

**Report of the
Comptroller and Auditor General of India
on
ECONOMIC SECTOR
for the year ended 31 March 2016**



Government of Madhya Pradesh
Report No. 2 of the year 2017

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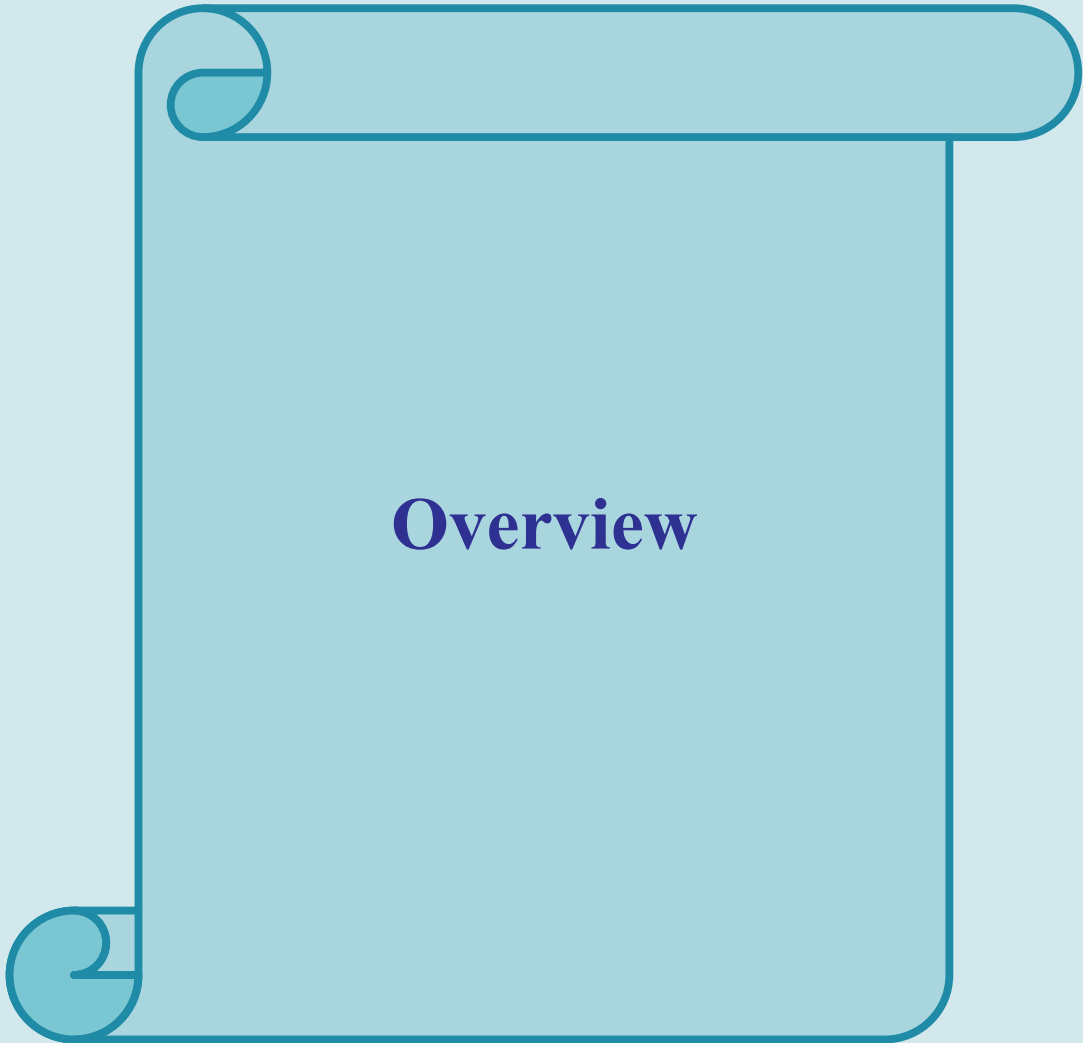
PREFACE

This Report for the year ended 31 March 2016 has been prepared for submission to the Governor of Madhya Pradesh under Article 151 of the Constitution of India.

The Report, contains significant results of the performance audits and compliance audits of the Departments of the Government of Madhya Pradesh under Economic Sector, including Departments of Co-operation, Farmer Welfare and Agriculture Development, Forest, Narmada Valley Development, Public Works and Water Resources. However, Departments under the General, Social and Revenue Sectors are excluded and are covered in the Reports on the General, Social and Revenue Sectors.

The instances mentioned in this Report are among those which came to notice in the course of test audit for the period 2015-16 as well as those which came to notice in earlier years but could not be reported in previous Audit Reports. Instances relating to the period subsequent to year 2015-16 have also been included, wherever necessary.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.



