CHAPTER-I
PERFORMANCE AUDITS

Public Health and Family Welfare Department

1.1 Working of 'AYUSH' Department

Executive Summary

The Indian System of Medicine and Homeopathy (ISM&H) now renamed as AYUSH (Ayurved, Yoga & naturopathy, Unani, Siddha and Homeopathy) is providing healthcare facilities in alternative medicine system to the rural and urban people of the State. The Department is implementing various centrally sponsored schemes and State schemes for rendering the healthcare services to the populace of the State. Providing treatment under the Ayurved etc. and other indigenous systems of medicine by establishing AYUSH wings in existing allopathic institutions, prevention of diseases, production of Ayurved medicines, drug testing, imparting medical education and training are the objectives of the Department.

The performance audit conducted by us revealed that while the staff and administrative cost to total revenue expenditure of the Department was 88 *per cent*, the expenditure on medicines, machines and scheme was only 12 *per cent* of the total expenditure. The Department had not prepared any perspective or annual action plan for implementation of various activities of the Department and had also not fixed any norms for opening the new healthcare units. Though the number of outpatients in Ayurved and Homeopathy system has increased, the same showed decreasing trend in Unani system. Inpatient facilities were not made available in District Ayurved Hospitals at Ambikapur and Dallirajahara. In Hospital attached to Government Ayurved College, Raipur the number of inpatients decreased during the period. We also noticed that except in Hospital attached to Government Ayurved College emergency maternity facilities were not available in any of the Ayush Hospitals. The constructions of 12 AYUSH wings, 20 Specialised Therapy Centres and 24 Speciality Clinics in District Allopathic Hospitals and Community/Primary Health Centres remained incomplete even after incurring expenditure of ₹ 85.77 lakh during the last five years. The machines procured for Ayurved Pharmacy remained uninstalled for want of space. The Department had not fixed any schedule or targets for manufacture of medicines. Similarly, neither norms for process loss fixed nor monitored the working of the Pharmacy during the period. The procurement of raw herbs without assessing the actual requirement resulted in unnecessary locking up of government funds. Department failed to ensure optimum utilisation of the Drug Testing Laboratory and Research Centre during the period of performance audit. The strengthening of Drug Testing Laboratory and Research Centre was adversely affected due to idling of machinery/equipment, non-availability of required equipment, shortage of trained manpower and blockade of funds. The implementation of the State scheme "*Ayurved gram*" in test checked districts except Surguja, was not satisfactory and the intended

objectives of the schemes also could not be achieved.

Only two out of 16 District Ayurved offices were having their own building. Construction work of 201 dispensaries building was sanctioned during 2007-08, of which 150 works were completed and handed over, 12 were not handed over to Department of AYUSH by Public Works Department and remaining 51 works were either not started or incomplete as of October 2011. There were significant shortages in the cadre of Medical Officers and supporting staff; lack of basic infrastructure like water, electricity, diagnostic facilities and dysfunctional healthcare infrastructure in primary, secondary and tertiary healthcare institutions had adversely affected the quality of healthcare services.

1.1.1 Introduction

The Indian System of Medicine and Homeopathy (ISM&H) Department now renamed as AYUSH (Ayurved, Yoga & naturopathy, Unani, Siddha and Homeopathy) Department is responsible for providing alternative healthcare facilities to the people in remote as well as in urban areas of the State, was established in the year 1977-78 in erstwhile State of Madhya Pradesh and after the creation of Chhattisgarh State in 2000 continues to function as part of Government of Chhattisgarh.

The Department has a network of six[1] District Ayurved Hospitals (DAH); 693[2] field level dispensaries; 399[3] AYUSH centres (319-Ayurved, 60 Homeopathy and 20 Unani) and 15 AYUSH wings, 22 Specialised Therapy Centres and 24 Speciality Clinics set up within the existing allopathic hospitals, Community and Primary Health Centres. In addition the Department runs *Shri Narayan Prasad Awasthi* Government Ayurved Medical College at Raipur (Ayurved College) with a 110 bedded Ayurved Hospital attached to it, one Government Ayurved Pharmacy (Pharmacy) meant for production of Ayurved classical medicines and one Drug Testing Laboratory & Research Centre (DTLRC) for checking the quality of medicines manufactured by departmental/private pharmacies. During the period of performance audit (2006-11), the Department was also implementing various Centrally Sponsored Schemes (CSS) and State schemes that support popularisation of alternative system of medicines.

1.1.2 Organization set-up

The overall responsibility for implementation of programmes and policies of the Department is vested in the Secretary to Government of Chhattisgarh, Department of Public Health and Family Welfare. At State level, he is assisted by Director, AYUSH and at the district level by District Ayurved Officers (DAOs). At the block and village level, dispensaries manned by Medical Officers/Assistant Medical Officers of Ayurved, Unani and Homeopathy have been set up.

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[1] Bilaspur, Ambikapur (Surguja), Dallirajahara (Durg), Durg, Jagdalpur (Bastar) and Raigarh.

[2] 635 Ayurved (Rural-618 and Urban-17), six Unani (Rural-three and Urban-three) and 52 Homeopathy (Rural-29 and Urban-23).

[3] 52 in Community Health Centres and 347 in Primary Health Centres.

The Director, AYUSH being the head of the Department is responsible for overall working of the Department. The DAOs are responsible for actual implementation of the schemes in the field.

1.1.3 Scope of Audit

The performance audit of the 'AYUSH' Department covering the period 2006-11 was carried out during March- June 2011. The records maintained in the offices of the Director, AYUSH, five[4] out of 16[5] existing DAOs along with Hospitals and Dispensaries under their control and records of 54 out of 146 *Ayurved Grams* were scrutinised. Further, the records maintained in Ayurved College and attached Hospital, DTLRC, Pharmacy and *Ayushdeep Samities* (Societies) were also examined.

1.1.4 Audit objectives

The performance audit of AYUSH Department was carried out to ascertain overall status of healthcare delivery by the Department of AYUSH with specific focus on:

(i) effectiveness with which different State and Centrally Sponsored Schemes in the health sector were implemented by the Department,

(ii) the manner in which financial and non-financial resources were managed,

(iii) existence and effectiveness of the internal control system in the Department and finally

(iv) adequacy and quality of healthcare delivery system through the indigenous system of medicines.

1.1.5 Audit criteria

The sources of various audit criteria used for benchmarking the audit findings were as under:

(i) State and Central Governments' notifications and instructions issued from time to time for the implementation of State and Centrally Sponsored Schemes;

(ii) Departmental budget, general financial and other subsidiary rules, departmental manual/ policies/ rules and regulations;

(iii) procedure prescribed for monitoring and evaluation of schemes/ programmes, and

(iv) norms prescribed by the Central Council of Indian Medicines (CCIM).

1.1.6 Audit Methodology

An entry conference was held (May 2011) with the Secretary, Public Health and Family Welfare Department wherein audit objectives, audit criteria, scope of audit and methodology adopted for selection of units for test check were explained and discussed.

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4 Bastar, Jashpur, Kabirdham, Raipur and Surguja.

5 Total 18 districts but two districts Bijapur and Narayanpur not having separate DDOs during the period of performance audit and were functioning under DAOs, Dantewada and Bastar respectively.

Five[6], out of 16 districts including three tribal districts (Bastar, Jashpur and Surguja) were selected by adopting Simple Random Sampling Without Replacement (SRSWOR) method. In five selected districts, out of 442 Ayush hospitals, dispensaries and Ayush centres (Urban-26 and Rural-416), records of 416 (94 *per cent)* units including 26 Urban and 390 Rural units as well as records of 54 (90 *per cent*) out of 60 *'Ayurved Grams'* were test checked. In addition relevant information collected from six[7] more districts was used for analytical purposes. The sample included AYUSH Wing in District Allopathic Hospital, Durg which was test checked at the request (June 2011) of Director, AYUSH.

Audit findings, as discussed in the succeeding paragraphs, are based on scrutiny of records, responses received to questionnaires circulated to DAOs in the five test checked districts, analysis of data and information thus collected and replies furnished to audit memoranda by the above units.

An Exit Conference was held (October 2011) with the Secretary, Public Health and Family Welfare Department (Secretary) and the views of the Government/ Department received have been appropriately incorporated in the draft performance audit report at relevant places.

1.1.7 Financial Management

The Department receives funds under three[8] grants incorporated in the budget of the State Government which are supplemented by funds provided by GOI for implementation of CSSs. Since 2007-08, Central funds are being remitted directly to the nodal agencies and, hence, are not reflected by budgetary allocations of the State Government.

(a) The year-wise position of budget allotment and expenditure incurred there against by the Department during 2006-11 was as under:

Table-1: Budget and actual expenditure during 2006-11

(₹ in crore)

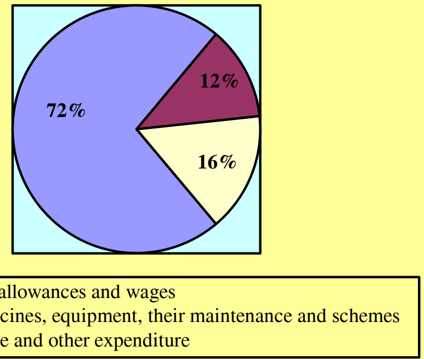
Year	Budget allocation	Expenditure incurred	Savings
2006-07[9]	37.58	30.40(81)	7.18(19)
2007-08	70.57	29.51 (42)	41.06 (58)
2008-09	76.47	35.73 (47)	40.74 (53)
2009-10	66.43	55.76 (84)	10.67 (16)
2010-11	113.34	68.97 (61)	44.37 (39)
TOTAL:	**364.39**	**220.37 (61)**	**144.02 (39)**

(Source: Figures furnished by Department. Figures in parenthesis indicates percentage)

The expenditure on pay and allowances and office expenses was 72 and 16 *per cent* respectively. Only 12 *per cent* of funds were spent on equipments, its maintenance and purchase of medicines as indicated in the **Graph-1** below:

6 Bastar, Jashpur, Kabirdham, Raipur and Surguja.
7 Bilaspur, Dhamtari, Durg, Korba, Raigarh and Rajnandgaon.
8 Grant numbers 41, 79 and 80 under Major Head 2210.
9 Includes funds received from GOI under various Centrally Sponsored Schemes.

Graph-1
Percentage of expenditure, out of total expenditure



(b) We observed that the Department received funds aggregating ₹ 20.74[10] crore under five CSSs during 2001-10. The funds directly received by the Department from GOI during the period 2007-08 to 2009-10 for following CSSs and their utilisation was as under:

Table-2: Receipt and expenditure of funds under CSS

(₹ in lakh)

Scheme	Funds received	Expenditure incurred	Savings (kept in savings bank account)	Amount deducted/ withheld by GOI
Upgradation of academic institutes to the status of State Model Institute/ College of AYUSH	186.79	184.90	1.89	3.00
Strengthening and establishing of ASU&H Pharmacies	68.61	0.00	68.61	35.00
Strengthening and establishing of Drug Testing Laboratories for ASU&H drugs	37.60	21.80	15.80	12.00
Strengthening of State Drug Controllers of ASU&H enforcement mechanism	29.00	17.57	11.43	0.00
TOTAL:	**322.00**	**224.27 (70)**	**97.73 (30)**	**50.00**

(Source: Figures furnished by Department. Figures in parenthesis indicates percentage)

Due to non-utilisation of earlier grants, the GOI deducted/withheld an amount of ₹ 50 lakh from the subsequent grants released during 2007-11 and the same will be released after submission of utilisation certificate for unspent amount of ₹ 97.73 lakh by the State Government to GOI.

(c) During the period of test check (2006-11) the Department of AYUSH was allotted only 10 *per cent* (₹ 415.95 crore) of the total budget (₹ 4,128.84 crore) of health sector. However, it could not utilize even such limited funds as were made available to it. We observed that while shortfall in expenditure on medicines ranged between four (2006-07) to 35 *per cent* (2008-09), the shortfall in expenditure on purchase of machine/equipment and pay and allowances was far higher as depicted in **Graph-2** below:

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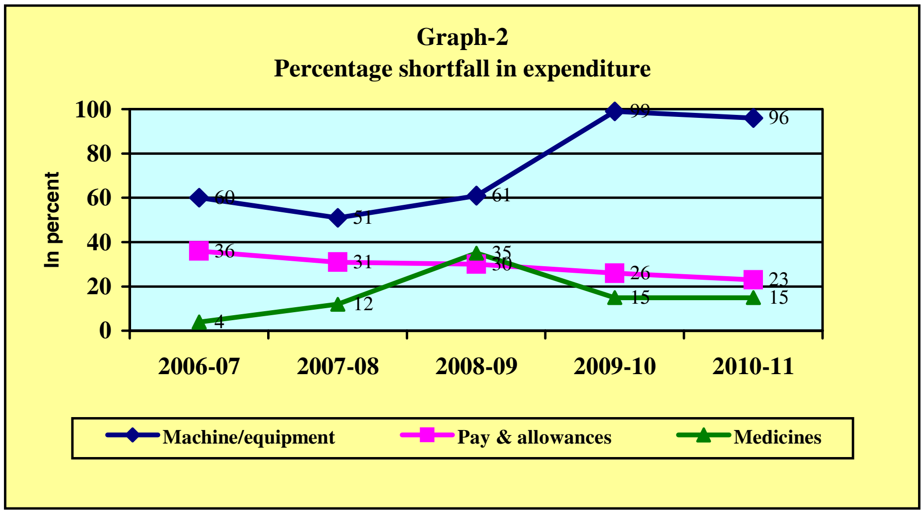
[10] ₹ 17.52 crore from 2001-02 to 2006-07 and ₹ 3.22 crore from 2007-08 onwards.



The Secretary, Public Health and Family Welfare (Secretary) in exit conference (October 2011) attributed the reasons for shortfall in expenditure on pay and allowances to delay in recruitment process of medical staff by State Public Service Commission for which provision was made in anticipation of recruitments. It was also informed that some recruitments were made during 2010-11 and efforts are being made to fill up the remaining vacant posts.

(d) We also observed rush of expenditure during 2006-11 in purchase of medicines and machine/equipment which ranged between 71 to 100 *per cent* in the month of February-March during the period 2006-11.

The Secretary in the exit conference stated (October 2011) that the Finance Department releases budget generally in the month of May. The process of tendering which starts thereafter takes three to four months and after placing the orders materials are received during December to January along with the bills. This prolonged process was stated to be one of the main reasons for rush of expenditure in the months of February and March. The Secretary assured that necessary steps will be taken to overcome this situation.

The reply of the Department does not explain why it could not have initiated the tendering processing in advance to avoid the impact of delay in receipt of budget allocations and obviate surrender of funds and rush of expenditure.

Audit Findings

1.1.8 Planning

The National Policy on promotion of Indian Systems of Medicine and Homoeopathy-2002 envisages that vast infrastructure of Indian Systems of Medicine and Homoeopathy in the country should be optimally utilised for delivery of healthcare to the people in the country. It suggested initiation of measures to enable each of these systems of medicine and healthcare to develop in accordance with their inherent genius. Simultaneously, it also envisaged a planned effort for integration at the appropriate levels of the services available under these system of medicine, within specified areas of responsibility and functioning in the over all healthcare delivery system, specially in regard to the preventive, promotive and public health objectives. The need for preparing a perspective plan and suitably dovetailed Annual Acton Plan for this purpose was, therefore, obvious.

Annual Action plans were not prepared by the Department

We observed that the Department had not prepared any perspective or annual action plans in consonance with the National Policy or otherwise, to detail out an overall implementation strategy for various schemes/activities of AYUSH. Since planning was critical for implementation of various activities of a Department, the impact of its absence on efforts of the State Government for strengthening the network of Primary, Secondary and Tertiary level health institutions was evident in all respects of the working of AYUSH Department as brought out in the succeeding paragraphs.

Confirming the absence of the Perspective/Annual Plan, the Secretary in the exit conference stated (October 2011) that the activities included in the annual budget are being implemented and to that extent the budget itself acts as a planning mechanism. In this context, he discounted the significance of annual Administrative Reports which are placed before the State Legislature and other departmental brochures which have year after year indicated various kinds of targets for promotion of AYUSH in the State. There was, thus, a clear dissonance between the Administrative Reports of the Department and its annual budgets as a result of which AYUSH Department could not:

- establish popular facilities of *Panchakarama* and *Kshar-sutra* in DAHs, Jagdalpur (Bastar), Dallirajhara (Durg), Raigarh and Ambikapur (Surguja) and AYUSH wings in 15 districts,
- start new dispensaries of Ayurved (100), Homeopathy (50) and Unani (25) dispensaries,
- establish 10-bedded polyclinics at District headquarters,
- opertionalise AYUSH wings in 15 DHs, 22 STCs, 24 SCs and Ayush centres in Primary/ Community Health Centres,
- upgrade the only Ayurved College as State Model College,
- enhance the number of admissions in Ayurved College from 55 to 100 per year and to start post graduation courses on five additional subjects,
- start new Ayurved, Homeopathy and Unani colleges, and
- complete construction work of dispensaries and other buildings for 15 DAOs and one DAH.

Delivery of services by healthcare institutions

1.1.9 Working of Dispensaries and Ayush centres

Standards and norms for opening of new healthcare units not fixed

Dispensaries function as the primary level healthcare units and their location and number needs to have a direct co-relation with the demography of the State. We noted that the State Government has not fixed any norms for opening of new healthcare units at primary, secondary or tertiary level. As of

March 2011, 693[11] dispensaries existed in the State, of which only two[12] were opened during 2006-11. Besides these, there were six Unani and 52 Homeopathy dispensaries in the State. The Kabirdham district, however, had only Ayurved dispensaries as of October 2011.

In the exit conference, the Secretary stated (October 2011) that State Government was in the process of fixing of norms for opening of new dispensaries.

The deficiencies noticed by us in the working of 204 dispensaries in the five test checked districts were as under:

1.1.9.1 Outpatient treatment

Daily outpatient treatment per Medical Officer in 183 dispensaries was less than the norms fixed by State Government

(a) As per the norms fixed (August 2007) by the State Government each Medical Officer should attend to at least 25 outpatients per day. In 183 out of 204 dispensaries test checked, we noticed that the number of outpatients treated by Medical Officers in these dispensaries was less than the norm. In 12 out of 26 dispensaries in Surguja district, no doctors were posted during the period of test check. In several districts the number of outpatients under Homeopathy and Unani system was zero because no such dispensaries existed in these districts. The daily average of outpatients in the test checked dispensaries varied from a minimum of two to maximum of 50 as further elaborated in the table below:

Table-3: Details of district-wise number of average outpatients treated per day

Range of average outpatients per day during 2006-11	Number of dispensaries in the test checked districts														
	Bastar			Jashpur			Kabirdham			Raipur			Surguja		
	A	H	U	A	H	U	A	H	U	A	H	U	A	H	U
Upto five	3	0	0	0	0	0	0	0	0	2	0	0	3	0	0
6 to 10	3	0	0	1	0	0	4	0	0	12	4	0	4	0	0
11 to 24	36	0	1	10	2	0	12	0	0	62	3	1	17	5	0
25 to 40	2	1	0	2	0	0	0	0	0	5	1	0	1	2	0
41 to 50	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1
TOTAL	**45**	**1**	**1**	**13**	**2**	**0**	**16**	**0**	**0**	**82**	**8**	**1**	**26**	**8**	**1**

A= Ayurved, H- Homeopathy and U-Unani. (Source: Information collected and compiled by Audit)

Increase in outpatient treatment in Ayurved system

(b) We noticed that out of 182[13] (93 *per cent*) Ayurved dispensaries test checked by us, overall number of outpatient treatment in 171 fully functional dispensaries had increased to 9.44 lakh in 2010-11 from 7.98 lakh in 2006-07 showing a growth of 18 *per cent*. However, in Bastar region the trend was in the reverse direction as the number of outpatients had declined to 2.01 lakh in 2010-11 from 2.45 lakh in 2006-07, thus registering a decline of 18 *per cent.* The average of outpatients treated per day in these dispensaries during 2006-11 was just 16.

Increase in outpatient treatment in Homeopathy system

(c) Test check of 19 (95 *per cent*) Homeopathy dispensaries revealed that 5.59 lakh outpatients were treated in them during the test checked period (2006-11). The overall number of outpatients that had received treatment in

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[11] 635 Ayurved (Rural-618 and Urban-17), six Unani (Rural-three and Urban-three) and 52 Homeopathy (Rural-29 and Urban-23).

[12] Garhbengal (Bastar) during 2006-07 and Chief Minister House (Raipur) during 2010-11

[13] Out of 182, six were non-functional upto 2009-10, four upto 2010-11 and one was still non-functional as of March 2011.

these dispensaries had increased by 24 *per cent* during this period and increased to 1.19 lakh in 2010-11 from 0.96 lakh in 2006-07. The average of outpatients treated per day in these dispensaries during 2006-11 was just 20.

We also observed that as against the total demand[14] of plastic files and plain globules for distribution of homeopathy medicine, the supply was only 35 and 52 *per cent* respectively. Despite availability of sufficient homeopathy medicines and increase in number of outpatients, enough quantity of plastic files and plain globules could not be ensured for safe distribution of medicines.

Decrease in outpatient treatment in Unani system

(d) In three Unani dispensaries in three[15] districts, the overall number of outpatients treated had decreased by 10 *per cent* during the period 2006-11 and the overall number of outpatients treated declined to 0.27 lakh in 2010-11 from 0.30 lakh in 2006-07. The average of outpatients treated per day in these dispensaries during 2006-11 was 31.

In the exit conference, the Secretary stated (October 2011) that the popularity of AYUSH system will increase by organising awareness camps where benefits of Ayurved system of treatment will be explained by adopting Information, Education and Communication (IEC) activities.

1.1.9.2 Impact of the shortage of Medical Officers and para medical staff on the healthcare delivery

Functioning of hospitals/ dispensaries without adequate manpower

(a) The State Government sanctioned posts of one Medical Officer (MO)/ Assistant Medical Officer (AMO), one pharmacist, one peon and one part-time sweeper in a dispensary. Test check of records of selected districts revealed that during 2006-07, out of 219 dispensaries, 66, 69 and 68 were without MO/AMO, Pharmacists and supporting staff respectively. The number came down further to 61, 48 and 66 respectively, during 2010-11. In Raipur district, 40 dispensaries were without MOs/AMOs and 14 without supporting staff during 2006-07. The shortfall rose to 43 and 24 respectively, in 2010-11. However, in Raipur district during the period 2006-11, 22 dispensaries were without pharmacist. The details are shown in ***Appendix-1.1.***

Distribution of medicines by pharmacists in absence of MOs/AMOs

(b) In consequence of non-availability of doctors in 48 dispensaries in four[16] districts the pharmacists, whose responsibilities are limited to maintenance of records and distribution of prescribed medicines to the patients, were actually running the dispensaries even though they were not authorised to examine and give treatment to the patients. Medicines valuing ₹ 30.37 lakh were issued in such dispensaries to patients in an irregular and unsafe manner.

Confirming the above facts, the Secretary, in the exit conference, stated (October 2011) that shortage of Medical officers had resulted in pharmacists running the dispensaries at some places and that the Director, AYUSH had been instructed to define the mandate of pharmacists in regard to treatment of patients in absence of Medical Officer and prescription of medicine to them.

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[14] Against the total demand of 5,404 only 1,896 (35 *per cent*) plastic files and against the total demand of 6,006 only 3,145 (52 *per cent*) plain globules were supplied.

[15] Bastar, Raipur and Surguja.

[16] Bastar, Jashpur, Kabirdham and Raipur.

Further, the Secretary stated that maximum posts were filled up in tribal districts/ blocks and recruitment in other dispensaries will be made in due course.

1.1.9.3 Insufficient infrastructure affected level of healthcare services

Lack of basic facilities in dispensaries

(a) In five selected districts, out of 204 dispensaries test checked, only 30 (15 *per cent*) had all the facilities. Forty dispensaries were without basic facilities like own building and were housed in donated/ panchayat/ rented buildings, without electricity and water; 30 were without electricity and water; 19 were without own buildings and water; two were without building and electricity and 83[17] lacked one or the other facility. Our analysis indicated that there was a direct correlation between availability of electricity and the functional effectiveness of a dispensary.

(b) Further, information collected from Directorate in respect of 349 other dispensaries revealed that while 49 (14 *per cent*) were having all facilities, 78 dispensaries (22 *per cent*) were without basic facilities like own building (housed in donated/ panchayat/ rented buildings), 213 (61 *per cent*) were without water facilities and nine were without electricity. We also noticed that 101 dispensaries required new buildings, eight dispensaries were in repairable condition and 12 dispensary building were under construction.

In the exit conference, the Secretary stated (October 2011) that the dispensary buildings will be sanctioned by State Government and facilities of water and electricity will be ensured through *Ayushdeep* Societies.

Construction of dispensary building at incorrect place

(c) Our scrutiny of buildings for dispensaries in Jashpur district revealed that a dispensary was constructed (November 2009) by Public Works Department (PWD), Division Jashpur at a cost of ₹ 3.20 lakh from Backward Region Grant Fund (BRGF). The Chief Executive Officer, Zilla Panchayat, Jashpur issued work order[18] (June 2009) for construction of dispensary building in village Ranpur (Block-Jashpur) instead of village Ranpur (Block-Bagicha) and copy of the same was not endorsed to DAO, Jashpur. As the dispensary at village Ranpur (Block-Jashpur) was not sanctioned by Government, the DAO, Jashpur refused (December 2009) to take possession of the building. Thus lack of coordination between Zilla Panchayat, PWD and DAO led to construction of building at wrong place rendering expenditure of ₹ 3.20 lakh unfruitful. **(Picture-1)**.

[17] Without buildings-23, without water-58 and without electricity-two.
[18] The Collector, Jashpur approved the execution of work.

Picture-1

Idle dispensary building in village Ranpur (Block-Jashpur)

The Secretary in the exit conference stated (October 2011) that the matter would be reviewed by him.

1.1.9.4 Inadequate training to staff

We noticed that out of 204 test checked dispensaries in 156 dispensaries (Ayurved-136, Homeopathy-18 and Unani-two) no training was provided to Medical Officer and subordinate staff which indicated lack of initiatives on the part of the Department to upgrade the skills of the staff.

1.1.9.5 Establishment of Ayush centres in CHCs/PHCs

With a view to provide outpatient treatment in all systems under one roof, the State Government sanctioned (July 2008) one post of Medical Officer for each of the 399[19] Ayush centres (319-Ayurved, 60 Homeopathy and 20 Unani) established in all regular Community/Primary Health Centres of the State. In three[20] out of five selected districts, 204[21] Ayush centres were set up. No such centres had been sanctioned in Kabirdham and Raipur districts as of October 2011. Test check of 193[22] (94 *per cent*) such centres revealed the following:

Outpatient treatment

(a) Eight, out of 161 Ayush centres (in PHCs) were started during 2009-10. The remaining 153 (95 *per cent*) Ayush centres (three in CHCs and 150 in PHCs) commenced functioning from June 2010 onwards. Delay in starting these centres was attributable to non-availability of Medical Officers. Consequently, the overall outpatient treatment in the Ayush centres, in the test checked districts, increased to 1.79 lakh in 2010-11 from 7,704 in 2009-10. The average outpatients treatment per day in 114 Ayush centres was less than five and in 47 it was between five and 15 which was far below the norm of 25 outpatients per Medical Officer per day fixed by State Government. Though uptrend in the number of outpatient treatment during the period 2006-11 was steady, Medical Officers in these Ayush centres had not been sanctioned any

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19 52 in Community Health Centres and 347 in Primary Health Centres.

20 Bastar, Jashpur and Surguja

21 172-Ayurved (16 in CHCs and 156 in PHCs); 23 Homeopathy (16 in CHCs and seven in PHCs) and nine Unani (two in CHCs and seven in PHCs))

22 161-Ayurved (11 in CHCs and 150 in PHCs), 23-Homeopathy (16 in CHCs and seven in PHCs and nine- Unani.

supporting staff as of October 2011.

Homeopathy (23) and Unani centres (Nine) were not started in CHCs/ PHCs

(b) We further observed that in Bastar, Jashpur and Surguja districts, 23[23] homeopathy (16 in CHCs and seven in PHCs) and nine[24] Unani centres (two in CHCs and seven in PHCs) did not commence services for want of Medical Officers. Thus, the people of these areas were deprived of the full range of alternative medical healthcare services as of October 2011.

In the exit conference, the Secretary stated (October 2011) that these centres could not be made operational due to vacancies in the cadre of Medical Officers. He assured that efforts will be made to fill up the vacant posts.

The above deficiencies indicate that during period of test check the dispensaries/Ayush centres were functioning without Medical Officers, lacking basic infrastructural facilities. Besides, little had been done for building capacity of existing staff. All these factors together had adverse effect on the delivery of healthcare services at primary level.

1.1.10 Working of District Ayurved Hospitals

District Ayurved Hospitals (DAHs) provide the secondary level healthcare. There were six DAHs in the State having bed strength of 30 each. As per the norms fixed (August 2007) by the State Government the percentage of bed occupancy should be 80 and the number of outpatients should be 50 per Medical Officer per day. Test-check of records of four DAHs i.e Jagdalpur (Bastar), Durg, Dallirajahara (Durg) and Ambikapur (Surguja) and information collected in respect of remaining two (Bilaspur and Raigarh) revealed the following:

1.1.10.1 Inpatient treatment

Inpatient facilities were not available in DAH Ambikapur and Dallirajahara

The DAH at Ambikapur in Surguja district, sanctioned in 1979-80, has not had an inpatient facility since 1996 owing to lack of sufficient space in the existing building. The DAH, therefore, has been providing treatment to only outpatients. Similarly, the DAH, Dallirajahara (Durg), sanctioned in 1984-85, has been functioning in a rented building and was able to provide only day admission facility. The details of inpatients treated, bed occupancy and outpatient treated in six test checked DAHs are given in ***Appendix-1.2.***

Overall bed occupancy in District Ayurved Hospitals decreased from 51 to 48 *per cent*

It is evident from the appendix that the bed occupancy of four DAHs declined to 48 *per cent* in 2010-11 from 51 *per cent* in 2006-07 which was far below norms of 80 *per cent* fixed by the State Government. In DAH, Durg where the bed occupancy which was 83 *per cent* in 2006-07, came down steeply to 40 *per cent* in 2010-11. However, in sharp contrast to declining trend of outpatient attendance in Bastar district the bed occupancy in DAH, Bastar had increased to 85 *per cent* in 2010-11 from 18 *per cent* in 2006-07.

The Secretary in the exit conference stated (October 2011) that inpatient

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[23] CHC-Bakawand, Makadi, Bisrampuri, Darba, Farasgaon, Orcha and Londiguda (Bastar); CHC-Manora, Farsabahar, Kansabel, Kunkuri and Duldula (Jashpur) and CHC-Rajpur, Batauli, Bisrampur and Mainpat (Surguja). PHC-Dhanora (Bastar), PHC-Tapkara-6, Sanna-6, Ludeng (Jashpur) and PHC-Rewati, Biharpur-Chandni and Pratapgarh (Surguja).

[24] CHC-Narayanpur and Keshkal (Bastar). PHC-Lanjoda (Bastar); PHC-Gholeng and Narayanpur (Jashpur) and PHC-Raghunathpur, Aara, Jawaharnagar and Maharajganj.

facilities in DAH, Ambikapur and Dallirajahara could not be started due to insufficient space. He assured that the continuation of DAH, Dallirajahara will be reviewed and if necessary, the same will be shifted to some other tribal districts.

1.1.10.2 Outpatient treatment in DAHs

The overall number of outpatient treated in the six test checked DAHs had declined to 0.95 lakh in 2010-11 from 1.16 lakh in 2006-07 which indicated a percentage fall of 18 (***Appendix-1.2***). On the contrary, in Dallirajahara (Durg), the number of outpatients treated had increased to 16,672 in 2010-11 from 11,292 in 2006-07 which was a rise of 48 *per cent* thus underlining the fact that Ayurved system of medicine was gaining popularity despite the DAH having to function from a rented premises. Down trend of inpatients in the same DAH as indicated above paragraph clearly attributable to absence of credible inpatient facilities. This factor needs to be carefully evaluated and considered while deciding the future status of DAH at Dallirajahara.

