

CHAPTER-I PERFORMANCE AUDIT

PUBLIC HEALTH AND FAMILY WELFARE DEPARTMENT

1.1 National Rural Health Mission

Highlights

The National Rural Health Mission was launched in April 2005 with the aim of providing accessible, affordable, accountable, effective and reliable health care facilities in rural areas. The State Government spent Rs 634.55 crore from the inception of the scheme till March 2009. There were substantial savings of Rs 250.96 crore. The availability of health care infrastructure, doctors and supporting staff was not adequate. While there were significant achievements in some interventions, the indicators of maternal and infant mortality remained short of interim targets, even though the major expenditure under the scheme was for reproductive and child health. Some important audit findings are given below:

An amount of Rs 21.30 crore, including Rs 9.27 crore meant for Mobile Medical Units and Rs 1.90 crore for a Health Management Information System, remained unutilised.

(Paragraph 1.1.6.2)

Funds amounting to Rs 3.46 crore, received for health care of urban poor, were diverted.

(Paragraph 1.1.6.4)

There was excess expenditure of Rs 25.54 lakh on purchase of blood lancets.

(Paragraph 1.1.6.5)

There were delays of upto 730 days in the payment of cash incentives of Rs 59.64 lakh to 4,646 beneficiaries of the 'Janani Suraksha Yojna'.

(Paragraph 1.1.9.1[ii])

Payments totalling Rs 4.83 crore for folk dance programmes organised to spread health awareness, were not supported by prescribed certificates and photographs.

(Paragraph 1.1.9.2)

Only 52 per cent of reports were being received in respect of the Integrated Disease Surveillance Project.

(Paragraph 1.1.12.2)

1.1.1 Introduction

The National Rural Health Mission (NRHM) was launched (April 2005) by the Government of India (GOI) with the aim of providing accessible, affordable, accountable, effective and reliable health care facilities in the rural areas. Various existing National Disease Control Programmes viz. the Reproductive and Child Health-II (RCH-II) Programme, the National Vector Borne Disease Control Programme (NVBDCP), the Revised National Tuberculosis Programme (RNTCP), the National Leprosy Eradication Programme (NLEP), the National Blindness Control Programme (NBCP) and the Integrated Disease Surveillance Project (IDSP), were being implemented by separate health societies, which were merged under NRHM into a single State Health Society (SHS) to implement the scheme. The successful implementation of NRHM involved decentralised planning in the health sector and monitoring by health monitoring and planning committees formed at the Primary Health Centre (PHC), Block, District and State levels.

1.1.2 Organisational Structure

At the State level, the Chief Minister heads the State Health Mission (SHM), which provides the overall guidance to the scheme activities. The SHS, which is chaired by the Chief Secretary of the State, executes the scheme with the assistance of the State Programme Management Support Unit (SMPU). The Mission Director (MD), NRHM is the coordinator of the SHS and is responsible for overall implementation of the scheme. The MD is assisted by the Joint Director, NRHM and the Director, Health Services.

At the district level, the District Health Societies (DHS) implement the project. They are headed by the District Collectors, who are assisted by the Chief Medical and Health Officers (CMHO) who act as Chief Executive Officers (CEO) of the DHS. Health care was extended to 2.08¹ crore people (including 1.66 crore rural people) of the State, through a network of 138² Community Health Centres (CHC), 719 PHCs and 4,741 Sub Health Centres (SHC). The SHCs are manned by Female Health Workers/Auxiliary Nursing Midwives (ANM) and Multipurpose Health Workers (Male) (MPWM). The PHC is the first contact point between the patient and the doctor in rural areas, the CHC is treated as a secondary care institution and the district hospital (DH) is treated as a tertiary care institution.

1.1.3 Audit Objectives

The objectives of the performance audit were to assess whether:

- stage-wise planning was done starting from surveys at the village level,
- accounting and utilisation of funds was efficient and effective,

¹ Population as per census 2001.

² As per data given by the Directorate of Health Services.

- the scheme achieved strengthening of physical and human infrastructure at different levels as per the Indian Public Health Standard norms,
- the performance indicators and targets fixed in respect of reproductive and child health care as well as immunisation and disease control programmes were achieved and
- the scheme was being monitored as provided in the guidelines.

1.1.4 Audit criteria

The audit was conducted based on criteria derived from the following:

- Framework for implementation of NRHM issued by the Ministry of Health and Family Welfare, Government of India;
- National Programme Implementation Plans for RCH and other disease control programmes;
- State Programme Implementation Plans approved by GOI;
- Memorandum of Understanding between the GOI and the State Government;
- Indian Public Health Standards (IPHS) for upgradation of CHCs and PHCs;
- Chhattisgarh Store Purchase Rules, 2002.

1.1.5 Scope and coverage of Audit

The performance audit of the scheme was conducted during April 2008 to May 2009 for the period from April 2005 to March 2009. The coverage of audit included the SHS and four³ districts of the State selected by the Simple Random Sampling Without Replacement (SRSWOR) method. The four selected districts had 47 CHCs, 204 PHCs and 1,429 SHCs, out of which 12 CHCs, 24 PHCs and 48 SHCs were selected, as shown in *Appendix-1.1*, by the SRSWOR method.

The performance audit commenced with an entry conference with the Secretary, Public Health and Family Welfare Department on 4 April 2008. An exit conference was held on 10 September 2009 to discuss the audit findings.

1.1.6 Financial Management

As per the funding arrangement, GOI was to provide 100 *per cent* grants to the State upto 2006-07 and thereafter, all the existing National Disease Control Programmes were to be merged under NRHM and the State was to contribute 15 *per cent* during the XI Plan period (2007-12). The GOI grant was to be provided in two parts i.e. direct transfer to health societies and

³ Bastar, Kanker, Raigarh and Raipur.

transfer of funds to the State Government. The total expenditure incurred on the scheme during the period of audit was Rs 634.55 crore as against funds availability of Rs 885.51 crore as detailed in **Appendix-1.2**. Of the total expenditure of Rs 634.55 crore, the expenditure on Direction and Administration was Rs.256.06 crore (40 per cent) while Rs 378.49⁴ crore (60 per cent) was spent on programme activities, of which RCH was the main focus area, under which expenditure of Rs 341.96 crore was incurred.

1.1.6.1 Persistent savings

It was observed that except for the year 2006-07, there were large savings during each financial year as depicted below:

Table – 1.1: Funds received and expenditure incurred under NRHM

(Rs in crore)

Year	Receipt	Expenditure	Savings	Percentage of savings
2005-06	165.58	112.19	53.39	32
2006-07	202.16	195.34	6.82	3
2007-08	260.88	177.52	83.36	32
2008-09	256.89	149.50	107.39	42
Total	885.51	634.55	250.96	28

(Source: Information furnished by SHS and Directorate of Health Services)

Note: The above table does not include receipt and expenditure figures relating to the State Malaria Control Society as the society could not produce the information/records to Audit.

Of the total savings of Rs 250.96 crore, Rs 217.67 crore (87 per cent) occurred under RCH-II. This included unspent balances of Rs 7.42 crore under RCH-Phase-I, Rs 24.19 crore under flexipool (*Janani Suraksha Yojana*⁵, family planning, institutional strengthening and child health and training), Rs 127.28 crore under NRHM additionalities (untied funds, ASHA⁶, mobile medical units, Health Management and Information System, procurement of drugs and equipment and public private partnerships) and Rs 59 lakh under immunisation. The State contribution of Rs 47 crore and interest amount of Rs 5.68 crore remained unutilised. During the exit conference, the Government stated that there were savings under the salary head as personnel had not been appointed and the State contribution was not utilised as it was released at the end of March 2008 and March 2009. However, it was observed by Audit that the savings on salaries, booked primarily under Direction and Administration, was only a small part whereas the bulk of the savings was under various interventions under RCH. The

⁴ RCH-Rs 341.96 crore (90 per cent), NLEP- Rs 4.77 crore (one per cent), RNTCP- Rs 16.75 crore (five per cent), IDSP-Rs 2.97 crore (one per cent) and NVBDCP- Rs 12.04 crore (three per cent).

⁵ *Janani Suraksha Yojana* is a scheme to promote safe delivery at health centres by providing cash incentives to pregnant women, Auxiliary Nursing Midwives or ASHA

⁶ ASHA (Accredited Social Health Activist): A trained community health worker to be provided in each village for assisting in neonatal care, prevention and cure of common childhood diseases, immunization and family planning activities and other activities for control of malaria, TB, leprosy etc.

Government also agreed that the State Malaria Control Society had not kept its records properly and informed that an inquiry was being conducted as there were many irregularities in its running. The results of the inquiry were awaited (August, 2009).

1.1.6.2 Non-utilisation of funds of Rs 21.30 crore

**Mobile
Medical Units
were not
provided for
remote areas**

(i) As per the State programme implementation plans (PIP), GOI provided Rs 7.22 crore in 2006-07, for establishment of 16 Mobile Medical Units (MMUs) to provide necessary medical care in remote areas of the State. Subsequently, Rs 2.40 crore was released during 2007-08 as operational cost. It was observed that only four chassis of trucks for establishment of MMUs had been purchased (November 2008) for Rs 35 lakh against the requirement of 16 MMUs, while the balance of Rs 9.27 crore was lying unutilised. During the exit conference, the Government stated that a prototype MMU had been provided by the supplier which was being changed as it was not as per the specifications. It was further stated that all the MMUs would be purchased by March 2010. It was evident that adequate efforts had not been made in the past and consequently, the aim of providing medical care in the remote areas was not achieved and the funds remained blocked. Similarly, an amount of Rs 1.90 crore was provided by GOI in 2007-08 for establishment of a Health Management and Information System (HMIS), to make public health care services more efficient by computerising all records and transactions, from the SHC level to the State level and to monitor the functioning of health centres. However, the entire amount was lying unutilised.

During the exit conference, the Government stated that hardware would be purchased and the software would be provided free of cost by the National Informatics Centre (NIC). This action should have been taken immediately after receiving the funds but due to delays, the regular monitoring envisaged in the scheme guidelines through HMIS had not been started.

(ii) It was observed that funds received from GOI in 2004-05 for encouraging institutional deliveries through public private partnership (Rs 50 lakh) and formation of a cell to plan the stabilizing of population (Rs 20 lakh) and in 2007-08 for village and panchayat capacity building (Rs 98.20 lakh) and alternate human resources development (Rs 2.83 crore) remained unutilised. Consequently, these initiatives as envisaged in the annual PIPs were delayed for one to three years.

During the exit conference, the Government stated that the funds would now be utilised.

(iii) Scrutiny of records of RCH societies in the test-checked districts revealed that funds of Rs 5.62 crore received during 2006-07 to 2007-08 under various components were not utilised by the DHSs of Bastar (Rs 1.34 crore), Kanker (Rs 27 lakh), Raigarh (Rs 1.46 crore) and Raipur (Rs 2.55 crore) for more than one year, as detailed in **Appendix-1.3**. These funds were meant for purchase of drug kits, blood storage facilities, institutional strengthening, urban health programmes, formation of village health and sanitation committees etc.

At the exit conference, the Government stated that as drug kits were procured centrally by the Directorate of Health Services, the unspent amounts were retained by DHS Raipur and would be utilised for other activities. The unspent amount for blood storage facility and institutional strengthening would be utilised in 2009-10. The Village Health Sanitation Committees had not been set up as bank accounts had not been opened and they would now be started. It was evident that adequate action had not been taken in the past to utilise the funds, which resulted in delaying the intended benefits by one to two years.

1.1.6.3 Funds management and accounting

The following shortcomings were observed in the handling of funds, accounting and reporting utilisation of the same:

Funds amounting to Rs 7.42 crore were neither refunded to GOI nor spent by implementing agencies

- It was observed that an unspent balance of Rs 7.42 crore of RCH-I was neither refunded to GOI nor spent upto 31 March 2009. At the exit conference, the Government stated (September 2009) that the unspent balance would be refunded to GOI immediately. Had this action been taken in 2005-06, blockage of funds of Rs 7.42 crore for over four years could have been avoided.
- As per the MOU entered between GOI and the State Governments, the funds received under NRHM were to be kept in an interest-bearing account of a nationalised bank. Scrutiny of records revealed that funds received under RCH by DHS, Raigarh during April 2005 to June 2008 were kept in a current account. At the exit conference, the Government stated (September 2009) that a show cause notice would be issued to the concerned officials.
- During scrutiny of records at the SHS, the State Malaria Control Society (SMCS) did not produce vouchers and other records like cash book and stock registers. Therefore, their receipts and expenditure could not be ascertained by Audit. The Government accepted that the records had not been maintained properly by the society and informed that the accounts were being recast and an inquiry was also being carried out.

1.1.6.4 Diversion of funds

The SHS received Rupees four crore during 2005-06 to improve the health status of the urban poor community by providing quality primary health care with a focus on RCH services and to achieve population stabilisation. The programme was to be implemented by municipal bodies in coordination with the Health Department through social mapping of towns; identification of appropriate places for health care centres; appointment of two ANMs for urban slums to assist in deliveries and providing immunisation services, antenatal care and other services similar to the rural SHCs. An amount of Rs 3.45 crore had to be disbursed to the municipal bodies for executing these activities. In addition, Rs 26.25 lakh had to be utilized for organising health camps for identifying patients with serious illnesses and referring them to district hospitals. Another Rs 26.25 lakh had to be utilised for Information,

Education and Communication (IEC)⁷ activities. It was observed that while expenditure was incurred on IEC activities as planned, the amount of Rs 3.46 crore meant for municipal bodies was diverted for purchase of equipment, which was issued to Chief Medical and Health Officers in all districts.