Overview

Overview

This Report of Comptroller and Auditor General of India on Economic Sector, Government of Madhya Pradesh for the year ended 31 March 2016 comprises three Chapters. First Chapter contains the financial profile of the State, planning and conduct of audit and follow up on Audit Reports. Second Chapter deals with the findings of two Performance Audits and third Chapter deals with Compliance audit findings of the Departments of Co-operation, Farmer Welfare and Agriculture Development, Forest, Narmada Valley Development, Public Works and Water Resources. The audit findings included in the Performance Audits and Compliance Audits in this Report have total money value of ₹ 1,705.33 crore.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India. Audit samples have been drawn based on statistical sampling. The specific audit methodology adopted has been mentioned in each Performance/Compliance Audit. The audit conclusions have been drawn and recommendations have been made taking into consideration the views of the Government. A summary of the main audit findings is presented in this overview.

1. Performance Audits

(i) Implementation of National Food Security Mission

National Food Security Mission (NFSM) is a centrally sponsored crop development scheme which aimed at achieving additional production of food grains and restoring soil health. In Madhya Pradesh, the scheme was being implemented in eight districts under NFSM-Rice, 17 districts under NFSM-Wheat and all 51 districts under NFSM-Pulses. Since 2014-15, NFSM-Coarse cereals and NFSM-Commercial crops were being implemented in 16 districts and eight districts respectively. During 2012-13 to 2015-16, the State had incurred ₹ 945.18 crore out of ₹ 1,051.41 crore received as grants-in-aid from the Government of India for activities to be undertaken under the scheme.

Performance audit covering the period from 2012-13 to 2015-16 revealed that:

Target for production of food grains were not fixed for NFSM districts in the State. As a result, their progress in achieving scheme objective of additional production could not be ascertained.

Despite an expenditure of ₹ 945.18 crore under NFSM in the State during 2012-16, only two *per cent* of the total farmers in the State had benefitted from the scheme.

Cultivation area of foodgrains

NFSM districts could increase the sown area of rice by five *per cent* only as against the average growth rate of 26 *per cent* in sown area of rice at State level. NFSM-Wheat districts also did not achieve sustained growth, as the sown areas decreased in 2014-15 as compared to previous year. Production of pulses substantially decreased by 22 *per cent* in 2013-14 and by 14 *per cent* in 2014-15 as compared to 2012-13. However, utilisation of funds received under NFSM by the Department decreased from 95 *per cent* in 2012-

13 to 64 *per cent* in 2015-16 due to quarterly budgeting system, low rainfall, drought, etc.

(Paragraph 2.1.6)

Distribution of quality seeds

The Department did not provide adequate seeds in time. As a result, the objective of the Scheme of distributing quality seeds at subsidised rates to all farmers could not be achieved. A beneficiary survey of farmers conducted by the audit revealed that 250 out of 260 farmers reported higher yield by using quality seeds provided by the Department.

District offices could not ensure quality testing of seeds distributed to farmers before its sowing, which put to risk, the production and income generation of farmers.

(Paragraph 2.1.8)

Agencies for supply and norms for subsidy

The Department did not fix the agencies and rates of farm implements as required under the NFSM operational guidelines. The assistance to farmers on purchase of farm implements resulted in irregular expenditure of ₹ 261.81 crore.

Norms for providing subsidy on farm implements such as pipes and sprinkler sets were not adhered to by the Department. As a result, the Department provided irregular subsidy of ₹ 5.11 crore to 8,337 farmers in 14 districts.

(Paragraph 2.1.11)

Field demonstrations

The objective of field demonstration to disseminate the knowledge of improved practices were largely not fulfilled due to deficiencies in conducting cropping system demonstrations, lack of involvement of scientists and deficiency in preparation of results of demonstration. In eight test checked districts, expenditure of ₹ 91.71 crore on 1.74 lakh demonstrations was rendered unfruitful due to failure to maintain prescribed records for demonstration results.

(Paragraph 2.1.9)

Plans for implementation of scheme

Perspective plan for implementation of scheme in the State was not prepared. Baseline survey and feasibility studies were also not conducted due to which the status of crop productivity and its potential remained unassessed. Inputs from the Block offices were not obtained for preparation of District Annual Action Plans.

(Paragraph 2.1.7)

Monitoring of the scheme

Inadequate coordination at State and District level of the Department to ensure proper functioning of Project Management Teams affected the planning, implementation and monitoring of the scheme.