1.1.10.3 Ayushdeep Samities

To improve management of healthcare facilities through public participation, the State Government decided (August 2007) to form *Ayushdeep Samities* (Societies) in all Dispensaries and Hospitals covered under AYUSH. These Societies, headed by the District Collector and supported by Senior Officers at District level, Hospital management, Senior citizens and voluntary organizations, are required to fix the rates for healthcare services provided by the Dispensaries/Hospitals. The funds received thereby or from any other sources are to be spent for the purpose of developing dispensary and patient related facilities like cleaning, white washing, paintings, furniture, medical instruments viz. stethoscope, thermometer, BP instrument, and other petty expenses. Similarly, Sub-*Ayushdeep* Societies are to be formed for every dispensary in a district.

We observed that though the *Ayushdeep* Societies were formed in all six test checked DAHs, the required number of four meetings in a year had not been held by any of these societies. As a result the intention of State Government to improve the management and healthcare facilities through regular monitoring by these societies could not be fulfilled.

The Secretary in the exit conference attributed this to lack of awareness among members of the *Ayushdeep* societies and stated that to build the capacity of these Societies their members will be trained to conduct the meetings as per their relevant bye-laws.

1.1.10.4 Incomplete DAH building at Ambikapur

Our scrutiny revealed that construction of building for DAH, Ambikapur sanctioned in 2008-09 and scheduled to be completed in October 2009 was incomplete as of October 2011. The PWD Division, Ambikapur, that was responsible for its construction revised the estimated cost to ₹ 1.65 crore owing to time overrun. The revised estimate was yet to be sanctioned (October 2011). Thus, due to delay in completion of building**,** the benefit of full-fledged DAH could not be extended to the people.

The Secretary in the exit conference stated (October 2011) that the administrative approval will be accorded after receipt of revised estimate from PWD and appropriate steps will be taken to ensure early completion.

1.1.10.5 Shortage of manpower

In six District Ayurved Hospitals on an average 31 *per cent* post of Specialists, Ayurved Medical Officers, Nursing sister, Kitchen servant etc. were vacant during the period 2006-11.

Thus, operation of these DAHs without adequate infrastructure and staff did not serve the purpose of providing quality healthcare services at secondary level to the needy patients.

1.1.11 Hospital attached to Government Ayurved College, Raipur

Under the category of alternative system of medicines, the Hospital attached to Government Ayurved College at Raipur is the only tertiary care centre in the State. As per the Central Council of Indian Medicine (CCIM) norms, the bed occupancy in Hospital attached to Government Ayurved College should be 50 *per cent* and the number of outpatients should be 100 per day. However, under the *'Chikitsalaya/ Aushadalay Sudhar Yojna'*, the State Government made these norms more stringent by raising the percentage of bed occupancy to 80 and the number of outpatients to 50 per Medical Officer per day. During our audit we observed the following:

(a) The occupancy of beds and outpatients treatment in Hospital attached to Government Ayurved College was as under:

Table-4:Bed occupancy and outpatient attendance in Hospital attached to Government Ayurved College

Year	Beds available	No. of IPD during the year	Bed capacity in a year (Beds x no. of days in a year)	Actual bed occupancy in a year	Percentage of actual occupancy	Outpatient attendance
2006-07	110	890	40150	9064	23	30969
2007-08	110	952	40260	8685	22	28265
2008-09	150	1356	71175	8875	16	35985
2009-10	150	1587	54750	11148	20	43016
2010-11	150	4410	54750	21159	39	80424

(Source: Bed strength-departmental figures and Occupancy/ outpatient figures furnished by Hospital)

Bed occupancy ranged between 16 and 39 *per cent* in Hospital attached to Government Ayurved College

From the above table it is evident that the bed occupancy during the period of our audit was grossly sub normal. This also indicates that the students' opportunity to gain practical experience by treating the inpatients was constrained to that extent. On an average 12 Medical Officers were attending the outpatients during 2006-11 and the average number of outpatients each day during this period was just 146. Though attendance of outpatients had showed an increasing trend but it was still very low in comparison to the norms fixed by the State Government.

In the exit conference, the Secretary stated (October 2011) that the less popularity of AYUSH system is the main reason for low bed occupancy and stated that the number of inpatients and outpatients will be increased by organising awareness camps in which benefits of Ayurved system of treatment will be explained by adopting IEC activities. In regard to evaluation/studies the Secretary stated (October 2011) that the task has been assigned to State Health Resource Centre (SHRC) which will submit its report within six months and that suitable action will be taken to improve the acceptability and reliability of AYUSH system on the basis of the report of SHRC.

(b) Shortage of manpower

The State Government sanctioned 83 posts for the Hospital attached to the Ayurved College. But there was a shortage of 31 *per cent* in medical staff as of March 2011. We also noticed that though the State Government had sanctioned 58 posts of Medical, Para Medical and other category of staff during 2010-11 for the Hospital, these posts could not be filled up as of August 2011. The shortage of manpower had affected the quality of practical training and proper functioning of Hospital attached to Ayurved College.

(c) Diet to patients at lower rates

Diet at lower rate to AYUSH patients

The Public Health and Family Welfare Department had revised (June 2005) the rate for diet per day per patients from ₹ eight to ₹ 16 and again revised (July 2010) the same to ₹ 24. We observed that the revised rates of June 2005 were communicated in September 2007 to the Director, AYUSH by the State Government i.e. after delay of about two years. Similarly, the rates revised in July 2010 were not communicated (October 2011) to Director, AYUSH due to which the Ayurved College Hospital was providing diet to patients at old rate of ₹ 16. This was attributed mainly to non-endorsement of copy of orders to the Director, AYUSH. Likelihood of low dietary allowance impacting preference of inpatients for the Hospital attached to Government Ayurved College could not be ruled out.

The Secretary in the exit conference stated (October 2011) that orders for revised diet rate of July 2010 have since been issued (October 2011) to Department of AYUSH and assured that, in future such orders would be communicated to Director, AYUSH expeditiously.

1.1.12 Implementation of Hospital and Dispensaries Scheme

With a view to make available the benefits of AYUSH to the public at large and also to improve infrastructure and position in respect of supply of drug in the rural dispensaries, GOI launched (2005-06) Hospitals and Dispensaries Scheme to encourage setting up of general and specialised treatment centres of AYUSH in the allopathic hospitals.

The objectives of the scheme were:

- to facilitate expansion of healthcare facilities of Indian System of Medicines and Homeopathy (ISM&H) and building up confidence of the practitioners of these systems through proper propagation and to thus establish their strength and potential; and
- to provide facilities of specialized therapies like *Panchakarma*[25], *Kshar-Sutra*, Homeopathy, Yog and Naturopathy practices and regimental therapy of Unani system of medicine for utilisation as an adjunct or better alternative to conventional medical treatment.

Under the scheme, the GOI provides 100 *per cent* funds for alteration, partition, repair etc. in the existing buildings, equipment and furniture, special medicines, training of medical and paramedical staff and small contingent

[25] Vaman, Visechan, Vasti, Nasam and Shirodhrya or Raktmokshan.

Blockade of ₹ 7.26 crore under the GOI scheme

expenditure under the scheme. Accordingly, GOI provided (2005-06) an amount of ₹ 12.48 crore for implementation of the scheme in Chhattisgarh against which only ₹ 5.22 crore (42 *per cent*) was spent by the State Government leaving an amount of ₹7.26[26] crore unspent as of October 2011.

The Public Health and Family Welfare Department of Chhattisgarh had selected (September 2005 and March 2006) 15 District Allopathic Hospitals (DHs) for AYUSH wings (except Bilaspur), 22 Community Health Centres (CHCs) in 14[27] districts for Specialised Therapy Centres (STCs) and 24 Primary/Community Health Centres (CHCs/PHCs) in 14[28] districts for Speciality Clinics (SCs) in the State. The Department appointed (September 2005) the Chhattisgarh State Industrial Development Corporation (CSIDC) as the executing agency to establish these centres.

As reported in paragraph 2.4.3 in the Report of the Comptroller and Auditor General of India, Government of Chhattisgarh, for the year ending 31 March 2010, the Director, AYUSH drew the entire amount of ₹ 12.48 crore from treasury on 31 March 2006. After spending an amount of ₹ 22 lakh, deposited the balance of ₹ 12.26 crore under civil deposit head on the same day. Of this, an amount of ₹ 6.25 crore was released (October 2006) to CSIDC which incurred expenditure of ₹ 85.77 lakh for establishment of AYUSH wings in three DHs and Specialised Therapy Centres in two CHCs upto September 2008. The CSIDC expressed its inability (September 2008) to execute the remaining work of establishment of AYUSH wings in 12 DHs, STCs in 20 CHCs and SCs in 24 CHCs/PHCs due to non-availability of space in these health centres and also due to change in scope of work and increase in market price.

Despite balance of ₹ 5.39 crore with CSIDC, the Director, AYUSH released (March 2009) a further amount of ₹ 4.69 crore to CSIDC. Another amount of ₹ 1.32 crore was lying in civil deposit for more than three years lapsed to State revenue in April 2009.

Subsequently, in January 2010 an amount of ₹ 10.08 crore was refunded by CSIDC to Director, AYUSH. Out of the refunded amount the Director, AYUSH released (April 2010) an amount of ₹ 2.92 crore to district *Ayushdeep* societies. These societies also received an amount of ₹ 3.62 crore from funds provided by European Union State Partnership Programme (EUSPP). Thus, a total amount of ₹ 6.54 crore was to be used by these societies for establishment of AYUSH wings, Specialised Therapy Centres and Speciality Clinics. The following shortcomings were noticed by us in utilisation of the funds by these societies:

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26 Unspent (October 2011) scheme fund of ₹ 5.94 crore and GOI assistance of ₹ 1.32 crore lapsed (March 2009) to State revenue.

27 Bilaspur (two), Dhamtari (three), Durg(one), Janjgir-Champa(one), Jashpur(two), Kabirdham(one), Kanker(two), Korba(one), Koriya(one), Mahasamund(one), Raigarh(one), Raipur(one), Rajnandgaon(four) and Surguja(one).

28 Bastar(one), Bilaspur (four), Dantewada(six), Dhamtari (one), Durg(one), Janjgir-Champa(one), Jashpur(one), Kabirdham(one), Kanker(two), Koriya(one), Mahasamund(one), Raigarh(one), Raipur(one) and Surguja(two).

1.1.12.1 AYUSH wings not established in District Allopathic Hospitals

Blockade of ₹ 2.19 crore and non-establishment of AYUSH wings in 12 DHs

As per the scheme, an AYUSH wing in each DH was to be established with a minimum space allocation of 2,400 sq. ft. that could accommodate with six therapy rooms, one room for Outdoor Patient Department (OPD) and an office room. Further, for AYUSH patients, each DH was required to dedicate 10 beds in Indoor Patient Department (IPD). On a similar pattern kitchen attached to DH was to be shared by Ayush and non-Ayush patients. We observed that the specialised facilities of AYUSH wings in 12[29] DHs were not commenced (except in four[30] districts) as the required construction works were not completed. The amount of ₹ 2.19[31] crore provided for this purpose (April 2010) to District *Ayushdeep* Societies was thus partly lying with DAO and partly with the PWD. Out of five test checked districts, in three districts (Bastar, Kabirdham and Raipur), ₹ 54.87 lakh was lying in bank deposits and in two (Jashpur and Surguja) ₹ 36.58 lakh was deposited with PWD.

Our scrutiny of AYUSH wings[32] in District Allopathic Hospitals (DHs) revealed that the AYUSH wing in DH at Jagdalpur (Bastar) was not functional as of October 2011 whereas AYUSH wing in remaining eight DHs started providing general outpatient treatment between 2008-09 and 2010-11. The overall number of outpatients treated in these eight DHs during 2008-11 was 66,796. We observed that the average outpatients treated per day in seven districts ranged between one and 19. However, in Durg district which was test checked at the request of Director, AYUSH the average number of outpatients treated per day were 54 during 2010-11 and the overall number of outpatients in Durg had thus doubled from 7,188 in 2008-09 to 16,182 in 2010-11

1.1.12.2 Specialised Therapy Centres not established in CHCs

Blockade of ₹ 3.01 crore and 20 Specialised Therapy Centres not established in CHCs

On the pattern of AYUSH wings in DHs, Specialised Therapy Centres (STCs) were to be established under the scheme in 22 CHCs. We observed that the specialised facilities of STC in 20 out of 22 CHCs had not commenced as the required construction works were not completed. Consequently an amount of ₹ 3.01 crore at the rate ₹ 15.03 lakh (₹ five lakh GOI grant and ₹ 10.03 lakh from EUSPP funds) provided for establishment of 20 STCs to District *Ayushdeep* Societies was lying unused either with DAO or with the PWD. In test checked districts an amount of ₹ 75.15 lakh was given for five STCs was either lying in bank account of respective DAOs (₹ 45.09 lakh) or was deposited with PWD (₹ 30.06 lakh).

Our scrutiny of 16[33], out of 22 STCs in CHCs revealed that except in STC, Balod (Durg) started from 2008-09, general outpatient treatment facilities were not available in any other STC. Even in STC, Balod the number of

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[29] Bastar, Dantewada, Dhamtari, Jashpur, Kabirdham, Kanker, Korba, Koriya, Mahasamund, Raigarh, Raipur and Surguja,

[30] Bilaspur, Durg, Janjgir-Champa and Rajnandgaon.

[31] At the rate ₹ 18.29 lakh (₹ 10 lakh GOI grant and ₹ 8.29 lakh EUSPP funds).

[32] Test checked-Bastar, Jashpur, Kabirdham, Raipur and Surguja and information collected- Durg, Korba, Raigarh and Rajnandgaon.

[33] In test checked districts-Bagicha and Pathalgaon (Jashpur), Pandaria (Kabirdham), Dharsiwa (Raipur) and Surajpur (Surguja) and information collected from- Mungeli and Musturi (Bilaspur); Kurud, Magarlod and Nagri (Dhamtari); Balod (Durg); Pusor (Raigarh) and Dhumka, Dongargaon, Dongargarh and Khairagarh (Rajnandgaon).

outpatients had fallen to 6,545 in 2010-11 from 8,702 in 2008-09 indicating a declining trend of 25 *per cent.* On an average only 26 patients were visiting the STC every day.

1.1.12.3 Speciality clinics not established in CHCs/PHCs

Blockade of ₹ 1.34 crore and 24 Speciality Clinics not established in CHCs/PHCs

Speciality Clinics (SCs) in 24 CHCs/PHCs were to be established with a working space of 800 sq. ft. that included a consultation room and a medicine distribution room. We observed that in none of the 24 CHCs the specialised facilities of SCs were commenced as scheduled because the required construction works were not completed. The amount of ₹ 1.34 crore provided to District *Ayushdeep* societies at the rate of ₹ 5.60 lakh per society (₹ 3 lakh GOI grant and ₹ 2.60 lakh EUSPP funds) was again either lying with respective DAOs or with the PWD. In six SCs in the test checked districts, an amount of ₹ 11.20 lakh (33 *per cent*) was lying in bank account of respective DAOs and ₹ 22.40 lakh (*67 per cent*) had been deposited with PWD.

However, in 13[34] SCs general outpatient treatment facility started functioning during the year 2010-11 and 13,489 outpatients were treated upto March 2011. This indicated that on an average five patients were visiting each of these SCs every day. It is thus evident that potential of healthcare delivery through AYUSH had remained partially developed.

1.1.12.4 Inadequate manpower

The State Government had sanctioned (May 2007) eight[35] posts for AYUSH wing in each DH, seven[36] posts for each STCs in CHCs and three[37] posts for each SCs in CHCs/PHCs. These included the posts of specialists, *Panchakarma* assistants and supporting staff that remained unfilled. Thus, as of October 2011, these institutions were effectively not functional as specialised centres and were providing the services like any ordinary dispensary, thereby defeating the objective of the GOI scheme.

In the exit conference, the Secretary stated (October 2011) that the project was delayed due to non-completion of works by earlier nodal agency (CSIDC). He further intimated that out of 61 construction works, 22 have been completed, 31 are in progress and eight could not be started. He also assured that all these specialised centres will be made operational by providing necessary machinery and infrastructure from the balance scheme funds.

It was evident that due to tardy implementation of Central scheme, the populace of the State were deprived of specialised AYUSH medical services as envisaged in the scheme even after receiving sufficient financial assistance from GOI.

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[34] In test checked districts-Kondagaon (Bastar); Tapkara (Jashpur); Sahaspur Lohara (Kabirdham); Abhanpur (Raipur) and Sitapur and Wardrafnagar (Surguja) and information collected from- Bilha, Gorella, Kota and Pendra (Bilaspur); Gujra (Dhamtari); Bhilai-3 (Durg) and Badebhandar (Raigarh).

[35] One post each of Specialist, Ayurved Medical Officer, Pharmacist, Peon and four posts of Panchakarma Assistant.

[36] One post each of Specialist, Pharmacist, Peon and four posts of Panchakarma Assistant.

[37] One post each of Ayurved Medical Officer, Pharmacist and Peon.

1.1.13 Deficiencies in Hospital and Dispensaries improvement scheme

With a view to improve the quality and services of Hospitals and Dispensaries at primary, secondary and tertiary level, the State Government launched (August 2007) the *'Chikitsalaya/ Aushadalay Sudhar Yojna'* and prescribed standards and norms for functioning of all Hospitals and Dispensaries of Ayurved, Homeopathy and Unani.

(a) Under the scheme, one time financial assistance of ₹ 25,000 was to be provided to a Dispensary having *Ayushdeep* Societies for meeting the contingent expenditure. Scrutiny of receipt and utilisation of such financial assistance in 204 test checked dispensaries revealed that in 58 dispensaries either no Ayushdeep societies were formed or no Medical Officer was posted. Hence, no financial assistance was given to these societies. Of the remaining 146 dispensaries, 120 had incurred expenditure on eligible items like cleaning, white wash, paintings, furniture, medical instruments viz. stethoscope, thermometer, BP instrument and other petty expenses. The remaining 26 dispensaries could not spent the amount given to them due to obvious lack of initiatives on the part of Medical Officers or due to *Ayushdeep* societies remaining dysfunctional as evidenced by us during our visit to the dispensaries.

(b) In addition, following shortcomings were also noticed in 356[38] functional health institutions:

- General, emergency services and maternity facilities were not available in any of the test checked institutions except in Ayurved College Hospital.
- The outpatient and inpatient registrations were not computerised in any of the Hospitals.
- Systems of obtaining feed back from the patients for evaluation of services, scientific methods of medical waste management and uninterrupted electricity facilities in Hospitals were not in place. Further, the provision of citizen charter, notice boards outside the rooms, details of fees for various services, details of National health programmes being implemented in these hospitals were also not displayed in most of the units.

The Secretary in the exit conference stated (October 2011) that suitable guidelines will be issued in this regard to all concerned including *Ayushdeep Societies*.

Delivery of services by educational institute

1.1.14 Working of Government Ayurved Medical College

The only Government Ayurved Medical College at Raipur (Ayurved College) was started (1950) with 55 sanctioned seats to impart medical education and to

[38] District Ayurved Hospitals-six; Ayurved Dispensaries-182; Homeopathy Dispensaries-19; Unani Dispensaries-three, AYUSH wing in District Allopathic Hospitals-four, AYUSH centres in CHCs-eight and PHCs-134.

award the degree 'Bachelor of Ayurved Medicine and Surgery (BAMS)' to students. Its attached Hospital was established (1956) with 110 bed inpatient capacity. In addition, the College offers Post Graduation courses in five subjects through 14 departments. The College has three laboratories, a library, an ambulance and a 52 seater bus. As against sanctioned strength of 70 teaching staff, 52 were in position as of October 2011. The Ayurved College and attached Hospital, however, lack facilities like animal house, separate Pharmacy, research laboratory, four lecture halls and audiovisual section, auditorium, post graduate hostel, one major operation theatre and ophthalmology operation theatre, additional inpatients wards etc.

The College has not attained standards with regard to teaching facilities, number of para medical and non-para medical staff and other necessary infrastructure for the College and attached hospitals as prescribed under Central Council of Indian Medicine Act, 1970 in spite of both the institutions having existed for the last 55 years as brought in the succeeding paragraphs.

Student bed ratio was not as per CCIM norms

- As per CCIM norms 275 beds were required to achieve a student bed ratio of 1:5. The bare minimum requirement at the ratio 1:3 was 165 beds. In addition there were five post graduate courses having eight clinical subjects from 2008-09 for which 40 additional beds were required as per norms. We noticed that during 2006-11 the bed strength ranged between 110 and 150. Therefore, the stipulated student bed ratio was not met.

Inadequate library facility

- As per the standards fixed by GOI under the scheme State Model Institute of Ayurved, an Ayurved College requires library with a minimum of 50,000 books and a full time qualified librarian. Our scrutiny revealed that as of October 2011, the College library was having 14,273 books. No books were purchased after July 2009. We noticed that though the college is having a full time qualified librarian adequate library facility was not available.

Non-setting up of herbal garden

- The CCIM has prescribed setting up of herbal garden in proximity to the Ayurved Colleges where all possible medicinal plants should be planted for identification and demonstration purpose. The Ayurved College received (August 1998) grant amounting to ₹ five lakh from GOI for development of herbal garden which was spent on preparatory works viz. fencing, bore well (with pump house), landscaping, etc. We noticed that even after lapse of more than 11 years, herbal garden could not be developed on the site as no medicinal plants were planted due to which the expenditure of ₹ five lakh rendered unfruitful.
- Due to lack of essential infrastructure, shortage in teaching staff, inadequate student bed ratio etc., the GOI declared 2008-09 year as a zero year meaning thereby that the college could not admit students for the college during that year.
- Due to non-fulfillment/ observance of CCIM norms in existing college, the proposal (April 2010) for enhancement of seats from 55 to 100 was also rejected (November 2010) by GOI.

1.1.14.1 Shortage of manpower

As per the CCIM norms, 26 Professors/Readers, 17 Lecturers and 26 other

Shortages in teaching, medical, paramedical and supporting staff in College

staff (Laboratory Technicians/Assistants/Attendant/Museum Keeper etc.) were required for Ayurved College. As against this, 37 posts of Professors/Readers, 35 posts of Lecturers/Demonstrator, two paramedical and 64 supporting staff were sanctioned by the State Government for College. We noticed that as of March 2011, the shortage in teaching staff (Professors/ Readers/ Lecturers/ Demonstrator) was 35 *per cent* and 45 *per cent* amongst the supporting staff.

In the exit conference, the Secretary stated (October 2011) that maximum posts as per norms of CCIM were filled and remaining posts will be filled up in due course after reviewing the requirement and available posts as per CCIM norms. The reply was not acceptable because the posts sanctioned in addition to minimum requirement of CCIM norms by State Government were required to be filled up to ensure availability of sufficient teaching and supporting staff for imparting quality education to students.

1.1.14.2 Scheme for development of AYUSH institutions (State Model College)

Non- development of Ayurved College as State Model College

With a view to develop one Model Institute of Indian System of Medicine & Homeopathy per system per State in the 10th Plan, the Government of India launched (2004-05) centrally sponsored scheme called *"State Model Institute of AYUSH"*. The Government institutes recognized by the Central Council of Indian Medicine (CCIM) that fulfilled at least 50 *per cent* of Council norms were eligible under the scheme for limited financial assistance of ₹ three[39] crore for hiring the additional technical staff on contractual basis, construction works, purchase of equipment, books etc. Thus by using these funds the additional technical staff required for the department of radiology, microbiology, biochemistry & anesthesia and deficient teaching staff in the post graduation departments were to be appointed by the institute on contractual basis in the plan period. The GOI released to the State Government an amount of ₹ 2.77[40] crore for various purposes covered by the scheme.

Our scrutiny revealed that out of ₹ 2.77 crore, works amounting ₹ 73.11 lakh (26 *per cent*) were completed and various works amounting ₹ 1.67 crore (61 *per cent*) were in progress (October 2011). Out of the balance amount, an amount of ₹ 34.63[41] lakh (*12 per cent*) was incurred on other components and ₹ 1.89 lakh (one *per cent*) was lying in bank account (October 2011). However, no expenditure was incurred for appointment of additional technical and teaching staff.

While accepting the observation, the Secretary intimated that the activities covered under the scheme will be completed on receipt of further funds from GOI.

Thus, failure of the Department to appoint the teaching/ technical staff and non-procurement of machines/equipments and other infrastructure defeated the purpose of simultaneous development of facilities in Ayurved College to

[39] Capital works, furnishing & renovation-₹ 1.41 crore; Machinery, equipment & computers-₹ 93 lakh; Books & journals-₹ nine lakh and Additional technical & teaching staff-₹ 57 lakh.

[40] June *2004*- ₹ 90 lakh and September 2007- ₹ 1.87 crore.

[41] Purchase of machine equipments-₹ 32.63 lakh, Furniture/fixtures-₹ one lakh and ₹ one lakh on books.

upgrade it as State's Model College. Due to non-observance of CCIM norms, the facilities in Ayurved College could not be upgraded as intended.

Delivery of services by subsidiary institutions

1.1.15 Working of Government Ayurved Pharmacy

The Department has set up a Government Ayurved Pharmacy (Pharmacy) at Raipur for manufacturing Ayurved *Shastrokta* (Classical) medicines and their supply to government Hospitals and Dispensaries. During the test check period (2006-11) 28 to 35 types of classical medicines were produced in Pharmacy and the State Government had provided budget allocation of ₹ 10.81 crore to the Pharmacy. In addition, since the closing years of Ninth Five Year Plan (1996-2001), the Government of India had also provided an additional assistance of ₹ 1.80 crore under the scheme 'Strengthening and establishment of Ayurved, Siddha, Unani and Homeopathy Drugs (ASU&H) Pharmacies' with a view to strengthen its drug manufacturing units and to meet norms of Good Manufacturing Practices (GMPs).

The Pharmacy has been sanctioned a total staff of 71 which includes posts of four pharmacists, 28 medicine makers, two medicine packers, four machine operators etc. At present, the Pharmacy is functioning at its own building which is used to run its office, manufacture medicines and storage of raw materials, etc. No testing laboratories exist in its premises.

The year wise production targets fixed by the Pharmacy for itself and achievements there against are given in the ***Appendix-1.3***. The targets fixed by the Pharmacy are stated to have been based on demands received from the District Ayurved Offices. We noted that no rational correlation existed, however, between the demands received from the districts and the targets fixed by the Pharmacy and actual production, both in terms of kind of medicines and the quantity, as can be seen from ***Appendix-1.3*** and ***1.4***. An analysis of the figures reflected in the appendices indicates the following mismatches:

- In the first three years (2006-09) of test check period, against 35,418.90 litres of liquid and 2,189.39 quintals of solid medicines extensively demanded by the districts, the targets fixed were either less (for liquids 20,978.60 litres) or more (for solids 3,181.64 quintals).
- Even though the targets for liquid medicines were fixed far below the demand, actual production was lower and the shortfall ranged between 26 and 94 *per cent*. Though targets were fixed higher than the demand for solid medicines from districts, actual production was even lesser than the districts had demanded. The shortfall ranged between 61 and 69 *per cent.*
- In the remaining two years of the test check period (2009-10 and 2010-11), coincidently the demand received from the district and the targets set by the Pharmacy matched to a decimal. Yet the actual production fell sharply below the targets. The shortfall ranged between 78 and 82 *per cent* for liquid and 68 and 73 *per cent* for solid medicines.

- The discrepancies have also been observed in the number of medicines for which demands have been received and for which the targets were fixed as well as those which were actually produced. Large quantities of solid as well as liquid medicines were either produced without any demands or far beyond targets. On the other hand, number of medicine for which demands existed or for which targets were fixed were not produced at all (see ***Appendix-1.3***).

The above observations made by us indicate that manufacturing activity of the Pharmacy is neither based on any rational demand forecast nor subject to any degree of control at the production stage. The factors that have hampered achievement of targets and the impact of the demand-target-production correlation in the Pharmacy are discussed in the succeeding paragraphs.

1.1.15.1 Government Ayurved Pharmacy not strengthened

Our scrutiny of utilisation of funds of ₹ 1.80[42] crore released (2007-10) by GOI under the scheme[43] for strengthening the DTLRC revealed that there was insufficient availability of equipment as well as ineffective use of funds and equipments as shown below:

(a) Inadequate infrastructure and machinery/equipments

As per GOI scheme a Pharmacy requires total area of 10,000 to 20,000 square feet for its functioning. We noticed that the entire Pharmacy was functioning in an area of maximum 1,800 square feet only. Further out of 53 machines/equipments were recommended by GOI for a Pharmacy 18 (34 *per cent*) were not available (October 2011) with the Pharmacy.

(b) Idle machinery and equipments- ₹ 28.93 lakh

Idling of machinery and equipment worth ₹ 28.93 lakh

We observed that due to space constraints in Pharmacy, out of all machinery/ equipments valuing of ₹ 85.88 lakh, 57 machines and tools equipment worth ₹ 28.93 lakh (34 *per cent*) procured during January 2002 to March 2007, and installed during January 2002 to January 2010, were non-functional and lying (***Appendix-1.5.***) in Pharmacy for period ranging from one to 10 years **(Picture-2).**

Picture-2

Idle machinery/equipment in Pharmacy

[42] Of which ₹ 15 lakh released by GOI in January 2005 which was kept in civil deposits and released in March 2006 by State Government)

[43] Strengthening and establishment of ASU&H Pharmacies.

(c) Blockade of Central assistance of ₹ 68.61 lakh

Blockade of GOI funds of ₹ 68.61 lakh adversely affected strengthening of Pharmacy

Out of ₹ 93.61 lakh received from GOI during March 2001 and October 2008 for building works unspent balance of ₹ 68.61 lakh was parked in bank account for more than two years due to which strengthening of Pharmacy was adversely affected.

Non-operation of these machines due to insufficient space in Pharmacy led to blockade of raw materials, increase in production cost as well as shortfall in qualitative and quantitative production of medicines as discussed below:

(d) Excessive stock of raw herbs

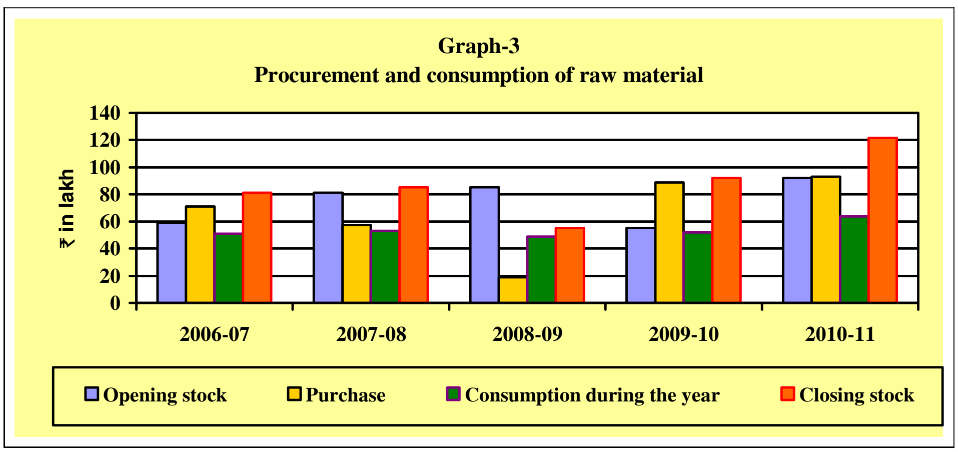
Five types of raw herbs/ material (herbal, mineral, *jantav*, metal and artificial) are used by Pharmacy for production of medicines of which the herbal items are consumed faster. The year-wise stock position of raw herbs and consumption in the Pharmacy during the period 2006-11 was as under:

Table-5: Stock position of raw herbs

(₹ in lakh)

Year	Opening stock	Receipt during the year	Total	Consumption during the year	Closing stock	Percentage of consumption
2006-07	58.89	73.15	132.04	50.96	81.08	39
2007-08	81.08	57.29	138.37	53.19	85.18	38
2008-09	85.18	19.02	104.20	49.01	55.19	47
2009-10	55.19	88.90	144.09	52.01	92.08	36
2010-11	92.08	93.06	185.14	63.80	121.34	34
TOTAL:	**58.89**	**331.42**	**390.31**	**268.97**	**121.34**	

(Source: Stock registers maintained in Pharmacy and compilation by audit)



Blockade stock of raw herbs in stores

It may be seen from the above table and graph that the consumption of raw herbs was always less than the opening balance and ranged between 34 and 47 *per cent* of total stock. Despite sufficient stock of raw herbs, subsequent purchases were made without ensuring the consumption of earlier stock. We also noticed that raw herbs valuing ₹ 56.78 lakh (***Appendix-1.6***) were lying in stock, of which 10 items valuing ₹ 26.44 lakh were lying for more than five years. Thus, procurement of raw herbs without assessing the actual requirement resulted in unnecessary locking up of government funds.