Due to the non-utilisation and diversion, the objective of improving the health status of the urban poor community was not fulfilled. The Government assured that an inquiry would be carried out to ascertain whether the expenditure was appropriate. However, the diversion was inappropriate as it resulted in non-initiation of the activities for improving urban health care.

1.1.6.5 Cases of irregular and extra expenditure

Scrutiny of records of the SMCS revealed the following:

(i) As per the guidelines of the National Vector Borne Disease Control Programme (NVBDCP), 2004, procurement was to be done as per Government rules. The Chhattisgarh Purchase Rules, 2002 provided that purchases above Rs 50,000 should be made by inviting open tenders. In contravention of these provisions, the SMCS invited (April 2005) quotations for laboratory and publicity material, finalized rates which were inclusive of all taxes and issued supply orders during September and October 2005. Based on these rates, blood lancets were purchased (March 2006) at the rate of Rs 1.45 each. During the same period, the Director, Health Services invited (October 2005) separate tenders and finalised the rates for blood lancets at Rs 0.26 each and circulated (February 2006) the approved rates to all the societies. The rate of Rs 1.45 finalised by the SMCS, was in contravention of purchase rules and was five times higher, when compared to the rate of Rs 0.26 finalised by the Director, Health Services. Therefore, by purchasing blood lancets at higher rates, the SMCS incurred excess expenditure of Rs 25.54 lakh as detailed in **Appendix-1.4**. It was also observed that though the approved rates were inclusive of all taxes, commercial tax of 4.6 per cent was paid on 17 invoices, which resulted in excess payment of Rs 4.40 lakh to a firm as detailed in **Appendix-1.5**.

**Excess
expenditure of
Rs 25.54 lakh on
purchase of blood
lancets**

During the exit conference, the Government stated (September 2009) that the case has now been handed over to the Economic Offences Wing (EOW) for investigation.

**Irregular
expenditure of
Rs 15.62 lakh**

(ii) The SMCS issued (October 2005) a supply order for purchase of 29,000 slide boxes for Rs 14.94 lakh. It was observed that the ordered quantity was supplied twice against the same supply order, vide invoices dated 14 February 2006 and 21 March 2006 and payment of Rs 31.24 lakh (including taxes) was made. It was found that the stock entry for the second lot of 29,000 slide boxes was made in the stock register on 1 March 2006 though the material was supplied vide an invoice dated 21 March 2006. There

⁷ *Information, Education and Communication is the activity by which health awareness is created in the general public through posters, banners, pamphlets, folk dances etc.*

was nothing available on record to explain the discrepancy, which raised doubts on the genuineness of the second supply. During the exit conference, the Government stated that case had been handed over to EOW for investigation.

1.1.7 Planning

Non-preparation of block action plans

As per the NRHM framework, the district action plans, the basis for interventions in the health sector, are to be prepared by consolidating the block action plans prepared on the basis of surveys at the village level by involving panchayat representatives.

It was observed that a community needs assessment survey and a facility survey were carried out at the village level by the Health Department through ANMs and health workers but the block action plans were not prepared. District plans were prepared using the survey data. Therefore, the stage-wise planning envisaged in the scheme was not carried out. During the exit conference, the Government agreed that the bottom up approach of planning should be introduced and stated that block action plans would be prepared from 2010-11 onwards.

1.1.8 Facilities at health centres

Health care facilities in rural areas are provided through Community Health Centres (CHCs), Primary Health Centres (PHCs) and Sub Health Centres (SHCs).

1.1.8.1 Infrastructure

(i) Community Health Centres

The CHCs are located at the block level and constitute the secondary level of the health care design to provide referral as well as specialised health care to the rural population.

As per the framework for implementation of NRHM, a CHC was to be established for every 1,20,000 persons (80,000 in tribal areas). The IPHS norms envisaged that the CHCs would provide assured medical services⁸ and had prescribed the requisite infrastructure and facilities. Scrutiny of records of the 12⁹ test-checked CHCs revealed the following shortcomings against the prescribed IPHS norms:

⁸ *Routine and emergency surgeries, 24-hour normal and assisted delivery services, essential and emergency obstetric care including surgical interventions like caesarean sections and other medical interventions.*

⁹ *Districts - Bastar -(Bakawand, Lohandiguda and Tokapal) Kanker- (Amoda, Bhanupratappur and Charama), Raigarh -(Chaple, Pussore and Tamnar) and Raipur-(Abhanpur, Arang and Dharsinwa)*

Shortage of CHCs in the State

- As per the data provided by the Directorate of Health Services, there were 138 CHCs in the State as on March 2009 against the requirement of 173 CHCs based on the 2001 census, which estimated the rural population of 1.68 crore. Thus, there was a shortage of 35 CHCs.

Basic infrastructure was inadequate in CHCs

- None of the 12 CHCs test-checked had accommodation for patients' attendants, 67 per cent had no in-patient service, 50 per cent were without accommodation facilities for ANM, 42 per cent had no separate wards for male and female patients, 33 per cent had no standby power supply and 25 per cent had no accommodation facilities for general duty medical officers and staff nurses. The CHCs had adequate infrastructure for services such as ambulances, diagnostic facilities, labour rooms, water supply etc. The available infrastructure and facilities in CHCs are given in **Appendix-1.6**.

Essential OT equipment not provided

Even though operation theatres were available in the 12 test-checked CHCs, out of the 14 items essential for operation theatres, eight items were not present in 8 to 12 CHCs as detailed in **Appendix-1.7**.

Blood storage facilities not available

Blood storage facilities were not available at any of the 12 test-checked CHCs even though funds of Rs 65 lakh were released (2007-09) to the DHSs.

(ii) Primary Health Centres

The PHCs are located in the villages to provide 24-hour emergency services such as general medical care, family welfare and maternity and child health care services. They are referral centres for SHCs. The IPHS norms prescribed the equipment and facilities required in the PHCs such as standby power supply/generator, minor operation theatre, labour room etc.

Inadequate infrastructure in PHCs

Scrutiny of records of the 24¹⁰ test-checked PHCs revealed that there was non-provision of standby power supply, 92 per cent were without any operation theatre and accommodation for staff nurses, 79 per cent had no separate utilities and wards for men and women, 71 per cent could not provide inpatient services, 67 per cent had no accommodation for medical officers, 54 per cent had no diagnostic services, 46 per cent had no provision for water supply, 42 per cent had no facilities for medical waste disposal and 29 per cent had no labour rooms. The PHCs were, however, adequately equipped with OPD rooms and 24x7 emergency and delivery services. The details of infrastructure and facilities available in PHCs are given in **Appendix-1.8**.

(iii) Sub-Health Centres

The SHCs located at the village level, are the first contact point of the health care system with the rural community. They are expected to provide promotional, preventive and a few curative primary health care services such

¹⁰ **Bastar**-(Alnar, Belar, Jaibel, Malgaon, Maulibhata and Tahakapal), **Kanker**-(Basanvahi, Halba, Hatkarra, Korar, Kottara and Sarwandi), **Raigarh**-(BadeBhandar, Binjkot, Jobi, Kodatarai, Saraipali and Urba) and **Raipur**-(Champaran, Labhandi, Mandhar, Mandirhasaud, Rewa and Uparwara).

**Inadequate
infrastructure in
SHCs**

as antenatal and post-natal care, family planning and contraception. The SHCs should have facilities such as labour rooms, accommodation for staff, adequate water supply etc.

Scrutiny of records of the 48¹¹ test-checked SHCs in four districts revealed that 71 *per cent* were without separate utilities for men and women, 67 *per cent* were without provision for water supply, 58 *per cent* did not have facilities for disposal of medical waste, 42 *per cent* were without labour rooms and accommodation for staff and 38 *per cent* had no Government building as detailed in *Appendix-1.9*

In the absence of the minimum prescribed infrastructure and facilities, the health centres at various levels were not fully equipped to deliver assured services as envisaged in the IPHS norms. Since 38 *per cent* of the SHCs were running from rented premises, there was little scope for their upgradation and provision of the prescribed facilities such as waste disposal and labour rooms.

During the exit conference, the Government stated that mapping of the population was being done to assess the total requirement and additional CHCs would be constructed as per the assessment. The Government also stated that action would be taken to construct buildings for SHCs, to equip the OTs adequately and to introduce a Chhattisgarh Equipment Management System to ensure minimum stock of medicines and equipment at all health centres. The State would also start a Medical Corporation for procurement of equipment and outsource the testing of equipment and medicine. These initiatives were required to be implemented expeditiously to improve the quality of health care in the State.

1.1.8.2 Manpower

(i) Community Health Centres

The IPHS norms provided that every CHC should have a general physician, a gynaecologist, a paediatrician, an anaesthetist, a pharmacist, a laboratory technician, a radiographer and nine staff nurses to cater to a bed occupancy of 60 *per cent*.

¹¹ **Bastar-**(Badanji, Burungpal, Chindgaon, Dharaur, Garenga, Irikpal, Karanji Napawand, Nainnar, Potanar, Targaon and Ulnar), **Kanker-** (Barvi, Bhainsakanhar, Bheja, Choria, Dudhava, Jebra, Kotela, Lilejhar, Musurputta, Puri, Samtara and Selegaon) **Raigarh-** (Bhupdeopur, Chhatamuda, Gorpar, Gurda, Jaridih, Jibri, Khadgaon, Khamhariya, Khokhra, Nandeli, Samaruma and Supa) and **Raipur-**(Barbanda, Girod, Kachna, Kendri, Lakholi, Mowa, Nawagaon, Nimora, Palod, Paragaon Parsada, and Rakhi).

**Shortage of
doctors in
CHCs**

Against the 1,104 sanctioned posts of qualified doctors in the State, there was a shortage of 514 (47 per cent) as detailed below:

Table-1.2 : Status of manpower in CHCs in the State

Sl. No.	Name of the Post	Sanctioned	In position	Shortage	Percentage of shortage
1.	Medical Officer	414	376	38	9
2.	General Physician	138	51	87	63
3.	Gynaecologist	138	36	102	74
4.	Pediatrician	138	60	78	56
5.	Surgery specialist	138	28	110	80
6.	Anaesthetist	138	39	99	72
Total		1104	590	514	47

(Source: Information provided by the Directorate of Health Society)

It was observed that none of the 12 test-checked CHCs had an anaesthetist and staff nurses, 92 per cent were without general physicians, 83 per cent were without gynaecologists, 67 per cent were without paediatricians, 50 per cent were without general surgeons, 42 per cent were without radiographers and 33 per cent were without any general duty medical officer (MO). The shortage of staff is depicted in **Appendix-1.10**.

(ii) Primary Health Centres

**Shortage of
manpower in
PHCs**

As per the IPHS norms, a PHC should have an MO, a staff nurse, a pharmacist and a laboratory technician. Out of the 24 PHCs test-checked, 88 per cent were without any staff nurse, 75 per cent were without an ANM, 67 per cent were without laboratory technicians, 50 per cent were without pharmacists and 29 per cent were without any medical officers as detailed in **Appendix-1.11**.

The shortage (29 per cent) of MOs in the test-checked PHCs was quite close to the overall shortage in the State. Against the requirement of 1,414 MOs for the whole State, only 1,092 were deployed, resulting in a shortage of 322 (23 per cent).

(iii) Sub Health Centres

**Shortage of
manpower in
SHCs**

The IPHS norms prescribed that each SHC should have two ANMs and a male health worker to provide basic health care services. It was observed that two ANMs were posted only in two per cent of the SHCs, a single ANM was posted in 92 per cent of the SHCs, while in six per cent of the SHCs, no ANM was posted at all. Fifty eight per cent of the SHCs were without any male health worker as detailed in **Appendix-1.12**. Since ANMs were required to make field visits and conduct weekly immunisation, it would not be possible to deliver the services at SHCs properly with just one ANM. The non-availability of ANMs implied that the concerned SHCs were not equipped to deliver the level of health care as envisaged under NRHM.

In the absence of the minimum prescribed numbers of doctors and paramedical staff at all levels, the health centres were not fully equipped to deliver the assured services as envisaged in the IPHS norms.

During the exit conference, the Government stated that redistribution of posts and rationalisation of current deployment would be done for all the health centres and efforts would be made to increase the manpower. It also stated that some posts of doctors would be surrendered. Over 300 nurses had recently been appointed and more posts of nurses would be proposed. The redeployment was required to be done and appointments made expeditiously to improve the quality of health care.

1.1.9 Reproductive and Child Health

Under NRHM, health care was targeted through two major areas:

- Reproductive and Child Health (RCH) programme.
- Other disease control programmes.

Improvement
in MMR,
IMR and
TFR

The RCH programme aimed to reduce the maternal mortality rate (MMR), infant mortality rate (IMR) and total fertility rate (TFR) through improved antenatal care, family planning and immunization. The achievements against the targeted levels of MMR, IMR and TFR are indicated below:

Table-1.3 : Status of MMR, IMR and TFR

Item	Status in year 2005	Target up to 2012	Target upto 2008-09	Achievement upto 2008-09
MMR	379/1,00,000 live births (SRS-2001-03)	100	300	335 (SRS-2004-06)
IMR	70/1000 live births (SRS-2003)	30	Less than 55	59 (SRS-2007)
TFR	2.62 (NFHS-2005-06)	2.1	2.2	2.62 (NFHS-2005-06)

(Source: Data provided by SHS)

SRS: Sample registration system, NFHS: National Family Health Survey

While there were improvements in the indicators from the year 2005 onwards, they were lagging behind the interim targets envisaged under NRHM.