(Paragraph 2.1.16)

(ii) Implementation of Madhya Pradesh Water Sector Restructuring Project

Madhya Pradesh Water Sector Restructuring Project (MPWSRP) was taken up in 2004 by WRD, Government of Madhya Pradesh (GoMP) with assistance from the World Bank. It aimed to rehabilitate and modernise existing irrigation assets in selected six river basins (Chambal, Betwa, Ken, Sindh, Tons and Wainganga) of the State having Culturable Command Area (CCA) of 6.18 lakh hectare (ha). The administrative approval of the project was revised (April 2015) to ₹ 2,498 crore from ₹ 1,919 crore (August 2004). MPWSRP, after five time extensions, was closed in June 2015 after incurring an expenditure of ₹ 2,497.52 crore.

A performance audit of MPWSRP during the period 2010-16 revealed the following:

Change in scope of project

The scope of MPWSRP was restructured in June 2012 and 362 irrigation schemes were discontinued as Department failed to complete the scheme as per Project Implementation Plan (PIP). The easy execution of Chambal Canal System prompted WRD for its overemphasis after restructuring of the project in June 2012. Works valuing ₹ 606.24 crore (24 per cent of total expenditure under MPWSRP) were taken up during 2012-13 to 2013-14 for Chambal Canal System. Of these works, Cement Concrete lining, which could be easily executed in a short span of time, constituted 94.29 per cent of works. The overemphasis on Chambal Canal System helped Department in achieving the required financial progress for closing the project. However, this adversely affected achievement of CCA of medium and minor schemes.

(Paragraph 2.2.7.1)

Agriculture intensification and diversification

The MPWSRP envisaged for agricultural intensification and diversification through effective collaboration of GoMP line Departments (WRD, FW&AD, Horticulture and Food Processing Department and Jawaharlal Nehru Krishi Vishav Vidyalaya (JNKVV), Jabalpur). Due to poor integration with line departments, absence of sustainable water supply to farmers, lack of extension activities and training to Water User Associations (WUAs), agriculture intensification and diversification did not correspond to the achievement of irrigated area under MPWSRP.

During beneficiary survey, 133 out of 334 (40 per cent) farmers reported not participating in any training programme of FW&AD. Thus, there was lack of effort at institutional level to generate awareness among farmers about the benefits of crop diversification.

The impact of sown area of gram, *arhar* and mustard was taken as an indicator for agriculture intensification in PIP. There was reduction in sown areas of gram and *arhar* during 2014-15 by 20 per cent and 35 per cent respectively as compared to 2011-12. Further, the sown area of mustard was reduced in 2014-15 by 19 per cent as compared to 2012-13. Plantation area of fruits, vegetables and spices remained low ranging from 2.90 per cent to 7.31 per cent, as

against the target of 21 *per cent* of the irrigated area envisaged in PIP and was even below state average of nine *per cent*.

(Paragraph 2.2.7.4)

Contract management and execution

Avoidable liability of commitment charges of ₹ 9.38 crore was created due to delayed planning and execution of works.

(Paragraph 2.2.8.1)

Provision was made in Scheme Modernisation Plans for works of field channels, water courses and farm turnouts. But these works were not executed in Chambal Canal System. As a result, ₹ 205.52 crore earmarked for micro distribution network and canal automation were diverted for other purposes.

Unjustified expenditure of ₹ 263.85 crore was incurred on execution of excess quantities and length of CC lining of canals beyond the scope of Scheme Modernisation Plans (SMP).

(Paragraphs 2.2.7.3 and 2.2.8.3)

Provisions of specifications appended with National Competitive Bidding (NCB) were not adhered resulting in irregularities amounting to ₹ 65.18 crore in works for trimming of earthwork and CC lining of canals, besides, inadequate quality control of works.

(Paragraphs 2.2.9.2, 2.2.9.4, 2.2.9.6 and 2.2.10.3)

Adherence with agreement clauses was inadequate leading undue financial benefit of ₹ 68.74 crore in issues relating to additional security deposit, liquidated damages, royalty charges and insurance coverage of works.

(Paragraphs 2.2.9.9, 2.2.9.10, 2.2.9.11 and 2.2.9.12)

Provisions of schedule of rates were not followed, which led to extra cost of ₹ 24.02 crore due to incorrect lead of metal, incorrect rate of embankment and item of blasting besides, excess payment on account of shrinkage allowance.

(Paragraphs 2.2.9.3, 2.2.9.5, 2.2.9.7 and 2.2.9.14)

Quality control and monitoring of the project was inadequate as core tests of works were not ensured. This resulted in undue financial aid of ₹ 20.47 crore to contractors.

(Paragarph 2.2.10.3)

2. Compliance Audit findings

(i) Audit on preparation of estimates of road works

Out of 57 Public Works Division in the State, the test checked 12 divisions executed 391 road works valued at ₹ 1,699.25 crore during 2012-16. Out of this, 196 estimates for road works valued ₹ 1,250.74 crore were audited, which revealed that:

In all the test checked 196 estimates, pre-requisite activities for preparation of estimates of road works, such as feasibility study and detailed survey and

investigation were not carried out. As a result, there were large deviations from estimates at the time of execution.