While accepting these observations, the Secretary in the exit conference stated (October 2011) that this was due to inefficient management of stores and assured that the system will be streamlined.

(e) Prohibitively higher cost of production

Standards or norms for costing not defined

Scrutiny of records in Pharmacy revealed that the system of costing of medicines being produced, as adopted by the Pharmacy, was neither prescribed by the State Government nor approved by it at any level. The method adopted by Pharmacy to work out its cost of production, therefore, was ad-hoc. The costing details of production of medicines during the period 2006-11 are indicated below:

Table-6: Cost of production in Pharmacy

(₹ in lakh)

Year	Cost of raw herbs/ materials used for production of medicines	Expenditure on various overheads viz. pay and allowances, electricity etc.	Total production cost	Percentage of expenditure on various overheads to total production cost
2006-07	47.56	50.49	98.05	51
2007-08	70.31	33.70	104.01	32
2008-09	50.10	62.26	112.36	55
2009-10	51.93	65.16	117.09	56
2010-11	63.91	65.87	129.78	51

(Source: Stock and production registers of Pharmacy)

It may be seen from the above table that the expenditure on various overheads was more than the cost of raw herbs/ materials during the period except in 2007-08. Accordingly, the percentage of various overheads to total production cost was between 32 and 56 during the period 2006-11. Moreover, no system of costing of medicines being produced in the Pharmacy had been established by the Department.

In the exit conference, the Secretary stated (October 2011) that targets were fixed in anticipation of installation of machinery/equipments but these could not be installed for want of space. It was also stated that after shifting of dental college to its new building, some space will be made available to Pharmacy and all the machines and equipments available with Pharmacy will be installed to increase the production capacity and to reduce the production cost.

The reply is not acceptable because the targets were set without ascertaining the production capacity of the Pharmacy.

(f) Norms for process loss not laid down

Norms for process losses not laid down and variations in process losses

The Government/ Department had not fixed any norms for process losses in manufacturing of medicines by the Pharmacy. Test check of records related to production of medicines revealed that 28 to 35 types of *Shastrokta* (classical) medicines were produced in Pharmacy during 2006-11. The cases of process loss[44] (10 *per cent* and above) in manufacturing of eight solid medicines are shown in table below:

[44] Output (weight of finished product) – Input (weight of raw material issued) x 100/ Input.

Table-7: Process loss in manufacturing of medicines

Sl. No.	Name of the medicine produced	Percentage of process loss incurred
1.	*Sphatik Bhashma*	50
2.	*Tankan Kshar*	38 and 42
3.	*Godanti Bhashma*	22 and 25
4.	*Hazarul Yahood Bhashma*	20
5.	*Aamlaki Rasayan*	23
6.	*Mukta Shukti Bhashma*	12 and 19
7.	*Shatawari Churna*	13
8.	*Kapard Bhashma*	10

(Source: Stock and production registers of Pharmacy)

The Secretary in the exit conference stated (October 2011) that the norms for process loss have not been laid down and the same will be fixed after carrying out studies in this regard.

1.1.15.2 Inadequate manpower

The State Government sanctioned 71 posts in various categories for Pharmacy against which on an average 30 were vacant during the period 2006-11. These included four posts each of critical staff like machine operator and pharmacist Grade-I. Thus, due to shortage of staff to the extent of 30 *per cent* in different categories, the working of Pharmacy may adversely affected and to that extent the quality during production of medicines could not be ensured.

While accepting the observation, the Secretary in the exit conference stated (October 2011) that due to space constraints some machines and equipments could not be put to use. In respect of blockade of ₹ 68.61 lakh, the Secretary stated that the requirement of construction works and the additional funds from State Government will be reviewed and a decision to return the funds to GOI will be taken accordingly. It was also stated that the efforts are being made to improve the staff position at all levels.

The strengthening of Pharmacy was thus adversely affected due to blockade of funds (₹ 68.61 lakh) meant for construction works and the machinery procured were lying idle for want of space as well as shortage of staff. Thus, the objectives of following Good Manufacturing Practices by Pharmacy as envisaged under the GOI scheme could not be achieved.

1.1.16 Working of Drug Testing Laboratory and Research Centre

The State Government established (December 2005) a Drug Testing Laboratory and Research Centre at Raipur (DTLRC) for carrying out quality testing of medicines produced at Government and Private pharmacies in the State to ensure production of quality medicines as per the standards of Ayurved Pharmacopeias of India and to carry out research in the field of ASU&H drugs. The DTLRC had not undertaken any research activity since its establishment. Also no norms have been fixed by Government or Department of AYUSH or by the DTLRC itself, in respect of samples required to be tested in the DTLRC over a given period. Hence, the targets fixed by the DTLRC each year in respect of samples to be tested were adhoc in their basis.

Only 691 samples were tested during 2006-11 in DTLRC

We noticed that only 82 *per cent* of the targeted number of samples had been received from Pharmacy and the various DAOs/ agencies during 2006-11. As against the target of 964[45] samples, 786 samples had reached the laboratory. Of these, 691 (88 *per cent*) were tested. The remaining 95 samples (12 *per cent*) could not be tested due to non-availability of facilities, insufficient quantity for carrying out tests and non-availability of pharmacopoeia standards. Thus, the overall functioning of the DTLRC was sub-optimal. The following related observations are made:

1.1.16.1 DTLRC not strengthened

Our scrutiny of utilisation of funds of ₹ 1.38[46] crore released (2007-10) by GOI under the scheme[47] for strengthening the DTLRC revealed that there was insufficient availability of equipment as well as ineffective use of funds and machinery as shown below:

(a) Inadequate infrastructure and machinery/equipments

We noticed that out of 46 machinery/equipments recommended by GOI for a drug testing laboratory, 30 (65 *per cent*) were not available (October 2011) in DTLRC.

Idling of machinery worth ₹ 29.12 lakh

(b) Idle machinery and equipments

We observed that due to posts of Scientific Officers not being filled up, out of machinery/ equipments valuing ₹ 65.34 lakh, equipment worth ₹ 29.12 lakh (45 *per cent*) was non-functional and lying idle in the laboratory. The Department had not taken any initiative to fill up the vacant posts to utilise the funds amounting ₹ 8.54 lakh allotted for the purposes. The details of idle machineries/equipments are given in ***Appendix-1.7.***

(c) Out of an amount ₹ 50[48] lakh deposited with PWD for various civil works, works amounting to ₹ 33.15 lakh (66 *per cent*) were in progress as of October 2011. Strengthening of DTLRC was adversely effected due to incomplete civil works.

Blockade of GOI funds of ₹ 15.80 lakh

(d) The unspent balance of ₹ 15.80 lakh was parked in a bank account for more than six years and had remained unutilised for the sanctioned purposes.

1.1.16.2 Inadequacy of manpower

The State Government had sanctioned 10 posts in various categories for DTLRC of which six to eight remained vacant at different point of time. Further, for research work no additional posts have been sanctioned by the State Government. Thus, due to shortage of staff to the extent of 60 to 80 *per cent* in different categories and posts for research works not being sanctioned, the working of DTLRC adversely affected the testing of drugs and research works.

Thus, strengthening of DTLRC was adversely affected due to idling of machinery/equipment, non-availability of required equipment, shortage of

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45 Including opening balance of 24 samples.

46 Equipment and documentation centre-₹ 77.60 lakh, human resource-₹ 10 lakh and Civil works-₹ 50 lakh).

47 Strengthening and establishment of Durg Testing Laboratory for ASU&H drugs.

48 ₹ 16.85 lakh (May 2006), ₹ 5.87 lakh (March 2007), ₹ 2.28 lakh (March 2008) and ₹ 25 lakh (October 2010).

trained manpower and blockade of funds. The objectives of the GOI scheme remained unachieved and the State Government/ Department failed to ensure optimum utilisation of the DTLRC during the period of performance audit.

1.1.17 Implementation of enforcement mechanism for ASU&H drugs scheme

Under the GOI scheme of "Strengthening of State Drug Controllers of ASU&H Enforcement Mechanism" in the State an annual financial assistance for the duration of the 11 Five Year Plan (2007-12) was to be reimbursed by the GOI against expenditure incurred after 1 April 2007 on the various components[49]. As per the scheme, the State Government was to work out the possibilities of ploughing the revenue generation towards funding of the staff proposed in the component and development of ASU&H drug control sector in the State. Accordingly, GOI released ₹ 29[50] lakh for implementation of the scheme.

Scrutiny of the records revealed that there were 31 drug manufacturing units in the State. The Department spent only ₹ 17.57[51] lakh (61 *per cent*) and ₹ 11.43 lakh (39 *per cent*) was kept in bank account (October 2011) by Directorate for period ranging from two to three years.

We further observed that meager expenditure was incurred under the head 'collection of survey samples' and 'training' and no expenditure was incurred under the head salary for Data Entry Operator and traveling allowance. Against collection and testing of 500 samples per year, only 436 samples were collected and tested during 2006-11. The possibilities of ploughing revenue generation had not been worked out as the Department realised revenue only through renewal of licenses. Though computerisation of the office of ASU&H Drug Controller was stated to have been completed but the data relating to issue and renewal of licenses, survey samples testing and inspection reports were not uploaded in State website as of October 2011.

Thus, the Department failed to utilise the earlier central assistance received and failed to obtain further assistance from third year onwards to strengthen the enforcement mechanism for ASU&H Drugs in the State Government.

Programme Implementation

1.1.18 Implementation of *"Ayurved Gram"* scheme

The State Government launched (2008-09) *'Ayurved Gram'*, scheme with objective to provide information and awareness to people regarding healthcare, identification for medicinal plants and domestic treatment through herbs, preparation of domestic Ayurved medicine in villages, promotion of *Panchakarma* and *Kshar-Sutra* treatment, information and treatment about

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[49] Expenditure on purchase of vehicle, Computerisation Drug Controller Office, collection of statutory/ survey samples and training.

[50] ₹ 15 lakh in February 2008 and ₹ 14 lakh in April 2009.

[51] Salary of Licensing Authority and Drug Inspector-₹ 9.45 lakh, purchase of vehicle-₹ 5.56 lakh, computer, fax etc.- ₹ 1.84 lakh , stationery-₹ 0.32 lakh, State level meetings-₹ 0.19 lakh, survey sample collection-₹ 0.11 lakh and training-₹ 0.10 lakh

epidemics, implementation of National health programme and to encourage the farmers in production and plantation of medicinal plants, etc.

Under the scheme financial assistance of ₹ one lakh per year for each Ayurved Gram was to be provided by the State Government. Of this, 40 *per cent* was to be spent on publication and promotion, 20 *per cent* on essential drugs, 15 *per cent* on other contingencies at Directorate level and 25 *per cent* on health fairs/ awareness camps through respective DAOs.

(a) There are 146 blocks in the State and we observed that the objective of developing of one village as 'Ayurved Gram' in every block and to organize medical camps and health fairs at district/block level was largely achieved as can be seen from the table below:

Table-8: Allotment of funds and expenditure under 'Ayurved Gram' scheme

(₹ in lakh)

Year	No. of Ayurved Gram during the year	Amount sanctioned	Expenditure incurred	Balance amount	Percentage of savings
2008-09	25	25.00	17.43	7.57	30
2009-10	121	121.00	95.17	25.83	21
2010-11	146	146.00	112.94	33.06	23
TOTAL		**292.00**	**225.54**	**66.46**	**23**

(Source: Departmental figures)

However, of the total amount of ₹ 2.92 crore sanctioned for the purpose, funds ranging between 21 to 30 *per cent* could not be utilised.

We also noticed that out of ₹2.26 crore actually spent, ₹ 1.33 crore (59 *per cent*) was incurred by Directorate on purchase of medicines (₹ 82.63 lakh), Publicity and Promotion (₹ 45.59 lakh) and Training (₹5.10 lakh). The remaining expenditure of ₹ 93 lakh was incurred by respective DAOs.

(b) Records of 54, out of 60 Ayurved Grams in five selected districts were test checked. The district-wise allotment of funds and expenditure thereagainst in five test checked districts was as under:

Table-9: Allotment and expenditure in test checked districts

(₹ in lakh)

	Bastar		Jashpur		Kabirdham		Raipur		Surguja	
Year	**All**	**Exp**	**All**	**Exp**	**All**	**Exp**	**All**	**Exp**	**All**	**Exp**
2008-09	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.59	0.00	0.00
2009-10	5.20	2.09	2.40	1.60	1.94	1.52	7.76	3.67	7.28	6.53
2010-11	5.60	1.00	3.88	2.80	1.94	1.75	7.28	6.57	9.22	9.18
TOTAL	**10.80**	**3.09**	**6.28**	**4.40**	**3.88**	**3.27**	**15.64**	**10.83**	**16.50**	**15.71**
Percentage of savings	**71**		**30**		**16**		**31**		**5**	

(Source: Figures furnished by respective DAOs)

Objectives of 'Ayurved Gram' scheme not achieved

It is evident from the above table that except in Surguja there was savings ranging from 30 to 71 *per cent* in the test checked districts. In Bastar district implementation of the scheme was very poor. Our scrutiny of records and information revealed that though expenditure of ₹ 37.30 lakh was incurred on publication, promotion, health fairs/awareness camps etc., the other objectives of the scheme to encourage the farmers for production and plantation of medicinal plants and preparing of domestic Ayurved medicines in villages remained unachieved.

(c) Under the scheme, the Department also undertook plantation of medicinal plants during 2009-10. We noticed that the overall survival rate of medicinal plants was 40 *per cent*. However, in 16 Ayurved Grams this percentage was less than 25. In 46 out of 54 Ayurved Grams no member was involved from *Rajya Vanoshadi Board* in organising committee as envisaged in the scheme guidelines.

In the exit conference, the Secretary stated (October 2011) that the concept of planting of medicinal plants on commercial lines or production of Ayurved medicines were not the objectives of the scheme and informed that the State Government had entrusted the work of evaluation/study of the scheme to SHRC.

The reply was not convincing as the concept and objectives of the scheme clearly included activities aimed at encouraging the farmers to undertake production and plantation of medicinal plants and also preparation of domestic Ayurved medicine in villages etc.

The implementation of the scheme in four districts was thus not satisfactory as the funds provided to districts for publication, promotion, health fairs/camps etc. were not utilised and the intended objectives of the schemes also could not be achieved.

1.1.19 Convergence with other on-going programmes

1.1.19.1 NRHM not implemented and refund of ₹ 3.29 crore

Refund of NRHM funds ₹ 3.29 crore

Based on the approval of State Programme Implementation Plan (PIP) for National Rural Health Mission (NRHM) its Mission Director in Chhattisgarh released (March 2009) ₹ 1.78 crore and ₹ 4.24 crore (March 2010) for implementing various activities under NRHM. We noticed that an amount of ₹ 3.29 crore (55 *per cent*) was refunded (December 2010) to the State Mission Director, NRHM as funds could not be spent on various components and activities as envisaged in the PIP of NRHM, the details of which are given in ***Appendix-1.8.***

We observed that two health camps at district level and four at block level were to be organized every year for which ₹ 65.40 lakh was received from NRHM under PIP 2008-09. Of this, ₹ 62.41 lakh (95 *per cent*) was spent upto March 2011. In five selected districts only 11 (37 *per cent*) health camps at the district level were organised during 2008-11 for which an expenditure of ₹ 1.13 lakh was incurred. Similarly, in 60 blocks of five test checked districts, only 245 health camps (34 *per cent*) were organised in that year by spending an amount of ₹ 9.90 lakh. Thus, lack of initiative on the part of the Department in organizing the health camp not only led to non-achievement of the target but also the objectives of creating awareness on the use of alternative system of medicines through the health camps also remained unachieved in the selected districts.

In the exit conference, the Secretary attributed (October 2011) the short performance of AYUSH Department under NRHM due to lack of monitoring.

The non-utilisation of NRHM funds was noticed mainly in regard to (a) establishing integrated epidemic cell, (b) purchase of essential medicines for rural, remote and tribal areas, (c) recruitment of additional manpower for AYUSH units in tribal CHC/PHC and (d) imparting training on essential maternal and child health and ward in Ayurved College etc. This had resulted in an over-optimistic estimate of activities to be under taken and expenditure to be incurred in the PIP of NRHM. Also, the objectives of the improved healthcare facilities deliverable through AYUSH institutions had remained unachieved.

1.1.19.2 Lack of coordination with State Medicinal Plant Board

The National Medicinal Plants Board (NMPB) was set up in November 2000 with the objective to coordinate all matters relating to medicinal plants. The NMPB provides financial assistance to the State Medicinal Plants Board (SMPB) for development of medicinal plants. In order to encourage growing of medicinal plants in the State and other related activities the State Medicinal Plants Board (SMPB) was established (August 2009) under the Forest Department and has been functioning under the Chairmanship of the Chief Minister with other ex-officio, technical and non-official members including the Director, AYUSH.

We noticed that no initiative was taken by the Department in coordination with SMPB for development of a herbal garden for the Ayurved College or of nurseries and plantations of medicinal plants in dispensaries having government land.

The Director, AYUSH stated (October 2011) that proposal for development of herbal garden on government land available with hospital/ dispensaries would be prepared and submitted to SMPB.

Human Resource Management and training

1.1.20 Staff position and shortages

Shortage of manpower in all categories of staff

During the period of performance audit, we observed that there was shortage of staff ranging from 63 to 85 *per cent* in Class-I, 17 to 50 *per cent* in Class-II, eight to 47 *per cent* in Class-III, 19 to 29 *per cent* in Class-IV cadres and 16 to 24 *per cent* in Contingent staff. There were shortages in Specialists/Medical Officers/ Assistant Medical Officers of Ayurved, Yog & naturopathy, Unani, Siddha and Homeopathy (17 *per cent*), paramedical staff (30 *per cent*) and other supporting staff such as Dais/Female Health Worker and Class-IV/Part Time Sweepers (21 *per cent*) as of March 2011.

We further observed that 93 *per cent* posts of Specialists, *Panchakarma* Assistants and Massager, 45 *per cent* posts of Female Health Worker, 31 *per cent* posts of peon and 18 *per cent* posts of pharmacists were vacant as of March 2011 which adversely affected the basic and important services of Ayurved treatment in Hospitals/Dispensaries.

Extent and impact of these staff shortages have been discussed for each segment of Department of AYUSH operations in the preceding paragraphs.

In the exit conference, the vacancies existing in Dispensaries, Hospitals, Ayush centres, AYUSH wings and specialised centres were discussed. In his response the Secretary stated (October 2011) that efforts are being made to improve the staff position at all levels.

1.1.21 Execution of building works for health institutions

Inadequate buildings and incomplete construction works

The impact of shortage of space and delays in completing construction works on the effectiveness of different aspects of functioning of Department of AYUSH have been discussed at appropriate places in the earlier paragraphs of this report. However, the overall position is summed up hereunder:

(a) We noticed that out of 16 District Ayurved Offices, only two (Durg and Raipur) were having own building, eight[52] were functioning in rented buildings and six[53] in other buildings.

(b) The Department has been constructing buildings for Hospitals and Dispensaries through PWD. We noticed that during the period of performance audit (2006-11), administrative approval of ₹ 12.60 crore was accorded during 2007-08 for 201[54] building works. As per the information furnished (October 2011) by the Directorate, 150 were completed of which 12 buildings were not handed over to the Department by PWD. Out of the remaining 51 works, 20 were in progress and 31 works could not be started/ incomplete as of October 2011.

The Secretary in the exit conference stated (October 2011) that the position will be reviewed.

Thus, there was lack of coordination and monitoring in respect of building works in the Department due to which the Dispensaries and Hospitals were lacking infrastructural facilities.

1.1.22 Internal Audit

An internal audit wing has been set up in the Department for conducting the internal audit of field units. Out of 20 units to be audited in a year only four[55] units were actually audited during the period 2006-11. The compliance reports on these internal audit reports from the units were also not received. It was evident that the internal audit mechanism in the Department was not effective.

The Secretary stated (October 2011) in the exit conference that due to shortage of staff, internal audits could not be done and agreed to review the position.

1.1.23 Monitoring and evaluation

We observed that the Department had not evolved any system for monitoring and execution of various CSSs and State programmes to evaluate their impact on the healthcare deliveries systems in the State as discussed below:

(a) In five test checked districts, no field inspections were conducted by the respective DAOs during the period 2006-09. Similarly, the DAOs of test checked districts intimated that inspections were conducted by Directorate but records relating to the inspections were not maintained by them.

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52 Dantewada, Janjgir-Champa , Jashpur, Kanker, Korba, Koriya, Mahasamund and Surguja.

53 In District Allopathic Hospital- Kabirdham and Rajnandgaon; In District Ayurved Hospital-Bastar, Bilaspur & Raigarh and In Collectorate building-Dhamtari.

54 Scheduled Caste region-45, Scheduled Tribal region-49 and General region-107.

55 2006-07: two, 2008-09: one and 2009-10: one.

(b) In subsequent two years (2009-10 and 2010-11) four DAOs conducted 175[56] inspections of dispensaries during 2009-10 and three DAOs conducted 208[57] inspections of dispensaries during 2010-11 by utilizing NRHM funds. However, no inspection reports were issued nor any records maintained.

It is evident from the above that the Directorate and field functionaries had not exercised regular and adequate supervision over the functioning of the dispensaries under their jurisdiction. Thus, due to ineffective monitoring and evaluation, the Department could not have assessed the field level impact of the various GOI/ State schemes being implemented in the State nor taken cognizance of problems faced by the field units in implementing the schemes.

1.1.24 Conclusion

Despite the importance attached to promotion of low cost and easily accessible treatment, especially for the poor, the delivery of healthcare services in the State could not be achieved to the desired extent. Even though the popularity of indigenous systems of medicines, particularly, Ayurved, in various districts of the State was evident from the growing number of outpatients. The utilisation of funds allocated to the Department was very low, particularly in regard to purchase of equipments and medicines. There were significant shortages in the cadre of Medical Officers and supporting staff; lack of basic infrastructure like water, electricity, diagnostic facilities and dysfunctional healthcare infrastructure in primary, secondary and tertiary healthcare institutions had adversely affected the quality of healthcare services. The lone Government Ayurved College and Hospital attached to Government Ayurved College lacked shortage of teaching and paramedical staff as well as infrastructural facilities which had affected the quality of services provided and the education imparted by it. The in-house production of Ayurved drugs was very marginal and the testing of raw herbs could not be carried out. The services of Drug Testing Laboratory and Research Centre was also not optimally utilised.

Though these deficiencies were pointed out in paragraph 3.3 of the Report of Comptroller and Auditor General of India (Government of Chhattisgarh) for the year ending 31 March 2004, during the present performance audit no significant improvement was noticed even after lapse of seven years.

The implementation of centrally sponsored schemes was tardy as substantial funds remained unspent. The objective of establishing AYUSH wings and mainstreaming them with allopathic institutions to provide treatment in both systems of medicine under one roof also remained unachieved. The implementation of the State scheme "*Ayurved gram*" was not satisfactory and the intended objectives of the schemes also could not be achieved. Monitoring and inspection of the implementation of the schemes and working of the Dispensaries and Hospitals was inadequate.

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[56] Jashpur (17), Kabirdham (five), Raipur (83) and Surguja (70)
[57] Bastar (175), Jashpur (29) and Surguja (four)

1.1.25 Recommendations

The following recommendations may be considered by the State Government:

- To avoid rush of expenditure and surrender of funds at a late stage advance action should be taken to make procurements etc. during the relevant financial year.
- Effective steps may be taken to strengthen outpatient services in the Ayurved Dispensaries in Bastar region.
- Steps may be taken to provide plastic files and plain globules to Homeopathy Dispensaries in the State for safe distribution of medicines.
- Effective steps should be taken to ensure quality healthcare services like general, emergency and maternity services as well as basic infrastructure like computerisation of inpatient and outpatient registration, waste management system and uninterrupted power supply, in all existing Dispensaries and Hospitals in the State.
- Staff shortage should be addressed on a priority basis, especially in the case of Medical/Assistant Medical Officers, who are the backbone of the medical system. Similarly, to ensure effective delivery of healthcare facilities supporting staff in Ayush centres should be considered where only the post of Medical Officer has been sanctioned so far.
- The Drug Testing Laboratory and Research Centre and Government Ayurved Pharmacy needs to be modernised and essential steps taken for installation of machine and equipment lying idle in these institutes in order to reduce cost of production and to facilitate quality testing of drugs.
- Proper inventory management system for raw herbs needs to be put in place to avoid blockage of funds, the cost of production of medicines in Pharmacy needs to be rationalized by establishing a proper costing system. Norms for process loss should be laid down to ensure actual loss of raw herbs during process of production.
- Construction works should be closely monitored to ensure early completion so that AYUSH wings, Specialised Therapy Centres and Speciality Clinics can commence functioning to provide required medical services.
- The Government/ Department should streamline the system of monitoring and evaluation including internal audit function to ensure full and proper utilisation of funds including those provided by Government of India under various centrally sponsored schemes.
- A great deal of attention may be paid to activating field inspection of Dispensaries and Hospitals by the supervisory officers.

The Secretary in the exit conference (October 2011) agreed to the above recommendations and stated that efforts will be made by the Department to implement the same as far as possible.

PUBLIC WORKS DEPARTMENT

1.2 Chhattisgarh State Road Sector Development Project (ADB assistance)

Executive Summary

With a view to improve the connectivity of the State road network in Chhattisgarh and to provide a more effective institutional and policy framework for road sector management, Government of Chhattisgarh (GOCG), Public Works Department (PWD) developed Chhattisgarh State Road Sector Development Project (project) with the loan assistance from Asian Development Bank (ADB) for improvement of 1700 km of State's road network. Against this, the Department could award contracts for only 1249 km and was able to improve only 1229 km (72 *per cent*) roads through an investment of ₹ 1154.58 crore during 2004-11. This includes loan of ₹ 692.86 crore[1] from ADB. The Department failed to reach key milestones set in the Project Action Plan. This resulted in slippage of physical targets as well as cost escalation. The Department failed to introduce required sectoral reforms that were essential for effective implementation of the project. This resulted in the technical assistance grant received from ADB becoming unfruitful. Short drawal of the loan from ADB resulted in avoidable burden of commitment charges. Works executed were based on faulty estimates prepared by the consultants resulting in abnormal variation of the items during actual execution. The payments due to contractors were released on the basis of uncertified mode of measurements. The ambiguity in contract provisions and the non performance of duties by the consultants as per terms and conditions of the agreement led to excess and irregular payments to the contractors including avoidable extra cost on works. The poor performance of consultants and contractors delayed the project works beyond its stipulated date. During the course of project implementation the Road Management Committee (RMC) responsible for implementation of sectoral reforms and effective monitoring of the project had never met to monitor the project performance. Though the responsibility of implementing the project was assigned to the official hired on contract basis and the consultants, the Department had not conducted any internal audit to ensure the implementation of the project as per the terms and conditions of the loan agreement and also in compliance to the financial rules and regulations.

1.2.1 Introduction

The Government of Chhattisgarh (GOCG), Public Works Department (PWD), is responsible for road sector management and development. It oversees the planning, design, construction and maintenance of all the State Highways (SHs), Major District Roads (MDRs), Other District Roads (ODRs), some

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[1] Loan reimbursed by ADB was US $ 153.49 million.

rural roads, major bridges etc. Having road network of 36327[2] kilometer (km) as of 2002-03, PWD identified a road length of 10223 km for improvement at an investment of ₹ 9625 crore within a span of 12 years (2005-2016). Of this, 1700 km were planned to be improved[3] under Chhattisgarh State Road Sector Development Project (project) with loan assistance from Asian Development Bank (ADB). The Performance Audit of the project was conducted during February to July 2011 covering the period 2004-11. The estimated cost of the project was ₹ 1285.65 crore (US $ 285.70 million) at the 2003 year price level. ADB's loan component in the project was ₹ 810 crore (US $ 180 million-63 *per cent*). Balance investment of ₹ 475.65 crore (US $ 105.70-37 *per cent*) was planned from State's own resources. The loan agreement with ADB initially approved in December 2003, was signed in December 2004 and made effective from 15 January 2005.

1.2.2 Organisational setup

The Public Works Department of the State is headed by the Principal Secretary to GOCG. The Engineer-in-Chief (E-in-C) is the administrative head of the Department. For the implementation of the project, the Government formed a Project Implementation Unit (PIU) headed by a Project Director who functioned under the supervision of Engineer-in-Chief (E-in-C), PWD. For implementation of the project within the jurisdiction of various existing Public Works Divisions, the Government issued orders (August 2006) designating the Executive Engineers of concerned Public Works Divisions as Nodal Officers, thus making them responsible for ensuring timely completion of the project and for assuring quality of construction. The PIU and its field officials were overall responsible for day-to-day implementation of the project. Government formed a Road Management Committee (RMC) headed by the Chief Secretary responsible for timely implementation of road sector reforms and for effective monitoring of the project.

1.2.3 Audit objectives

The performance audit was conducted to assess that :

- the objectives of the project were adhered with due economy, efficiency and effectiveness;
- the Department adhered to the comprehensive action plans prepared for the successful implementation of the project; and
- the construction activities conformed to the conditions of contracts.

1.2.4 Audit criteria

The audit findings were based on the criteria sourced from the following :

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2 National Highways-2225 km; State Highways-3216 km, Major District Roads-2118 km and Other Roads/Village Roads-28768 km.

3 Rehabilitation, up-gradation, improvement and construction of State's road network.

- Master Plan for Road Sector Development;
- Terms and conditions of ADB's loan agreement and project agreement;
- Procurement guidelines stipulated by ADB;
- ADB's guidelines for engagement of consultant for Project Management Consultancy;
- Specifications stipulated in the relevant IRC code and Ministry of Road Transport & Highways (MORT&H);
- Works Department (WD) Manual, Central Public Works Account (CPWA) Code and relevant Schedule of Rates (SORs);
- Detailed Project Reports of the priority roads, Administrative Approval, Technical Sanction and NIT/contract documents.

1.2.5 Audit methodology

In carrying out the performance audit, we examined (February-July 2011) records relating to implementation of the project in the offices of Project Director, Project Implementation Unit (PD, PIU) along with the records/information obtained from the seven executing divisions. Besides, for our detailed scrutiny we selected six out of 19 road works being executed under the project by using random number table applying SRSWOR[4] method. An additional road was brought within the scope of audit on the basis of a suggestion made by Principal Secretary (PS) in the entry conference held in May 2011 with him. An exit conference with the PS and other officials of the PWD was held (October 2011) to discuss the various issues raised in audit. The comments of the PS have been incorporated at relevant places in this report.

Audit findings

1.2.6 Planning

The project was planned to be completed in five years, from January 2004 to January 2009. As per the covenants of the loan, the GOCG had committed to implement a set of road sector reforms under the Institutional Strengthening and Capacity Building Component (ISCBC) to facilitate efficient implementation of the project. The works relative to upgradation of road network of 1700 km identified under the Master Plan of the project were to be executed in two phases. In phase-I, nine roads (800 km) were identified for upgradation by State Government. Each selected road was designated as candidate sub project and validated in the Master Plan. In phase-II, 21 roads (900 km) were similarly identified in the Master Plan to provide, in

[4] Simple Random Selection Without Replacement.

conjunction with phase-I roads, devised degree of continuity and spread to the State's total road network. Between July 2006-December 2007 the Department engaged 21 civil contractors for improvement of 19 roads (1249 km). Action to award contracts in respect of 11 sub project roads (469 km) from the phase-II had not been initiated/completed as of July 2011. The details of 19 sub project roads taken up for execution are shown in ***Appendix-1.9***. The Department also engaged (August 2006) three consultants for supervision of the civil works under 21 contract packages. The details of targets and achievements of the project are as below :

Target fixed for improvement in Master Plan : 1700 km (30 roads)
Contract awarded : 1249 km (19 roads)
Actually improved : 1229 km (19 roads)

Table-1 : Target and achievements of the project

	Phase	Number of roads	Road length (km)	Project cost (₹ in crore)	Completion dates
Target	I	9	800	1285.65	August 2008
	II	21	900		December 2009
	Total	**30**	**1700**		
Achievement	I	9	798	1154.58	7-completed 2-In progress[5]
	II	10	431		10-completed
	Total	**19**	**1229**		17-completed 2-In progress
Shortfall		**11**	**471**	**131.07**	

Source : Compiled in audit from the information provided by the PWD.