1.1.9.1 Achievements and shortcomings under RCH- Phase II

The scrutiny of records and information collected from the department and test-checked health centres revealed that there were significant achievements as well as shortcomings as described in the following paragraphs.

(i) Antenatal care

The maternal health strategies in RCH provide that pregnant women should be registered and given three antenatal checkups, iron-folic acid (IFA) tablets for 100 days and two doses of tetanus toxide (TT). The information collected revealed that 82 per cent of pregnant women in the whole State were provided three antenatal check-ups while the percentage was 89 in the test-checked districts. Immunization of pregnant women against tetanus was 95 per cent both in the whole State and in the test-checked districts. While the administration of IFA tablets to pregnant women in the State was 82 per cent, it was only 75 per cent in the test-checked districts. It was also observed that 7.80 lakh pregnant women were registered in the test-checked districts but

Thirty per cent shortage of IFA tablets

IFA tablets were available for only 5.47 lakh (70 per cent) of women, leading to a shortage of 30 per cent (**Appendix-1.13**). The shortage of IFA tablets implied that iron and vitamin supplements would not be available to all pregnant women. Thus, the administration of IFA tablets was to be stepped up to counter the incidence of anaemia and reduce the MMR. During the exit conference, the Government stated that sufficient IFA tablets would be obtained and administered.

(ii) Institutional delivery

Institutional deliveries in the State showed a gradual increase but remained at 32 per cent in 2008-09 (**Appendix-1.14**). This could be attributed to various factors including shortcomings in facilities and medical staff in health centres as detailed in paragraph 1.1.8 and also the shortcomings in the implementation of the 'Janani Suraksha Yojana' (JSY) which, as explained earlier, was an incentive scheme aimed to increase institutional deliveries by providing cash incentives to women who got the deliveries done at Government health centres.

Government of India guidelines provided that all expectant mothers should get cash incentives under JSY in one go at the time of delivery. Further, GOI would not consider the payments under JSY legitimate if payments beyond 25 per cent were made in advance or seven days after the delivery. Scrutiny of records in the four test-checked districts revealed that there were delays ranging from seven to 730 days in payment of cash incentives of Rs 59.64¹² lakh to 4,646 beneficiaries. During the exit conference, Government stated that JSY payments were now being made through bearer cheques and timely payments were being ensured. However, it could not explain the reasons for the delays pointed out by Audit and the action it proposed to take.

Enhanced payment of JSY not made to 2,523 beneficiaries

Government of India had enhanced the rates of incentives in October 2006 from Rs 700 to Rs 1,400 for rural areas and from Rs 600 to Rs 1,000 for urban areas but payments at the enhanced rates were made only from June 2007 onwards, which led to less payment of Rs 15.77¹³ lakh to 2,523 beneficiaries for the period November 2006 to May 2007 in the test-checked districts. In reply, the DHSs, Bastar, Kanker and Raipur stated that they had paid the enhanced rates as soon as they had received directions of the Directorate of Health Services. During the exit conference, the Government stated that timely issue of orders by the Directorate would be ensured in future.

(iii) Family Planning

Overall sterilization fell short by 22 per cent

Use of spacing methods e.g. Oral Pill Cycle, Inter Uterine Device (IUD) insertions and distribution of condoms was 90 per cent in the State. However, the overall sterilization in the State fell short by 22 per cent and the shortfall ranged from 11 to 31 per cent in the test-checked districts during 2008-09.

¹² Bastar-Rs 14.81 lakh (1,702 women), Kanker-Rs 2.56 lakh (312 women), Raigarh-Rs 21.36 lakh (1,315 women) and Raipur-Rs 20.91 lakh (1,317 women).

¹³ Bastar-Rs 6.44 lakh, Kanker- Rs 2.65 lakh and Raipur-Rs 6.68 lakh.

During the exit conference, the Government stated that necessary measures would be taken to increase family planning activities.

NRHM also lays thrust on promoting male sterilisation but it was observed that the percentage of male sterilisation in the State was only six during last four years. Moreover, information collected from the SHS revealed that most of the male sterilisations had occurred in Bastar (30 *per cent*), Dantewada (66 *per cent*) and Kanker (29 *per cent*), which had increased the overall percentage of male sterilization which was otherwise very low in the other districts (0.25 to 6.76 *per cent*). During the exit conference, the Government agreed that efforts would be made to increase the number of male sterilisations.

(iv) Immunization and Child Health

Ninety six per cent achievement of immunization targets

The scheme had a very significant achievement of 96 *per cent* of the target in respect of routine immunizations for prevention of six diseases. The administration of vitamin A solution to children was also significant at 90 *per cent* of the target.

1.1.9.2 Information, Education and Communication activities

As stated earlier, the Information, Education and Communication (IEC) strategy under NRHM aims to facilitate awareness and dissemination of information through print media, printed material, street plays etc., regarding the availability of and access to quality health care.

The IEC Bureau¹⁴ of the Director, Health Services approved three Samitis¹⁵ for executing IEC work, at the rate of Rs 1,940 per programme, through *Kalajathas*¹⁶, to create health awareness in all the villages of the State.

Accordingly, the Joint Director, RCH issued (July 2005 to March 2006) work order to all the three Samitis with directions to submit the bills to the IEC Bureau along with photographs of the programmes and certificates from the *Sarpanches* of the villages and local workers, which would verify that the programmes had actually been held. While the RCH society made payment of Rs 4.16 crore to the three Samitis, the IEC Bureau was unable to produce any photographs or certificates from *Sarpanches* and local workers to Audit.

The RCH society issued another work order to M/s Reliable Associates during March 2006 for executing 3,456 folk dance programmes in 16 districts without any specific instructions for submitting proof of execution and made a payment of Rs 67.04 lakh to them.

On verification in the districts, the DHS, Bastar stated that the records of 2005-06 were not available while the DHS, Kanker stated (November 2008)

¹⁴ The agency for managing the work relating to IEC component under NRHM.

¹⁵ Chhattisgarh Lok Kala Samiti; Dhamtari, Nav Jagriti Kala Samiti, Bilaspur and Suman Saurabh, Raipur.

¹⁶ Plays and folk dance programmes in local language.

that no such programmes had taken place. As the work orders included 850 programmes for Kanker district, involving a total payment of Rs 16.49 lakh, the matter required investigation. The DHS, Raigarh stated (September 2008) that photographs and certificates relating to *Kalajatha* programmes during 2005-06 had been sent to Raipur and were kept at the State level. The DHS, Raipur stated (July 2008) that the programmes were held but did not produce to Audit, the photographs and certification by *Sarpanches*.

Payment of Rs 4.83 crore for folk dance programmes was not authentic

Thus although payment of Rs 4.83 crore was made to *Kalajatha Samitis* and M/s Reliable Associates, photographs and certificates, which would have provided assurance that the programmes had indeed been held, were not traceable either at the State level or in the districts and there was no way to ascertain how the RCH society/ IEC Bureau had verified actual execution of the programmes before making the payments.

During the exit conference, the Government stated (September 2009) that the work of the *Kalajatha Samitis* had now been handed over to EOW for investigation.

1.1.10 Other disease control programmes

Various existing disease control programmes were integrated under NRHM to eradicate and eliminate the prevalence of the diseases. Significant achievements and shortcomings were noticed in the following programmes as described below:

1.1.10.1 National Vector Borne Disease Control programme

The guidelines of the Malaria Action Plans, 1995 provided that the Annual Blood Examination Rate (ABER)¹⁷ should be at least 10 *per cent* and the Annual Parasitic Incidence (API)¹⁸ should be brought down to 0.5 per thousand. For areas where the API was more than two, indoor residual spraying of DDT and anti-larvae solution was to be carried out. While the programme achieved the targets for ABER of more than 10 *per cent*, API of less than 0.5 per thousand was not achieved although it showed a decreasing trend from 8.01 in 2005-06 to 4.99 in 2008-09. All the test-checked districts showed a decreasing trend in API but it was very high in Bastar (20.72) and Kanker (16.28). One of the main contributing factors for the high API in these two districts was the high shortfall of upto 86 *per cent* in the targets of spraying as detailed in *Appendix-1.15*. The DHS, Kanker and Bastar stated (July 2009) that the targets of spraying could not be achieved due to short supply of insecticides by GOI. During the exit conference, the Government stated (September 2009) that indoor residual spray was not the sole remedy for reducing API but agreed that the insecticides should have been purchased by the State despite short supply by the GOI.

High API in Bastar and Kanker due to shortfall in insecticides

¹⁷ ABER-Total blood slides collected in a year/ total population * 100.

¹⁸ API- Falciparum cases detected per thousand in a year.

While spraying was not the sole remedy, it was one of the prescribed methods of prevention and inadequate spraying was likely to have raised the API in these two districts.

1.1.10.2 Revised National Tuberculosis Programme

Thirteen test-checked PHCs did not have diagnostic facilities

While achievement of the overall cure rate of tuberculosis under the Revised National Tuberculosis Programme was 83 to 84 *per cent* against the target of 85 *per cent*, the detection of new sputum positive cases was only 55 to 62 *per cent* against the target of 70 *per cent* (**Appendix-1.16**). Deaths due to tuberculosis increased from 658 to 835 and defaulter cases increased from 1,362 to 2,004 during the period of audit. It was observed that out of the 24 test-checked PHCs, 13 PHCs did not have diagnostic facilities. This indicated that there was scope to improve the diagnostic facilities which could contribute to better detection rates.

1.1.10.3 National Leprosy Eradication Programme

Prevalence of leprosy increased

Though the detection of new leprosy cases decreased from 9,040 to 7,984, the prevalence rate of leprosy increased from 1.99 to 2.34 per 10,000 population against the target of less than one by the year 2012. This was due to the reduction in the number of patients treated and cured from 12,519 in 2005-06 to 5,000-8,000 during subsequent years (**Appendix-1.17**). In reply, the Deputy Director, Leprosy stated (July 2009) that the prevalence rate was higher due to the higher number of new cases detected and improved surveillance, including receipt of NGOs' reports. This did not clarify the position as the detection of new cases had actually decreased. During the exit conference, the Government stated that the matter would be looked into and a detailed reply for increase in prevalence would be provided. The reply was awaited (September 2009).

1.1.11 Role of ASHAs /Mitanins

As explained earlier, an ASHA, called *Mitanin* in Chhattisgarh, is a trained community health worker to be provided in each village for assisting in neonatal care, prevention/cure of common childhood diseases, immunisation and family planning activities and other activities for control of malaria, TB, leprosy etc. An ASHA is entitled for performance based incentives as per prescribed norms under programmes such as JSY, sterilisation and immunization.

59,489 ASHAs were posted as against norms of 16,648

As per the framework of NRHM, one ASHA is to be provided in each village in the ratio of one per thousand population. As per the information collected from SHS, 59,489 ASHAs were posted in the State against the norms of 16,648 which was more than three times the prescribed number. Further, 48,430 ASHAs had been imparted training. Therefore, the deployment of ASHAs in Chhattisgarh was much higher than the norms and strengthened the delivery of health services at the village level.

1.1.12 Monitoring and Evaluation

1.1.12.1 Community participation

Active
community
participation
was not
ensured

The NRHM framework states that community action is the only guarantee for exercising the right to health care and putting community pressure on the health care system. The framework provides for participation of NGOs in capacity building and monitoring; formation of village health and sanitation committees (VHSC) for village level monitoring and planning and monitoring committees at the State, district and block levels.

- It was observed that during 2006-07, funds of Rs 2.32 crore were received in April 2006 for conducting base line survey and monitoring of RCH activities in unserved and under-served areas and Rs 2.25 crore was released to six Mother NGOs¹⁹ at the end of March 2008 but the entire amount remained unutilised (June 2009). During the exit conference, the Government stated that NGOs would not be engaged in future as their working was not satisfactory.
- As per information provided by the SHS, out of 20,639 villages, VHSCs were formed in 18,452 villages. This was required to be extended to all the remaining villages.
- As per the information collected from the SHS, community based monitoring committees had been started on a pilot basis at the district level in Bastar, Kawardha and Koriya districts in 2007-08 to monitor health services. Health planning and monitoring committees had not been formed at the State, district and block levels.

Therefore, against the various kinds of community participation envisaged in the scheme for planning and monitoring, only village health and sanitation committees had been formed.

1.1.12.2 Reporting under IDSP

The Integrated Disease Surveillance Project (IDSP) is a weekly reporting system on symptoms of diseases such as high fever, vomiting, dysentery etc. The data is furnished by SHCs, PHCs and CHCs at the district level every Tuesday. The objective is to identify the outbreak of diseases and control them at early stages. Analysis of reporting under IDSP for 15 weeks in the year 2008 revealed that on an average, only 52 per cent of the units were entering the required data (*Appendix-1.18*). Consequently, the data was largely incomplete and the objective of surveillance of diseases was not being fulfilled as envisaged.

¹⁹ Mother NGOs are appointed to undertake the activities of RCH at unserved and under-served areas. They are meant to get the activities executed through field NGOs.

1.1.13 Conclusion

Implementation of the National Rural Health Mission in the State had various shortcomings. There were cases of under-utilisation and diversion of funds as well as instances of irregular expenditure. Stage-wise planning was not done. The health centres did not have adequate infrastructure, facilities, doctors and support staff. While there were significant achievements in some interventions and the health indicators accordingly showed improvements, there were shortfalls in administration of iron-folic acid tablets, gender imbalance in sterilisation, low institutional deliveries, low detection of sputum positive cases and non-achievement of the norms of annual parasitic incidence. The indicators of maternal and infant mortality remained behind the interim targets. The level of community participation as envisaged in the scheme had not been achieved.

