari	2008-09 to 2011-12
Kawardha	2008-09
Korea	2010-11 to 2011-12
Raipur	2007-08 to 2011-12

(Source: Compiled from the records furnished by the department)

It is evident from the above table that physical verification of stores was not being done in Ambikapur and Kawardha for the last four years, in Korea for the last three years and in Dantewada and in Dhamtari districts for the last one year. No information was furnished by Bilaspur, Janjgir-Champa and Mahasamund districts.

During the exit conference, the Government accepted the audit observation and stated (February 2013) that instructions for strict compliance would be issued.

(b) Excessive procurement

As per Rule 118 of the Chhattisgarh Financial Code Volume-I, purchases should be made only after assessment of definite requirements.

Scrutiny of records revealed that in four divisions, stocks were procured in excess of requirement and stock valuing ₹ 47.50 lakh was not issued since 2007-08. The details of stock not cleared are as follows:

Table 19: Details of items lying unused

Districts	Name of Item	Amount (in ₹)	Procured during
Dantewada	GI pipe	193857	2009-10
Dhamtari	GI pipe	1230671	2010-11
	CI Tyton pipe	46758	2007-08
Kawardha	GI pipe	601239	2010-11
	ACP pipe	157996	2008-09
	CI Tyton pipe	1332029	2008-09
Raipur	GI pipe	40279	2007-08
	HDPE Tank	1146915	2008-09
Total		4749744	

(Source: Compiled from the records furnished by the department)

Further, in PHE Division Raipur, it was observed that out of 770 Force lift pumps procured during 2008-09 to 2011-12, only 373 pumps were issued during this period. The remaining 397 Force lift pumps valuing ₹ 23.86 lakh were lying in stock. Details regarding item wise stock available were not furnished by PHE Division Ambikapur, Janjgir-Champa and Korea.

Thus, procurement in excess of requirement led to blocking of funds of ₹ 71.36 lakh.

During the exit conference, the Government stated (February 2013) that the GI pipe would be used in the works and for remaining items, matter would be reviewed.

3.2.8.7 Training

Training to women and Gender Empowerment

As per Clause 9.13 of the NRDWP guidelines, at least 30 *per cent* of hand pumps mistries under various skill development programme and other training schemes should be women of the local area/habitation as they can take care of the operation and maintenance of the hand pumps in a better way than others. It also provides that prominent women from the habitations should represent the Village Water and Sanitation Committee (VWSC)/*Pani Samiti* and should constitute at least 50 *per cent* of women.

Scrutiny of records of the test checked districts revealed that women of the local area were not given such type of training for operation and maintenance of hand pumps and no steps had been taken to include prominent women from the habitations in the VWSC/*Pani Samiti*. Thus, the objectives of Gender Empowerment by training of women and also employing women caretakers for hand pumps in the habitations were not achieved.

During the exit conference, the Government stated (February 2013) that awareness among women in villages for participation is being created.

3.2.9 Conclusion

The PHED is responsible for preparation and the execution of the water supply and sanitation projects in the State. As on March 2012, out of sanctioned 128 Urban water Supply Schemes and 4824 PWSS and Spot Source Schemes, 69 Urban water Supply Schemes and 3636 PWSS and Spot Source Schemes were completed. We noticed deficient planning in execution of schemes as VAP and DWSP were not prepared and thus, could not form part of AAP. Further, the Department did not conduct detailed habitation survey since 2003. Shortage of manpower at various levels in the Department resulted in ineffective monitoring of the scheme activities. The Department also failed to utilise the allotted funds in achievement of targets under 'Water Quality' and 'Sustainability'. There was unfruitful expenditure of ₹ 133.39 crore due to non-completion of projects. Besides, failure to comply with the provision of Unified Schedule of Rates and agreement led to extra cost and undue aid to the contractors. The Department had not established State level and sub-divisional level laboratories for conducting quality test of water sources. The field testing kits/reagents expired due to non-distribution resulting in wasteful expenditure. There was excessive procurement of stores and physical verification was not being done regularly.

3.2.10 Recommendations

We recommend that the Department should:

- *prepare Annual Action Plan on the basis of Village Action Plan, District Water Security Plan and current habitation survey for effective implementation of various schemes.*
- *fill up all the vacant posts for smooth implementation of various schemes/programmes.*
- *ensure completion of the projects within the stipulated time to extend the intended benefits to the targeted beneficiaries.*
- *apart from regular monitoring of all water sources, establish State level and Sub-divisional laboratories to ensure availability of safe drinking water to the people of the State.*