Our scrutiny of implementation of the 19 component sub projects revealed the following deficiencies of planning-

1.2.6.1 Non-adherence to key milestone set in implementation of the project (cost overrun of ₹212.32 crore).

The project was approved by the ADB in November 2003. As per the Project Administration Memorandum per kilometer cost of the project roads was estimated at ₹ 0.61 crore. In the action plan of the memorandum, the ADB fixed key milestones for implementation of the project activities like implementation of reforms, finalization of loan, pre-construction activities etc. We observed instances of non-adherence to these key milestones during the implementation of the project, as detailed below :

(a) Non-implementation of road sector reforms.

As a part of reform measures to which the GOCG, PWD had committed itself (December 2004) under the loan covenant, it was required to establish an Agency for Road Development (ARD) responsible for management of the roads financed under the project. By the end of December 2006, the ARD was to be transformed into the Dedicated Road Authority (DRA) and made responsible for management of all State Highways (SHs) and Major District Roads (MDRs) of the State. For this purpose ADB provided (24 April 2006) Technical Assistance (TA) grant to enable GOCG to engage the services of

[5] (i) Bhanupratapur-Narayanpur-Kondagaon road & (ii) Gariaband-Bardula road.

consultants for implementation of Institutional Strengthening and Capacity Building Component (ISCBC). The services of consultants engaged were completed in August 2009.

Failure in implementation of road sector reforms and unproductive utilisation of TA grant amounting to ₹ nine crore

We observed that though the GOCG, PWD availed the services of consultants provided under the TA grant, envisaged road sector reforms to be introduced with the help of the consultants had not been implemented as of July 2011. Utilising the TA grant, however, 12 PWD officials were deputed for training abroad. Of these, only three officials were actually placed in the PIU. The remaining nine officials were never involved in implementation of the reform component (***Appendix-1.10)***. Moreover, while the trained staff were required to remain in service for at least two consecutive years after the completion of training, Chief Engineer, PWD, was deputed for training even though he was due for retirement three months after training. This contravened the conditions listed in Schedule-6[6] of the loan agreement.

Thus, despite recognizing the need of road sector reforms for efficient implementation of the project and proper management of State road network, the Department failed to bring about the necessary reforms, thus practically wasting TA grant of ₹ nine[7] crore.

In the exit conference (October 2011), the PS, PWD did not specifically address this issue.

(b) Delay in finalization of loan.

Delay in getting approval of FD, led to delay of one year in signing the loan agreement

As per Part-I, Rule 11 (i) of Rules of Business of the Executive, Government of Chhattisgarh, no Department shall, without previous consultation with the Finance Department, authorise any orders which either immediately or by their repercussions will affect the finances of the State. Further as per Part-II, of the directions issued under Rule-7, the proposals for raising of loans on the security of the consolidated fund of the State should be brought before the council.

Scrutiny in audit revealed that the loan negotiations were finalised by the PWD, GOCG in November 2003. The loan negotiations were also finalised without involving Finance Department. After negotiations, the proposal was submitted for the approval of Finance Department (FD) in December 2003. FD delayed its approval stating that the loan was finalised by the PWD without assessing other sources of funding and finalising the Master Plan. This led to delay of one year in signing the loan agreement which was finally signed in December 2004. The implementation schedule of the project, however, was left unchanged which implicitly cast on the implementing agencies, the responsibility to plan and complete lead-up activities expeditiously. This did not happen to an adequate extent as several critical actions were unduly delayed as brought out in the next sub paragraph.

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6 As per Schedule-6 of the loan agreement, the GOCG, PWD should ensure necessary measures to endeavor that the trained staff remain in service for at least two consecutive years after the completion of training.

7 The TA Grant amounting to US $ two million converted at the rate of ₹ 45 per US $.

(c) Delay in completing pre-construction activities.

From the table below it is evident that the Department failed to complete the pre-construction activities as per the completion of the project targets resulting in cascading delays.

Table-2 : Target and achievements of the preconstruction activities

Activities	**Target month**	**Actual achievement month**	**Delay in months**
Finalisation of DPR of priority roads	April 2005	October 2005	6
Engagement of construction supervision consultant	June 2005	August 2006	14
Finalisation of bid documents and award of contract	September 2005	August 2006	11
Project finalization	January 2009	Still in progress (July 2011)	30

Source : Compiled in audit from the information furnished by PWD.

(d) Dilution of norms in engagement of consultants.

The consultants engaged diluting the norms

(i) The loan agreement envisaged engagement of consultants for assisting execution of individual road works. Their services were to be specifically used for preparation of Detailed Project Reports (DPRs) and supervision during construction.

The selection and engagement of consultants was to be based on quality and cost consideration as per Quality and Cost Based Selection (QCBS) procedure prescribed for this purpose. The Department had empanelled 20 firms of consultants from whom offers were invited for preparation of DPRs of nine road works under phase-I. As per the Request For Proposal (RFP) documents, one consultant would be considered only for one work and technical bids were to be evaluated on the basis of equipment available with the consultants. We noticed that contrary to these provision out of 20, only three consultants were shortlisted and awarded the work of preparing DPR for all the nine works, three to each consultant. This was not only contrary to the RFP documents but also the tender evaluation norms. To ensure sufficient availability of key professionals for each work every consultant was required to respond to the tender of only one work. Since, the Department had violated this stipulation in awarding three works to each consultant, it had not taken care to ascertain and ensure availability of key professionals and survey equipments with the consultant. Consequently the DPRs were submitted by the consultant 75 to 150 days beyond the stipulated dates.

In the exit conference, the PS, PWD stated (October 2011) that the three shortlisted consultants were awarded more than one work due to non-availability of qualified consultants. He further stated that penalty will be imposed on the consultants.

The reply, however, was not based on facts as 20 consultants had been empanelled by the Department against nine works; also no provision has been made in the contracts with consultants for imposition of penalty for delay in providing required services.

The supervision consultants were engaged deviating the bid evaluation norms

(ii) The Department engaged M/s Renardat SA, Switzerland as supervision consultant for nine roads (810 km) in phase-I on the basis of the recommendations of Tender Evaluation Committee. As per the requirement of ADB agreement, the tenders were evaluated as prescribed for this process under QCBS procedure. As per the RFP document, the financial bids of only those bidders were evaluated who got 75 *per cent* marks in technical proposal, which in turn, were to be based on the curriculum vitae (CV) of key professional offered for the job and the points awarded to each of them. All the CVs submitted were required to be duly signed by nominated professionals to establish their availability with the bidder. To confirm the veracity of such facts, each member of the tender evaluation committee was required to sign evaluation work sheet (EWS).

Scrutiny however, revealed that contrary to these provisions following deviations were made, casting a shadow over the integrity of the bid evaluation process :

- The Tender Evaluation Committee recommended the proposal of M/s Renardat SA (the L1 bidder) without ascertaining the availability of signed CV with the technical proposals.
- The CVs of four key professionals of L1 bidder were considered by the Tender Evaluation Committee even though the same had not been submitted at the time of submission of technical bid.
- The evaluation worksheet was not signed by any member of the Tender Evaluation Committee.
- After award of work, the L1 firm substituted eight out of 15 key professionals with professionals having to their credit a lesser score. Of these three key professionals had not joined the work at all. This corroborates the fact that the L1 bidder submitted the CVs of key professionals who were not available with them at the time of tender evaluation. The comparison of the CVs is detailed in ***Appendix-1.11.***
- The firm qualified the bid getting 879 technical points against required 750 points. Whereas the firm supervised the work with 680 to 657 technical points in 46 out of 53 months. This had ultimately resulted in delay in completion of project works by 81 to 709 days.

The non-adherence to the set key milestones of the action plan resulted in cost overrun of ₹ 212.32 crore

Thus, the failure of the Department in adhering to the different action plans prepared for successful implementation of the project resulted in cost overrun of ₹ 212.32 crore as detailed below :

Table-3 : Cost overrun due to delay in project finalisation

Cost per Kilometre as per approved project (in 2003)	₹ 0.61 crore[8]
Cost per Kilometre at the time of finalisation of estimates (in 2006)	₹ 0.78 crore[9]
Cost overrun per Kilometre	₹ 0.17 crore (28 *per cent*)
Cost overrun of the project	₹ 212.32 crore[10]

Source : Compiled in audit from the information furnished by PWD.

1.2.6.2 Improper preparation of budget estimates and short drawal of loan resulted in accrued commitment charges of ₹16.42 crore.

The loan agreement with ADB[11], stipulated that the borrower shall pay a commitment charge at the rate of 0.75 *per cent* per annum on the sum drawn less than the committed drawal of funds. This depended on budgetary allocations and actual expenditure there against, as drawal of funds was incident on submission of reimbursement claims by the State Government to ADB through Controller Aid Accounts and Audit Division (CAAD), Department of Economic Affairs (DEA), Ministry of Finance (MoF), Government of India.

The position of funds allotted for the project and the expenditure there against during the period 2005-06 to 2010-11 is indicated in the table below :

Table-4 : Details of year-wise allotment and expenditure of the project

(₹in crore)

Year	Allotment	Expenditure	Excess (+)/Savings (-)
2005-06	3.50	2.96	(-) 0.54
2006-07	130.00	72.76	(-) 57.24
2007-08	207.00	208.40	(+) 1.4
2008-09	300.00	306.33	(+) 6.33
2009-10	300.00	304.12	(+) 4.12
2010-11	260.00	260.01	(+) 0.01
Total	**1200.50**	**1154.58**	**(-) 45.92**

Source : Public Works Department

Though overall short drawal of funds by the end of 2010-11 was only ₹ 117.14[12] crore (US $ 26.50 million), in the initial four calendar years (2005-2008) the drawal of funds was far below the committed amounts (see table-5).

8 The civil work and consultancy charges were estimated at ₹ 1030.50 crore for 1700 km road network in the approved project.

9 The estimates for 1248.97 km road network were finalized for ₹ 972.91 crore.

10 @ ₹ 0.17 crore x 1248.97 km

11 Section-2.03, Article-II.

12 As against the approved loan of ₹ 810 crore, the department could able to draw only ₹ 629.86 crore as of July 2011 resulting in short drawal of ₹ 117.14 crore.

Table-5: Details of drawal of loan against commitment

Year	Commitment with ADB as per loan agreement (Progressive in USD)	Actual withdrawal from ADB (in USD)	Progressive withdrawal from ADB (in USD)	Short drawal against commitment (col.2-col.4)	Accrual of commitment charges (in USD) @ 0.75 per cent of col.5
1	2	3	4	5	6
2005	2,70,00,000	Nil	Nil	2,70,00,000	2,02,500
2006	8,10,00,000	48,19,098	48,19,098	7,61,80,902	5,71,357
2007	15,30,00,000	1,61,28,095	2,09,47,193	13,20,52,807	9,90,396
2008	18,00,00,000	3,90,59,711	6,00,06,904	11,99,93,096	8,99,948
2009	--	4,85,08,234	10,85,15,138	7,14,84,862	5,36,136
2010	--	3,93,03,630	14,78,18,768	3,21,81,232	2,41,359
2011	--	56,77,485	15,34,96,253	2,65,03,747	1,98,778
Total	**18,00,00,000**	**15,34,96,253**	**15,34,96,253**		**36,40,474**

Source : Compiled in audit from the information obtained from the official website of CAAAD, DEA, MoF, GOI, New Delhi.

Short budget allocation and drawal of loan there against resulted in accrual of liability towards commitment charges

As against committed drawal of US $ 180 million (₹ 810 crore) by December 2008, the Department had drawn only US $ 60.01 million (₹ 270.05 crore) resulting in short drawal of US $ 119.99 million (₹ 539.95 crore). This was attributable to lower budgetary allocations during these three years (₹ 425.25[13] crore) which fell short of the committed budgetary support of ₹ 688.50 crore.

This resulted in accrual of liability amounting to ₹ 16.42[14] crore (US $ 3.64 million) towards commitment charges despite substantially higher drawal in the subsequent three years between 2009-2011.

In the exit conference, the PS, PWD stated (October 2011) that the State Government was compelled by the ADB to draw the loan from the very first year of its becoming effective, even though owing to preparatory work in the first year requirement of funds practically starts from second year onwards.

The reply of the Department is not acceptable. The Department should have mobilized to execute the work as per the schedule agreed to under the loan agreement.

1.2.7 Execution of project and contract management

As per the provision of loan agreement and guidelines issued by ADB, the Department engaged the consultants responsible for supervision, inspection and measurements of civil works. The consultants were also responsible for proper management of civil works contract, comprehensive supervision of project implementation activities carried out by the contractors and completion of the work within the stipulated period. Their agreements with the PIU stipulates that the consultant shall perform their duties with due care and diligence in accordance with acceptable criteria and standards.

[13] As against the committed drawal of ₹ 688.50 crore, the budget provision during 2005-08 was only ₹ 425.25 crore (63 per cent of ₹ 675 crore).

[14] Conversion made at the rate of ₹ 45 per US dollar (value as on date of singing of the loan agreement).

To safeguard the interest of Government, the GOCG, PWD had designated (August 2006 and May 2007) the Executive Engineers (EEs) of the divisions where under works were being executed as Nodal Officers, who along with the Sub Divisional Officers (SDOs) and Sub Engineers were delegated the power to release the contractual payments. They were simultaneously made responsible to ensure required checks in measurements as per Works Department (WD) Manual. Later in June 2009 this arrangement was modified to centralize all contractual payments under the EE, PWD Dn.3, Raipur, whereas the other Nodal Officers continued to remain responsible for checking measurement of work done by contractors.

We observed the following deficiencies in contract management :

1.2.7.1 Release of payments of ₹ 437.66 crore using uncertified mode of measurements.

No verifiable record of measurements based on which payment of ₹ 437.66 crore made to the contractor was available

The following are the provisions stipulated in the WD Manual[15] and in the contract[16] with regard to recording of measurement and their maintenance-

- The Measurement Book (MB) is the most important record since it is the basis of all accounts of quantities of work done and it must contain complete record of facts so as to be conclusive evidence in court of law.
- Every measurement, at the time it is taken, must be recorded directly in the MB and in no other book.
- The measurements should be as described under various items of the Bill of Quantities (BOQ) conforming to MORT&H specifications.
- The consultant might use all computer programs developed by him with prior written approval of the Department.
- The Nodal Officers along with the SDOs and Sub Engineers had entrusted[17] to check the measurements as required under WD Manual.

Scrutiny of the mode of measurements adopted in all the test-checked packages[18] for the items[19] to be measured in volumetric units revealed that in the MB, the consultant had shown only the area, length and volume surface area of the road to calculate payment due to the contractors. Since area would be a product of width and depth of the item, no chainage-wise width and depth of the road was recorded in MB. The cross sectional measurements derived from computer calculations were thus not conforming to the relevant specifications. The Nodal Officers responsible for ensuring necessary checks had allowed the mode of measurements without any objection. Therefore no

15 Para 4.017 and 4.023.
16 Clause 1.1.4, section-6 of the civil contract; clause 5.2.17, 9.02 and 7 (TOR) of consultant contract.
17 As per directions of GOCG, PWD (August 2006 and May 2007).
18 Packages 1, 2,3,4,5,6, 10-A, 11-Phase-I and 3, 9-Phase-II.
19 Excavation of embankment, construction of embankment, GSB, WMM & Bituminous courses.

verifiable record of measurements based on which payment of ₹ 437.66 crore was made to the contractor was available, the computation of payments thus made to contractors through all uncertified mode of measurements was in violation of contract and should not have been accepted. This led to unrealistic calculation as detailed below :

- The levels recorded in MB were different from the levels entered in computer software for computation.
- In one case, the Nodal Officer, Khairagarh informed (June 2007) the consultant that in the calculation sheet prepared by the computer software, no levels were mentioned and the consultant's representative also was not able to explain the mode of measurements adopted. Further, the quantity evaluated manually was not matching with the computerized calculations.

In the exit conference, the PS, PWD assured (October 2011) to furnish a detailed reply and stated that since the issue being serious as the incomplete MBs cannot be accepted for payment and creates doubts about the payment made on the basis of these measurements, hence the E-in-C, PWD decided to correlate the measurements and payments. Necessary records will be produced to audit again for re-examination.

1.2.7.2 Acceptance of erroneous estimates prepared by the consultant resulted in extra expenditure of ₹61.45 crore.

According to paragraphs 2.025 and 2.017 of the WD Manual, estimates for works were required to be prepared as accurately as possible on the basis of detailed surveys.

Further as per contract, the supervision consultant should seek prior approval of the employer (GOCG, PWD) with regard to variation order exceeding 0.5 *per cent* of the individual items.

Execution of work through erroneous estimates prepared by the consultant resulted in extra expenditure of ₹ 61.45 crore

We observed that in nine[20] out of 10 test-checked packages, the quantities of items pertaining to construction of embankment and bituminous works were increased abnormally between 16 and 3772 *per cent* as detailed in the ***Appendix-1.12***. Despite huge variation, no action was initiated against the consultant by the Department. Moreover, contrary to the provision of agreement, the consultants allowed the variations without obtaining approval of the Government. While forwarding the revised estimates, the E-in-C, PWD had also pointed out the irregularity committed by the consultants as they did not obtain approval of the variations. Consequently, the Department incurred extra expenditure of ₹ 61.45 crore (72 *per cent*) over the contractual cost of ₹ 85.06 crore for these items in nine test-checked packages. The reasons for variations were mainly due to faulty estimates prepared by consultants.

In the exit conference, the PS, PWD stated (October 2011) that the variations were due to faulty DPRs submitted by the consultants and agreed to impose

[20] Package Nos.1, 2, 4, 5, 6, 10-A & 11 (Phase-I) and 3 & 9 (Phase-II).

penalty on the consultants.

The updated position of imposition of penalty on the consultant and recovery was awaited (January 2012).

1.2.7.3 Irregular release of price escalation amounting to ₹ 97.66 crore without valid extension of time and non recovery of liquidated damages.

In the civil works of 19 roads awarded to 21 contractors in 21 contract packages between July to December 2006 (for phase-I works) and March to December 2007 (for phase-II works), the stipulated period for completion was 24 months from the date of issue of work order. Out of 21 packages, four[21] were completed within stipulated period, 15[22] were completed with delay ranging between 81 and 588 days and the remaining two[23] were still in progress (October 2011).

The following conditions[24] were stipulated in the contract for regularization of the delay occurred in completing the road works :

- The contractor shall be liable to pay delay damages[25], if the delay attributable to him.
- If the causes of delay are attributable[26] to the Department, the contractor is entitled to regularization of time extension without imposition of penalty and would get price escalation for the extended period.
- The consultants engaged for supervision were also especially responsible for timely completion of the works through initiation of advance actions for handing over of site, timely issue of drawings and conducting inspections etc.
- The power to regularize the extension of time (EOT) cases was vested with the Government of Chhattisgarh in Public Works Department.

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21 Package No.4 (Phase-I) and 6, 7, & 8 (Phase-II).

22 Packages No.1, 2, 3, 5, 6, 9, 10-A, 12 & 13 (Phase-I) and 3, 4, 5, 9, 10 & 11 (Phase-II).

23 Package 7-A & 11 (Phase-I).

24 Clause 8.4, 8.7 and such-clause 13.11 of section-8 of civil contract.

25 At the rate of 0.05 *per cent* of the final contract prices for every day of default subject to a maximum of six *per cent.*

26 (i) substantial variation in the quantities, (ii) exceptionally adverse climatic conditions and (iii) unforeseeable shortage in materials.

Scrutiny of the records revealed the following-

Price escalation amounting to ₹ 97.66 crore for the delay period was paid to the contractors without valid extension of time and without recovery of liquidated damages

- The EOT cases pertaining to phase-I contract packages were finalised by the PD, PIU though he was not entrusted with the powers. Whereas the phase-II contract packages were not finalized (July 2011).
- While finalising the EOT cases, the PD, PIU imposed only one day penalty amounting to ₹ 2.88 lakh in package-1 (Rajnandgaon-Mohal road) for the total delay of 367 days.
- No penalty was imposed on rest 16 packages though the delay to certain extent was attributable to the contractors (***Appendix-1.13***).
- Similarly, no penalty was imposed on the consultants[27] though they failed to initiate advance actions for handing over of site and timely issue of drawings resulting in delay in completion of works.
- The consultant M/s Renardat SA responsible for supervision of phase-I project works had deployed lesser technical professionals as against the required during 46 out of 53 months. The points of technical professionals ranged between 618 and 657 against the required 750 points. Despite this, no penalty was imposed on the consultant by the Department.
- The consultants allowed the contractors to execute the work beyond the scheduled date of completion without obtaining prior approval of the Department. The factors contributing to the delay provided by the Department are detailed in the ***Appendix-1.14.***
- As a result of the delay in completion of works, the Department availed the services of the consultants beyond 24 months and incurred extra expenditure of ₹ 8.88 crore on consultancy services.
- Since the power to regularize the EOT was vested with GOCG, PWD, the orders of PD, PIU regularizing the EOT were not acceptable in Audit.
- In the absence of valid EOT the price escalation amounting to ₹ 97.66 crore paid for the delayed period was inadmissible (***Appendix-1.15)***.

In the exit conference, the PS, PWD stated (October 2011) that the EOT cases will be reviewed and penalty as required will be imposed for the delay attributable to the contractors. The PD, PIU furnished a statement at the same time showing imposition of penalty of ₹ 2.92 crore in 13 contract packages (***Appendix-1.14).***

The position of review of EOT cases along with recovery of penalty was awaited (January 2012).

[27] M/s Renardat SA engaged for supervision of 19 phase-I roads (21 packages).

1.2.7.4 Ambiguity in contract provisions led to extra payment of ₹17.80 crore to contractors.

As per the contract[28] the price variation of bitumen should have been adjusted either as an addition to or as a deduction from the contract prices. The price adjustment of bitumen as per the above clauses was to be computed by applying the difference between the basic price and current price of the actual quantity of bitumen consumed in permanent works. Whereas the *basic price*[29] of the bitumen was provided in the supplementary information of the contract (phase-I contract : bitumen-₹ 14000 and phase-II contract : bitumen-₹ 24500 and CRMB[30]-₹ 26000), the *current price* was to be reckoned as the ex-refinery price inclusive of sales tax and excise duties for bitumen, at the nearest refinery, prevailing during 28 days prior to the last day of the interim payment certificate.

Ambiguity in contract provision enabled excess payment to contractor amounting to ₹ 17.80 crore

Scrutiny of records of price adjustment on bitumen revealed that instead of computing the price differential (as per afore stated price adjustment formula) of the actual quantity of bitumen consumed in work, gross quantity of bitumen brought to the site was reckoned for computing the differential amount payable to the contractor. This resulted in extra payment of ₹.1.55 crore to the contractor.

Since the agencies executing the ADB works are exempted from payment of excise duty subject to production of Project Authority Certificate[31] (PAC) issued by GOCG, PWD, this element was excludable from the current price. However, in phase-I contracts, the current prices were taken including central excise tax despite exemption of excise duty. In phase-II contracts, the basic price of bitumen and CRMB which as per contract should have been ₹ 24500 and ₹ 26000 respectively was reckoned as ₹ 18300 and ₹ 20703 respectively. This resulted in avoidable extra payment of ₹ 14.26 crore between ₹ 0.64 to ₹ 3.12 crore to the contractors.

The contract[32] also stipulated that the contractor should, at all times, procure the material at the most economical prices. We was observed that notwithstanding the provisions, the price adjustment of bitumen in package-10A (phase-I) were computed considering the current price of packed bitumen that was higher than that of bulk bitumen. This resulted in extra payment of ₹ 1.99 crore to the contractor.

Thus the payment of price adjustment on bitumen contrary to the provisions of the agreement resulted in excess payment of ₹ 17.80 crore to the contractors in 10 test-checked packages and other 11 packages of contracts in respect of which the Department furnished the necessary data ***(Appendix-1.16)***.

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28 Clause 13.8.3 (F) and 13.10 of section-8 (PCC),

29 The price of bitumen ruling on 28 days prior to the closing date for submission of bids.

30 CRMB-Compact Rubber Modified Bitumen.

31 As per clause 14.1 (b), Section-7 (GCC) and clause-2.2, section-8 (PCC) of the contract.

32 Contract clause 13.10 (iv) of Section-8 (PCC).

The PD, PIU stated (October 2011) that the excess payments were made due to ambiguity in contract clauses and keeping these ambiguities, the PD also stated that payments made to the contractors on account of price escalation were suitably revised.

In the exit conference held in the same month, the PS, PWD also accepted the audit observations and assured to recover the excess payments from the contractors.

The updated position of recovery was awaited (January 2012).

1.2.7.5 Undue aid of ₹ 5.31 crore due to excessive issue of Project Authority Certificates for exemption of central excise tax.

Under ADB project, the contractors were entitled to avail central excise duty exemption in procuring consumable materials for use in the contract. In order to avail the exemption, the contractors were obtaining certificates titled "Project Authority Certificate (PAC)" and producing them to the concerned refineries.

Excessive issue of PAC resulted in undue aid of ₹ 5.31 crore to the contractors in the form of excise duty exemption

We observed that in eight out of 10 test-checked packages, the Department issued PACs for procurement of 36,963 MT bitumen and 7,321 MT CRMB[33] to the contractors. As against this, the contractors used 29,818 MT bitumen and 2,315 MT CRMB in the project works. Thus, the excess issue of PAC for 7,145 MT bitumen and 5,006 MT CRMB had resulted in undue aid of ₹ 5.31 crore to the contractors in the form of exemption of central excise duty as detailed in ***Appendix-1.17***.

In the exit conference, the PS, PWD stated (October 2011) that the contractors would be asked to submit certificate of lifting of bitumen against the PACs issued to them, failing which the component of duty on the excessive PACs will be recovered from the contractors. The status of updated position was awaited (January 2012).

1.2.7.6 Short deduction of commercial tax amounting to ₹ 1.13 crore.

The running bills of contractors are payable subject to deduction of commercial tax at the prescribed rates which are indicated in a certificate issued by the Commercial Tax Officer. However, tax is recoverable at reduced rates in respect of bills valuing up to a specified limit.

Commercial tax amounting to ₹ 1.13 crore was short deducted from the contractor's bills

We observed that in 12 out of 21 packages, the Department had paid contractors bills after deducting the commercial tax by applying reduced percentage in cases where the billed amounts were beyond the specified limit. This resulted in short deduction of commercial tax totaling ₹ 1.13 crore (***Appendix-1.18)*** and extension of undue aid to the contractor.

In the exit conference, the PS, PWD stated (October 2011) that any short deduction in commercial tax will be adjusted in the final bills of the

[33] Compact Rubber Modified Bitumen.

contractors.

The updated position of adjustment of short deducted commercial tax was awaited (January 2012).

1.2.7.7 Irregular and unauthorised payment of ₹ 1.83 crore to the contractors ignoring the provisions.

In the Bill of Quantities (BOQ), the rates of bituminous items[34] were based on the Schedule of Rates (SOR) for roads issued by E-in-C, PWD and effective from April 2005. The SOR specified use of bitumen up to a fixed percentage of total mix of overlaid quantity of bitumen item limited to actual requirement as per the site specific job mix formula approved.

Where site specific mix design warrants use of additional quantities of bitumen over and above the percentage prescribed in the SOR, the contractor has to absorb the cost of the same within the tendered rates. Hence, as provided in the general conditions of the SOR, no extra/separate payments were to be made on this account. Any deviation from this provision required the approval of the Government and the consultant was not empowered to recommend any extra payments on this account.

Irregular and unauthorised payment of ₹ 1.83 crore made to the contractor ignoring the provisions

Scrutiny in audit revealed that the mix designs (job mix formula) of the bitumen items with provision of higher percentage of bitumen were approved by the consultant. As per the mix designs, these items required use of extra bitumen content. Based on the recommendation of consultant, the Department paid an amount of ₹ 1.83 crore in five[35] out of 10 test–checked packages for consumption of extra bitumen while executing the bituminous items (***Appendix-1.19)*** without prior approval of the Government**.**

Thus, acceptance by the Department of consultant's recommendation for extra payments of Rs.1.83 crore to the contractor without prior approval of the Government was irregular and extra sums paid to contractor were unauthorized.

Department did not reply to audit observation (January 2012).

1.2.7.8 Estimation errors in road works resulted in extra payment of ₹ 3.19 crore to contractors.

The design and supervision work of five[36] phase-II roads (239 km) was awarded (July 2006) to M/s Carl Bro, consultants for which they were paid fee of ₹ 3.95 crore.

Error in estimates resulted in extra payment of ₹ 3.19 crore to the contractors

As per clause 507 of MORT&H specifications, the minimum requirement of bitumen in Dense Bitumen Macadam (DBM) Grade-II item should not be less than 4.5 *per cent* of the mix. Accordingly, the unit rate of this item of work

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[34] Semidense Bituminous Concrete (SDBC), Dense Bituminous Macadam (DBM), Bituminous Concrete (BC) and Bituminous Macadam (BM).

[35] Package Nos.3, 4, 10-A (Phase-I) and 3 & 9 (Phase-II).

[36] Package Nos.3,4,5,6 & 9.

with 4.5 *per cent* bitumen as reflected in the Schedule of Rates (April 2005) was ₹ 3327 per cum.

Scrutiny of two[37] estimates prepared by M/s Carl Bro revealed that whereas only four *per cent* bitumen content had been stipulated for DBM Grade-II item, the unit rate of the item was not appropriately marked down in the cost estimates and continued to reflect the higher rate of ₹ 3327 per cum. The PIU failed to detect the error, thus allowing it to become a contracted item rate. Consequently the contractors were paid extra amount of ₹ 79.95 lakh and ₹ 57.64 lakh respectively. Scrutiny further revealed that extra payment of ₹ 1.81 crore was paid to the contractors under packages-4, 5 & 6 of phase-II in a similar manner.

In remaining 16 packages of the project, no mismatch between the percentage of bitumen (4.5) actually recommended in execution of work and that reckoned for computing the relevant item rate was observed.

Thus, the error in preparing the estimates by the consultant M/s Carl Bro, for works in five packages of phase-II, resulted in extra payment of ₹ 3.19 crore to the contractors.

The consultant in his reply duly endorsed by PD, PIU stated that the error had arisen due to a typographical error, which was not pointed out by the Departmental authorities while according AA and TS. PD, PIU agreed to issue necessary instruction for recovery of the excess payment (August 2011).

1.2.7.9 Failure in obtaining Project Liability Insurance policy from the consultants resulted in loss to Government.

Loss to Government as the department failed to obtain the PLI policy from the consultants

As per clause-3 of the agreement with the consultants engaged for preparation of DPRs of nine phase-I (800 km) roads, the consultant should submit a Project Liability Insurance (PLI) for deficiencies and inadequacies in the design of pavement, structures and other highway features that may be noticed at subsequent stages. The minimum insurance should be for the contract value of consultants' assignment and for 10 years beyond consultancy period.

The deficiencies noticed in audit on scrutiny of records of all consultancy works that were awarded under the project are detailed below :

[37] Package Nos.3 & 9.

Table-6 : Details of consultants engaged and the status of PLI

<table>
<tr><th>Sl. No.</th><th>Name of consultant</th><th>Name of work</th><th>Period of work executed</th><th>Period of Insurance as per contract</th><th>Deficiencies noticed in audit</th></tr>
<tr><td>1.</td><td>M/s Scott Wilson</td><td rowspan="3">Preparation of DPRs for phase-I road works</td><td rowspan="3">December 2004 to October 2005</td><td rowspan="3">PLI required for 10 years beyond consultancy period.</td><td rowspan="3">Department had failed to obtain the PLI.</td></tr>
<tr><td>2.</td><td>M/s Feedback Ventures</td></tr>
<tr><td>3.</td><td>M/s Gherzi Eastern</td></tr>
<tr><td>4.</td><td>M/s Renardat SA</td><td>Supervision of phase-I road works</td><td>August 2006 to July 2011</td><td rowspan="3">The clause for insurance coverage was incorporated without specifying the minimum coverage of 10 years period.</td><td rowspan="2">The PLI submitted by this consultant was not specifically meant for this project.</td></tr>
<tr><td>5.</td><td>M/s SMEC International</td><td rowspan="2">Design and supervision of phase-II road works</td><td rowspan="2">August 2006 to July 2011</td></tr>
<tr><td>6.</td><td>M/s Carl Bro</td><td>Department failed to obtain the PLI from the consultant.</td></tr>
</table>

Source : Compiled from the information provided by the PWD.