1.1.14 Recommendations

- The prescribed stage-wise planning process starting with block level health plans should be adopted.
- Unspent amounts relating to various scheme initiatives may be utilised expeditiously.
- Doctors, support staff, and facilities should be ensured at health centres as per the Indian Public Health Standards norms.
- Interventions under Reproductive and Child Health may be stepped up to achieve improvements in the maternal mortality rate, infant mortality rate and total fertility rate. Grant of cash incentives under the '*Janani Suraksha Yojna*' may be streamlined.
- Interventions such as spraying may be stepped up to reduce the Annual Parasitic Incidence.
- The monitoring system should be strengthened by implementing the Health Management Information System and ensuring timely reporting under the Integrated Disease Surveillance Project.

HOME DEPARTMENT

1.2 Modernisation of Police Force

Highlights

The scheme of Modernisation of Police Force was launched to augment the efficiency of State police forces to effectively face the emerging challenges to internal security. Performance audit of implementation of the scheme showed that there were large savings; 41 per cent of the police stations were not provided light vehicles; construction of non-residential and residential buildings were not completed; there were shortages in the number of modern weapons and shortcomings in the communication network; police stations were not fully computerised and buildings and equipment meant for forensic examination were lying idle. Some important audit findings are given below:

The State Government could not utilise Rs 54.52 crore out of the total outlay of Rs 260.15 crore released during 2003-09 for the scheme.

(Paragraph 1.2.7.1)

Police stations continued to have low mobility because of shortage of vehicles.

(Paragraph 1.2.8.1)

Of the 849 housing units sanctioned during 2003-09, construction of 157 units had not commenced and 332 units were incomplete.

(Paragraph 1.2.9.1)

Only 188 (52 per cent) out of 364 police stations and 27 (26 per cent) out of 105 outposts had their own buildings.

(Paragraph 1.2.9.2)

There was a shortage of weapons as per the Bureau of Police Research and Development norms.

(Paragraph 1.2.10)

There was idling of expenditure of Rs 2.11 crore in forensic laboratories.

(Paragraph 1.2.13.1)

1.2.1 Introduction

‘Police’ and ‘Law and Order’ are State subjects as per Schedule VII of the Constitution of India. It is the prime responsibility of the State Government to improve the functioning of their police force and equip them adequately with the latest technology. The ‘Modernisation of Police Force’ (MOPF) scheme

was introduced by the Government of India (GOI) in 1969 to augment the operational efficiency of the State police forces so that they could effectively face the emerging challenges to internal security in the form of terrorism, Naxalism, insurgency, increase in crime etc. The scheme was revised during 2000-01 and extended for a period of 10 years, to make good the deficiencies in basic police infrastructure as identified by the Bureau of Police Research and Development (BPR&D).

1.2.2 Organisational Setup

The Police force functions under the Home Department of the State Government headed by a Principal Secretary. The Director General of Police (DGP) is the Head of the Police Department. The scheme is implemented by the Police Headquarters (PHQ), District Police consisting of four Police Ranges divided into 21 Police districts (including one Government Rail Police unit), Chhattisgarh Armed Forces, the Telecom wing and the State Forensic Science Laboratory, which is under the direct control of the Home Department. The training facilities include the Police Academy at Chandkhuri and two Police Training Schools (PTS) at Rajnandgaon and Mana. A State Level Empowered Committee (SLEC) was formed (June 2001) under the chairmanship of the Chief Secretary to implement and monitor the scheme.

1.2.3 Audit Objectives

The audit objectives were to examine whether:

- planning for implementation of the scheme was as per the methodology prescribed by the Ministry of Home Affairs,
- adequate funds were provided by the Central/State Governments and the same were utilized,
- vehicles, buildings, modern weaponry, communication equipment and computers were provided as per BPR&D norms to augment operational efficiency at police stations,
- Forensic science laboratories were modernized and
- training facilities were adequate.

1.2.4 Audit criteria

Audit findings were benchmarked against criteria derived from the following:

- Annual Action Plans of the department;
- Norms prescribed by the BPR&D;
- Guidelines issued by the Ministry of Home Affairs.

1.2.5 Audit coverage and methodology

The records of PHQ, four Superintendent of Police (SP) offices (Kanker, Raipur, Rajnandgaon and Sarguja) and eight police stations (PS) under the

selected SP offices (five¹ Naxal-affected and three² others) were selected for audit by simple random sampling, for the period from 2003-09. The Assistant Inspector General (Telecommunications) (AIG, Telecom), Bhilai; PTS, Rajnandgaon; and Director, State Forensic Science Laboratory (SFSL), Raipur were also audited. The audit was carried out from February to March 2009. An entry conference was conducted on 25 February 2009 with the DGP and the exit conference was held on 20 October 2009.

Audit findings

1.2.6 Planning

As per instructions of GOI, the State Government was to submit to the Ministry of Home Affairs (MHA), a five-year Perspective Plan (PP) starting from 2000-01, indicating the projects which were to be implemented each year. It was also supposed to submit Annual Action Plans (AAP) indicating the annual targets for implementation of sanctioned projects.

Separate sub-Plan for Home Guards was not prepared till 2005-06

It was observed that the department prepared a five year PP covering the period from 2000 to 2005. However, no PP was prepared thereafter. The AAPs were prepared but a separate sub-Plan for Home Guards from 2003-04, as stipulated by MHA, was not included in the AAPs till 2005-06.

1.2.7 Financial Management

1.2.7.1 Funds not utilised

During 2000-03, the scheme was financed by GOI and the State Government in the ratio of 50:50. The funding pattern was modified from 2003-04 and the ratio was changed to 75:25 between GOI and the State. The details of approved AAPs, funds made available vis-à-vis the expenditure incurred during the years 2003-04 to 2008-09 are given below:

Table- 1.4 : Year-wise release of funds by GOI and State Government

(Rupees in crore)

Year	Total Plan Outlay	GOI share due	Releases by GOI	State's share due	Releases by State	Total funds available (4+6)	Total expenditure	Unspent amount	Percentage of unspent amount
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2003-04	22.22	16.66	16.66	5.56	5.56	22.22	22.07	0.15	1
2004-05	43.63	32.72	32.72	10.90	10.90	43.62	43.60	0.02	0
2005-06	52.11	39.08	39.08	13.03	13.03	52.11	51.20	0.91	2
2006-07	75.98	56.99	56.99	19.00	19.00	75.99	39.97	36.02	47
2007-08	53.76	40.33	40.33	13.43	13.43	53.76	43.05	10.71	20
2008-09	12.45	9.91	9.91	2.54	2.54	12.45	5.74	6.71	54
Total	260.15	195.69	195.69	64.46	64.46	260.15	205.63	54.52	21

(Source: Expenditure statement provided by the department and compiled by Audit)

¹ Ambagarh Chowki, Ambikapur, Charama, Kamleshwarpur and Kanker.
² Civil Lines-Raipur, Kotwali-Rajnandgaon and Simga.

It was observed that both GOI and the State Government met their respective commitments for funding the scheme. The expenditure incurred during the period 2003-09 was Rs 205.63 crore against the total outlay of Rs 260.15 crore, leaving an unspent amount of Rs 54.52 crore (21 per cent). The component-wise expenditure and savings were as follows:

Table-1.5 : Component-wise funds received and expenditure incurred during 2003-09

Component	Funds received (Rs in crore)	Expenditure (Rs in crore)	Percentage of total expenditure (Column 3/Rs 205.63 crore) on the component	Savings (Rs in crore)	Percentage of total savings (Column 5/Rs 54.52 crore) on the component
(1)	(2)	(3)	(4)	(5)	(6)
Building	51.46	51.44	25	0.02	0
Weaponry	48.65	48.64	24	0.01	0
Vehicles	42.8	35.82	17	6.98	13
Communication	26.22	15.43	8	10.79	20
Forensic Science	5.22	3.5	2	1.72	3
Computerisation	5.99	5.57	3	0.42	1
Security Equipment	69.9	36.79	18	33.11	61
Training	5.64	4.67	2	0.97	2
Traffic	1.43	0.98	0	0.45	1
Anti-Corruption Bureau	0.67	0.62	0	0.05	0
Home Guard	2.17	2.17	1	0	0
Total	260.15	205.63	100	54.52	100

(Source: Expenditure statement and AAPs provided by the department and compiled by Audit)

**Saving of
61 per cent
in security
equipment**

It was observed that there were significant savings under two components i.e. 'security equipment' and 'communication'. The bulk of the savings under 'security equipment' i.e. Rs 27.75 crore pertained to 2006-07. It was intimated (October 2009) by the Government that items amounting to Rs 24.60 crore were already under different stages of procurement. This included 3065 bullet-proof jackets for which work orders had been issued (August 2008) for Rs 17.21 crore but the jackets had not been supplied as clearance for Customs duty exemption for the same was pending with MHA since September 2008. The department also stated during the entry conference that the procurement of security equipment was taking longer as it had introduced mandatory field testing for selection, to ensure quality. The bulk of savings of Rs 6.63 crore under 'communication' pertained to 2006-07, against which communication items costing Rs 6.36 crore were being procured. The department also attributed the savings to delayed release of funds in 2006-07 and 2007-08 and multiple calls for some tenders.

1.2.7.2 Overstatement of expenditure

The PHQ made advance payment of Rs 45.46 crore to the Chhattisgarh Housing Board for construction of police buildings. The actual expenditure on construction reported by the Board, as of March 2009 to PHQ was Rs 20.49 crore. GOI had issued instructions that the funds remaining unspent with the implementing agency should not be treated as expenditure. However, PHQ booked the entire advance of Rs 45.46 crore as expenditure and reported the same to the Home Department. This resulted in overstatement of

expenditure by Rs 24.97 crore and projection of an incorrect status of utilisation of funds.

1.2.8 Mobility

Mobility is vital to the efficient performance of the police force. Increased mobility reduces response time and enhances operational efficiency. BPR&D, in its study report, stated that in a well-equipped police force, the mobility deficiency should be 'nil', implying that the entire police force should have the ability to move at once. Based on this concept, BPR&D prescribed scales for various types of operational vehicles such as heavy/medium/light vehicles and motorcycles required for PS, Reserve Lines and Armed Battalions, which were to be the guiding factors in procurement of vehicles.

1.2.8.1 Deficiency of Vehicles

As per BPR&D norms, PHQ assessed (May 2009) a total requirement of 6,011 vehicles, against which there were only 2,995 vehicles. Thus, there was a shortage of 3,016 vehicles as detailed below:

Table- 1.6: Deficiency of vehicles

	Light	Medium	Heavy	Motor cycle	Total
Requirement as per BPR&D norm	1,875	898	1,408	1,830	6,011
Vehicles available	874	377	205	1,539	2,995
Shortfall	1,001	521	1,203	291	3,016

(Source: Information furnished by the department)

Shortage of heavy vehicles in district PHQs

Heavy vehicles, which can transport upto 35 persons, are required in reserve lines of district police headquarters and battalions of armed forces, for mass movement of police personnel. During test-check of four³ districts, it was observed that as against the requirement of 224 heavy vehicles in the reserve lines, only 28 such vehicles were available as detailed below:

Table- 1.7: Deficiency of heavy vehicles

Name of Police District.	Requirement of heavy vehicles as per BPR&D norms	Availability of heavy vehicles
Raipur	93	08
Rajnandgaon	56	06
Kanker	43	09
Sarguja	32	05
Total	224	28

(Source: Information furnished by the department and compiled by Audit)

Out of 28 heavy vehicles, six heavy vehicles (21 per cent) were procured under the modernisation scheme (2003-09). Therefore, it was evident that there was a severe shortage of heavy vehicles in the district police headquarters/reserve lines.

³ Kanker, Raipur, Rajnandgaon and Sarguja.

Shortage of light vehicles in PSs

Against the BPR&D norms of two light vehicles and three motorcycles for each PS, 149 PSs (41 per cent) out of the total of 365 PSs in the State were functioning without any light vehicles as of April 2009. In the four test-checked districts, out of 94 PSs, 79 PSs had mobility deficiencies. The percentage of mobility deficiency with reference to the number of personnel in the 94 PSs was 51 (*Appendix-1.19*). This implied that on an average, only 49 out of 100 policemen were mobile. In the test-checked PSs, it was observed that Kanker PS had more than the required number of vehicles, Rajnandgaon PS had one light and one medium vehicle and the other six PSs had deficiencies either in the number of light vehicles or motorcycles as detailed below:

Table- 1.8: Status of light vehicles and motor cycles in test-checked PSs

Description	Naxal-affected PS					Other PS		
	Ambagarh Chowki	Kanker	Charama	Ambikapur	Kamlesh warpur	Simga	Civil lines, Raipur	Kotwali, Rajnandgaon
Light vehicle								
Requirement	2	2	2	2	2	2	2	2
Availability	1	2	1	1	1	1	1	1+1 (Medium)
Shortage	1	-	1	1	1	1	1	-
Motor cycle								
Requirement	3	3	3	3	3	3	3	3
Availability	5	5	2	3	4	0	0	0
Shortage	-	-	1	-	-	3	3	3

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

It was observed that out of the 49 light vehicles received by the test-checked districts under the scheme, only seven (14 per cent) were issued to PSs while the remaining were issued to SPs, Additional SPs, reserve lines etc. for routine policing duty and operations in Naxal areas. Therefore, very few of the light vehicles procured under the scheme, finally reached the PSs.

The SPs of the test-checked districts stated (March 2009) that deficiencies of vehicles were due to less availability of vehicles in the police district and because the vehicles received under the scheme had been distributed to various officers for policing and operational duties in Naxal-affected areas. The SPs of Rajnandgaon and Kanker further stated that Naxal-affected PSs were provided with motorcycles in place of light vehicles because during explosions by the Naxals, there was less damage to life and property.