The Department noticed various risks such as preparation of faulty estimates leading to extra expenditure of ₹ 61.45 crore, late submission of DPRs resulting in overall delay, non performance of works by the consultants with due care and diligence and delay in completion of civil works as pointed out in paragraphs (1.2.7.1, 1.2.7.3, 1.2.7.7, 1.2.7.8, 1.2.7.10, 1.2.7.11, 1.2.7.12, 1.2.7.14 and 1.2.9.3). The Department however, could not recover the cost of risk due to the reasons mentioned in the table above.

In the exit conference, PS, PWD stated (October 2011) that the respective insurance companies will be asked to examine the required procedures for encashment of PLI. Accordingly, action will be initiated and audit will be informed.

The reply of the PS, PWD is not acceptable as no PLI was obtained from four consultants and in the remaining cases the PLI submitted by the consultants were not valid.

1.2.7.10 Avoidable extra cost of ₹ 2.57 crore due to application of tack coat over freshly laid bituminous surface

As per the construction procedure stipulated in the specifications,[38] during execution of the work, the contractor should provide and maintain a passage for traffic either along a part of the existing carriageway under improvement or along a temporary diversion constructed close to the highway. All these arrangement for traffic during construction were considered incidental to the works and was the responsibility of the contractor.

Execution of superfluous item resulted in avoidable extra cost of ₹ 2.57 crore.

The specification[39] stipulates that where the material to receive an overlay was a freshly laid bituminous layer, that has not been subjected to traffic, or contaminated by dust, a tack coat is not mandatory.

[38] Clause 112 of MORT&H specifications.
[39] Clause 503.1 of MORT&H specifications.

We observed that in total disregard to the specifications, the Department provided application of additional tack coat in all seven test checked roads and paid ₹ 2.57 crore (***Appendix-1.20)*** to the contractors. Since the diversion of traffic during construction was the responsibility of the contractor and application of tack coat is not necessary on a freshly laid bituminous layer, the application of the same at a cost of ₹ 2.57 crore was superfluous and could have been avoided.

In the exit conference, the PS, PWD stated (October 2011) that practically it is not possible to divert the traffic while laying the bituminous layers. Therefore, extra tack coat was required to be laid prior to laying the second layer. Moreover, the contractor's plant could not get readied for next layer within three days period, between which the layer got contaminated and required application of tack coat.

The reply is not acceptable because the traffic was already diverted by the contractor while laying the first bituminous layer and it could have been diverted for further few hours for laying the second layer. Further arrangement of materials was the responsibility of the contractor and as such application of tack coat on the ground of contamination of the layer due to contractor's inability to lay the second layer immediately after the first layer, was not justified.

1.2.7.11 Inaccurate computation of earth work resulted in excess payment of ₹ 93.11 lakh to contractor

Error in computation of earth work quantity had resulted in excess payment of ₹ 93.11 lakh to contractor.

Our scrutiny of computation of earth work (item no.2.03) in Basna-Bhilaigarh road (package-9/phase-II) revealed that the contractor was paid an excess payment of ₹ 93.11 lakh (29796.59 cum x ₹ 312.50) due to error in computation of earth work. The error was committed by the consultant in the running bills. As in the IPC-3 & 4 against the payable quantity of 81039.54 cum, the contractor was paid for 102307.54 cum. Similarly in the 8th IPC, a quantity of 8528.59 cum already paid for in IPC-3 was erroneously included in the work done indicated in that bill. Thus, erroneous calculation of earthwork by the consultant resulted in excess payment of ₹ 93.11 lakh to the contractor.

In the exit conference (October 2011), the PS, PWD agreed to recover the excess payment from the contractor.

1.2.7.12 Avoidable payment of ₹ 3.29 crore due to abnormal variation in item of work

As per clause 12.3 of the contract, a new rate or price shall be appropriate for an item of work if the measured quantity of the item is changed by more than 25 *per cent* from the quantity of this item in bill of quantities.

Avoidable expenditure due to faulty estimates.

We observed that in two road works during actual execution, the quantity of earth work was increased by more than 25 *per cent* and the contractors were paid at a rate higher than the contract rate. This had resulted in avoidable payment of ₹ 3.29 crore as detailed below :

Table-7 : Details of works in which items were paid at higher rate

Sl. No.	Name of road	Quantity as per BOQ	Quantity actually executed	Quantity for which higher rate paid	Rate as per contract	Rate paid for variation (in ₹)	Amount (₹ in crore)
		(in cum)					
1.	Basna-Bhilaigarh road	27,506	5,24,000 (1905 *per cent*)	4,89,618	250	282	1.61
2.	Sarsiwa-Saraipali-Orissa border road	10,000	3,87,224 (3772 *per cent*)	3,74,724	180	225	1.68
						Total	**3.29**

In the exit conference the PS, PWD stated (October 2011) that extra payment, if any, made will be recovered after verification of records.

The updated position of recovery was awaited (January 2012).

1.2.7.13 Irregular payment of ₹ 56.16 lakh as maintenance cost beyond the stipulated period

Payment of ₹ 56.16 lakh made beyond the contract period.

Work for upgradation of Sarsiwa-Saraipali-Orissa Border (package-3/phase-II) was awarded to the contractor in December 2007 for completion within 24 months. The contract also provided for routine maintenance of the existing road during 24 months period of construction. As per contract, the cost of maintenance of the road during the period of construction was estimated at ₹ 2.25 crore.

We observed that against the payable amount of ₹ 2.25 crore for maintenance of the road, the contractor was paid ₹ 2.81 crore. The increase in the maintenance cost was due to delay in completion of the work. Since the delay was attributable to the contractor, the payment of extra ₹ 56.16 lakh (₹ 280.80 – ₹ 224.64) was beyond the provision of the contract and, hence irregular.

In the exit conference, the PS, PWD agreed (October 2011) to recover the excess payment from the contractor. The status of recovery was awaited (January 2012).

1.2.7.14 Inadmissible payment of ₹ 41.43 lakh to the contractor

As per specifications,[40] the Open Graded Premix Carpet (OGPC) item should immediately be sealed after its laying. The contract under package-10A provided for laying of OGPC item followed by seal coat in 3,11,750 sqm area. The contract neither provided application of tack coat over OGPC prior to seal coat nor was it required as per the specifications.

Inadmissible payment of ₹ 41.43 lakh

We observed that consultant directed (March 2010) the contractor to lay tack coat over 2,95,900 sqm area of OGPC prior to seal coat as the contractor failed

[40] Clauses 513.3.2 and 513.8 of the MORT&H.

to reorganize the asphalt plant and clean the paver for placing seal coat immediately. Since the reasons for application of tack coat was attributable to the contractor, the payment of ₹ 41.43 lakh (2,95,900 sqm x ₹ 14) was inadmissible.

In the exit conference, the PS, PWD stated (October 2011) that the excess payment will be recovered from the contractor.

The updated position of recovery was awaited (January 2012).

1.2.7.15 Excess payment to consultants

Instances of non-observance of contractual provision of consultants' agreements were observed in audit as detailed below :

(a) Excess payment of ₹ 6.89 crore to phase-I consultant.

Excess payment of ₹ 6.89 crore made to the phase-I consultant beyond the contract provision.

The GOCG, PWD engaged (June 2006) the consultant M/s Renardet SA, Switzerland for supervision of nine project roads (12 contract packages) in phase-I of the project. As per contract[41] the total payment shall not exceed the ceiling amount of ₹ 12.87 crore.

Scrutiny of records in audit revealed that the payments were made to the consultant beyond the ceiling amount specified in the contract. The remuneration and other allowances for the staff were paid to the consultant for more than the period specified in the contract. Thus failure of the Department to observe the contract provision had resulted in excess payment of ₹ 6.89 crore (***Appendix-1.21)***.

(b) Extra payment of ₹ 1.99 crore to phase-II consultant.

The GOCG, PWD engaged (July-August 2006) two consultants M/s Carl Bro and M/s SMEC international for design and supervision of 17 phase-II project roads. As per contract the total payment shall not exceed ceiling amount of ₹ 11.32 crore.

Payment of ₹ 1.99 crore was paid in excess of the scope of work to phase-II consultants

Scrutiny of records in audit revealed that as per contract, the consultant was responsible for preparation of DPRs and supervision of 17[42] project roads (793 km). However, after submission of DPRs of 17 project roads, the Department planned to execute only 10 project roads (437 km). In view of this reduction, the responsibility of the consultant to supervise 17 project roads was limited to 10 project roads. Despite the above reduction, the ceiling amount payable to the consultant was not reduced and the consultant was paid ₹ 7.62 crore as against the payable ceiling amount of ₹ 5.63 crore (***Appendix-1.22)***. This had resulted in extra payment of ₹ 1.99[43] crore. Since any payment beyond this amount is likely to further increase the extra payment, the Department may take immediate action to reduce the maximum ceiling amount payable to the

41 The maximum ceiling amount as per section-6 of the contract was specified in clause-6 of the same contract.

42 M/s Carl Bro : 9 roads and M/s SMEC international : 8 roads.

43 M/s Carl Bro : ₹ 1.16 crore and M/s SMEC international : ₹ 0.83 crore.

consultants in view of the reduction in the number of project roads.

(c) Irregular reimbursement of tax of ₹ 53.29 lakh to the consultant.

As per section-12.02 of contract, the client warrants that the government shall exempt the consultant and the personnel from any taxes in respect of any payment made to the consultant or the personnel other than Indian national in connection with carrying out the services.

Tax amounting to ₹ 53.29 lakh was reimbursed to the consultant beyond the permissible limit

Scrutiny of records in audit revealed that an amount of ₹ 3.26 crore[44] was reimbursed to the consultant M/s Renardat SA towards corporate and service tax. Out of this, an amount of ₹ 53.29[45] lakh reimbursed to M/s Renardat SA was actually paid by its Indian associate M/s Theme Engineering. As the reimbursement of the taxes paid by the Indian associate is not covered under the contract, the reimbursement of the same was irregular. Similar information on phase-II consultants (M/s Carl Bro & M/s SMEC international) though called for by audit, was not made available by the Department.

Consultant in his reply duly endorsed by PD, PIU stated that the foreign consultant was paying the service tax through challan and through CENVAT credit. Hence, it was stated that the amount of service tax paid by their local associate (which they were claiming as CENVAT credit) should not be taken to be excess of service tax reimbursed to them. No reply on reimbursement of corporate tax was furnished.

In the exit conference, the PS, PWD stated (October 2011) that the matter is pending with the State Law Department for decision and action will be taken after receipt of decision from the Law Department.

Further reply of the Department was awaited (January 2012).

1.2.7.16 Inaction on the part of the Department resulted in blockage of funds.

For shifting of poles/transformers the Chhattisgarh State Electricity Board (CSEB) submits to the Department a demand note towards meeting the cost involved. Similarly the Forest Department submits a cost estimate for cutting of trees, if required. Based on these demand notes/estimates required funds are placed with the concerned authorities in advance by the Department.

Scrutiny of records revealed that the EE, PWD Dn, Khairagarh had paid (March to May 2007) an amount of ₹ 1.46 crore to CSEB and ₹ 31.72 lakh to Forest Department for shifting of electric poles and cutting of trees between Km.1 to Km.51 of Rajnandgaon-Kukamera road (package-3/phase-I) respectively. During actual execution, the scope of work was reduced and widening work between km.11 and Km.44 was not taken up. Similarly the EE, PWD Dn, Rajnandgaon also had paid an amount of ₹ 95.89 lakh to the CSEB authorities for shifting of electric poles/ transformers between 38.19 km reach

[44] Corporate tax : ₹ 1.52 crore and Service tax : ₹ 1.74 crore
[45] Corporate tax : ₹ 25.33 lakh and service tax : ₹ 27.96 lakh.

of Mohla-Maharastra border road (package-2/phase-I). Subsequently, during actual execution, the road length was reduced by 11.69 km. Despite the scope of work being reduced at later stage, the actual amount refundable by the CSEB and Forest Department was not calculated by the concerned EEs. Consequently, the unspent balances that cannot be specified in the absence of relevant details from the CSEB/Forest Departments, remained unrefunded.

In the exit conference, the PS, PWD stated (October 2011) that action will be initiated to get back or adjust the funds and audit will be informed accordingly.

1.2.8 Monitoring and Internal Control

Some instances of negligible monitoring of the project by Road Management Committee[46] (RMC), non-conducting internal audit and non-development of the required Project Performance Management System (PPMS) etc, observed in audit are detailed below :

1.2.8.1 Negligible monitoring of the project by Road Management Committee.

The Road Management Committee (RMC) formed (September 2004) by the GOCG, PWD was responsible for timely implementation of the institutional reforms in the road sector and assisting in effective monitoring of the project performance. Further, as required under the provision of the loan agreement, the GOCG, PWD was required to develop a comprehensive project performance management system (PPMS) with the assistance of the consultants appointed under the project. We noticed that :

- The RMC which was required to meet at the State level every two months, met only thrice. It met once in October 2004 and twice in August 2005.
- Though the responsibility of the project implementation was assigned to the official deputed on contract and the consultants, the Department had not conducted any internal audit of the project to ensure that the contractors and consultants were performing their role in implementing the project as per the terms and conditions of the loan agreement and in compliance to the financial rules and regulations.
- As per the Project Administration Memorandum and contract with consultant, the Department should have established baseline indicators and target values at the commencement of the project and monitor the indicators by using PPMS to evaluate the project benefits. To evaluate this, the consultants engaged for supervision of the project works were required to carry out every year the household surveys and participatory research. No such evaluation was made under the project.

[46] RMC formed by State Government was chaired by the Chief Secretary of the State and comprised representatives from PWD, Finance Department, Rural Development Department, Transport Commissioner, Police Department and Chhattisgarh Infrastructure Development Corporation (CIDC).

1.2.8.2 Irregular payment of ₹ 80.67 lakh without actual execution.

Scrutiny of the road works Sarsiwa-Saraipali-Orissa Border under package-3/phase-II indicated that the Nodal Officer, Mahasamund through a communication dated 9th December 2009 to the SDO, had asked the latter to clarify within three days about doubtful payment of ₹ 80.67 lakh paid to a contractor on the basis of entries in the measurement book showing routine maintenance of existing road and filling up of pot holes, whereas none had actually being executed. Neither the SDO had submitted any explanation nor had any disciplinary action been initiated against him by the Nodal Officer. Incidentally the same Nodal Officer had authorized the proposed payment of the claims processed by the SDO.

Thus internal controls in regard to incurrence of expenditure under the project had been vitiated due to lackadaisical attitude of the officials.

In the exit conference, the PS, PWD stated (October 2011) that there is no excess payment and the reply will be furnished after obtaining comment from the concerned Nodal Officer. The reply being self contradictory is unacceptable.

1.2.8.3 Acceptance of below specification work valuing ₹ 8.73 crore.

Acceptance of work valuing ₹ 8.73 crore executed contrary to the design and specification

The approved design and specifications of the work Hasaud-Sarsiwa-Saraipali (package-3/phase-II) road provided for laying of Dense Bitumen Macadam (DBM) Grade-II item at 50 mm thickness. We observed that the contractor had laid the DBM item at only 40 mm thickness over the entire length of the road. Yet the work value was accepted by the consultant and recommended for payment of ₹ 8.73 crore. Since the specification did not allow laying of DBM at below 50 mm thickness, the acceptance of below specification work was irregular.

Thus, the internal controls in regard to execution of work as per approved design had been vitiated due to poor supervision of the Departmental authorities. Department did not reply to audit observation (January 2012).

1.2.9 Conclusion

The Department failed to implement the project as per the targets set in the Action Plan due to delay in getting approval from Finance Department for signing the loan agreement resulting in time and cost overrun of the project. The project approvals and preparation of estimates took an unreasonably long time. Besides this, the consultants violated the tender provisions, which led to delay in finalisation of the estimates. The Department failed to utilise the borrowed funds fully due to lack of adequate financial management. The provisions made in the budget estimates were also not matching with the commitment. Moreover the commitment made in the loan agreement was beyond the capacity of the Department to expend. The same had resulted in avoidable payment of commitment charges. The Department failed to monitor the performance of the consultant, which led to extension of undue favours to the civil contractors in violation of contractual provisions. Non-delegation of powers between the project authorities had also resulted in injudicious exercise of powers by the project authority. Lack of co-ordination between project authorities and Nodal Officers resulted in blockage of funds with other Departments. The Department failed to achieve the project targets due to delayed implementation and poor performance of the consultants. There was inadequate monitoring and internal control which further hampered smooth implementation of the project.

1.2.10 Recommendations

- In order to avoid slackness in utilizing external assistance and consequential commitment charges, before finalizing the agreement for the second phase of loan, the Government should asses, year to year requirement of funds realistically and frame budget proposals of the Public Works Department accordingly.
- Department should plan execution of projects involving external borrowings in consultation with other Departments of the Government to avoid delay and subsequent time and cost overrun.
- The Government should formulate a mechanism to ensure that consultants conform to their contractual obligations.
- A penal clause should be incorporated in the agreement with consultants for imposition of penalty for non-adherence to contractual obligations.
- A well structured system for internal control and monitoring of the project should be put in place.

URBAN DEVELOPMENT DEPARTMENT

1.3 Performance Audit of Jawaharlal Nehru National Urban Renewal Mission

Executive Summary

Government of India (GoI) approved 28 projects under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) to be implemented over a period of seven years with the aim to provide an enabling environment for the growth of the cities. This was to be achieved by enhancing effective urban service delivery and civic infrastructure through improvements in urban management, land management, financial management and stakeholder participation in local governance in Chhattisgarh State. The nodal agency for implementation of JNNURM is State Urban Development Authority (SUDA). The Municipal Corporations, Public Health Engineering Department (PHED) and Chhattisgarh Housing Board (CGHB) are the executing agencies for the projects undertaken as a part of JNNURM. Audit studied the performance of the Municipal Corporations and PHE Project Divisions of Raipur and Bilaspur for the period from April 2011 to July 2011.

As per Memorandum of Agreement (MOA) with Government of India (GoI), Government of Chhattisgarh (GoCG) was required to implement 23 reforms for effective achievement of the Mission objectives, out of these GoCG could implement only 14 reforms. Despite availability of funds, the construction works under various projects remained incomplete due to failure of the Municipal Corporations to acquire land at DPR stage, delay in construction works and lack of constant monitoring and evaluation. GoCG could not complete a single Dwelling Unit (DU) for urban poor due to wrong selection of agency viz. M/s Hindustan Prefab Limited. The City Bus scheme for Raipur could not be implemented due to the delay in finalization of tenders. Besides this, the projects were not implemented economically as there were cases of preparation of inflated estimate, extension of undue benefits to contractors, extra cost on the projects, payment of irregular advances, diversion of funds, excess payment and payment of inadmissible mobilisation advance to contractors were noticed in audit. Delayed implementation of reforms also led to deduction of Central Assistance by GoI to the tune of ₹ 24.29 crore. Similarly, as envisaged in the City Development Programme (CDP) for Raipur city, the various development strategies for providing sewerage, construction of public toilets at different slum areas, storm water drainage, solid waste management (SWM) and transportation for urban population could not developed due to lack of initiative by GoCG.

Thus, due to the delay in execution of the sanctioned projects and wrong selection of agency, the urban population was deprived of the desired benefits of the Mission.

1.3.1 Introduction

The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched by GoI in December 2005 with the objective of reforms driven and fast track development of cities across the country, with focus on sustainable development of physical infrastructure in cities, including development of technical and management capacity for promoting holistic growth, with improved governance. The Mission period is seven years i.e. upto 2012. The Mission comprises of four components for implementation viz. (i) Urban Infrastructure and Governance (UIG), (ii) Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT), (iii) Basic Services to the Urban Poor (BSUP) and (iv) Integrated Housing and Slum Development Programme (IHSDP). GoI approved 28 projects in Chhattisgarh State under these four components of the Mission valuing ₹ 1,414.24 crore. This was to be shared by Central Government and State Government/Urban Local Bodies in the ratio of 80:20. Of this only ₹ 571.12 crore was released to the executing agencies and the expenditure was ₹ 513.58 crore (March 2011). All these 28 projects included in the Mission are under progress (October 2011). A brief of these projects is shown in ***Appendix-1.23.***

1.3.2 Organisational setup

A State Level Steering Committee (SLSC) headed by the Chief Minister along with members from concerned departments was formed (December 2005), to review and prioritize proposals for inclusion in the Mission. The SLSC was supported by State Level Nodal Agency (SLNA) which is referred to as SUDA in Chhattisgarh. Its responsibilities were as under:

- inclusion of the projects in the Mission;
- to obtain sanction from SLSC;
- disbursements of grants received from Central and State Governments;
- management of revolving fund and
- monitoring the physical and financial progress and implementation of reform components.

Programme Management Unit (PMU) consisting of consultant and subject matter experts is to be constituted at the State level to assist the SUDA in discharging its roles and responsibilities assigned as per JNNURM guidelines. The Project Implementation Unit (PIU) exists at the district level, meant for supplementing and enhancing the existing skill mix of the Urban Local Bodies (ULBs) to enhance the pace and quality of implementation of JNNURM.

1.3.3 Audit Objective

To assess that:

- project planning was adequate and whether the plans were implemented;
- financial management and control were adequately exercised;

- projects were executed economically, efficiently and effectively and
- appropriate mechanism existed for adequate and effective monitoring and evaluation.

1.3.4 Audit Criteria

The audit criteria used in this report have been sourced from the following :

- Guidelines of JNNURM and subsequent orders issued by GoI;
- Memorandum of Agreement (MoA) and Detailed Project Reports (DPRs) of selected projects;
- Toolkits issued by Ministry of Urban Development (MoUD)/Ministry of Housing and Urban Poverty Alleviation (HUPA) for various schemes under JNNURM, and
- Works Department Manual.

1.3.5 Audit Methodology

Under JNNURM, two cities viz., Raipur and Bilaspur were selected for audit. The capital city of Raipur has been taken as the Mission city for implementation of two components of JNNURM viz. UIG and BSUP. Bilaspur has been selected by the State Government for implementation of the remaining two components of JNNURM viz. UIDSSMT and IHSDP. The performance Audit team visited office of the SUDA, Raipur Municipal Corporation (RMC), Bilaspur Municipal Corporation (BMC), and PHE Project Divisions viz., Raipur and Bilaspur between April 2011 to July 2011.

An entry conference was held (June 2011) with the Secretary, Urban Development Department (UDD) to discuss the audit objectives, criteria, scope and methodology of the performance audit. The exit conference was held in October 2011 with Secretary, UDD and Secretary, Public Health Engineering department (PHED) and their perspectives were incorporated while drafting the review.

Scope Limitation

Year wise desegregated data relative to funds demanded by executing agencies, funds received and released by the State Level Nodal Agency, expenditure actually incurred and utilization certificates furnished to GoI was not made available by SUDA to audit until February 2012. Consequently, overall picture of financial performance of the schemes in Raipur and Bilaspur and the State as a whole could not be presented in this report.

Audit Findings

1.3.6 Planning

The signing of MoA was a necessary condition for receipt of central assistance under the Mission. As per the MoA signed (June 2006 and August 2006) between the GoI, the GoCG and ULBs, the State Government was required to follow specific milestones for implementation of the reforms. As per the guidelines of the Mission, planning of the individual projects should involve acquisition of encumbrance free land before the initiation of projects.

A City Development Plan (CDP) for the Mission city Raipur was prepared (2006) by the State Government to address the infrastructure needs and services delivery gaps. The objective of the CDP is to formulate a development strategy for meeting challenges of infrastructure, problems of urban poverty and create enabling environment for the growth of economy. The main areas covered in the CDP are Water Supply, Sewerage, Storm Water Drainage (SWD), Solid Waste Management (SWM) and Transportation for urban population.

1.3.6.1 Implementation of reforms

As per MoA signed with GoI, the GoCG is to implement 23 reforms. The status of implementation of reforms are detailed below:

Table-1.1: Status of Reforms as in September 2011

Category of Reforms	Name of reform	Timeline for implementation	Actual achievement
Mandatory Reforms: State Level	Implementation of 74th Constitutional Amendment Act	-	Achieved prior to MOA
	Transfer of functions to ULBs	-	
	New Rent Control Act	2010-11	2010-11
	Stamp Duty Rationalisation to 5%	2011-12	2010-11
	Repeal of ULCRA	-	Achieved prior to MOA
	Community Participation Law	2006-07 2010-11(revised)	2010-11
	Public Disclosure Law	2007-08	2010-11
Mandatory Reforms: ULB Level	E-Governance	2009-10	Not-Achieved
	Migration to Accrual based double entry system in accounts	2007-08	Not-Achieved
	Property Tax	2009-10	Not-Achieved
	Water Supply	2009-10	Not-Achieved
	Provisions of Basic Services to urban poor	2009-10	Not-Achieved
	Internal earmarking of funds in ULB budget for services to urban poor	2006-07	2010-11
Optional Reforms	Revision of Building Bye-laws to streamline the approval process	2007-08	2010-11
	Earmarking at least 20-25 *per cent* of developed land in all housing projects (public and private) for EWS/LIG category	2008-09 2009-10(revised)	Not-Achieved
	Simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural process	2006-07 2009-10(revised)	2009-10
	Bye-laws on reuse of recycled water.	2007-08 2010-11(revised)	Not-Achieved
	Administrative reforms	2009-10	2009-10
	Introduction of property title certification in ULBs	2009-10	Not-Achieved
	Revision of Building bye-laws to make rainwater harvesting mandatory	2005-06 2010-11(revised)	2009-10
	Introduction of computerised process for registration of land property	2009-10	Not-Achieved
	Structural Reforms	2010-11	2009-10
	Encouraging Public-Private Partnerships	2006-07	Achieved prior to MOA

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

Nine reforms out of 23 not achieved even after expiry of six years and subsequent deduction of Central share of ₹ 24.29 crore

It may be seen from the above table that all the State level Mandatory reforms were achieved within the timeline. However, out of the six ULB level Mandatory reforms, only the internal earmarking of funds in ULB budget for services to urban poor was achieved. E-governance under the mandatory reform was not achieved till the date of audit, though some of the functions such as issue of domicile, caste, birth, death certificates, ration cards etc. of ULB under E-governance performed through use of Information Technology (IT) by setting up of CHOICE[1] centres. The deadline for implementation of mandatory ULB level reforms has already expired. Thus, five ULB level mandatory reforms were not achieved even after expiry of the deadline. It was further observed that out of 10 optional reforms[2], four reforms were not achieved even after revision of their deadline for completion/ implementation.

Clause 2 of the MoA provides that subsequent central assistance under JNNURM would be released only on timely implementation of reforms indicated in the agreement. As the State Government failed to implement these reforms, assistance amounting to ₹ 24.29 crore was deducted by GoI (February 2011).

In the exit conference, Government stated (October 2011) that all the reforms have since been achieved except for the reforms on 'Property title certification' which is under consideration with GoI. It was also stated that the relevant documents regarding the achievement of reforms would be provided to audit. However, these documents could not be produced to audit.

1.3.6.2 Land was not acquired at the DPR stage resulting in delayed execution of works

DPRs finalized without ensuring availability of encumbrance free land resulted in delay in completion of work

(i) According to the CDP for Raipur city, development strategies for Augmentation of water supply were prepared with projection for 16 years (2006-2021). The project consisted of laying of Raw Water and Clear Water pipe lines, construction of Treatment Plants and Over Head Service Reservoirs (OHSRs) and distribution network within the city and newly developed areas of the city. The Mission guidelines stipulated that the DPR for the individual project should include factual position of availability of quantum of land along with the confirmation of availability of encumbrance free site so that the project could be completed within the stipulated period.

Under UIG scheme, the work of "Augmentation of water supply scheme including extended area of RMC" was sanctioned for ₹ 303.64 crore in the year 2006-07 for completion within three years. The DPR for the project was prepared by PHE Project Division, Raipur. As per DPR, the whole project was divided into 17 different components on the basis of the nature of work. Accordingly, 29 tenders were invited and awarded for different components and sub components. The upto date (March 2011) expenditure of the project was ₹ 234.31 crore.

Scrutiny of the records of EE, PHE Project Division, Raipur revealed that as per the DPR, the project was scheduled for completion by December 2009 and

1 Chhattisgarh Online Information Citizen Empowerment
2 Optional reforms were to be achieved in a phased manner within the Mission period of seven years

the department accordingly engaged 29 contractors for execution of different components/sub components of project out of which only 12 were completed (March 2011) and remaining 17 were incomplete. The incomplete works included construction of Water Treatment Plant, Intake Well, Clear Water Mains and five Over Head Service Reservoirs in two agreements.

Audit scrutinized six cases[3] which revealed that one of these works was completed in due time and five of these works were in progress. In three of these cases, the works were incomplete due to delay in obtaining permission from National Highway Authority of India (NHAI), Railway Department, Collector, Raipur, Chhattisgarh Housing Board and land dispute at the site. In the remaining two cases, the delay was on the part of the contractor. Thus, had the department taken timely action to obtain clearances from the concerned authorities, the delay could have been avoided and the benefits of these schemes could have been extended to the beneficiaries.

Picture showing incomplete work of Clari-flocculator of Water Treatment Plant at Raipur

Picture showing incomplete work of Water Filtration Block of Water Treatment Plant at Raipur

Picture showing Over Head Service Reservoir at Tatibandh, Raipur at testing and commissioning stage

Picture showing Over Head Service Reservoir at Jarway, Raipur at testing and commissioning stage

During the exit conference, Government accepted (October 2011) the audit observation and stated that the project was started with the availability of approximately 80 *per cent* of required land.

3 Agt. No.64 DL, 65 DL, 72 DL, 73 DL, 76 DL and 77 DL (2007-08)

(ii) Similarly, under IHSDP scheme at Bilaspur, 7,836 DUs were to be constructed at 30 sites which are detailed as follows:

Table-1.2: Status of IHSDP scheme

Project Name	Approval Date	No. of Dwelling Units	Project Cost (₹ in crore)	No. of sites as per DPR	Actual No. of sites (revised)	Due date for Project Completion	Present Status (July2011)
Bilaspur I	28.09.2006	1,344	17.85	19	16	01.11.2009	Incomplete
Bilaspur II	28.09.2006	6,492	79.33	11	22	01.11.2009	Incomplete
TOTAL		**7,836**	**97.18**	**30**	**38**		

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

In **Bilaspur Phase–I,** the execution of 1,344 DUs were to be done at 19 sites as per the DPR which was later revised to 16 sites. It was observed that in five sites, works were started without acquisition of land and the project was incomplete even after the stipulated date of completion.

Similarly, in **Bilaspur Phase-II**, the execution of 6,492 DUs were to be done at 11 sites as per the DPR which was later revised to 22 sites. The construction of DUs started only at 15 sites which were taken up without land acquisition and the project was incomplete even after the stipulated date of completion.

It was further observed that even though the land acquisition in the case of one site (Khaparganj, Ward No.23, Plot No.104/1) was already disputed in court of law, BMC started the construction prior to finalization of the case. Subsequently, the court ordered (April 2011) dismantling of the structure and handing over of a portion of land to the claimant. The area of disputed land was 11.55 sq.m where work was in progress and the up-to-date expenditure on the work was ₹ 19.98 lakh.

Out of the project cost of ₹ 97.18 crore, ₹ 43.39 crore was utilised till July 2011 and none of the works undertaken were completed resulting in blockage of the entire expenditure.

During the exit conference, Government accepted (October 2011) the audit observation and stated that DPR was prepared tentatively. However, the sites were changed due to dispute in the court. Regarding the court order for dismantling of structure located in Khaparganj, department stated that court had stayed the earlier order of dismantling and a copy of the latest order would be provided to audit.

However, the latest court orders were not provided to audit. Project of IHSDP was delayed more than two years because land was not acquired at the DPR stage. Moreover, the commencement of the work without acquisition of land was irregular.

1.3.6.3 Failure to initiate scheme for Sewerage and Sanitation system, Storm Water Drainage System and Solid Waste Management System of Raipur City

According to the CDP for Raipur city under UIG scheme, development strategies for Sewerage and sanitation system was prepared with projection for 16 years (2006-2021) with an estimated cost of ₹ 303.09 crore. The project was to provide sewer lines for a length of 200 km including replacement of old system for 32 km, surface drain of 170 km, three sewerage treatment plants and construction of 350 public toilets at different slum areas of Raipur city.

The main goal of Storm Water Drainage System was to develop and manage existing nallahs (drains) and to provide high quality environment for the city. This also aimed at cleaning and widening of existing drains and construction of additional drains in new areas to avoid flooding during rainy season.

The CDP of Raipur city provided for development of strategy for Storm Water System by de-silting[4] and alignment of major drainages (44.70 km), lining and restructuring of medium drains (18.88km), construction of new drains in new colonies (11.65 km) and construction of other drains and water bodies with an estimated cost of ₹ 256.46 crore.

The main goal of Solid Waste Management was to provide an environmental friendly and sustainable waste management system with complete safe disposal facilities by putting waste reduction and recovery mechanisms.

The CDP for Raipur city provided for development of strategy for solid waste management system with projection for 16 years (2006-2021) with an estimated cost of ₹ 152.45 crore for the work of door to door collection of waste, segregation of collected wastes and treatment and disposal.

During scrutiny of records of SUDA, it was observed that even though the above works were projected in the CDP to be completed by 2012-13 in a phased manner but no initiative was taken by the State Government (September 2011).

As the above projects were not initiated, neither the old system of sewer line network was replaced nor was the new lines laid for the sewer disposal out of the city. No toilets were constructed in the slum areas resulted in lack of safe sanitation facilities for the poor and slum dwellers. Similarly, no Storm Water Drainage System was developed to avoid flooding during rainy season and illicit discharge into the drains and no Solid Waste Management System was developed to provide complete and safe disposal of solid waste.

The projects were delayed due to inadequate planning as DPRs were finalized without ensuring the availability of encumbrance free land. The various development strategies, as envisaged in the City Development Programme (CDP) for Raipur city, for providing sewerage, construction of public toilets at different slum areas, Storm Water Drainage, Solid Waste Management (SWM) and transportation for urban population could not developed due to lack of initiative by GoCG.

1.3.7 Financial Management

The funds for execution of schemes under the Mission were provided by the Central as well as the State Government and ULBs in their respective shares of the project cost. The funding pattern in different schemes are as under:

[4] To remove the clay and sand carried with running water and deposited as sediments

Table-1.3: Funding pattern of JNNURM

Scheme	Central share (percentage)	State share (percentage)	ULB/ Parastatal agency share[5] (percentage)
UIG	80	10	10
UIDSSMT	80	10	10
BSUP	80	20	
IHSDP	80	20	

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

Against the sanctioned amount of ₹ 1,414.24 crore, expenditure incurred was ₹ 513.58 crore. The sanction and actual expenditure under different components and projects during 2006-07 to 2010-11, under JNNURM are detailed below:

Table-1.4: Name of project and financial status as on 31 March 2011

(₹ in crore)

Scheme	City	Sector	Name of Project	Project cost	Total release	Expenditure	Percentage of utilization against release	Percentage of utilization against project cost
UIG	Raipur	Water Supply	Augmentation of Water Supply Scheme	303.64	237.54	234.31	99	77
			Water Supply Scheme for Naya Raipur	156.23	0	0	0	0
		Transport	City Bus Scheme	14.85	6.68	0	0	0
BSUP	Raiput	Housing	BSUP in slums at various locations in Raipur city	391.45	96.91	94.52	98	24
			BSUP Ph. II - 1136 DU	42.25	0	0	0	0
			BSUP in slums New Raipur – 888 DU	28.79	6.22	0.91	15	3
UIDSSMT	Bilaspur Bilaspur	Water Supply	Water Supply Scheme Bilaspur	41.42	27.17	23.7	87	57
		Sewerage	Sanitary Sewerage System	190.25	55.02	55.02	100	29
	Raigarh	Water Supply	Water Supply Scheme	15.24	9.04	9.04	100	59
	Kondagaon	Water Supply	Water Supply Scheme	4.52	2	2	100	44
IHSDP	18 locations across the State	Housing	Housing and Slum Development	225.60	130.54	94.08	72	42
Grand Total				**1,414.24**	**571.12**	**513.58**	**90**	**36**

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

It may be seen from the above table that against the funds released, the overall expenditure was 90 *per cent*. But, even while the period of JNNURM (2005 to 2012) is coming close, the expenditure on all the projects has been 36 *per cent* (March 2011) vis-à-vis the estimated cost of all the projects approved under the Mission. Even though sufficient funds were available in City Bus Scheme and BSUP scheme for New Raipur, the utilization was zero and 15 *per cent* respectively. In two other schemes viz., Water Supply Schemes for Naya Raipur and BSUP Phase-II for Raipur, no funds were released by Central and State Government.

1.3.7.1 Funds not released by Central and State Governments

Funds not released for Naya Raipur water supply scheme

During scrutiny of records of SUDA, it was observed that the Water Supply Scheme for Naya Raipur was sanctioned in February 2009 for ₹ 156.23 crore. However, no funds were released by the Central as well as the State Government for the scheme and as a result the work could not be commenced. The delay in commencement of the work not only deprived the people from the drinking water facilities but also may result in cost overrun.

5 May include loan from financial institutions in case of UIG and UIDSSMT and includes beneficiary contribution in case of BSUP and IHSDP

During the exit conference, Government accepted (October 2011) the audit observation and stated that funds were not released by GoI as Additional Central Assistance (ACA) had been exhausted. It was also intimated that New Raipur Development Authority (NRDA) had taken up the project in Public Private Partnership (PPP) mode. outside JNNURM funds.

1.3.7.2 Inordinate delay in implementation of the City Bus scheme and BSUP Phase II (1136 Dwelling Units) for Raipur

During scrutiny of records of SUDA, it was observed that City Bus Scheme for Raipur was sanctioned during 2008-09. Under this scheme 65 mini buses, 30 semi low floor buses and five low floor air-conditioned buses were to be purchased and operators were to be engaged for operating these buses in the city. Funds amounting to ₹ 5.94 crore was released by Central Government in March 2009. Central share along with State share of ₹ 74 lakh were provided to RMC in May 2009 by SUDA. It was observed that no tenders could be finalized till September 2011, as a result the benefits of the City Bus Scheme could not be extended to the beneficiaries and the entire amount remained unutilized.

Similarly, ₹ 7.44 crore were released by GoI to SUDA in March 2010 for construction of 1,136 DUs under BSUP Phase II for Raipur but no funds were released by SUDA for implementation of the scheme. Thus, due to delay in implementation of the scheme the benefit of housing could not be extended to the urban poor.

During the exit conference, Government accepted (October 2011) the audit observation and stated that supplier for buses were also selected in May 2009 through tender. However, due to non availability of operators of these buses, the same could not be materialized. Subsequently, special purpose vehicle for operating the buses was formed in 2011 but supplier expressed inability to supply the buses at 2009 rates. Retendering has since been done and financial bids have been received. However, no specific reasons were furnished for failure to incur any expenditure under BSUP Phase-II.

Thus, due to failure of the department to take timely action to arrange special purpose vehicle, Government could not get the buses at 2009 rates. Further, the objectives of urban infrastructure development as envisaged under JNNURM guidelines also could not be fully achieved.

1.3.7.3 Diversion of funds amounting to ₹9.22 crore from the JNNURM schemes causing interest loss of ₹1.11 crore

JNNURM fund amounting to ₹ 9.22 crore diverted for other works of BMC causing loss of interest of ₹ 1.11 crore

During scrutiny of records, it was observed that the three separate bank accounts were operated from July 2009, August 2009 and April 2010 for Sewerage Scheme, IHSDP and Augmentation of Water Supply respectively. Prior to this, the amount of all the schemes was operated through one bank account. It was observed that funds amounting to ₹ 9.22 crore was diverted from Sewerage Scheme to various other works of BMC without the sanction of competent authority. Subsequently, the amount was recouped over a period of two years, resulting in loss of interest[6] amounting to ₹ 1.11 crore

[6] Fixed deposit interest at the rate of eight *per cent*

(Appendix-1.24), which could have been used as Revolving Fund as per the JNNURM guidelines.

During the exit conference, Government accepted (October 2011) the audit observation and stated that the diverted amount has already been recouped to JNNURM funds. It was also stated that besides lodging First Information Report (FIR), departmental enquiry has also been initiated against the responsible officer.

1.3.8 Execution of projects

Urban Infrastructure and Governance

The Urban Infrastructure and Governance (UIG) component, administered by Ministry of Urban Development (MoUD), envisaged urban infrastructure projects relating to water supply (including sanitation), sewerage, solid waste management, road network, urban transport and redevelopment of inner (old) city areas etc. in Mission city i.e. Raipur.

The irregularities noticed in execution of the project works are detailed below:

1.3.8.1 Discrepancies noticed during the audit of Water Supply projects of UIG

(a) Execution of work at substantially higher cost

Extra cost of ₹ 18.41 crore due to preparation of inflated estimate

As per clause 2.027, of Works Department (WD) Manual, the rates in an estimate should generally agree with scheduled rates. Where from 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 scheduled rate for a particular item of work in the estimate, the proposed rate should be supported by an analysis.

The work of providing, laying, jointing, testing and commissioning of clear water pumping mains from treatment plant to 17 Nos. of OHSRs under the UIG component of the Mission was awarded (December 2007) to M/s Nagarjuna Construction Co. Ltd, Hyderabad on lump sum basis for ₹ 52.92 crore by the Executive Engineer (EE), PHE (Project) Division, Raipur. The work was under progress and contractor was paid (March 2011) ₹ 48.73 crore.

Scrutiny of the records revealed that the estimated cost as per Unified Schedule Of Rates (USOR) of PHED was ₹ 38.64 crore. However, the above estimated cost was enhanced by ₹ 18.53 crore without any justification. Since the tendering procedure was available to get the most competitive price, there was no justification in enhancing the estimates in an adhoc manner without following the provision of the WD manual. This enhancement in estimates facilitated the contractor in quoting higher rates and this resulted in extra cost of ₹ 15.86 crore[7].

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[7] Estimated cost ₹ 38.64 crore (below tender percentage i.e. 4.08 *per cent*) = ₹ 37.06 crore Net extra cost: Amount of contract ₹ 52.92 crore – Amount admissible ₹ 37.06 crore= ₹ 15.86 crore.

Similarly, the work of construction of nine OHSRs of 3200 KL capacity were awarded to three contractors on lump sum contracts for ₹ 15.03 crore and the contractors were paid ₹ 13.84 crore (March 2011).

Scrutiny of the records revealed that the estimated cost as per USOR of PHED was ₹ 9.09 crore. However, the above estimated cost was enhanced by ₹ 1.86 crore without following the provision of the WD manual and without any justification. This enhancement in estimates facilitated the contractor in quoting higher rates resulting in extra cost of ₹ 2.55 crore ***(Appendix-1.25)***.

Thus, the preparation of inflated estimates resulted in extra cost of ₹ 18.41 crore (₹ 15.86 crore + ₹ 2.55 crore).

During the exit conference, Government stated (October 2011) that escalation was included in the estimate to arrive at the prevailing market rates.

Reply was not acceptable because the inclusion of escalation was not supported with any rate analysis or justification and this facilitated the contractors to quote higher rates.

(b) Inflated estimate led to extra cost of ₹7.68 crore

As per notification issued (March 2007) by GoI, the pipes with more than 20 cm outer diameter in water supply project were exempted from excise duty.

Extra cost of ₹ 7.68 crore due to inclusion of exemptable excise duty in the estimate

While finalizing the bids, it was clarified by the department that the bidders should quote the rates inclusive of applicable excise duty and the department would issue certificates for exemption of applicable excise duty. Further, it was also clarified in the tender document that the department would neither reimburse nor would ask for any refund from the contractor on this account and would also not entertain any claim on this account.

Scrutiny of records of PHE, Project Division, Raipur under UIG scheme, revealed that estimate was prepared on the basis of rate analysis for the year 2006-07 including excise duty amounting to ₹ 7.68 crore[8]. The work was awarded to the successful bidders on lumpsum basis. The department also issued certificates to the contractors for availing excise duty exemption. Thus the inclusion of excise duty in the estimate despite its exemption inflated the cost of the work by ₹ 7.68 crore.

During the exit conference, Government stated (October 2011) that there was no separate rate of pipes without excise duty in the USOR of PHE department. Hence, excise duty was included in the estimate and the same was made open to the bidders.

Reply of the Government was not acceptable because in this particular case the rates of pipes were not available in the USOR and hence rate analysis was made by the department wherein the excise duty was separately included.

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8 Rate paid for 1700 mm diameter pipe(including 16.48 *per cent* excise duty) = ₹ 4686.29 lakh, therefore rate excluding excise duty = 100/116.48*4686.29 lakh = ₹ 4023.25 lakh, Undue aid = ₹ 4686.29 - ₹ 4023.25 = ₹ 663.04 lakh
Rate paid for 1400 mm diameter pipe(including 16.48 *per cent* excise duty)=₹ 744.26 lakh, therefore rate excluding excise duty=100/116.48* 744.26 lakh = ₹ 638.96 lakh, Undue aid =₹ 744.26 - ₹ 638.96 = ₹ 105.30 lakh
Total undue aid = 663.04 + 105.30 = ₹ 768.34 lakh say ₹ **7.68 crore**

(c) Irregular payment of advance and subsequent loss of interest

Irregular payment of advance of ₹ 103.21 crore besides loss of interest of ₹ 1.76 crore

As per lump sum contract (Form F), payment schedule for supply of material should not be allowed and payment to the contractor should be made only for finished item of the work.

(i) During the scrutiny of agreement (65DL/2007-08) for the work of providing, laying, jointing, testing and commissioning of clear water pumping mains from treatment plant to 17 Nos. of OHSRs, it was observed that in the common set of conditions, payment schedule was prepared for supply of material at the rate of 64.84 [9] *per cent* of the tender cost (₹ 52.92 crore) and the contractor was paid towards supply of material ranging from ₹ 73,372 to ₹ 3.68 crore and the same was used by the contractor over a period ranging from three to 406 days before the actual execution of work. The amount of advance paid irregularly to the contractor aggregated to ₹ 66.08 crore and resulted in loss of interest amounting to ₹ 1.04 crore[10] ***(Appendix-1.26)***.

(ii) Further, as per clause 10 of common set of conditions of agreement (64/DL 2007-08) for the work of providing, laying, jointing, testing and commissioning of raw water gravity main and pumping main, in case of contractor whose contract was for finished work, requires an advance on the security of materials brought to sites, can be sanctioned advances up to an amount not exceeding 90 *per cent* of the value of material (Mild Steel Plate) and any payment to the contractor should be made only after the completion of the work.

Scrutiny of records revealed that the contractor of the above work was paid secured advance of ₹ 25.63 crore for mild steel plates for manufacturing of steel pipes. It was further noticed that besides the above, payment schedule was also prepared for supply of material at the rate of 61.06[11] *per cent* of the tender cost (₹ 61.47 crore) in common set of conditions and payment of ₹ 37.13 crore ranging from₹ 32.78 lakh to ₹ 5.03 crore was made to the contractor over a period ranging from five to 246 days. Thus, provisions made for payment of supply of material in addition to the secured advance resulted in extension of undue financial benefit of ₹ 37.13 crore to the contractor and resulted in loss of interest amounting to ₹ 71.88 lakh ***(Appendix- 1.27)***.

During the exit conference, Government stated (October 2011) that payment was made according to agreement to ensure timely completion of the works.

Reply was not acceptable because the inclusion of schedule of payment for supply of material in the agreement in violation of lumpsum contract

[9] 95 *per cent* of the 75 *per cent* of 91 *per cent* of tender cost
91 *per cent* of 529200000=481572000
75 *per cent* of 481572000=361179000
95 *per cent* of 361179000=343120050
i.e., 64.84 *per cent* of tender cost

[10] Calculated as per fixed deposit interest rates of State Bank of India prevailing during the period of advance

[11] 85.7 *per cent* of the 95 *per cent* of 75 *per cent* of tender cost
85.7 *per cent* of 614716029 =526811637
95 *per cent* of 526811637 = 500471055
75 *per cent* of 500471055 = 375353291
i.e., 61.06 *per cent* of tender cost

provisions facilitated the contractors to receive advance payment on supply of materials. Further, the works were incomplete even after payment of the advance.

Thus, the objective of providing the infrastructural services to the urban population as envisaged in the Mission also could not be fulfilled as the project was delayed and remained incomplete even after expiry of stipulated period (December 2009) for reasons which were attributable to both contractors and the department. The execution of projects was not carried out economically as the estimates were inflated and contractors were extended undue financial benefits.

Basic Services to the Urban Poor

This is administered by the Ministry of Housing & Urban Poverty Alleviation (HUPA) through the Directorate for Basic Services to the Urban Poor. The scheme envisages housing and slum development through projects for providing shelter, basic services and other related civic amenities in Mission city i.e. Raipur under BSUP.

According to the CDP for Raipur city about one-fourth of the population in RMC area was living in slums. A project was designed to provide basic services to the urban poor living in slums by providing housing with infrastructural facilities. Under this project it was targeted to construct 27300 DUs with an estimated cost of ₹ 273.00 crore to bring down the percentage of slum population by the year 2020.

1.3.8.2 Discrepancies noticed during the audit of BSUP

Government of Chhattisgarh, Urban Development Department (UDD) accorded (November 2006) administrative approval of ₹ 391.45 crore for construction of 27,976 DUs under BSUP component of JNNURM in Raipur. The estimates were technically sanctioned (July 2007) for ₹ 355.98 crore. The work of Project Management Consultant (PMC) was awarded to (August 2007) M/s Hindustan Prefab Limited (HPL), New Delhi by RMC, at the rate of seven *per cent* of the actual cost of work. M/s HPL was responsible for construction and supervision of the work. Against the project cost of ₹ 391.45 crore, the expenditure incurred was ₹ 104.83 crore. Payment of ₹ 61.96 crore was made to M/s HPL for construction of the DUs.

Scrutiny of records further revealed the following irregularities in execution of the scheme.

(a) Irregular appointment of Project Management Consultant (PMC).

Irregular expenditure of ₹ 4.34 crore made on PMC

As per JNNURM guidelines, the engagement of Project Management Consultant (PMC) was not permitted. Despite this, M/s HPL, New Delhi was engaged (August 2007) as PMC by RMC and payment of consultancy charges at the rate of seven *per cent* of actual cost of civil works was made. As per agreement, M/s HPL was responsible for construction of all the civil works approved under BSUP-Raipur. M/s HPL was paid ₹ 4.34[12] crore towards consultancy charges.

Since the engagement of PMC was not permissible as per guidelines of JNNURM, the payment of ₹ 4.34 crore to M/s HPL was irregular.

During the exit conference, Government stated (October 2011) that M/s HPL was appointed as PMC on the suggestion of Ministry of Housing and Urban Poverty Alleviation, GoI.

(b) Complete failure in construction of DUs for urban poor

(i) As a part of agreement between RMC and M/s HPL, the company was entrusted with the responsibility for construction of 27,976 DUs and was paid an amount of ₹ 61.96 crore in three[13] installments. Subsequently, M/s HPL awarded (May 2008) the construction of 7,680 DUs out of 27,976 DUs to M/s Vijeta Construction Company, Raipur at the rate of ₹ 1.60 lakh per unit for construction and infrastructure development. The scheduled date of completion as per agreement was May 2009.

Scrutiny revealed that M/s Vijeta Construction Company, Raipur failed to complete the construction of DUs awarded to them. However, no agency was engaged by M/s HPL for construction of remaining 20,296 DUs as of July 2011. Due to failure by M/s HPL to complete the work, construction work of 11,080 DUs were withdrawn by RMC. Even after reduction of scope of work, M/s HPL neither started the work for the remaining DUs nor completed the DUs already taken up for construction. Subsequently, all the construction works were abandoned by M/s HPL.

Advance of ₹ 49.84 crore paid to M/s HPL not recovered

Since M/s HPL failed to execute the construction of DUs as per agreement, the SUDA engaged the Third Party Inspection & Monitoring Agency (TPIMA) as per guidelines of JNNURM to assess the value of work executed by the M/s HPL. As per the valuation of TPIMA (August 2010), the cost of work executed by M/s HPL was only ₹ 12.12 crore. Despite the valuation of work by TPIMA and failure on the part of M/s HPL in construction of DUs, the RMC did not recover the excess payment of ₹ 49.84 crore made to M/s HPL.

Thus, it was evident from the above facts that out of the total advance of ₹ 61.96 crore paid to M/s HPL by RMC, advance amounting to ₹ 49.84 crore was still recoverable even after abandonment of the work by M/s HPL.

During the exit conference, Government accepted (October 2011) the audit observation and stated that the matter had been taken up with GoI. It was further stated that another third party inspection has been done for upto date valuation of the work for which report is awaited.

[12] seven *per cent* of ₹ 61.96 crore=₹ 4.34 crore

[13] Payments to M/s HPL ₹ 8,69,12,100 on 30.10.2007, ₹ 34,76,48,400 on 07.06.2008 and ₹ 18,50,00,000 on 02.01.2010

(c) Complete failure to develop Slum Profile and Biometric Identification of beneficiaries

As per the agreement, M/s HPL should perform (i) development of Municipal slum profile of urban poor in a phase manner, (ii) development of phase-wise plan for making the city slum free as per vision plan of the city and assist in implementation of the plan, (iii) assist in establishing State and Municipal level poverty alleviation cells, (iv) put in place a computerized system to track the physical and financial progress of the project, slum wise, beneficiary wise and construction site wise of BSUP scheme, (v) establish quality control system both internal and external to ensure the quality in construction and (vi) undertake the work of biometric identification of beneficiaries to ensure easy identification in future.

Slum Profile, Biometric Identification of beneficiaries not developed and subsequently penalty of ₹ 2.17 crore not imposed

Scrutiny of records revealed that M/s HPL had failed to prepare slum profile, biometric identification of beneficiaries, computerized system to track the physical and financial progress of the project and establishing quality control system to ensure the quality in construction. Thus, due to failure of M/s HPL to deliver the entrusted assignment, none of the DUs were completed and in absence of proper quality control and monitoring system, sub-standard work was executed as discussed in para 1.3.9.1. In the absence of biometric identification of beneficiaries allotment of DUs to the urban poor would be further delayed.

As per para 29 of the agreement, if M/s HPL fails to complete the project within the stipulated time (December 2009), a compensation at the rate of 50 *per cent* of the consultancy charges was leviable. However, despite failure to complete even a single DU, the department did not recover penalty amounting to ₹ 2.17 crore [14] from M/s HPL.

During the exit conference, Government accepted (October 2011) the audit observation and stated that State Government had decided to go for arbitration against M/s HPL and for which opinion of Advocate General, Chhattisgarh is being sought.

(d) Failure to construct Dwelling Units (DUs) by Raipur Municipal Corporation (RMC) and Chhattisgarh Housing Board (CGHB)

All 27,976 DUs remained incomplete even after expiry of stipulated date of completion

Initially the RMC engaged M/s HPL as PMC and assigned the responsibility for construction of 27,976 DUs. Scrutiny revealed that since M/s HPL failed to initiate action for construction of the remaining DUs, construction of 11,080 DUs were withdrawn from M/s HPL. Out of these, construction of 3,360 DUs were allocated to Chhattisgarh State Housing Board (CGHB) for which ₹ 25 crore was paid and the construction of remaining DUs was taken up (April 2009) by RMC. Even after this, none of the DUs was completed either by CGHB or RMC till October 2011.

During the exit conference, Government accepted (October 2011) the audit observation and stated that Government has now reduced the target to 11000 DUs against 27,976 DUs as the market price of the construction materials has increased substantially.

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14 *50 per cent of seven per cent of ₹ 61.96 crore =`` 2.17 crore*

Reply of the Government is not acceptable as the DUs meant for the urban poor could not be constructed due to irregular engagement of consultancy agency and inadequate monitoring and supervision. This also resulted in reducing the number of DUs actually planned for construction for the urban poor.

(e) Preparation of inflated estimate resulted in avoidable extra expenditure of ₹3.18 crore

Avoidable extra cost of ₹3.18 crore due to preparation of inflated estimate

As per SOR (1999), the rate of the item "Providing and laying mechanically mixed RCC excluding centering, shuttering and reinforcement in foundation, plinth and in super structure upto height of 4 mt. above plinth level" was ₹ 1,770 per cum. Further, the rate of the item of lift payable for every 0.50 mt height or part thereof for a height beyond 4 mt above plinth level for all RCC work was at the rate of 0.20 *per cent* of ₹ 1,770.

Scrutiny of the DPR pertaining to BSUP-Raipur revealed that the rate of RCC for all heights was calculated at the rate of 20 *per cent* of ₹ 1,770 i.e., ₹ 354 per lift, instead of 0.20 *per cent* of ₹ 1,770 i.e., ₹ 3.54 per lift for each 0.50 mt. This resulted in increase in cost of RCC by ₹ 2,725 per DU. As a result the estimates for construction of 27,976 DUs were inflated by ₹ 7.62 crore. The work of 11,674 DUs was in progress and an avoidable extra expenditure of ₹ 3.18 crore was already incurred as detailed below:

Table-1.5: Extra cost due to preparation of inflated estimate

(amount in ₹)

Sl. No.	Floor	Rate of RCC taken in DPR	Height	Rate of RCC as per SOR	Difference	Quantity (in cu.m)	Inflated amount
1	Ground	1770+354=2124	3mt	1770	354	77.97	27601
2	First	1770+354=2124	6mt/4 lift	1770+14=1784	340	39.53	13440
3	Second	1770+354=2124	9mt/10 lift	1770+35=1805	319	39.53	12610
4	Third	1770+354=2124	12 mt/16 lift	1770+57=1827	297	39.53	11740
				No of DU 24			65391
				Total inflated amount for 1 DU			2725
				Total inflated amount for 27976 DU			**76234600**
				Total extra cost for 11674 DU			**31811650**

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

During the exit conference, Government stated (October 2011) that lumpsum tender was floated and payment was not made as per SOR rates.

The reply of the Government is not acceptable as the rates of lift of RCC for all heights in the estimates was erroneously taken as 20 *per cent* instead of 0.20 *per cent* and this not only increased the cost of the work but also led to extension of undue financial benefit to the contractors.

(f) Changes of plan after sanction of estimate leading to extra cost

Avoidable extra cost of ₹ 1.36 crore due to reduction in plinth area

As per approved DPR pertaining to BSUP Raipur, for construction of DUs the plinth area of each DU was to be 31.5sq.m and based on the area, estimated cost was worked out to ₹ 1.40 lakh per DU.

Scrutiny of records revealed that RMC allocated construction of 3,360 DUs to CGHB as per the approved DPR. It was noticed that 15 agreements were finalized for construction of 3,360 DUs. While awarding the works for construction of 2,816 DUs, each DU was specified with plinth area of 31.5sq.m. However, in the work order for construction of the remaining 544 DUs the plinth area of each DU was specified as 25.37sq.m. The reduction of plinth area by 6.13sq.m[15] per DU for 544 DUs was irregular and resulted in extra cost of ₹ 1.36 crore ***(Appendix-1.28)***.

During the exit conference, Government stated (October 2011) that the reduction of plinth area was made after due approval from GoI.

The reply is not acceptable because commensurate reduction in cost estimate ought to have been done also.

Thus, the objective of providing housing and integrated slum development in Raipur could not be achieved as not a single DU was completed even after expiry of stipulated period.

Urban Infrastructure Development Scheme for Small and Medium Towns

The Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) component, administered by MoUD, provides for urban infrastructure projects relating to water supply, sewerage, solid waste management, roads etc in small and medium towns (other than the Mission city identified under UIG and BSUP). Under this scheme two projects viz., Sanitation and Sewerage system and Water supply scheme in Bilaspur were sanctioned by the State Government.

1.3.8.3 Execution of Sanitation and Sewerage and Water Supply projects of UIDSSMT

Sanitary and Sewerage System for Bilaspur

The Sanitary and Sewerage System for Bilaspur project was sanctioned in the year 2006-07 for ₹ 190.25 crore and two contracts were awarded (October 2008) for ₹ 279.97 crore with stipulated period of completion of two years. The upto date expenditure on the project was ₹ 97.12 crore including recoverable amount of mobilization advance of ₹ 17.70 crore. The physical progress of the project was 28 *per cent*.

Scrutiny of the records revealed various irregularities in execution of the scheme as detailed below.

(a) Delay in completion of works

Penalty of ₹ 14 crore not imposed for delay in completion of work

As per agreement for the work of Sewerage scheme under JNNURM, penalty for works not completed within the stipulated period should be imposed at the rate of 0.5 *per cent* of the total contract price per week of delay subject to a maximum of five *per cent* of the total contract price.

During scrutiny of records of BMC, it was observed that bids for the works[16] of sewerage and road restoration were invited (August 2008) for an estimated

[15] 31.50 sq.m.-25.37 sq.m.=6.13 sq.m

[16] (i) supply, installation, testing and commissioning sewerage pipe lines, manholes and appurtenances, (ii) construction of sewage of pumping station (submersible pump type), providing and laying ductile iron rising main including electrical, mechanical and operation and maintenance for three years and (iii) road restoration where sewers are laid in BMC area

cost of ₹ 118.47 crore, the contract was awarded (October 2008) to Simplex Infrastructure Limited, Kolkata for ₹ 222.99 crore for completion within 24 months including rainy season (i.e. by October 2010). However, the work was not completed till June 2011. In view of the delay in completion of the work, penalty of ₹ 11.15 crore (5 *per cent* of ₹ 222.99 crore) was leviable against the contractor.

Further, scrutiny of records of BMC, revealed that the contract for the work of Sewerage Treatment Plant[17] was awarded (October 2008) for ₹ 56.98 crore and according to the agreement the work was to be completed within 24 months including monsoon period i.e. by October 2010. However, the work was not completed till June 2011. As the delay in execution of work was attributable to the contractor, penalty amounting to ₹ 2.85 crore (five *per cent* of ₹ 56.98 crore) was leviable.

Though the contractors were given extension of time till October 2011 without the benefit of price escalation but no penalty was imposed against the contractor.

During the exit conference, Government accepted (October 2011) the audit observation and stated that the right to penalty has been reserved and would be imposed after analysis of delay.

(b) Payment of inadmissible mobilization advance of ₹25.95 crore to contractors and loss of interest of ₹8.63 crore

Inadmissible mobilization advance of ₹ 25.95 crore paid to contractor and loss of interest of ₹ 8.63 crore

According to the Municipal Corporation Rules and Act, 1998 "In case of Municipal Council and Nagar Panchayat, the tender shall be invited for construction work or purchase of material in accordance with the provisions of the Work Department Manual of the Public Works Department".

As per provisions of Chhattisgarh WD manual, mobilization advance may be paid for tenders of ₹ one crore and above and shall not exceed five *per cent* of the contract amount and limited to ₹ 10 lakh. This advance shall bear interest at the rate of 14 *per cent* per annum.

(i) During scrutiny of records of work of sewerage and road restoration to Simplex Infrastructure Limited, Kolkata, it was observed that as against the admissible mobilization advance of five *per cent* of contract value and limited to ₹ 10 lakh, the agreement signed with the contractor provided for payment of interest free mobilization advance upto 10 *per cent* of the contract value payable in four installments of 2.5 *per cent* each. The contractor was paid mobilization advance amounting to ₹ 22.30 crore against the admissible mobilization advance of ₹ 10 lakh. This resulted in extension of undue financial benefit of ₹ 22.20 crore to the contractor. It was also noticed that no provision for time bound recovery was made in the contract. As a result, out of the mobilization advance of ₹ 22.30 crore, only ₹ 5.25 crore was recovered

[17] Work of procuring, constructing and commissioning of Sewage Treatment Plant of 54 MLD and 17 MLD capacity of Domuhani and Chilati site along with all related Mechanical and Electrical equipment and accessories, instrumentation including miscellaneous works

upto 16th RA bill (June 2011) and ₹ 17.05 crore was still due for recovery though the scheduled date of completion has expired (October 2010). The recovery should have been made before the expiry of stipulated period. Further, interest of ₹ 7.57 crore ***(Appendix-1.29)*** at the rate of simple interest of 14 *per cent* per annum recoverable from the contractor was also not levied.