However, despite the issue of motor cycles and procurement of vehicles under the scheme, the PSs continued to have low mobility. It was evident from the above facts that the light vehicles procured under the scheme were being utilised at higher levels and additional vehicles were required to be procured to adequately address the cause of mobility deficiency of the PSs.

1.2.8.2 Response time

No norms were fixed for response time

Increase in mobility for field policing should result in reduction of response time⁴. It was observed that the State Government had neither fixed any norms for response time nor given any instructions for recording the time of visits to crime sites in the crime diaries. Therefore, this was not available in the daily

⁴ Total time taken from receiving a message/ First Information Report to the time when police personnel actually reach a crime scene.

diaries of the test-checked PSs. On this being pointed out, SPs⁵ stated that there were no instructions to record this information. Thus there was no way to assess whether the response time had been reduced, consequent to the procurement of vehicles under the scheme.

1.2.9 Buildings

Construction of well-secured PS buildings and houses for police personnel closer to the PS was one of the thrust areas of the scheme. The personal security of off duty police personnel and their families would be enhanced if they were provided housing near the PS as the entire area covering the PS and contiguous houses could be kept secure. BPR&D had stated (March 2000) in its report, that the availability of family accommodation helped to humanize the police force and that States with higher levels of residential accommodation had higher efficiency levels. The largest share of the scheme funds was allotted for construction of residential accommodation for the police staff and non-residential buildings including PS, outposts (OP), police lines, control rooms etc.

Shortage of buildings and delays in construction

1.2.9.1 Residential buildings

The National Police Commission recommended 100 *per cent* residential accommodation for police personnel. As per BPR&D norms, the minimum satisfactory levels for providing accommodation to upper subordinate level (USL)⁶ and lower subordinate level (LSL)⁷ police personnel were 80 and 70 *per cent* respectively.

Availability of accommodation for upper and lower subordinate levels was 22 *per cent* and 28 *per cent* respectively

Against the total requirement of 44,471 housing units (5,637 for USL and 38,834 for LSL) for the entire police force, the availability of houses was only 12,203 (1,223 for USL and 10,980 for LSL). The percentage availability of accommodation was only 22 and 28 respectively for upper and lower subordinate levels, which was far below the minimum satisfactory levels prescribed by BPR&D.

During the period 2003-2009, the department allotted the construction of housing units to the Chhattisgarh Housing Board. Out of 849 units taken up under the scheme, 332 units were under progress while for 157 housing units, construction had not started as of March 2009, due to delays in tendering. Only 360 housing units (42 *per cent*) could be completed, out of which 163 units were handed over to the Police Department and allotted to police personnel. The year-wise details are given in *Appendix-1.20*.

The slow progress in construction of buildings indicated that despite the availability of funds, the shortage in police housing was not being adequately addressed. The Government stated (October 2009) that due to the provision of limited funds under the scheme, sufficient number of housing units could not be sanctioned. However, it was observed that even the sanctioned units were

⁵ Kanker, Raipur, Rajnandgaon and Sarguja.

⁶ Upper subordinate level – Assistant Sub-Inspectors, Sub-Inspectors and Inspectors.

⁷ Lower subordinate level – Constables and Head Constables.

coming up very slowly, due to delays in execution, despite the availability of funds.

1.2.9.2 Non-residential buildings

Only 188 out of 364 police stations and 27 out of 105 outposts had their own buildings

BPR&D had stated that the PSs symbolised the presence of administration and buildings were the most important part of the infrastructure of the police. Therefore, every PS and OP was to have its own building for security of police personnel, records, equipment and arrested persons. It was found that against the total requirement of 364 PSs and 105 OP buildings, only 188 PSs (52 per cent) and 27 OPs (26 per cent) had their own buildings.

Out of 115 non-residential buildings {23 PSs and 92 Other Administrative Buildings (OAB)} proposed to be constructed during 2003-09, only 26 buildings (three PSs and 23 OAB) i.e. 23 per cent of the total target had been completed. Seventy three buildings were under progress and 16 had not been taken up due to delays in processing of tenders. During 2003-09, the construction of OPs was not sanctioned although the perspective plans provided for construction of 10 OPs each for 2003-04 and 2004-05. The year-wise details of sanction are given in **Appendix-1.21**. It was also observed that the buildings were not completed on time even though the funds had been issued to CGHB and the department was regularly following up the issue.

Weapons were not issued in four PSs in Raipur due to lack of space in rented building.

During test check of records of SP, Raipur, it was observed that no weapons could be issued to four⁸ PSs operating from rented buildings in Raipur due to inadequate space to keep weapons. This clearly showed why it was important for PSs to have their own buildings.

The Government replied (October 2009) that the progress of construction works entrusted to construction units was not satisfactory, especially in Naxal-affected areas. Consequently, a police pioneer company had been created and one Public Works Division had been provided to PHQ for this purpose.

It is evident that despite the availability of funds, the progress of construction was slow and the objective of enhancing security through better infrastructure was not being achieved.

1.2.10 Weaponry

To meet the challenges of Naxalites, terrorists and criminals, equipped with the latest weapons, upgradation of weaponry is of utmost importance for the police force. The MOPF scheme envisaged replacement of outdated weapons with sophisticated, modern weapons.

Shortage of weapons

BPR&D had prescribed separate norms for the requirement of weapons in PSs affected by Naxalism/terrorism/dacoities and in PSs which were not affected by these problems. The Chhattisgarh Musketry Manual (CMM) also prescribed separate norms for police districts affected and not affected by Naxals/terrorism. The Police Department had a total of 49,143 units of weapons, of which 11,232 units (23 per cent) were obsolete such as

⁸ Deendayal Nagar, Devendra Nagar, Gol Bazaar and Rajendra Nagar.

.303 rifles, .410 muskets, .38 revolvers, .303 LMG and Grenade Fire (GF) rifles, which were still in use. The balance 37,911 units were modern weapons, of which 10,094 units (27 per cent) were procured under the modernisation scheme during 2003-09.

There was shortage of weapons as per BPR&D norms

PHQ had assessed a total requirement of 47,265 units under various categories of modern weapons, against which, the availability was 37,911 units only. Therefore, there was an overall shortage of 9,354 units (20 per cent of the requirement) for the whole State. There were shortages in rifles, pistols/revolvers, Light Machine Guns (LMG), AK 47 rifles, 51 mm mortars and GF rifles. It was further observed that during 2006-09, MHA had allotted 14,183 units of modern weapons against the total demand of 19,334 units raised by the Chhattisgarh Police.

Scrutiny of district-wise details furnished by PHQ for deployment of the available arms showed that there were excesses and shortages in deployment of various arms and ammunitions as detailed below:

Table-1.9: Deployment of arms

Description of arms	Naxal-affected districts		Non-Naxal-affected districts		Battalions		Police training institutions	
	Excess deployment	Short deployment	Excess deployment	Short deployment	Excess deployment	Short deployment	Excess deployment	Short deployment
Rifles	605	--	--	515	--	457	1130	--
LMGs	82	--	12	--	--	254	21	--
Carbines (9 mm)	134	--	95	--	191	--	49	--
GF rifles	160	--	03	--	--	364	41	--
Pistols/ Revolvers	--	613	--	109	--	62	50	--
AK 47 rifles	--	1311	163	--	--	2258	138	--

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

In the test-checked PSs, it was observed that five Naxal-affected PSs⁹ were well-equipped with arms. In fact, the arms were in excess of the requirements. The three non-Naxal¹⁰-affected PSs were equipped only with obsolete arms, which were grossly inadequate as per the norms fixed by BPR&D.

It was clarified (October 2009) by the Government that the shortage of arms was being gradually reduced through purchases and that due to less allocation of weapons from GOI, the total requirement could not be fulfilled. They stated that the obsolete arms would be replaced as and when modern arms were procured. They also stated that arms were provided in excess in some PSs/OPs in police districts which were partially Naxal-affected and also for security duties during VIP/VVIP visits.

It was evident that more arms were required to be procured under the scheme to fully achieve the objective of equipping the police with modern weapons. PHQ could also review the deployment of arms to explore the possibility of shifting arms held in excess of requirement in non-Naxal-affected areas to the Naxal-affected areas.

It was also observed that as per the Musketry Manual, constables were eligible to fire with .303 rifles, .22 rifles and 7.62 SLRs. During the period 2005-08, the constables were trained by PTS, Rajnandgaon to fire only these three

⁹ Ambagarh Chowki, Ambikapur, Charama, Kamleshwarpur and Kanker.

¹⁰ Civil Lines-Raipur, Kotwali-Rajnandgaon and Simga.

Constables did not practice firing with modern weapons

weapons. Of these weapons, .303 rifles and .22 rifles had been declared obsolete by MHA. Therefore, the constables were not adequately trained in using modern weapons. SP, PTS, Rajnandgaon stated that the trainee constables were given instructions on the use of modern weapons and there was no provision in the Musketry Manual for practice of firing with AK 47s, Insas, LMGs, Carbines etc., for newly recruited police constables.

It is recommended that the manual be revised suitably to enable the constables to be trained in appropriate modern weapons as per the operational requirements of the department.

1.2.11 Communication

The MOPF scheme envisaged the setting up of a cohesive police telecommunication network for the benefit of investigation of crime and transmission of related data.

Functioning of POLNET

POLNET is a satellite based National Police Communication network which uses Very Small Aperture Terminal (VSAT) at the State capital and district headquarters for communication with other States and New Delhi. The VSAT is operationalised at the district headquarters using a Base Subscriber Unit (BSU). The PSs are connected to the district headquarters through Multi-Access Radio Telephony (MART) which is also called Rural Subscriber Unit (RSU). The PSs located at distances in excess of 35 km from the district headquarters are connected using Single Channel VSAT (SC-VSAT) and a combination of repeater BSU and RSU.

Due to connectivity problems, POLNET was not utilized

In the first phase¹¹ of POLNET, MHA provided equipment amounting to Rs 1.46 crore to 14 districts, including seven¹² Naxal-affected districts. The AIG (Telecom), Bhilai, had assessed (January 2005) that in addition to the 14 BSUs and 272 RSU/MART provided in first phase, another 31 BSUs, 27 SC-VSATs and 270 MARTs were required to connect all PSs and other offices of the State. The requirement of additional BSUs and SC-VSATs worth Rs 55.10 lakh had been conveyed (October 2005) to the Director, Co-ordination, Police Wireless, (DCPW) New Delhi but had not been supplied as of July 2009 and the coverage under POLNET remained incomplete.

There were instances of connectivity problems and non-utilisation of equipment as narrated below:

- **BSU-** In Jashpur District, there was no connectivity as no BSU was provided at the district headquarters. It was also observed during test-check that in Rajnandgaon, the BSU was out of order from July 2008 to March 2009 and in Kanker, it was malfunctioning from November 2007 onwards.
- **RSU-** At the time of test check (February 2009) by Audit, it was observed that out of 272 RSUs¹³ provided for the first phase,

¹¹ Implemented in undivided Madhya Pradesh State.

¹² Dantewada, Jagdalpur, Jashpur, Kanker, Korla, Rajnandgaon and Sarguja.

¹³ RSUs supplied before formation of Chhattisgarh State (November 2000).

One hundred six rural subscriber units were lying idle

113 RSUs had been installed while the remaining 159 RSUs and accessories costing Rs 19.33 lakh were lying idle. Not a single RSU had been installed in Sarguja and Jashpur Districts. It was observed that only 67 PSs and 46 other offices such as SP Offices, control rooms etc. were connected to POLNET. After this issue was pointed out (February 2009) by Audit, the installation of RSUs increased to 166 (155 PSs and 11 other offices such as SP Offices, control rooms etc.). Despite this, 106 RSUs of first phase were lying idle and as many PSs were still to be connected in 14 districts as of July 2009.

The Government accepted the audit observations and stated (October 2009) that despite regular correspondence with DCPW, New Delhi and Bharat Electronic Limited, Ghaziabad, the BSU and RSU had not been provided in Jashpur and the BSUs at Rajnandgaon and Kanker had not been repaired till date (July 2009).

It was evident that POLNET had achieved only partial connectivity due to non-procurement and non-installation of BSUs and RSUs. There were delays in repairs as they had to be carried out through DCPW, New Delhi.

1.2.12 Computerisation

Sharing and transmission of crime-related data amongst the police stations within the State and across the country is a core component of the MOPF scheme. This calls for creation of a robust IT infrastructure and supporting software for networking of computers.

Computerisation of PSs

Forty four per cent police stations in four test-checked districts were not computerised

One of the components of the scheme was the computerisation of the Police Department, which included PHQ, Battalions, PTSs, Police districts and PSs. In the four test-checked districts, it was observed (March 2009) that out of 94 PSs, only 53 PSs had computers, while the remaining 41 PSs (44 per cent) did not have any computer. Out of the eight test-checked PSs, it was observed that three¹⁴ had functional computers, one¹⁵ had a computer that was non-operational due to non-availability of trained staff, one¹⁶ was non-operational due to technical fault while the remaining three¹⁷ PSs did not have any computer.

After the cases were pointed out (March 2009) by Audit, the computers of three more PSs were made functional by August 2009. However, one¹⁸ PS still remained without a computer while another¹⁹ continued to have a non-functional computer.

The Government stated (October 2009) that the procurement of computers sanctioned in the year 2007-08 was in process and in the year 2008-09, GOI

¹⁴ PS -Ambikapur, PS -Civil Lines Raipur and PS -Kanker.

¹⁵ PS -Charama.

¹⁶ PS - Simga.

¹⁷ PS- Ambagarh Chowki, Kamleshwarpur and Kotwali, Rajnandgaon.

¹⁸ PS-Kamleshwarpur.

¹⁹ PS-Simga.

had not sanctioned any further purchase of computers. Thus, computers could not be provided to all PSs. It was further stated that the recruitment was going on in Police Districts and persons with knowledge of computers would be trained further to handle these computers.

More computers were, therefore, required to be procured and installed for creating the robust IT infrastructure envisaged in the scheme guidelines.

1.2.13 Forensic Science

For improving the quality of crime investigation, development of infrastructure for forensic science was envisaged under the scheme. The State Forensic Science Laboratory (SFSL) provided assistance to the Police Department by analysing samples.

1.2.13.1 Idling of equipment and buildings-Rs 2.11 crore

Equipment amounting to Rs 95.20 lakh remained idle for want of batteries

(i) Three items of equipment²⁰ costing Rs 95.20 lakh were purchased under the scheme and installed at SFSL during the period March to July 2007. They were not utilised for a year due to expiry of the batteries of their Uninterrupted Power Supply systems. The estimated cost of the batteries was Rs 1.10 lakh, for which proposals were sent to the PHQ in April, October and December 2008 but the sanction was still awaited (March 2009). Thus equipment costing Rs 95.20 lakh was idling for a year for want of batteries.

On this being pointed out, the Government stated (October 2009) that the batteries had not been purchased because the PHQ had not provided requisite funds. The reply indicated that the equipment worth Rs 95.20 lakh remained idle for want of sanction for only Rs 1.10 lakh.

Idle expenditure of Rs 51.34 lakh on equipment procured without ascertaining availability of technical manpower

(ii) SFSL procured three items of equipment²¹ through MHA costing Rs 51.34 lakh for serological analysis in August 2005, but they were not used till March 2009 as no scientific posts had been sanctioned for the Serology branch.

On this being pointed out, the Government stated (October 2009) that serological equipment was purchased in anticipation of availability of required scientists for serology branch. The reply showed that the equipment was idling due to injudicious purchase without ensuring the requisite scientific posts.

Non-commencement of two Regional Forensic Science Laboratories resulted in idle expenditure of Rs 64.11 lakh

(iii) The construction of two Regional Forensic Science Laboratory (RFSL) buildings at Ambikapur and Jagdalpur were taken up under the scheme. These would cover the northern and southern regions of Chhattisgarh. The RFSL buildings at Ambikapur and Jagdalpur were completed in March 2006 and June 2008 at costs of Rs 30.00 lakh and Rs 34.11 lakh respectively. Both remained non-functional as staff was not sanctioned by the State Government, leading to idle expenditure of Rs 64.11 lakh. Therefore, the objective of providing facilities for conducting forensic analysis in the northern and southern regions of the State could not be achieved. All samples from these regions continued to be brought to Raipur for examination which required

²⁰ Fourier Transform Infrared Spectrophotometer, Gas Chromatograph and Thermo Gravimetric-Differential Thermal analyzer.

²¹ Vertical Gel Electrophoresis, Capillary Electrophoresis and Iso Electric Focusing.

additional time and resulted in delays in obtaining results. On this being pointed out, the Government stated (October 2009) that the laboratory buildings had been constructed and it had been planned to provide training to available scientific staff. This confirmed that the buildings had been constructed before making any plan for providing the requisite technical personnel.

Thus there was idle expenditure of Rs 2.11 crore in the three cases cited above.

1.2.13.2 Pendency of cases

The State Government sanctioned (March 2004) 51 technical posts for SFSL, against which the actual working strength was 36. It was observed that 7,853 cases received since 2003 for forensic analysis were pending under different divisions of SFSL at the end of year 2008. On this being pointed out, the Government stated (October 2009) that as per BPR&D norms, the number of scientific officers was inadequate in proportion to the number of criminal cases referred for testing from all districts. The equipment was made available in anticipation of revision of staff setup.

It was, therefore, evident that while additional infrastructure was created under the scheme, the requisite trained manpower was not provided to utilise the benefits of the equipment and facilities created.

1.2.14 Training

Training is an integral part of any police force and keeps the personnel fit and ready to meet the challenges posed by Naxalites, terrorists and criminals. BPR&D stated, in its report, that at the time the report was prepared i.e. 2000, it was possible to train personnel only once in 20 years. The report identified the shortage of infrastructure in the training institutions as the main problem.

During test-check of records of PTS Rajnandgaon, it was observed that the construction of a police hospital, 12 housing units for ministerial staff and a motor transport garage were sanctioned in the PTS under the scheme during 2004-06 with stipulated periods of construction of four months, nine months and two months respectively. The works were completed after lapses of one to three years beyond the stipulated period of the contracts, during which the facilities remained unavailable. It was further observed that the vacancies were 19 *per cent* of the sanctioned strength of 185 posts. Thus, due to non-completion of works and shortage of personnel, the facilities envisaged could not be made fully available at the PTS.

On this being pointed out, SP, PTS stated (March 2009) that they were in regular correspondence with PHQ for filling up the vacancies. PHQ stated (July 2009) that attempts were made to fill up the vacancies in the PTS through deputations but officials from other departments had not volunteered to come on deputation. The process was on to fill the vacant posts through promotion and direct recruitment.

The replies indicated that the filling up of vacant posts was required to be expedited to provide better quality of training.

1.2.15 Monitoring and evaluation

The State Level Empowered Committee (SLEC) was responsible for approval for the Annual Action Plans (AAPs) for onward submission to MHA. It was required to meet every month to monitor the preparation and implementation of the AAPs. However, it met only 10 times during the six-year period from 2003-09. As per the guidelines of GOI issued during 2001, a mid-term review of the scheme was to be conducted after two years. However, PHQ could not produce any records to show that any such formal review had been conducted.

The Government replied (October 2009) that the scheme implementation was reviewed in PHQ every month and important issues were approved by the SLEC through circulation of files.

1.2.16 Conclusion

The performance audit of the implementation of the Modernisation of Police Forces scheme in the State showed that even after the construction of buildings and procurement of equipment under the scheme, there were significant gaps in respect of the levels envisaged under the Bureau of Police Research and Development norms. The Central and the State Government provided their share of funds which were not fully utilised, resulting in huge savings mainly under security and communication equipment heads. There was a significant shortage in the number of vehicles in police stations. Despite the availability of sufficient funds, a large number of residential and non-residential buildings sanctioned under the scheme had not been completed. There were shortages in the number of modern weapons. The POLNET project was only partially operational with some equipment lying unused. The police stations were not fully computerized. Equipment and buildings meant for forensic examination costing Rs 2.11 crore were idling.

Recommendations

- Five year Perspective Plans may be prepared from 2006 onwards.
- The savings may be utilized in a time-bound manner to complete the activities included in the Annual Action Plans.
- The mobility deficiency of the police stations should be addressed through procurement/ redeployment of vehicles.
- The pace of construction should be accelerated to ensure completion of residential and non-residential buildings in a time-bound manner.
- The shortages in weapons should be met and obsolete weapons should be replaced. The deployment of arms may also be reviewed.
- The Musketry Manual may be suitably revised to enable firing practice with modern weapons.
- Full connectivity may be ensured under the POLNET project.
- More computers should be procured and installed to create a robust IT infrastructure.

- The State Government should set a definite time-frame for making the Regional Forensic Laboratories functional and the procured forensic equipment operational.
- Vacancies of instructors in training schools should be minimized.

FOOD, CIVIL SUPPLIES AND CONSUMER PROTECTION DEPARTMENT

1.3 Computerization of paddy procurement: ‘Dhan Kharidi-Online’

Highlights

The State Government operationalised the computerisation project ‘Dhan Kharidi-Online’ within six months of its inception. The system has been used successfully for two cycles of paddy procurement. A review of the various controls associated with the project revealed that some areas are required to be streamlined to further strengthen the system. Important audit findings are given below:

There were deficiencies in registration of farmers.

(Paragraphs 1.3.8.1, 1.3.8.2, 1.3.8.3)

Controls were not properly exercised during the data entry of paddy received.

(Paragraphs 1.3.8.4, 1.3.8.5)

There was no provision in society software to check whether the receipt of procurement was in proportion to the landholdings.

(Paragraph 1.3.8.6)

There were shortcomings in the issue and reconciliation of cheques.

(Paragraphs 1.3.8.7, 1.3.8.8, 1.3.8.9)

Millers were registered in one district without record of physical verification reports.

(Paragraph 1.3.8.10)

The validity of delivery orders was not adequately monitored by the system.

(Paragraphs 1.3.8.11, 1.3.8.12)

Documented security risk assessment and procedures were not available.

(Paragraphs 1.3.10.1, 1.3.10.2)

1.3.1 Introduction

The Food, Civil Supplies and Consumer Protection Department initiated the computerization project ‘Dhan Kharidi-Online’ in June 2007. It became operational in November 2007. The objectives of the project were to facilitate paddy procurement from farmers with instant cheque payment, checking leakage and diversion of paddy and rice, better inventory control and better management of milling and increase in transparency of operations. District-wise details of paddy procurement giving details of the societies and farmers have been made online for viewing by the general public.

After implementation, the project was used for two procurement cycles. During 2008-09, 37.59 lakh metric tonnes (MT) of paddy were purchased by

1,333 societies through 1,577 procurement centres¹. The project received the National award for e-governance in 2008.

1.3.2 Organizational Structure

The Food, Civil Supplies and Consumer Protection Department (Department) is headed by a Principal Secretary, assisted by a Director at the State level, the District Collectors and Controller (Food) /Food Officers (FO) at the district level and Sub Divisional Magistrates (SDM) and Assistant Food Officers (AFO) at the block level. Paddy procurement is managed by the Chhattisgarh State Marketing Federation (MARKFED) through District Marketing Officers (DMO) and through storage centres. MARKFED is assisted by the District Central Co-operative Bank (DCCB), Primary Agriculture Co-operative Societies (societies) and the procurement centres. Rice procurement and distribution are managed by the Food and Civil Supplies Corporation, also known as the *Nagrik Apurti Nigam* (NAN).

1.3.3 System design

'*Dhan Kharidi-Online*' system has been designed and developed by the National Informatics Centre (NIC). It has an online web-based application (online software) which is hosted on a central server available in the NIC office in the State Secretariat. This is connected through VSAT to MARKFED Headquarters, DMOs, Storage Centres, NAN and block headquarters in the office of Janpad Panchayats for processing online. The online software has been developed using Microsoft SQL Server and Microsoft Dot Net technology. The procurement centres have stand-alone computers with Windows operating system and software (society software) developed on MS Access.

During the paddy procurement season, the incremental data from the society software is uploaded on the central server and data from the online software is downloaded to the society software daily by motorcycle riders (runners) at the nearest block headquarters and storage centres. The runners carry data on pen drives and act as a physical network ensuring data updation on the system on a daily basis. New versions of the society software are also downloaded from the server at the block level and carried to the procurement centres by runners.

1.3.4 Flow of transactions

The '*Dhan Kharidi-Online*' software has computerised various transactions which can be broadly classified into the stages of paddy procurement and milling.

Paddy procurement

Paddy procurement is done every year on Minimum Support Price (MSP) from farmers at procurement centres which are located at the village panchayat level. The farmers deposit paddy at procurement centres, which is weighed. The purchase details are entered in the society software and cheques are printed from the society software and disbursed to the farmers. The

¹ Some societies purchase paddy through more than one procurement centre.

cheques issued to farmers are cleared by the DCCBs from the funds placed with it by MARKFED for paddy procurement. The paddy deposited at procurement centres is subsequently lifted by millers on the basis of delivery orders (DO) issued by DMO or sent to Food Corporation of India (FCI). The paddy left is transferred to MARKFED storage centres as per the directions of DMO. The details of lifting/transfer of paddy are entered in the society software.

Milling

Rice millers get registered with the Collectors who give permission for custom milling. The DMOs conclude agreements with millers on the basis of the permissions and issues DOs for lifting of paddy against bank guarantees or against rice deposited in advance by the millers with the NAN.

1.3.5 Audit Objective

The audit was conducted with the primary objectives of evaluating whether

- the necessary operational controls have been incorporated,
- the business rules of the manual system have been incorporated,
- IT security issues are being adequately addressed and followed and
- adequate backup procedures are being followed.

1.3.6 Audit Coverage, Scope and Methodology

The flow of transactions for paddy purchase and milling was analysed to identify the key stages, risks and controls. After identifying the key controls and studying the organizational structure, the operation of the system was reviewed in the offices of the Managing Director (MD) MARKFED, NIC, and in three² selected districts covering three DMOs, three FOs, six³ storage centres and 18⁴ procurement centres. An entry conference was held with the Principal Secretary, Department of Food, Civil Supplies and Consumer Protection on 23 March 2009. The exit conference was held with the Principal Secretary on 17 September 2009.

The methodology of audit involved review of documents and computer operations in all the selected offices and procurement centres and included the analysis of the data dump of the system provided by NIC as on 19 March 2009 as also the data dumps of 18 test-checked procurement centres using IDEA and MS Access. The information generated from the data dumps, including exception reports prepared by Audit were compared with the manual records in various offices. Many transactions and processes were also carried out using dummy data to ascertain the results of processing.