(ii) Similarly, mobilization advance amounting to ₹ 3.85 crore was also paid (October 2008) to M/s GEO Miller and Company Private limited for the work of Sewerage treatment plant. The contractor was paid interest free mobilization advance amounting to ₹ 3.85 crore as against the admissible mobilization advance of ₹ 10 lakh. This resulted in extension of undue financial benefit of ₹ 3.75 crore to the contractor. It was also noticed that no provision for time bound recovery was made in the contract. As a result, out of the mobilization advance of ₹ 3.85 crore, only ₹ 3.20 crore was recovered upto 11th RA bills (April 2011) and ₹ 65.00 lakh was due for recovery though the scheduled date of completion was expired (October 2010). Further, interest of ₹ 1.06 crore ***(Appendix-1.30)*** at the rate of simple interest of 14 *per cent* per annum recoverable from the contractor was also not levied.

During the exit conference, Government stated (October 2011) that since it was a specialized nature of work and huge investment was required, mobilization advance was paid even though the payment was not permissible as per the manual. The department stated that on the basis of audit observation, they have enhanced the rate of recovery from 15 *per cent* to 20 *per cent* of the amount of the Running Account Bill.

Reply of the Government is not acceptable as the payment of the advance of ₹ 25.95[18] crore was not in conformity with the manual provision and the contractors also could not complete the works within the scheduled time even after payment of the advance.

(c) Hard rock not accounted for amounting to ₹62.51 lakh

Hard rock amounting to ₹ 62.51lakh not accounted for in the material at site account

On scrutiny of records of Sewerage work, it was observed that 9,782.231cu.m hard rock was excavated. However, the above quantity was neither taken into material at site account nor any record was available on utilization of hard rock. The value of the materials as per PWD SOR-2010 amounting ₹ 62.51 lakh[19] was recoverable from the contractor as no issue rate was fixed by the BMC.

During the exit conference, Government accepted (October 2011) the audit observation and stated that excavated hard rock was consumed by the contractor in the same work and agreed to recover the cost.

Water Supply Scheme for Greater Bilaspur

The "Augmentation of Water Supply Scheme of Greater Bilaspur" project was sanctioned for ₹ 41.42 crore in the year 2006-07 for completion within two years. The Detailed Project Report (DPR) for the project was prepared by the office of the PHE Project Division, Bilaspur. As per DPR, the whole project was divided into 12 different components as per the nature of work. Out of

18 (₹ 22.30 crore- ₹ 10.00 lakh)+(₹ 3.85 crore- ₹ 10.00 lakh)= ₹ 25.95 crore
19 ₹ 639/cu.m.*9782.231 cu.m.= ₹ 62.51 lakh

12 components, six components were completed, while three components viz., construction of pump houses, laying of pumping main and electrification work were incomplete (December 2011). The remaining three components viz., installation of submersible pumps, chlorinators and laying of clear water pumping main were at tender stage (December 2011). The upto date expenditure on the project was ₹ 23.70 crore.

(d) Inordinate delay in completion of work

As per Clause 3 of the agreement, if any work is abandoned by the contractor, the contract is to be rescinded and the remaining work is to be awarded to other contractor and any sum incurred in excess of the original contract resulting in execution of the remaining/abandoned work is to be recovered from the defaulting contractor.

Liquidated damages of ₹ 17.96 lakh was not recovered from defaulting contractors

Scrutiny of records of PHE Project Division, Bilaspur revealed that work of 26 Gravel Pack Tube Wells were awarded (February-March 2008) to five contractors. Since the contractors could not complete the work the contracts were rescinded (May 2009) and the balance work were awarded (November 2009) to other contactor. The department had to incur extra expenditure of ₹ 17.96 lakh for completing the balance works ***(Appendix-1.31)***. As per clause 3 of the agreement, the above extra expenditure was recoverable from the defaulting contractors. However, the department did not recover the amount.

During the exit conference, Government accepted (October 2011) the audit observation and stated that penalty has since been imposed on the defaulting contractors. Earnest Money deposited had already been forfeited and action has already been initiated for recovery of the balance amount.

Thus, the objective of providing infrastructural services in Bilaspur could not be achieved as works under UIDSSMT remained incomplete even after expiry of stipulated period.

Integrated Housing and Slum Development Programme (IHSDP)

This component, administered by Ministry of Housing and Urban Poverty Alleviation provides for housing and integrated slum development in non-Mission cities/towns. The scheme envisaged urban renewal programme i.e. re-development of inner (old) cities areas to reduce congestion and provision of basic services to the urban poor, including security of tenure at affordable prices, improved housing, water supply and sanitation.

1.3.8.4 Discrepancies noticed during the audit of IHSDP

Government of Chhattisgarh (GoCG), Urban Development Department (UDD) accorded (November 2006) administrative approval of ₹ 97.18 crore for construction of 7,836 DUs under IHSDP component of the JNNURM in Bilaspur. The estimates were technically sanctioned (July 2007) for ₹ 97.17 crore. The work of Project Management Consultant (PMC) was awarded (August 2007) to M/s HPL, New Delhi by BMC. M/s HPL was responsible for construction and supervision of the 7,836 DUs. Against the project cost of ₹ 97.18 crore, the expenditure incurred was ₹ 43.39 crore. Payment of ₹ 11.92 crore was made to M/s HPL for construction of the DUs.

Scrutiny of records revealed the following irregularities:

(a) Irregular appointment of Project Management Consultant (PMC).

Irregular expenditure of ₹ 83 lakh made on PMC

As per JNNURM guidelines, the engagement of Project Management Consultant (PMC) was not permitted. Despite this, M/s HPL, New Delhi was engaged (August 2007) as PMC by BMC, Bilaspur and payment of consultancy charges at the rate of seven *per cent* of actual cost of civil works was made. As per agreement M/s HPL was responsible for construction of all the civil works approved under IHSDP-Bilaspur. M/s HPL was paid ₹ 83 lakh[20] towards consultancy charges.

Since the engagement of PMC was not permissible as per guidelines of JNNURM, the payment of ₹ 83 lakh to M/s HPL was irregular.

During the exit conference, Government stated (October 2011) that M/s HPL was appointed as PMC on the suggestion of Ministry of Housing and Urban Poverty Alleviation, GoI.

(b) Complete failure in construction of DUs for urban poor

As part of the agreement between BMC and M/s HPL, the company was entrusted with the responsibility for construction of 7,836 DUs and paid an amount of ₹ 11.92 crore in four[21] installments. Subsequently, M/s HPL awarded (March 2009) the construction of 3,132 DUs out of 7,836 DUs to M/s Baba Construction Private Limited at the rate of ₹ 1.64 lakh per DU for construction and infrastructure development. The scheduled date of completion as per agreement was August 2009. No agency was engaged by M/s HPL for the construction of remaining 4,704 DUs.

Scrutiny revealed that out of 3,132 DUs awarded to M/s Baba Construction Private Limited, work had been started only at 1,566 DUs which remained incomplete till July 2011. Since M/s HPL failed to complete the work, construction work of 6,270 DUs were withdrawn. Even after reduction of scope of work, M/s HPL failed to complete the 1,566 DUs already taken up for construction. Subsequently, all the construction works were abandoned by M/s HPL.

Since M/s HPL failed to execute the construction of DUs as per agreement, the department engaged the Third Party Inspection & Monitoring Agency (TPIMA) as per guidelines of JNNURM to assess the value of work executed by M/s HPL. As per the valuation of TPIMA, the cost of work executed by M/s HPL was only ₹ 11.66 crore including ₹ 43.13 lakh as mobilization advance. Thus, the value of work amounted to ₹ 11.23 crore. Despite the valuation of work by the agency and failure on the part of M/s HPL to construct the DUs, the BMC did not recover the excess payment of ₹ 69 lakh[22] made to M/s HPL.

[20] Seven *per cent* of ₹ 11.92 crore=₹ 83 lakh

[21] Payments to M/s HPL ₹ 70000000 on 07.05.2008, ₹ 20000000 on 10.11.2009, ₹ 4175000 on 14.01.2010 and ₹ 25000000 on 08.03.2010

[22] ₹ 11.92 crore-₹ 11.23 crore=₹ 0.69 crore, say ₹ 69 lakh

This Mission of providing DUs for urban poor was not achieved at all and this scheme was thus a complete failure.

During the exit conference, Government accepted (October 2011) the audit observation and stated that the matter had been taken up with GoI. It was further stated that another third party inspection has been done for upto date valuation of the work and the report is awaited.

(c) Complete failure to develop Slum Profile and Biometric Identification of beneficiaries

As per the agreement, M/s HPL was required to perform (i) development of Municipal slum profile of urban poor in a phase manner, (ii) development of phase-wise plan for making the city slum free as per vision plan of the city and assist in implementation of the plan, (iii) assist in establishing State and Municipal level poverty alleviation cells, (iv) put in place a computerized system to track the physical and financial progress of the project, slum wise, beneficiary wise and construction site wise of IHSDP scheme, (v) establish quality control system both internal and external to ensure the quality in construction and (vi) undertake the work of biometric identification of beneficiaries to ensure easy identification in future.

Slum Profile, Biometric Identification of beneficiaries not developed and subsequently penalty of ₹ 41.72 lakh not imposed

Scrutiny of records revealed that M/s HPL has failed to prepare slum profile, biometric identification of beneficiaries, computerized system to track the physical and financial progress of the project and establishing quality control system to ensure the quality in construction. Thus, due to failure of M/s HPL to deliver the entrusted assignment none of the DUs were completed and in absence of proper quality control and monitoring system, sub-standard work was executed as discussed in para 1.3.9.2. In the absence of biometric identification of beneficiaries allotment of DUs to the urban poor would be further delayed.

As per para 29 of the agreement, if M/s HPL was to fail to complete the project within the stipulated time (December 2009), a compensation at the rate of 50 *per cent* of the consultancy charges would have been recoverable. But penalty amounting ₹ 41.72 lakh[23] was not recovered by the department from M/s HPL.

During the exit conference, Government accepted (October 2011) the audit observation and stated that State Government had decided to go for arbitration against M/s HPL for which opinion of Advocate General, Chhattisgarh is being sought.

(d) Failure to construct DUs by BMC and CGHB

All 7,836 DUs remained incomplete even after expiry of stipulated date of completion

Initially, BMC engaged M/s HPL as PMC and assigned the responsibility for construction of 7,836 DUs.

Under IHSDP Bilaspur, due to the failure of M/s HPL to complete the DUs, BMC withdrew the construction of 6,270 DUs from M/s HPL (April 2009). Subsequently, 2,000 DUs were allocated to CGHB for which an amount of

[23] 50 *per cent* of seven *per cent* of ₹ 11.92 crore =₹ 41.72 lakh

₹ 3.00 crore was paid and BMC took up construction of 4,270 DUs. Despite this not a single DU was completed either by CGHB or by BMC.

(e) Preparation of inflated estimate resulted in avoidable extra expenditure of ₹1.23 crore

As per SOR (1999), the rate of the item "Providing and laying mechanically mixed RCC excluding centering, shuttering and reinforcement in foundation, plinth and in super structure upto height of 4 mt. above plinth level" was ₹ 1,770 per cum. Further, the rate of the item of lift payable for every 0.50 mt height or part thereof for a height beyond 4 mt above plinth level for all RCC work was at the rate of 0.20 *per cent* of ₹ 1,770.

Scrutiny of the DPR pertaining to IHSDP-Bilaspur revealed that the rate of RCC for all height was calculated at the rate of 20 *per cent* of ₹ 1,770, i.e. ₹354 per lift, instead of 0.20 *per cent* of 1,770 i.e., ₹ 3.54 per lift for each 0.50 mt. This resulted in increase in cost of RCC by ₹ 2,981 per DU. This inflated the estimates for construction of 7,836 DUs by ₹ 2.34 crore. The work of 4140 DUs was in progress and an avoidable extra expenditure of ₹ 1.23 crore was incurred as detailed below:

Table-1.6: Extra cost due to preparation of inflated estimate

(amount in ₹)

Sl. No.	Floor	Rate of RCC taken in DPR (in ₹)	Height	Rate of RCC as per SOR	Difference	Quantity (in cu.m)	Inflated amount
1	Ground	1770+354=2124	3mt	1770	354	77.97	27601
2	First	1770+354=2124	6mt/4 lift	1770+14=1784	340	39.53	13440
3	Second	1770+354=2124	9mt/10 lift	1770+35=1805	319	39.53	12610
				No of DU 18			53651
				Total inflated amount for 1 DU			2981
				Total inflated amount for 7836 DU			**23359116**
				Total extra cost for 4140 DU			**12341340**

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

During the exit conference, Government stated (October 2011) that lumpsum tender was floated and payment was not made as per SOR rates.

Reply of the Government is not acceptable as the rates of lift of RCC for all heights was erroneously taken as 20 *per cent* instead of 0.20 *per cent* and this not only increased the cost of the work but also led to extension of undue financial benefit to the contractors.

(f) Irregular awarding of work without tender

Work amounting to ₹ 1.21 crore awarded without tender

The work of preparation of DPR pertaining to IHSDP-Bilaspur was awarded to M/s Palliwal & Associates, Raipur (July 2007) at the rate of 1.25 *per cent* of sanctioned DPR cost i.e. 1.21 crore (project cost: ₹ 97.18 crore) plus service tax. It was observed that the above work was awarded to M/s Palliwal & Associates without invitation of tender and payment of ₹ 48.04 lakh was made to the contractor. The awarding of work amounting to ₹ 1.21 crore to consultant without tender was irregular.

During the exit conference, Government stated (October 2011) that as the consultant was awarded similar works at the State level, the preparation of DPR for IHSDP Bilaspur was awarded to the same consultant at the same rate to avoid delay.

Reply was not acceptable as the award of work without tender is violation of the WD manual.

Thus, the objective of providing housing to beneficiaries (slum dwellers) and integrated slum development with basic facilities in Bilaspur could not be achieved as not a single DU was completed even after expiry of stipulated period.

1.3.9 Monitoring and Evaluation

For effective monitoring of projects under JNNURM, the guidelines provides for Programme Monitoring and Evaluation System (PMES), mid-term evaluation by State Government/GoI at state level, physical and financial verification of programme and project level committee at ULB level. There is also provision for evaluation by Independent Review and Monitoring Agency (IRMA) and Third Party Inspection & Monitoring Agency (TPIMA).

1.3.9.1 Sub-standard work of BSUP Dwelling Units

During scrutiny of TPIMA reports, it was observed that as per the report the work of construction of DUs was sub-standard and following observations were made on the quality of construction:

i) Laboratories were not established at six sites (Hirapur, Walfort, Tatibandh, Daldal seoni, Smera and Samta II) and laboratory at one site (Mathpurena) was with insufficient testing facilities.

ii) Third party quality control agency was not maintained.

iii) Inferior quality of steel was used (rusted and under-weight).

iv) Qualified Supervising Engineers were not appointed.

v) Quality checking mechanisms was not developed.

vi) Poor workmanship-column eccentric, twisted and having honey combs, column/ beams junctions were not perpendicular and not casted monolithically.

vii) Concrete design mix for M-20 was not followed.

viii) Soil Bearing Capacity (SBC) for foundation was not confirmed before execution.

ix) Honey combs were found in the structures.

x) Columns were concreted without steel shuttering.

xi) Insufficient compaction of concrete for slabs, beams and columns.

xii) Insufficient cover for slab reinforcement leading to exposure of steel.

xiii) Insufficient curing for concrete structures.

xiv) Deficiency in measurement for thickness of waist slab.

xv) Nominal concrete mix was adopted instead of batch mix.

Sub-standard building work was executed with lower compressive strength of concrete

It was further reported by the agency that the results of compressive strength of M-20 grade concrete for three sites viz. Wallfort city (832 DUs), Heerapur (912 DUs) and Mathpurena (2,192 DUs) were found to be 111.15 kg/sq.cm , 181.41 kg/ sq.cm and 150 kg/sq.cm respectively as against the required comprehensive strength of 200 kg/sq.cm. Thus, framed structures for 3,936 DUs cannot be treated as sound structures and should have been rejected.

The above observations revealed that the works executed were sub-standard and all the above deficiencies were not rectified till the date of audit (October 2011).

Picture showing eccentricity of Column at Mathpurena site – BSUP Raipur (The compressive strength of concrete work was found 111.15 kg/sqcm against the standard of 200 kg/sqcm.

Picture showing water logged due to non progress of work and column steel has rusted at Mathpurena site - BSUP Raipur

During the exit conference, Government accepted (October 2011) the audit observation and stated that the matter is being closely monitored and action would be taken.

1.3.9.2 Sub-standard work of IHSDP Dwelling Units

During scrutiny of TPIMA reports for Phase-I Bilaspur, it was observed that the work of construction of DUs was sub-standard and following observations were made for quality of construction:

i) Laboratories were not established at five sites (Swarna Jayanti Nagar, Mangla, Ameri, Harsingar Awas Lingyadih and Near ware house Lingyadih).

ii) Qualified Supervising Engineers were not appointed at four sites (Swarna Jayanti Nagar, Mangla, Ameri and Harsingar Awas Lingyadih).

iii) Quality control Engineers were not appointed at four sites (Swarna Jayanti Nagar, Mangla, Ameri and Harsingar Awas Lingyadih).

iv) SBC was not tested but designed by assumption (Swarna Jayanti Nagar, Mangla, Amari, Uslapur, and Near warehouse Lingyadih).

v) Nominal concrete mix was adopted instead of batch mix.

vi) Rusted, underweight steel was used and 4 mm thick wire was used to tie bars instead of 8 mm thick wire.

vii) Frequency of test was not maintained.

Sub-standard building work was executed with lower compressive strength of concrete

At the Mangla site for the construction of 24 DUs for the slab casting work, 40 mm graded metal for M-20 concrete was used instead of 20 mm graded metal. It was further observed that the results of compressive strength test of M-20 grade concrete at Radhika Vihar Phase-I (18 DUs) was found as 123.88 kg/sq.cm, while it should not be less than 200 kg/sq.cm. Thus, framed structures cannot be treated as sound structures and should have been rejected.

During scrutiny of TPIMA reports for Phase-II Bilaspur, it was observed that the results of two compressive strength test of M-20 grade concrete for work Near Ward No.27 Banka Talab were 148.88 kg/sq.cm and 163.55kg/sq.cm respectively as against the requirement of 200 kg/sq.cm. It was also observed that nominal concrete mix was adopted instead of batch mix.

The above observations revealed that the work executed was below standard and all the above deficiencies were not rectified by the contractor.

During the exit conference, Government accepted (October 2011) the audit observation and stated that the matter is being monitored closely and action would be taken.

1.3.10 Conclusion

The construction works under various projects remained incomplete as land was not acquired at DPR stage, time schedule was not adhered to complete the project in stipulated time and lack of constant monitoring and evaluation. There was a complete failure on the part of GoCG to provide housing for urban poor due to arbitrary selection of M/s HPL as an agency on the basis of recommendation of Ministry of Housing and Urban Poverty Alleviation which defaulted without completing a single Dwelling Unit (DU). RMC, BMC and CGHB also failed to deliver DUs within the stipulated period. The project was not implemented economically as the DPRs were inflated which resulted in extension of undue benefits to contractors and extra cost was incurred on the projects. Projects such as Sewerage and Sanitation System, Storm Water Drainage System, Solid Waste Management System and the City Bus Scheme of Raipur City meant for the overall development were not even initiated.

1.3.11 Recommendation

- Necessary steps may be taken to utilize the funds in a time bound manner for the earmarked projects to extend the infrastructural services for the urban population and basic services to the urban poor.
- Encumbrance free land may be ensured before initiation of the project to avoid delay in completion of the project.
- Works may be executed in an economic, efficient and effective manner to prevent extra cost and also to ensure timely completion of the project along with quality of work.

FOOD, CIVIL SUPPLIES AND CONSUMER PROTECTION DEPARTMENT

1.4 Computerisation of Public Distribution System

Executive summary

Public Distribution System (PDS) is an important component of the strategy for eradication of poverty. To impart greater efficiency and transparency, Government of Chhattisgarh in 2007 modernized PDS in the State. The State Government adopted a unique Information and Communication Technology (ICT) based module to create a transparent and accountable delivery mechanism under the PDS. Computerizing the entire foodgrains supply chain. The computerisation project 'PDS-Online' was operationalised within six months of its being conceptualized in June 2007. The system has been operated successfully for the last three years. We conducted a performance audit of 'PDS-Online' during January–June 2011 to ascertain the extent to which the system has achieved its objectives.

We have noticed that even though tangible progress has been made in implementation of the computerised PDS, various deficiencies that can erode its effectiveness still persist. We found that application controls were not properly incorporated and adherence to and the password policy was weak. Discrepancies in Delivery Order (DO), *Panchnamas, Ghoshanapatras* and inventory control system etc. were also noticed thus casting a shadow over the robustness of the system. Despite computerisation of PDS, the department could not utilise its 'online data' for claiming subsidy from Government of India. It also failed to maintain the accounts online.

1.4.1 Introduction

The Food, Civil Supply and Consumer Protection Department was responsible for ensuring easy availability of the foodgrains to the public, at reasonable price. For this purpose it undertakes procurement and distribution of foodgrains and other essential commodities across the state. The Chhattisgarh State Civil Supply Corporation (CGSCSC) a corporation under the Government of Chhattisgarh, manages the entire PDS operation in the State.

The project for computerisation project of Public Distribution System of the Food, Civil Supply and Consumer Protection Department was initiated in June 2007 and the project became operational in November 2007. The project was a major initiative to reform and modernize the PDS in the State. It arrived at using information technology for managing the entire supply chain of the PDS in Chhattisgarh. The main objectives of computerisation of the project were to:

- achieve better inventory control and manage better milling operations of paddy.
- reduce fake and duplicate ration cards.
- eliminate irregularities in grant of allotment to Fair Price Shops (FPS).

- reduce delay in communicating allotment to FPS.
- reduce delay in foodgrains availability at FPS.
- check diversion and leakage in PDS commodities.
- reduce delays in capturing complaint and their redressal.
- ensure timely availability of information about lifting of commodities, and increase overall transparency in operations

The Computerisation project involved integration of processes being followed by different organizations like the Food, Civil Supply and Consumer Protection Department (nodal implementing department), Chhattisgarh Marketing Federation, CG State Civil Supply Corporation (CGSCSC), Food Controller and National Informatics Centre (NIC). With the help of the computerisation, 99 Storage Centres of the Department have been connected via V-SAT (Very Small Aperture Terminal) /Broadband/Data Card. The software developed for the purpose ensures allotment of rice, wheat and salt to 54 lakh ration card holders through 10571 fair price shops in the State.

Due to successful implementation of the project, the PDS of the State Government has been widely appreciated in the country. The IT project has received the following six awards for e-governance i.e.

- e INDIA 2008 for Best ICT enabled Department of the year.
- e INDIA 2008 for Best Government initiative of the year.
- National awards for e-Governance 2008 for online paddy procurement system.
- The Manthan award for best e-content for development.
- CSI-Nihilent e-Governance awards for best e-governed department.
- National award for e-governance 2008-09 for excellence in Government process re-engineering gold.

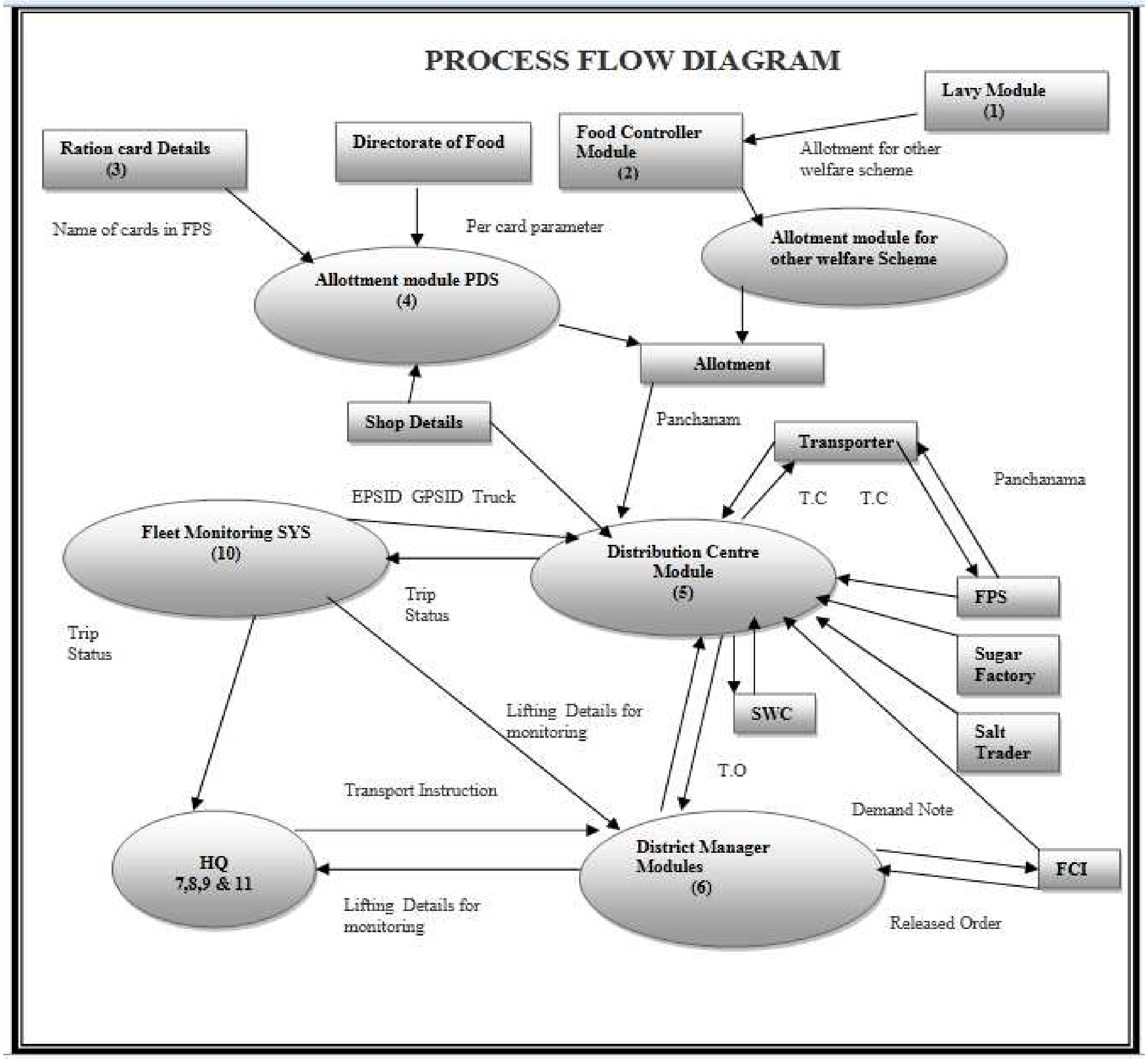
1.4.2 Organizational Structure

Food, Civil Supply and Consumer Protection Department is headed by the Principal Secretary, who is assisted by a Director at the State level, Controller Food/Food Officer (FO) at the district level, Sub Divisional Magistrate (SDM) and Assistant Food Officer (AFO) at the Tehsil level in regulating the PDS in the system. This includes registration, de-registration and modification of ration card holders and their assignation to various FPS in the State as well as approval of the latter. The CGSCSC through its District Managers (DM) procures and distributes PDS commodities.

1.4.3 System design

'Computerisation of Public Distribution System' has been designed and developed by the NIC. It is an online web-based application (online software) which has been hosted on a central server available in the NIC office in the State Secretariat. This is connected through V-SAT/Broadband/Data card to Food, Civil Supply and Consumer Protection Department, Controller Food/Food Officer (FO), CGSCSC, DM and State Warehouse Corporation

(SWC) Storage Centres. A process flow diagram indicating the transactional relationship of various participating organizations of the computerised PDS is given below:



The online software has been developed using Microsoft SQL Server 2008 and Microsoft Dot Net technology.

The software contains the following modules and other functionalities.

1. Levy Module - It creates sample slips, analysis report, acknowledgement and automatically generated bill for levy rice received from millers.

2. Food Controller module - It allows registration of mills, granting of permission for milling based on which DM issues paddy for milling.

3. Unified Ration Card Data Base - It facilities creation of new ration card, generation of PDF of ration card and deletion of existing ration cards.

4. Allotment Calculation - It facilitates calculation of FPS wise allotment under each scheme of PDS.

5. CGSCSC Distribution Centre module - It facilitates issue of foodgrains to FPS by means of DO and TC created online.

6. CGSCSC DM module-It facilitates distribution to FPS by the District Manager, CGSCSC , ensuring availability of necessary stocks at distribution centres and monitoring of PDS commodities through generation of necessary reports.

7. Citizen Participation module - It is an interface to provide information regarding ration cards, allotment of foodgrains etc. to the citizens and ensure their participation through registration of their complaints.

8. SMS/e-mail alerts - This provides the beneficiaries are provided information on issue of allotment of foodgrains to their respective FPS by means of SMS/e-mail.

9. Call Centre module - It provides a forum to the beneficiaries through a call centre, wherein they can register their complaints telephonically.

10. Transportation monitoring through GPS - Global Positioning System (GPS) is used to track the movement of vehicles carrying the foodgrains of PDS, with the help of GPS devices fitted in the trucks. GPS has now been substituted with a mobile phone based tracking system.

11. Complaint monitoring system - It provides a mechanism to track complaints received from the beneficiaries to ensure their fast redressal.

These modules are interlinked with each other as an entry in one module automatically affects input/output generated from the other modules. (see process how diagram at page 91)

1.4.4 Audit Objectives

The performance audit of computerised PDS was taken up with the objectives of ascertaining that:

- the business process of the department has become more transparent and effective.
- data integrity was being maintained at all stages.
- the business continuity plan, disaster recovery plan, backup policy and antivirus policies were in place.
- software provided adequate support in planning and decision making at Government level, and
- the overall objectives of computerisation of PDS were achieved.
- the IT resources are being acquired, maintained and used in responsible manner.

1.4.5 Audit Coverage, Scope and Methodology

Records relative to the procedure laid in the manuals of PDS were test checked in the office of the Director Food, Civil Supplies and Consumer Protection Department, CGSCSC, DM, FO, eight out of 16 Nagarik Apurti

Nigam (NAN) Distribution Centres and 32 Fair Price Shops (FPS) in five selected districts[1]. An Entry conference was held with the Principal Secretary, Food, Civil Supplies and Consumer Protection Department in January 2011. An exit conference was held on 25 November 2011 to discuss the audit findings. The methodology of audit also included the following :-

- Issue of questionnaires.
- Reviewing of Information Technology (IT) Policy and condition thereof.
- Observation of input and output controls.
- Interaction with officials as well as IT personnel.
- Data analysis using SQL and Excel worksheet.

Audit Findings

The current status of the computerised PDS vis-à-vis its various objectives is indicated in the table below:

Sl. No	Main Objective	A/NA/ PA	Remarks
1.	Achieve better inventory control (and better management of milling resulting in optimal capacity utilization and saving).	NA	The Department failed to achieved the objective of better inventory control as there exists wide variation between online stock owing to and actual stock, non existence of data of Pala bags, Sweepage foodgrains and old stock commodity in the online PDS. (Para 1.4.13.1, 1.4.13.2, 1.4.13.3, 1.4.13.5)
2.	Reduce fake and duplicate ration cards.	NA	The objective to reduce fake and duplicate ration cards has yet not been achieved as duplicate ration cards still exist in online PDS database. (Para 1.4.8.1)
3.	Eliminate irregularities like delayed allotment, biased allotment to FPS, allotment to FPS in excess of requirement, diversion of allotment etc. in grant of allotment to FPS.	PA	Although irregularities like delayed allotment, baised allotment to FPS, allotment to FPS in excess of requirement etc. have been eliminated but online still system does not have any capacity to restrict delayed running of allotment process. (Para 1.4.9)
4.	Reduce delay in communicating allotment up to FPS.	A	Automatic calculation of allotment for FPS has eliminated delays in releasing allotment. (Para 1.4.9)
5.	Reduce delay in foodgrains availability at FPS.	A	The truck challan is generated using the web application. Thus current information on allocations, stocks, issue and sales for each FPS is now available.
6.	Check diversion and leakage in PDS commodities.	A	The allotment is calculated based on number of ration cards in a FPS. Hence, there is no chance if excess or short allotment for a FPS. (Para 1.4.9)
7	Reduce delays in complaint capture and redressal	A	Citizens can register their complaint on the website or through call centre. (Para 1.4.3)
8.	Increase transparency in operations, and	PA	The transparency in operations has been achieved to some extent due to every operation being executed online. But more needs to be done in respect of tracking of vehicles carrying foodgrains, inclusion of data on sweepage foodgrains, *Pala bags* and old stock commodities in the online PDS. (Para 1.4.13.2,1.4.13.3)
9.	Insure timely availability of lifting information.	A	SMS alert or e-mail information is being sent to the beneficiaries for issue of allotment of foodgrains to their respective FPS. (Para 1.4.3)

(Note: A-Achieved, NA-Not Achieved, PA-Partially Achieved)

[1] Ambikapur, Durg, Jagdalpur, Janjgir, Raipur

1.4.6 Non-preparation of Software Design Documents

Documentation is an important part of software development. Types of documentation include:

- Requirements - statements that identify attributes, capabilities, characteristics or qualities of a system. This is the foundation for what shall be or has been implemented.
- Architecture/Design - Overview of software which includes relationship with the environment and construction principles to be used in designing software components.
- Modules, Master file, Data files, Input/Output formats, validation control and logs.
- Technical documentation of code, algorithms, interfaces.
- Manuals for the end-user, system administrators and support staff.