² *Dhantari, Janjgir-Champa and Raipur.*

³ *Akaltara, Bhatagaon, Chitod, Jonda, Manoharbhata and Tilda.*

⁴ *Akaltara, Bathena, Bhatagaon, Billadi, Chatti, Chorbhatti, Demar, Gaud, Karmahu, Khokhara, Kurud, Kotmi, Loharsi, Manikchauri, Navapara, Posari, Rajim and Tarpongi.*

Audit Observations**1.3.7 Inadequate documentation of the software**

The feasibility study of the project and the user requirements were not available on record and hence the extent to which the system met the user requirements could not be ascertained. The System Requirement Specification (SRS) was finalised in June 2008 although the system became operational in November 2007. Documentation relating to detailed testing was not on record. It was evident that the documentation for various stages of system design, application development and testing had either not been prepared or had been completed after implementing the system.

It was also observed that none of the test-checked procurement centres had a user manual. The society software was being used on stand-alone computers located mainly in rural areas and were being run by data entry operators appointed temporarily. Therefore, a detailed user manual was absolutely necessary as it would enable the officials of the procurement centres to exercise the mandatory controls required in the post-computerization processing of transactions.

The Government stated at the exit conference that a user manual in Hindi would be provided to the procurement centres before the commencement of paddy procurement season 2009-10. It also stated that some of the documentation was done after completion of the project as it was implemented in a very short time.

1.3.8 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, meet expectations, outputs are generated and distributed with requisite controls. Application controls may consist of edit tests, totals, reconciliations and identification and reporting of incorrect, missing or exception data. Automated controls on the software should be coupled with manual procedures to ensure proper investigation of exceptions. The control assessment at various important stages of the transaction flow are presented below:

Registration of farmers

Procedure and key controls: The agreement between the DMO and societies provides that the societies are responsible for ensuring that paddy is purchased at MSP only from genuine farmers. Therefore, the key control is that the procurement centres have to register all the farmers within its jurisdiction on the society software before starting of paddy procurement. The amount of paddy purchased should be commensurate with the landholding of farmers as recorded in the Credit Book (*wrin pustika*)⁵.

⁵ *Wrin Pustika* : A record book available with farmers mentioning the details of his landholding, irrigated land, source of irrigation and loans obtained from different financial institutions. It is issued by the Tehsildar.

As per the directions (4 October 2007) of the Secretary, Food, Civil Supplies and Consumer Protection Department to District Collectors, the details of farmers were to be captured on the society software by 15 October 2007 by the procurement centres with the help of the *Patwari*⁶. During 2008-09 it was instructed that the information on farmers was to be compulsorily updated by 10 October 2008.

It was, however, observed that the farmers details had been entered from lists furnished by the *Patwaris*. The procurement centres also informed that details of the registration data of farmers were updated from their *wrin pustikas* as and when they came to sell paddy.

1.3.8.1 Entry of landholding of farmers not mandatory on society software

The provisions of the agreements and instructions of Government indicate that the sizes of landholdings must be mandatorily captured for registration of farmers on the system. However, in the data entry screen for farmer's registration, the entry of landholding was not mandatory. Therefore, it was possible to register a farmer without entering the landholding. There were 94, 253 and 64 registered farmers from the procurement centres of Rajim (Raipur), Kotmi (Janjgir-Champa) and Loharsi (Dhamtari) showing 'nil' landholding on the system. Hence, the registrations by the department were not in consonance with the objective of purchasing paddy on the basis of landholdings.

1.3.8.2 Single farmer registered more than once

It was observed that a farmer who owned more than one piece of land was shown multiple times on the *Patwari's* list and had also been entered more than once on the system and had multiple identities on the society software. Due to such duplication, the exact number of registered farmers could not be ascertained. It was also observed that the farmer code generated by system was not being mentioned for cross reference either in the farmer's *wrin pustika* or in the manual records of the procurement centres. In view of the multiple identities of a single farmer, the system was not equipped to identify the genuineness of all farmers.

It is recommended that the entry of landholdings should be made mandatory in the society software while registering farmers. It should also have the provision to enter multiple landholdings of farmer under single name. The farmer code should be pasted in the wrin pustikas for cross-referencing. Printouts of farmer registration data should be taken in non-procurement season and circulated to Patwaris for verification of details/updating.

The Government agreed with the recommendations and stated in the exit conference that the software had been modified and during the paddy procurement season 2009-2010, paddy receipts would not be generated if the mandatory fields of landholding and *wrin pustika* number were not available in the society software. Provision for feeding multiple landholdings for a single farmer already existed in the society software, which would be strictly

⁶ *Official who maintains land records in a village.*

implemented. It was also stated that the farmer code would be printed on the paddy receipts for the purpose of cross-reference and the list of registered farmers and details would be verified by the *Patwaris*.

Receipt of paddy from farmers

Procedure and key controls: The farmers bring paddy to the procurement centres and transfer it into gunny bags of 40 kilograms capacity provided by the procurement centres. The bags are weighed in the presence of the farmers and officials of the procurement centres.

Details such as the variety and weight of paddy, number of bags, name of farmer, loan amount etc are noted in a proforma called the *taulpatrak*. It is verified and signed by the person responsible for weighing (*Taul-Kanta Prabhari*), the farmer and the procurement centre in-charge.

As per the agreement between MARKFED and the societies and the orders issued by the Government from time to time, the key controls to be exercised by procurement centres at the time of receiving paddy from farmers are to verify the genuineness of the farmer and that the quantity of paddy received is commensurate with the landholding of the farmer.

Scrutiny of manual records and data revealed the following control weaknesses.

1.3.8.3 Verification of farmers

It was ascertained that the verification of genuineness of farmers was done manually from the *wrin pustika*. After the manual verification, the *wrin pustika* numbers were entered in the society software. The amounts of landholdings entered earlier from the *Patwari's* lists were to be verified/updated. This would effectively verify and complete the registration of the farmers and make it possible to verify their identity from the software in future. Scrutiny of procurement centre databases showed some cases⁷ where paddy had been received and purchased but *wrin pustika* numbers had not been captured. There were also 130 cases where paddy was purchased from farmers whose landholdings were shown as 'nil' in the system. This indicated that in respect of these exceptions, the registration data was not updated and verified from the *wrin pustikas* at the time of receipt of paddy.

It is recommended that the society software should have a provision to verify that the wrin pustika number and the landholding of the farmer concerned are available in the database before accepting paddy receipt data from the taulpatrak.

The Government accepted the recommendations and stated in the exit conference that the software had been modified and during the paddy procurement season 2009-2010, paddy receipts would not be generated if the mandatory fields of landholding and *wrin pustika* number were not available in the society software.

⁷ 677 cases in Manikchauri (Raipur), 142 cases in Kurud (Dhamtari) and 16 cases in Chorbhati (Janjgir-Champa).

Data entry of paddy received

Procedure and key controls: The *taulpatrak* is the source document from which details of receipt of paddy are entered into the system which forms the basis for payment. The associated control is the authorisation in form of signatures of three persons including signature of data entry operator (DEO) to verify completion of data entry. Controls are necessary to ensure accuracy of entries from the *taulpatrak*, and to guard against the risk of fictitious entries.

1.3.8.4 Taulpatraks not signed

During random scrutiny, Audit found that in seven cases, *taulpatraks* were not signed by the *Taul Kanta Prabhari*, in five cases, they were not signed by the farmer, in 10 cases they were not signed by the procurement centre in-charges and in 49 cases, they were not signed by the DEO. This indicates that further controls were required to ensure that *taulpatraks* which did not carry all three prescribed signatures were not entered into the society software and the DEOs invariably signed the *taulpatrak* after doing data entry.

The Government agreed in the exit conference that *taulpatrak* entries and signatures were necessary and would be implemented strictly and instructions were being issued in this regard.

1.3.8.5 Control against fictitious/double entries

Once the data from the *taulpatrak* is entered and saved on the society software, a paddy receipt ID is generated which uniquely identifies that particular receipt of paddy. A paddy receipt is printed, given to the farmer and the copy is retained by the procurement centres. Subsequently, a cheque is printed through the society software against the paddy receipt ID and disbursed to the farmer.

It was observed that in two⁸ test-checked procurement centres, the *taulpatraks* and the paddy receipts were stapled and kept together which served as an automatic control against fictitious/double entries. This practice was required to be replicated in all procurement centres. The items on the paddy receipt should be verified with the data on the *taulpatrak* and a verification certificate recorded on the paddy receipt to ensure accuracy of data.

It is recommended that a uniform format of the taulpatrak with space for three signatures for verification and signature of DEO should be circulated and used in all procurement centres. A provision may also be made in the society software to capture the serial number of the taulpatrak.

The Government agreed with the recommendations and stated in the exit conference that the procedure of keeping the *taulpatrak* and paddy receipt stapled together as followed in Chorbhatti (Janjgir-Champa) and Tarpongi (Raipur) paddy procurement centres, was a good practice and would be introduced throughout the State. It was also agreed that *taulpatrak* number would be captured in the society software along with duplication checks and a uniform format of *taulpatrak* would be introduced in all procurement centres.

⁸ Chorbhatti (Janjgir-Champa) and Tarpongi (Raipur).

1.3.8.6 No provision in society software to ensure that receipt and procurement of paddy was in proportion to the landholding

The department had directed the formation of a committee in every society consisting of a President, the *Sarpanch* of the area concerned, one member nominated by the Collector and two persons nominated by the Minister in-charge of the area concerned, to estimate the per hectare production of paddy in the area adjoining the society and recommended per hectare yield for the purpose of paddy procurement. This check was relevant in the year 2008-09 procurement due to the payment of bonus in Chhattisgarh over and above the MSP.

It was observed that there was no facility in the society software to capture the acceptable yield per hectare and check whether the paddy purchased was commensurate with the landholdings. Twelve procurement centres had the figure of the recommended production as decided by the committee. The remaining six were unable to provide information on the recommended production to Audit. Audit analysed the databases of these 18 procurement centres to identify the purchases where the paddy production was higher than the norms. In cases where the recommended production was not provided, a norm of maximum yield of 50 quintals per hectare declared by DCCB Raipur was used. It was ascertained that there were 2,783 cases where the purchases were above the recommended upper limit of yield and according to the data captured on the society software 7,287 MT of paddy was purchased in excess of norms (as detailed in **Appendix-1.22**).

However, Audit was unable to ascertain the actual number of cases wherein paddy was purchased in excess over the norms of recommended yield. This was required to be investigated as the shortcomings in registration data pointed out earlier would also generate such cases. This underlines the need for updating the farmer registration data pointed out earlier, in the absence of which it is difficult to use such exception reports as a monitoring tool.

It is recommended that a provision should be made in the society software to capture the recommended yield. Further, at the taulpatrak data entry stage, the society software should check the yield per hectare for every entry and highlight the cases where it exceeds the recommended yield. The department should also prescribe the action to be taken by the procurement centres when cases of excess yield are highlighted. Exception reports should be generated to identify/ investigate cases of abnormal yield.

The Government accepted the recommendations and stated in the exit conference that provision as recommended would be incorporated in the current paddy procurement season (2009-2010) to check paddy receipts against a prescribed maximum production limit.

Issue of cheques

Procedure and key controls: One of the main objectives of introducing the computerised system was to expedite the payment of cheques. Since a very large number of cheques are disbursed within a short time during the procurement season, the printing and disbursement of cheques is categorized as a very high risk item. Accordingly, controls are required to ensure that (i) only one cheque is issued against one purchase entered in the society software

(ii) cheques are printed and issued immediately after generating the paddy receipts (iii) cheques are issued to the registered farmers from whom paddy is purchased (iv) proper inventory of the cheque forms is kept and cheques issued are reconciled with the bank. The following weaknesses were observed in these controls.

1.3.8.7 Printing of cheques in the name of different persons

Analysis of the purchase data showed that in 193 transactions in 11 procurement centres, the cheques for purchase of paddy and the bonus payable were issued to different persons. It was observed that in some cases, this became necessary due to unavoidable circumstances like death of the farmer, unavailability of the registered farmers', illness etc. However, the system did not provide for printing of a cheque in another names. For the cases cited, this was done by temporarily changing the farmers' names in the farmer registration table. This is a risk area as unauthorized changes can be made in this manner and therefore there is no assurance on the integrity of the master data captured in the farmer registration table.

It is recommended that this may be reviewed and a suitable module developed to enter such transactions on the society software with appropriate controls and authorisation.

The Government accepted the recommendation and stated in the exit conference that additional checks, which were under testing, were being provided which would ensure that once paddy was received, the farmers' names and their fathers' names could not be changed in the society software.

1.3.8.8 Printing of cheque is not flagged on the software

It was observed that for printing a cheque, the DEO entered the date of purchase, selected the paddy receipt ID for which payment had to be made, gave a print command and a cheque was printed. The date of purchase was printed on the cheque regardless of the date of printing. The cheque number of the printed cheque was not captured on the software, the date of printing/issue of cheque was not captured and there was no other provision such as flagging the paddy receipt ID in the system to indicate that a cheque had been printed for a particular transaction. Therefore, it was not possible to ascertain from the society software either the pending payments or the purchases for which payment had been made. It was also possible to print more than one cheque against a single paddy receipt.

Moreover, the objective of expeditious payment could be monitored only if the society software captured the date of purchase and date of issue of cheque. In the absence of a provision to capture the date of issue of cheque in the society software, the objective of ensuring instant cheque payment could not be monitored.

1.3.8.9 Inventory of cheques

In the computerised system, the traditional cheque book had been replaced by cheque forms on continuous stationery. However, all the provisions relating to the inventory and custody of cheques such as list of cancelled cheques, procedures for cancellation, reconciliation with bank etc. continued to be applicable. In view of the large number of transactions, there were bound to be

some cancellations and some cheque forms would be damaged during printing.

It was observed that the list of cheques cancelled/cheques forms damaged were neither captured on the society software nor were available in any manual register. Moreover, the society software did not have a provision for reconciliation of cheques with bank-scrolls since it did not capture the list of cheques printed/issued. While the test-checked procurement centres stated that the reconciliation was being done manually, the evidence in the form of bank reconciliation statements was not on record.

The procurement centres monitored the issue of cheques using the manually kept *Dhan-Kharidi* register. However, in the absence of inventory of cheques and bank reconciliation and the possibility of printing any number of cheques using the software, there was a risk of misuse of cheques.

It is recommended that the entire system may be reviewed considering the above observations and suitable access controls may be built by way of additional checks and provisions in the society software, supplemented by manual procedures, so that all the control requirements for custody, printing and inventory of cheques are fulfilled.

The Government agreed with the recommendations and stated in the exit conference that the cheque numbers would be captured on the society software and a check would be provided to ensure that a second cheque could not be printed against a paddy receipt without cancelling first cheque. It was also stated that inventory of cheques would be maintained as the cheque numbers would be entered in the society software and numbers of cancelled/destroyed cheques would also be captured. The reconciliation of cheques would be ensured by the DCCBs and societies.

Registration of millers and issue of permission for custom milling

Procedure and key controls: A miller gets registered in the Collector's office to lift paddy for custom milling. The information given in the applications for registration are physically verified and captured on the online software. Thereafter, a verification certificate is printed from the online software and issued to the miller. Registered millers apply for custom milling and permission is given by the Collector indicating type of rice, quantity and period of milling and after data entry, the system prints an *anumati* (permission) for the miller which is issued by the Food Officer. Thereafter, the DMO concludes an agreement with the miller. For a second *anumati*, a miller has to submit an application along with the latest electricity bill which is used to ascertain whether the miller has consumed appropriate amount of electricity for milling the paddy lifted against the first *anumati*.

Therefore, the key control requirements are that only verified data from the applications of miller are entered correctly in the online software and the quality, quantity and time period approved by the Collector are entered correctly for generating *anumati*. Moreover, the electricity bills must be available in all cases of second *anumati*.

1.3.8.10 Physical verification of millers not carried out

During the scrutiny of records of Food Offices in test-checked districts, it was observed that in Raipur and Janjgir-Champa, the verification reports of millers and electricity bills were on record but in Dhamtari district, it was observed that out of a total of 150 millers registered for the year 2008-09, verification reports were not on record in 130 cases. For the millers who were granted second *anumati*, the electricity bills were not on record. The online software did not have any provision for registering receipt of bills for second *anumati*. In the absence of verification, unauthorized data could be entered for miller's registration and second *anumati*.

On this being pointed out by Audit, the Food Officer, Dhamtari replied that the procedure was not followed due to the workload and it would be followed in the next procurement season.

The Government stated in the exit conference that the verification process of millers would be strictly implemented.

Issue of delivery orders

Procedure and key controls: On the basis of *anumati* and agreements the DMO issues DOs to procurement centres and storage centres, mentioning the quantity of paddy to be lifted by millers. As per the agreements with the millers, the DOs are valid for seven days from the date of issue. These DOs are entered on the online system and get updated in society software through the runners. The society software contains a key control that paddy delivery memos for issue of paddy to millers are generated only after linking to a valid DO.

1.3.8.11 Expiry of validity of DO not monitored by the system

It was observed that the online software did not have a provision for capturing the extension of the validity periods of DOs. Although the DMOs extend the validity period in some cases, neither the online nor the society software has any provision of checking the validity period of the DO at the time of issue of paddy from the procurement and storage centres.

Scrutiny of procurement centre data downloaded on the central server revealed that in 312 cases in Raipur and Dhamtari districts, paddy had been issued to millers after delays of up to 102 days from the DO expiry dates. All these cases had to be examined manually to ascertain whether lifting actually took place after expiry of validity period because in the absence of the aforementioned provisions in the software, this kind of exception data would also get generated in cases where the validity of DOs had been extended but not captured on the software.

It is recommended that the system should have a provision for capturing extension of DO validity period and a check may be built in the system so that the paddy delivery memos are not generated in cases where validity of DO has expired.

The Government agreed with the recommendation and stated in the exit conference that the DO validity check would be incorporated in the storage

centres as they were web-based. It also explained that the same would not be possible in the society softwares as they were/are on stand-alone computers and therefore, extension of DOs was not immediately available on the society software. This constraint was accepted by Audit.

1.3.8.12 Date of issue to miller not linked with date of DO

It was observed that the society software did not run any check on the date of the DO and the date of issue of paddy to miller. During analysis of society software data uploaded on the central server, it was observed that in 397 cases (all districts of Chhattisgarh), dates of issue of paddy were earlier than the dates of issue of DO, which implied that paddy was issued to millers before issue of the DOs. In another 18 DOs which were cancelled by DMOs, the paddy issue dates were after the cancellation dates of DOs which implied that paddy was lifted from procurement centres after the cancellation of DOs. This exception data was required to be scrutinized to ascertain the reasons for the ambiguity in data and how they occurred.

It is recommended that the generation of paddy delivery memos should be permitted by the system in procurement centres after checking that the issue dates are later than the DO dates.

The computerization of the milling process has enabled better monitoring of conversion of paddy to rice as the procurement centres and storage centres can verify the DOs issued by the DMO. Therefore, if the deficiencies as pointed out above are also addressed, the management of milling will further improve.

The Government accepted the recommendations and stated in the exit conference that the check had been incorporated in the society software to link the date of issue to miller with the date of the delivery order.

1.3.9 Exception analysis

Exception analysis is done to identify peculiar/unexpected data which has to be examined to identify possible processing errors or the presence of unauthorized or manipulated transactions. Audit carried out some exception analysis on the data in the central server and found the following discrepancies in the data uploaded on the server from the society software being used at the procurement centres.

- The society software generated a unique paddy receipt number but in the procurement centre data on the server, there were 123 instances of duplicate paddy receipt numbers in Dhamtari and Janjgir-Champa districts. In 18 of these cases, the farmer code and farmer name against the duplicate receipt numbers were also different.
- In respect of 516 (Dhamtari and Janjgir-Champa districts) cases of paddy purchase, the names and other details of farmers from whom paddy was purchased were not available as these details were missing from the farmer registration tables.
- The total paddy lifted against 20 DOs was more than the quantity mentioned in the DOs.

It was observed that all these inconsistencies/exceptions had arisen in the data even though the society software had in-built controls to prevent such occurrences. It was required to be ascertained whether the discrepancies were due to processing or updating errors or due to unauthorized/manipulated transactions.

It is recommended that the above exception reports may be incorporated in the software and a mechanism established to generate periodic reports which are taken on record, examined and corrective measures taken.

The Government accepted the recommendation and stated in the exit conference that exception analysis would be carried out.

1.3.10 Security Management

Security management of the system is designed primarily to minimise the risk of manipulation of the information stored on the system while in transit and to ensure continued availability of the system and data. The first step in an effective security management is to have a documented security policy or set of security practices/instructions which identify the risks to the system and prescribe the requisite procedures to mitigate the risk. It was observed that a documented security risk assessment and security procedures were not available. On scrutiny of the procedures and practices, the following security concerns were identified.

1.3.10.1 Disabled screens can be enabled by changing the system date

The paddy procurement period for *kharif* year 2008-09 was 20 October to 31 January. Thereafter, paddy could be purchased upto 15 February only from those farmers whose loan amounts were outstanding in the procurement centres and such procurement was termed as '*Linking Dhan-Kharidi*'. The transactions of normal paddy purchase and *Linking Dhan-Kharidi* were entered from the *taulpatrak* using two different screens in the society software. After the abovementioned cut-off dates, the software disabled both the screens so that no purchases could be entered thereafter.

On scrutiny of society software, it was observed that it was possible to bypass the lock on these two screens by changing the system date of the computer to a date during the paddy procurement period. This could be done easily while switching on the computer. Therefore, this system of disabling the purchase screens was required to be strengthened.

The Government stated in the exit conference that checks had been built in to ensure that the system date could not be changed.

1.3.10.2 Logical access control

Logical access controls protect an IT system from unauthorized access and malicious codes such as viruses and worms. It was observed that :

- The department did not have a documented password policy and no written instructions were issued regarding 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 forced periodic password changes were not incorporated.

- There was no documented approval of access profiles from the department, authorising various levels of employees to access different modules and screens. At the six storage centres and three DMO offices test-checked, it was observed that more than one person were using the same user-ID and password for accessing the application. Thus, the responsibility and accountability of all the operators was diluted and was required to be corrected through separate user-ID, access profiles and passwords.
- It was observed that in three procurement centres, there was no anti-virus and the remaining had anti-virus softwares of different companies which were not being updated in the absence of internet access. Therefore, in effect, none of the test-checked procurement centres were protected against virus or worm attacks and were prone to risk of intrusion and data corruption.

It is recommended that the department should define and approve access profiles, strengthen password management and load a standard anti-virus software in all the computers in the procurement centres which should be updated through software patches downloaded from the net as per prescribed periodicity. The patches can be sent to the procurement centres through runners.

The Government stated in the exit conference that recommendations on passwords and anti-virus were being implemented. It was also agreed that the task of regular updation of anti-virus software may be managed through the vendors providing the anti-virus software.

1.3.10.3 Edit/delete screen not provided in society software and online software

The society software and the online applications did not have any screens for editing or deleting data except for changes in farmer registration data. If any wrong entries were made during data entry, the Central Processing Unit (CPU) of the procurement centre was taken to the concerned DMO or district NIC office with a written application for making corrections. The DMO office sent a complaint and the database of the procurement centre electronically to NIC, Raipur. NIC made corrections in the database and sent it back electronically. The corrected database was electronically downloaded to the procurement centres' CPU at DMO or district NIC office which was then carried back physically to the concerned procurement centres.

- In this procedure, the CPUs were exposed to the risk of physical damage and manipulation of data while in transit.
- It was observed that all corrections of data for procurement centres and server data were made centrally by Assistant Programmers at NIC, Raipur centre using the backend facility of the database. This was a risk because backend corrections were devoid of any controls and all editing and deleting was being done without any data validation and without any log of the editing activity. There was a risk of bonafide

mistakes as well as data manipulations which could remain undetected until appropriate exception analysis was done. In the absence of activity log, it was impossible to fix responsibility for any errors/manipulation detected subsequently. Some of the exceptions pointed out in this report could also be due to data editing from the backend without validation checks.

- It was also observed that the procurement main data was in an MS Access database in a Windows based stand-alone computer and it was very easy to make copies of it. Therefore, it was possible to make a copy of the database, insert some fictitious transactions, print cheques and then overwrite the database with the previously saved copy. Consequently, there would be no trace of the fictitious transactions anywhere on the society software. This kind of risk was especially significant in view of the weak controls in keeping inventory of cheques as already pointed out in **paragraph 1.3.8.9** of this report.

It is recommended that the editing and deleting of data may be streamlined on the society software and online software so that it is done with requisite controls to mitigate the attendant risks. The processes copy/backup/restoration at procurement centres may be reviewed to make these operations procedure based i.e. menu driven from the application with appropriate controls.

The Government agreed with the recommendations and stated in the exit conference that an administrative module was being prepared for carrying out the editing. However, it was stated that some backend corrections were necessary, which would be listed and the correction procedure would be documented.

1.3.10.4 Back-up and continuity

The data from procurement centres is backed up regularly on the central server through runners. The NIC maintains a primary central server and a secondary server which is a mirror image. This ensures continuity in case the primary server fails. Logical backups are taken daily on CDs and physical backups are taken on an external hard disk.

It was observed that the secondary server and all backups were kept in the same room along with the primary server. In case of an unforeseen event like fire, the risk of total data loss was very high.

It is recommended that the backup procedure be reviewed considering storage of backup media in a separate location as per prescribed periodicity. At the end of a procurement season, the data may be separately backed up and archived. The back up of system and application softwares may also be kept at a separate location.

The Government agreed with the recommendations and stated in the exit conference that different locations such as Jashpur and Hyderabad were being considered for the mirror server and backups would be kept at separate locations as suggested.

1.3.11 Conclusion

The State Government had implemented the computerization of the paddy procurement project in just four to five months. The project had significant achievements. It had integrated the farmers and large number of functionaries from different departments who switched over from manual processing to the computerized environment and successfully used it for two procurement cycles. The procurement data was also available on the internet for public scrutiny.

The IT review revealed that the achievements of the project could be further strengthened by reducing the risk in different areas of operation. This could be done by improving the controls relating to registration of farmers, receipt of paddy from farmers and related data entry, issue of cheques, registration of millers and issue of permission for custom milling and monitoring of delivery orders. The documentation of the project needed to be streamlined and the security issues were also required to be addressed.

1.3.12 Summary of recommendations

Detailed recommendations have been made in the report. Some of the key items are summarized below:

- Provision should be made to capture information such as multiple landholdings against single farmer code, *wrin pustika* numbers, serial number of *taulpatraks* etc.
- Controls may be incorporated for mandatory entry of landholding of farmers, to prevent acceptance of paddy receipt data from *taulpatrak*, if *wrin pustika* number or landholding is not available, to check yield per hectare of paddy and to prevent generation of paddy delivery memo where DO date has expired.
- The paddy receipt and the *taulpatrak* should be stapled together for cross-verification.
- User manuals should be prepared and provided to the procurement centres.

The Government accepted the recommendations and stated in the exit conference that it had already initiated action on many issues including modification of software. It also stated that a committee had been formed to examine various issues raised and its recommendations would be documented and implemented.