Software Design Document was not prepared

We observed that no Software Design Documents (SDD) was prepared before developing the system. In the absence of SDD it is not possible to ascertain whether the software actually developed was comprehensively conceived and developed as per pre-set parameters. Moreover in the absence of such a basic document, modifications or upgradations of the system architecture in future are likely to pose problems. Difficulties may also be faced in proper maintenance and sustainability of the software. Since neither the Detailed Project Report (DPR) or Gap Analysis Report etc. was prepared nor any MOU executed with NIC, the software developed lacks internal consistency and integrity as indicated by our observation in para no 1.4.13

During the exit conference, Government accepted (November 2011) these audit observations and stated that SDD will be prepared before 31 March 2012.

1.4.7 Feasibility study and parallel checking of the software not conducted

Feasibility study and parallel checking was not done

The feasibility study of the system and parallel checking of software modules was not undertaken. Though the system became operational in November 2007, the System Requirement Specification (SRS) was finalised in June 2008. Hence, the extent to which the system has met the user requirements could not be ascertained. Documentation relating to detailed testing was not prepared. As evident from the various stages of system design and application development, the testing had either not been done or was completed only after implementing the system. Though a 'user manual' has been prepared by NIC it was not available at any of the test-checked distribution centres.

Government stated (November 2011), during the exit conference, that feasibility study was not done because the Government had no doubt about the feasibility of the supply chain computerisation peroject and that various functionalities were implemented in a phased manner within a span of six months, comparing the output generated through the system with manually calculated figures, which is equivalent to parallel checking.

The above reply of the Government is not tenable because the Delivery Order (DO) and Truck Challans (TC) are being issued manually, which implies that the system is yet to meet the user requirement fully.

1.4.8 Application Controls

Application controls are applied on input, processes and outputs to ensure that only complete, accurate and valid data is entered and updated in a computer system. These controls also ensure that processing accomplishes the correct tasks and meets expectations, and output is generated and distributed with requisite controls. Application controls may consist of edit tests, totals, reconciliation, identification and reporting of incorrect, missing or exception data. Automated controls on the software should be dovetailed with manual procedures to ensure proper investigation of exceptions. Our assessment of controls exercised at various important stages of the transaction flow is presented below:

Entry of beneficiary details in Database and key controls: The proper and correct allotment of foodgrains to FPS requires that only genuine beneficiaries are listed in the database. Therefore, the key control is that the database of all genuine beneficiaries is prepared before starting of Online Public Distribution System.

It was observed from the scrutiny of the PDS database that online database of beneficiaries was hurriedly prepared in a very short period on the basis of the list of beneficiaries provided by Panchayat and Urban Local bodies without properly checking for duplication and other errors in the data. Scrutiny of 34 lakh records pertaining to the ration cards revealed various irregularities which are discussed in the following paragraphs.

Discrepancies in Ration Card Database

In the online PDS, a Ration Card database is being maintained by the Department on the basis of list furnished by Gram Sabha in rural areas, local bodies of urban areas, Special Area Development Authority and Cantonment Board of Cantonment Area. It contains information of the distinctive member of the ration cards issued by the State Government under each scheme. The different categories of beneficiaries include families above poverty line (APL-White), below poverty line (BPL- Yellow) and family drawing ration under, *Antyodaya Anna Yojana* (AAY-Red), *Annapoorna Yojana* (AY-Violet) and *Mukhayamantri Khadyan SahayataYojana* in which different coloured cards have been issued viz. *Keshariya* (35), *Slaty* (35), *Keshariya* (10), *Hara* (10).

1.4.8.1 Failure of the system to check duplicate Ration Card Number in the database

In the Online PDS system, when a new ration card is made a unique ration card number is generated by the system which is used to identify the beneficiary holding the ration card.

Failure of the system to check duplicity in the database

During our scrutiny of the Ration Card Database, 1083 cases of duplicate ration card number i.e. two or more ration card holders having same ration card number, were found. This indicates that the system is vulnerable to manipulation and creation of bogus ration cards. It also brings out the failure of the system to check such type of duplicity in the database. If any one of the duplicate ration card is deleted, there is every possibility of a genuine ration card being deleted.

In the exit conference, Government accepted the audit observation and stated (November 2011) that ration cards will be physically verified and duplicates will be deleted.

The response of the department is unacceptable because it does not address the inability of the system to prevent generation of duplicate unique numbers.

1.4.8.2 Discrepancies regarding Father's/Husband's Name in Ration Card Database

Failure of the system to check of alphanumeric and blanks entry

Ration Card is issued in the name of *Mukhiya*/Head of family. In the present case we observed 750 cases where the names of the head of the family were identical. In two or more cases, the names of the 'Mukhiya' and his father were same which puts a question mark on the genuineness of the beneficiaries. This would imply that foodgrain was allotted and distributed against pseudonymous names. Further in 6549 cases, name of Father/Husband had not been mentioned in the Ration Card Database, whereas in some cases the field Name of Father/Husband had been filled by typing a Question mark, Dash, Zero, single Hindi Alphabet or just left blanks. This indicates the failure of the system to check such type of alphanumeric entries in the fields relative to the name of *Mukhiya* or the Father /Husband name.

Government accepted the audit observation and stated (November 2011) during the exit conference that discrepancies in the database regarding father's/husband's name in ration card will be verified from the field and necessary correction will be made. The reply, however, does not address the question why suitable validation checks have not been incorporated in the system to rule out irrelevant and non-sensical data being fed into the system.

1.4.8.3 APL Ration Cards Database was not prepared

In the online PDS, no database was prepared for APL Card Holders. The system shows only the total number of APL Card Holders furnished by Gram Sabha in rural areas, local bodies of urban areas, Special Area Development Authority and Cantonment Board based on which quantum of foodgrains is allotted to FPS in these areas. In the absence of detailed personalised information of APL card holders, it would be difficult for a Fair Price Shop keeper to identify the correct APL beneficiary. At the same time verification of actual distribution of the foodgrains allotted for APL card holders cannot be facilitated.

During the exit conference, Government accepted the audit observation and stated (November 2011) that APL online database has now been prepared.

1.4.8.4 User-Id not captured in Ration Card Database

No entry showing User-Id in Ration Card Database

Ration Card Database is the foundation of online PDS and on the basis of which allotment is calculated and distributed to the FPS. Consequently, any process of insertion, deletion or updation of the Ration Card Data should be properly recorded/ documented, so that the genuineness of these operations is clearly established.

During review of the Ration Card Database it was observed that out of a total of 3592998 records, the User-Id field was not captured in 490792 records. In the absence of User-Id, the user activity cannot be captured and as a result, the data integrity of the various records in the database cannot be ascertained. Further, there is increased risk of unauthorized addition, deletion or tampering of data due to the absence of user activity logs.

In the exit conference, Government accepted the audit observation and stated (November 2011) that in the ration card database user-ID will be created.

1.4.9 Lack of systematic arrangement for running of online allotment process

The software was to be designed in such a way that allotment of PDS is issued by 15th of every month to all the FPS on the basis of number of ration cards, which implies that the system would be incapable of generating allotments for periods prior to or after that spell of 15 days.

Allotment process run on an erroneous date

During our scrutiny of database, we found that user field was left blank and no proper register was kept to record running of online PDS allotment system. We also found that in several FPS the process of allotment of foodgrains was run several times in same month. In 1423269 cases, we noticed that the allotments were generated for period before and after the month in which the process actually run. In one FPS (i.e. shop ID 391001001) the process was shown run on erroneous date (i.e. 01.01.1900). This indicates lack of application control as well as absence of robustness in the system as observed from detail given in ***Appendix-1.32.***

The Government stated that there was no hard and fast rule to process allotment only once in a month, and that if the competent authority feels that ration card number in a shop is to be changed, he may decide to generate allotments a second time. We were assured that the system will ensure that allotment once given to a shop is not reduced if delivery order for that shop has already been issued and that the user department will decide on the requirement for maintaining the register to record allotment process. However, during the exit conference (November 2011), Government accepted the audit observation and stated that systematic arrangement for running of online allotment process will be put in place within one month.

Although Government has stated that online allotment process will be put in the place within one month, the veracity of allotments made previously, however, cannot be confirmed.

1.4.10 Discrepancies in allotment and distribution of kerosene

Director, Food, Civil Supplies & Consumer Protection makes district wise allotment of kerosene which is then sub-allotted by the Food Controller/Food Officer to FPS. Further, as per the standing instructions of the Director, kerosene is to be distributed at the rate of three litres per ration card and the allotments for kerosene to FPS are released on that basis alone.

The deficiencies in the distribution of kerosene

During our review of the process, the following discrepancies were found in the allotment and distribution of kerosene

- **Manual allotment and distribution of kerosene**

The online PDS contains provision for online allotment of kerosene. Yet the allotment of kerosene was being made manually by the Directorate, which was again sub-allotted manually at the district level. Consequently, the system of allotment and distribution of kerosene was yet to become fully transparent.

During scrutiny of records, we found that the allotment released by the Directorate was being sub-allotted by Food Controller/Food Officer without any fixed criteria. Although the PDS Control Order prescribes that the sub-allotment of kerosene will not be less than three litre per ration card, the same was made at variable criteria of 2.700, 2.750 and 2.830 litre. Due to the difference of allotment of kerosene, beneficiaries received less quantity to the tune of 0.3, 0.25 and 0.17 litres. Some of these discrepancies have been depicted in ***Appendix-1.33.*** Thus distribution of kerosene through the manual process was not only amenable to inconsistency but also less transparent.

During the exit conference, Government stated (November 2011) that though kerosene is a commodity supplied through PDS, the current PDS-online system did not cover kerosene. It was also stated that the kerosene supply chain is being computerised through another project which is under implementation.

1.4.11 Discrepancies regarding Delivery Order

In the online PDS, foodgrains are sent to FPS every month from distribution centre of CGSCSC by means of Delivery Order (DO) issued online. DO can be issued only after entering the amount of foodgrains issued for current month in case of cash ration shops and the quantity of previous month in case of credit shops. DOs also serve the purpose of the online authorization for delivery of foodgrains in FPS through trucks. Thereafter, Truck Challans (TC) are issued against the DOs, which have a fixed validity period of 15 days.

1.4.11.1 Validity of DO not checked by the system

Absence of validity period of Delivery Order

During our scrutiny at distribution centre Raipur we noticed three cases in which foodgrains were shown to have been transported months after expiry of validity of DO. The system did not detect the fact that the validity of DOs had expired and allowed Truck Challan (TC) to be issued on the basis of expired DOs. This indicated that the system was not capable of ensuring transportation of foodgrains within the specified time limit thus compromising an important control feature.

During the exit conference (November 2011), Government accepted the audit observation and stated that necessary correction will be made in the system.

1.4.11.2 Issue of Manual Delivery Order for some institutions

As per PDS Online Module User Manual, the process of allotment and issue of DO and TC must be done electronically.

Manual Delivery Order issue for CISF, BSF, ITBP etc.

However, it was observed that for providing foodgrains to Central Industrial Security Forces (CISF), Border Security Forces (BSF), Indo-Tibetan Border Police Forces (ITBP) etc, DO was being issued manually and was not entered in the online PDS. Consequently, the position of stocks in the online PDS did not match with the actual stock on the ground. The stock position in online PDS was corrected at subsequent dates through an adjustment entry.

During the exit conference (November 2011), Government accepted the audit observation and stated that necessary modification in the online PDS had been effected.

1.4.12 Discrepancies in Truck Challan

In online PDS, foodgrains are sent every month from the distribution centre to FPS. To facilitate movement of foodgrains from the distribution centres to FPS, a TC is generated through the online system. We carried out test in regard to16 distribution centres and 32 FPS to ascertain whether there was any mismatch in the quantity indicated in the DO or TC and stock of FPSs. We noticed following deficiencies in the processing of TCs.

1.4.12.1 No validity period for Truck Challan

Absence of validity period of Truck Challan

During scrutiny of the records of Distribution Centre, Durg, we observed that several DOs were pending for many months against which no TCs were generated. As the DO is generated only after entering amount for current month in case of cash ration shops[2] and amount of previous month in case of credit shops[3], the non-issue of any TC against these DOs implied that the foodgrains were not sent to the concerned FPS even after payment of necessary amount of cash by that FPS. We further observed that in the absence of a definite validity period in respect of TCs, the system did not prevent issue of TCs against those DOs, that had remained pending for several months.

During the exit conference (November 2011), Government accepted the audit observation and stated that necessary corrections will be made in the system.

1.4.12.2 Issue of Truck Challan Manually

Distribution centres issued Manually Truck Challan

As mentioned earlier, issue of TC must be done electronically. However, during inspection of distribution centres at Ambikapur, Jagdalpur, Durg and Bemetara, it was noticed that in 362[4] cases, TCs had been generated manually and none of these had been entered in the online system. In such a scenario, the possibility of omitting altogether the entry of TCs in the online system cannot be ruled out. This may result in mismatch of the online stock and the actual stock.

The officers in-charge of distribution centres ascribed the above deficiency to a variety of reasons including the problem of internet connectivity. The Government during the exit conference (November 2011), accepted the audit observation and stated that issue of Truck Challan through online system has since been implemented in the system on the ground.

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[2] Cash ration shops are those which pay the amount first and only then foodgrains are issued.

[3] Credit ration shops are those which pay the amount after taking one month foodgrains.

[4] 211 cases in Ambikapur,142 cases in Jagdalpur, six cases in Durg and three cases in Bemetara

1.4.13 Deficiencies in Inventory Control System

In the online PDS system, the rice received from millers through CMR, wheat received from FCI, sugar and salt received from factories constitutes the inward entry of stock. The foodgrains issued from the godowns to the FPS constitutes the outward entry of stock. As per PDS Online Module User Manual, all the processes of inward and outward entry of stock are to be done electronically. In this regard we noticed following deficiencies in the PDS.

1.4.13.1 Mismatch between online stock and actual stock

In the distribution centres under CGSCSC and SWC, apart from the stock shown in the online PDS, the parallel stock position was being maintained manually in the distribution centres.

Difference in Manual stock and online stock

During inspection of distribution centres at Karpawand, Kondagaon, Champa and Akaltara, we found that the opening and closing balances of the online stock and manual stock did not tally and there was significant difference between the two. Similarly, difference was noticed in the closing balances of the online stock and manual stock of foodgrains. Test check of records of five selected districts[5] revealed differences in stock ranging between (-) 6363.80 quintal and 6115.6 quintal. The instances of quantum of difference are given in ***Appendix-1.34.*** These differences were mainly attributable to generation of TCs manually, allotment of foodgrains to certain institutions in manual mode and failure to account in the online system for sweepage, storage and movement losses. This is indicative of inadequacy in the system design.

During the exit conference (November 2011), Government accepted the audit observation and stated that necessary corrections will be made in the system.

1.4.13.2 No information in the online PDS system regarding Sweepage Foodgrains

No information regarding Sweepage Foodgrains

The online PDS does not record the quantum of sweepage[6] arising for different commodities being delivered to the FPS. Our test check of records of five selected districts[5] office of CGSCSC revealed sweepage in regard to rice, sugar as shown in the table 1.1.

Name of Commodity	Year	Stock in Hand (In quintal)
Sugar	2008-09	1111.37
	2009-10	2313.94
Rice Raw Common	2008-09	76.61
	2009-10	1.38
Rice Raw Grade 'A'	2007-08	2.49
	2008-09	11.15

(*Source: Information furnished by the department and compiled by audit*)

Since the sweepage is not being reflected in online PDS, stock position indicated by the system particularly in regard to the sugar and rice did not reflect the correct position of the stock.

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5 Ambikapur, Durg, Jagdalpur, Janjgir and Raipur

6 "Sweepage" is a term used to describe the spoiled foodgrains which is not fit for human consumption.

During the exit conference (November 2011), Government accepted the audit observation and stated that sweepage foodgrains is since being reflected in the system.

1.4.13.3 No information in the online PDS system regarding Pala Bags.

No information regarding Pala Bags

"Pala bag" is a term used to describe the loose foodgrains that spills out during storage and transportation and which is collected in bags. We observed that the stock level depicted by online PDS does not reflect the position of *Pala Bags* which is being maintained by the Department manually. Consequently an overall and correct view of stock position is not visible in the PDS online system. Test check of records of five selected districts revealed that 17 *Pala Bags* of sugar, 218 *Pala Bags* of wheat and 7490 *Pala Bags* of rice were not accounted for online PDS during the year 2009-10 & 2010-11 as indicated in ***Appendix-1.35.***

During the exit conference (November 2011), Government accepted the audit observation and stated that '*Pala Bags*' were now being reflected in the system.

1.4.13.4 Erroneous presentation of quantity of foodgrains in the Stock Master Table

Fields show the quantity in decimal places of 14 digits

In Stock Master table of the online PDS, the fields that are meant for entry of stock of foodgrains in quintals showed the quantities entered upto 14 decimal places. As the system picks up the figures of opening balance of the stock from these fields for subsequent calculation, digits beyond two decimal places may result in computation errors.

During the exit conference (November 2011), Government accepted the audit observation and stated that erroneous presentation of quantity of foodgrains in the stock master table will be checked and corrected.

1.4.13.5 Old stock of some commodities not included in the online PDS

Non maintenance of seized and old stock in the online system

The PDS scheme has been revamped from time to time and so the commodities being distributed have varied from time to time. For example, before 2007, certain commodities like *Mahamaya* salt used to be distributed through PDS, some stock of this salt was still lying at some godowns[7] which

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Distribution Centres	Items	Quantity (in quintal)
Ramanujganj	Mahamaya Salt	177.49
Surajpur	Mahamaya Salt	277.42
Jagdalpur	Mahamaya Salt	92.00

was not reflected in the online stock. Similarly foodgrains[8] seized by the Food Department for distribution through PDS were also not included in the online system.

During the exit conference (November 2011), Government accepted the audit observation and stated that old stock will be auctioned and reflected in the online system.

1.4.14 Limitations on the effectiveness of Online PDS owing to dependency on manual operations

The Online PDS aims at checking diversion and leakage in PDS commodities and ensuring transparency in the process of allotment of various foodgrains from CGSCSC to the FPS. The shop-wise allocations are automatically calculated on the basis of per card allocations fed into the system at the State level. All FPS salesmen are required to declare their stocks and sales of PDS commodities in the month prior to issuance in *Ghoshnapatra.* These figures are entered into the web application. Based on these figures, the software calculates the actual amount of PDS commodities to be issued to the FPS. Accordingly, a DO is issued through the application. After the release of the DO, a TC is issued indicating the truck number, driver's name and quantity dispatched. The TC generated by the system also contains a *Panchnama,* certifying that correct quantity and quality of foodgrains have reached the FPS. The date of receipt of foodgrains in FPS is to be written and attested by five[9] persons in the *Panchnama*. This is to be taken back by the transporters and deposited in the distribution centre where it is entered in the online system. It is obvious from above that the effectiveness of online system is predicated to a significant degree on manual input of data and its correctness as pointed out in para 1.4.14.1, 1.4.14.2, 1.4.14.3, 1.4.14.4. This dependence on manual data entry and amenability to manual intervention at intermediate stages has made the online-PDS system vulnerable to in accuracies and manipulation. This view of ours further reinforced by following observation:

1.4.14.1 Discrepancies in preparation of Ghoshnapatra

Unsigned *Ghoshnapatra* were being accepted

During test check of 16 distribution centres in the five selected districts, it was observed that in many cases unsigned *Ghoshnapatra* were accepted and entered in the online system. Also the *Ghoshnapatra* was not attested by the respective Food Inspectors or any other responsible person.

Further, we observed that the salesmen were not providing correct information about the closing balance in the *Ghoshnapatra*. In 17 cases, they showed nil closing stock of the foodgrains, whereas, some quantity of stock still remained

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Distribution Centres	Items	Quantity (in quintal)
Wadafnagar	Seize Rice	5.50
Wadafnagar	Seize Wheat	1.50

9 Five reputed residents of the village/ward including the *Panch, Sarpanch* and members of vigilance committee

in the FPS as shown by their stock register. One of the instances of wrong information in *Ghoshnapatra* has been presented in ***Appendix-1.36.***

Absence of signature of salesman and attestation by designated persons in the *Ghoshnapatra* creates the risk of diversion of foodgrains. Further, since the next month's allotment is dependent on the declaration made in *Ghoshnapatra*, wrong information poses a serious risk of introducing discrepancies in the FPS.

During the exit conference, Government accepted the audit observation and stated (November 2011) that instructions regarding discrepancies in *Ghoshnapatra* will be issued.

1.4.14.2 Data entry based on un-validated Panchnama

Scrutiny of the *Panchnamas* submitted by the various truck drivers for the 16 test checked distribution centres, revealed that in many cases the date of receipt of foodgrains in FPS as well as the quality of foodgrains was not written in the *Panchnama*. Further, the *panchnama* did not contain signatures of the designated five persons. These unsigned *panchnamas* were accepted at the Distribution Centres, despite these validation gaps.

Although the data contained in these *panchnamas* was required to be entered in the online system, we observed that this was not done in most cases. Moreover, in some cases in which data had been entered, it was seen that instead of the date on which the commodities were received in the FPS, the entries in the online system were made by entering the date of receipt of the *Panchnama* in the distribution centre.

In the absence of signatures and date of receipt on the *panchnama*, neither the delivery of the stipulated quantity of various commodities to the FPS, nor the timely receipt of foodgrains in the FPS could be ascertained.

During the exit conference, Government accepted the audit observation and stated (November 2011) that necessary instructions regarding unsigned *Panchnama* and *Panchnamas* not entered in the online system will be issued. Further, the date of receipt of foodgrains in FPS will be incorporated in the system.

1.4.14.3 Non-utilization of online data in claiming subsidy and non-maintenance of PDS online accounting system.

a) In the PDS scheme, the State Government procures rice on behalf of the Central Government and claims subsidy in respect of quantity used for distribution under the PDS. The whole process of purchase of paddy, custom milling and transportation of foodgrains from distribution centre to the FPS is carried out online, but when it comes to claiming subsidy from the Central Government, the utilisation certificate is obtained manually from the districts rather than using the online data about lifting and distribution of foodgrains.

In reply, the department stated that till now the commodity-wise, scheme-wise and *kharif* year wise information regarding distribution of foodgrains is being maintained manually. Hence, the utilization certificate is sent accordingly on manual basis. However, at instance of audit, the department has started making efforts for computerization of above information for generation of future reports.

PDS accounting system not computerised

b) The online PDS project consigned maintenance of PDS account online. During review of records, it was, observed despite computerisation of PDS that PDS accounting system of the department was not being maintained online. This has resulted in difference of 15000 quintals in the stock balance of sugar as shown in December 2010 accounts, and the claim document of sugar equalisation fund for 2009-10.

In reply to audit observations, the department admitted the fact and assured that the implementation of PDS online accounting system will be made from the financial year 2011-12 onwards. During the exit conference, Government accepted the audit observation and stated(November 2011) that online accounting system has since been developed.

1.4.14.4 Non availability of *Kharif* Year wise data of foodgrains distribution in the online system

Non maintenance of Kharif Year wise stock

Rice procured in two different *Kharif* seasons is stored together at State Ware House Corporation/Central Ware House Corporation Godown and distributed in a single financial year without any demarcation of the crop season year. However, there is no information in the online PDS about the availability of Stock of rice of a particular *Kharif* Year. Yet CGSCSC claims subsidy from Central/State Government on the basis of *Kharif* Season to which foodgrains distributed pertain. As there is no mechanism in the online PDS to identically stock *Kharif* Year wise, the entire work of preparing subsidy claims is done manually. In two distribution centres (Karpawand and Kondagaon), it was noticed that stock received under APL scheme was distributed to beneficiaries under BPL and *Poorak Poshan Aahar* schemes. Hence, the claim of subsidy on that account cannot be treated as correct.

During the exit conference, Government while accepting the audit observation stated (November 2011) that year-wise data of foodgrains stored during *kharif* period has since been implemented in the system.

The above limitations of the online PDS underline the consequences of implementing the project preparation of SDD and SRS.

The reply, however, does not address excessive reliance of the system on the accuracy of manual inputs.

1.4.15 Logical access control

Logical access controls protect an IT system from unauthorized access and also from malicious codes such as viruses and worms. During audit we observed the following discrepancies:

Password Policy	Audit observation
As per 4.0 (3) of password protection under the password policy, the password should not be disclosed to anyone. Although the department had a documented password policy but no written instructions have been issued on regular change of passwords. Password control procedures like assigning alpha-numeric passwords, minimum number of characters for password, restriction on number of unsuccessful login attempts and	During review of reply furnished by the department relating to the password policy, it was seen that department had provided the same password to more than one person and even to the daily waged/temporary/contract based employee of the department. Hence, it is recommended that the laid down policy should be followed to prevent the event of misuse of password by any of the above categories of employees.

forced periodic password changes were not incorporated	
As per password policy 4.0 (13) of Password protection, the password should be kept properly written on a paper in a sealed envelope and should be kept at a safer place with the head office.	During review of records, it was, however, noticed that department had neither kept the password in a sealed envelope nor maintained any confidential register for the security of the same. In reply to audit observation, the department admitted the fact and instructed the DM to maintain the registers

During the exit conference, Government while accepting the audit observation stated (November 2011) that necessary instructions will be given to avoid issue of password to more than one person and also to keep password in safer place.

1.4.16 Non-installation of smoke detector and fire extinguisher in offices and SWC godowns

No disaster management policy

With a view to protect the computer equipments and stock of foodgrains, smoke detectors and fire extinguishers should be installed in offices and also in godowns of the department.

During review, it was, however, observed that in none of the offices and Godowns of the department, the above fire protection equipments were installed**.** Though no such calamity had occurred, but a well-structured disaster management policy for smooth functioning of PDS is absolutely necessary for the security of the system.

During the exit conference, Government accepted the audit observation and stated (November 2011) that instructions will be issued for installation of smoke detector and fire extinguisher in related offices and SWC godowns.

1.4.17 Data Backup policy

The backup policy framed by the department under policy document version 1.0 defines the backup policy for servers used for computerised paddy procurement and Public Distribution System and MS-Access database files created in PACS (Primary Agriculture Co-operative Society) Computers. This policy is designed to protect data in the organisation as well as to avoid data loss and to retrieve the data in the event of an equipment failure, intentional destruction of data or disaster.

The backup policy of the department prescribes the following timing and storage of backup:

- daily full backup by automated scheduling to other hard disk of the server.
- daily full backup to External Hard Disc Drive (HDD). The backup created on holidays are copied to external HDD on the next working day.
- daily backup of Microsoft Data Base on CD.
- a monthly backup shall be taken on CD/DVD using the backup available in the external hard disk.

During scrutiny of the records of Central Server of PDS located at NIC State Centre, Mantralaya, Raipur, following deficiencies were noticed in the maintenance of back up regine:

- **Complete system backup of PDS central server not taken**

No backup of complete system of PDS server

The backup policy is designed to ensure protection of the organisational data, so that data loss can be avoided, and data can be retrieved in the event of an equipment failure, intentional destruction of data or disaster, by taking complete system backup including all server logs.

During the inspection of NIC server room, it was observed that no complete system backup of PDS central server was found to have been taken by the department. Even though the department has not encountered data loss situation as yet, security of data should be the first priority for effective management of data recovery.

On this being pointed out, the department stated (November 2011) that requirement for complete backup of the system was not stipulated became the, server is already in mirror mode. We, however, observed that the mirror mode server and actual server were located in same place and not at different locations. So in case of any unforeseen incident at the location, both the servers might be damaged and thus vital data may get lost. Hence, it is advisable that complete backup of the system may be taken and kept at a different location.

- **Absence of fixed time for data backup on Digital Versatile Disc(DVD**

During the inspection of NIC server room, it was observed that no fixed time interval period was prescribed for data backup on DVD.

On this being pointed out, the department stated that data backup was regularly scheduled on the server and the data was transferred to secondary storage media (DVD) but not at fixed intervals. Department agreed to transfer data periodicals fixed intervals.

- **Non-maintenance of register for daily backup of transaction data**

As per the backup policy, daily backup of transaction data is being taken and errors shown during backup are to be noted in the register.

Our examination of related records revealed that daily backup of transaction data was being maintained only in the system and no register was being maintained for this purpose.

During the exit conference, Government while accepting the audit observation and stated (November 2011) that a daily backup Register will be maintained and back-up server will be shifted to another location.

1.4.18 Maintenance of computer hardware

As per procedure, Annual Maintenance Contract (AMC) is required to be made for proper upkeep and maintenance of computer hardware.

No AMC of 244 Computer Hardware

During our review, we observed that CGSCSC has 244 pieces of hardware equipments of which 11 computers were under warranty. The rest of 233 computers were neither under warranty nor was any AMC executed for them. This may result in unnecessary idling of computer hardware in the event of breakdown of computer, which would in turn affect the online PDS work adversely.

During the exit conference, Government accepted the audit observation and stated (November 2011) that instructions for AMC in respect of 244 computer hardware will be issued.

1.4.19 Conclusion

The 'Computerisation of PDS' software was envisaged to set an example of how Information Technology can be leveraged to provide transparency, accountability and convenience to the public at large. However, an IT enabled system on such a wide scale also required rigorous controls to sustain operations and to ensure that it is being run as intended, and is complying with all the relevant rules and regulations. Audit of the system has revealed various limitations and design deficiencies. The areas of concern, therefore, related to both system based and manual controls. Computerisation was commenced without preparing SDD or conducting a feasibility study. Consequently all the necessary application controls were not properly incorporated in this system which resulted in several discrepancies in the database and made system outcome susceptibly to manipulation Logical access controls were found to be weak which increased likelihood of unauthorised access to the data. Instances of manual maintenance of certain records observed despite provision for these in the online system, defeated partially the purpose of the software implementation. Though the backup policy had been framed, yet it needed to be strengthened and followed stringently. Several discrepancies in input document and outputs such as DOs, *Panchnamas, Ghoshanapatras,* inventory control system, allotment and distribution of kerosene, etc. were noticed in sum, even though the project had brought in many advantages over the manual system, yet there remained still a pressing need to review the existing deficiencies of the online PDS and overcome them in order to achieve all the objectives that were sought to be achieved through its implementation.

1.4.20 Recommendations

- The software design deficiencies should be addressed on priority through NIC. As for as possible the manual interventions in the system should be minimized.
- The completeness of the data and its correctness should be checked through the provision of adequate input controls at the data entry stage and appropriate validation controls.
- The department should define and approve access profiles, strengthen password management and load standard anti-virus software in all the computers in the distribution centres and FOs.
- An audit trail to track the transactions should be inbuilt in the system to monitor changes made in the including master data.
- The department should follow a structured disaster management policy coupled with good work practices in order to reduce the risk of disruption, especially in case of a physical disaster.

- Backup of data should be taken regularly and stored off site to ensure security against data losses.
- Efforts should be made to run the allotment process once a month or at fixed intervals for greater transparency.
- All the transactions should be carried out only through online system in order to avoid the wastage of manpower engaged in manual maintenance of stock as well as to minimise risks of loss of control in such hybrid system.
- Allotment of kerosene should be done through online system, for which the provision already exists, in order to increase transparency in allotment and distribution of kerosene.