(Paragraph 3.1.2.1)

Quantities of earthwork were provisioned in the test checked estimates by taking average thickness without taking actual ground levels. Due to failure in taking levels in 103 road works and erroneous consideration of levels in 93 road works, quantities of earthwork were not provisioned correctly in the estimates resulting in variation of more than 10 *per cent* in 68 road works.

(Paragraph 3.1.2.2)

Road works were awarded without ensuring adequate provision in the estimates for acquisition of forest and private lands. As a result, 26 out of 196 test checked road works were delayed for two months to over six years, which included 15 road works on which an expenditure of ₹ 66.86 crore was already incurred remained incomplete even after lapse of 21 to 68 months.

(Paragraph 3.1.2.4)

Cost of utility shifting in 10 estimates was provisioned on assumption basis without obtaining technical sanction from concerned Departments resulting in delay from 11 months to 27 months in construction of roads, besides increase in cost of road by ₹ 7.14 crore.

(Paragraph 3.1.2.5)

In 13 estimates, design traffic of road crust was incorrectly computed resulting in adoption of substandard specification in 10 estimates and richer specification resulting in extra cost of ₹ 2.98 crore in three estimates. It was also observed that though design traffics were worked out correctly in 20 estimates, department erroneously adopted richer specification resulting in extra cost of ₹ 21.30 crore.

(Paragraph 3.1.3.1)

Provisions of cross drainage (96 estimates) and length of road (30 estimates) were made without survey and investigation. As a result, wide deviation from estimate was noticed in 94 estimates which resulted in excess expenditure of ₹ 32.56 crore. Similarly, length of road specified in the estimate was increased up to three kilo metres in six road works and decreased up to 10.5 kilo metres in 24 road works.

(Paragraphs 3.1.4.1 and 3.1.4.2)

(ii) Audit on Crop Insurance Scheme

National Agricultural Insurance Scheme (NAIS) was launched by Government of India (GoI) from Rabi 1999-2000 season to mitigate the financial loss suffered by farmers due to crop failure on account of natural calamities, pests and diseases. Agriculture Insurance Company of India Limited (AIC) was the implementing agency of the scheme. The audit revealed that:

The coverage of farmers under NAIS increased from 14.58 *per cent* (Rabi 2010-11) to 33.80 *per cent* (Kharif 2015) of the total number of 88.72 lakh farmers in the State. The increase in coverage was due to compulsory insurance of loanee farmers, as only 2841 non-loanee farmers were covered under the scheme during Rabi 2010-11 to Kharif 2015. However, inadequate

coverage of 14.58 *per cent* to 33.80 *per cent* farmers under the scheme adversely affected the objectives of NAIS to help stabilise farm income, particularly in disaster years.

(Paragraph 3.2.2.1)

State Government failed to timely notify crop-wise areas to be covered under the scheme and the delays in notification ranged up to eight months. Farmers of 120 *Patwari Halkas* were deprived of the benefits under the scheme due to delay in issuing notifications for these areas after cut off dates for receipt of declaration by insurance agency.

(Paragraph 3.2.2.2)

As a result of failure of Superintendent Land Records and Deputy Directors of Agriculture in providing the results of crop cutting experiments, Agriculture Insurance Company could not calculate the insurance claim of farmers in 6,702 *Patwari Halkas*.

(Paragraph 3.2.2.3)

In Actuarial regime, Agriculture Insurance Company would bear insurance claims of the farmers by increasing the insurance charges ascertained by its statistical experts. However, it was not implemented even after five years of introduction of NAIS in the State. This resulted to extra financial burden of ₹ 692.92 crore to the State Government during *Rabi* 2010-11 to *Kharif* 2015.

(Paragraph 3.2.2.4)

There were delays in disbursement of insurance claims to farmers ranging from one month to over two years during *Rabi* 2010-11 to *Kharif* 2015. During beneficiary survey of 256 farmers in five districts, 16 *per cent* of the farmers stated that they could not repay their loans in due time due to delay in receipt of claims and hence, were debarred for loans in next season. Thus, delay in disbursement of claims resulted in hardship to claimants.

(Paragraph 3.2.2.9)

Due to failure of financial institutions to adhere to the limits specified for providing finances to the farmers, insurance claim submitted by farmers was increased by ₹ 101.07 crore. This caused extra financial burden to the Government.

(Paragraph 3.2.2.10)

During *Kharif* 2013, insured areas were more than the sown areas of notified crops by 9.06 lakh hectare in 3362 *Patwari Halkas* of 42 districts. The Department attributed it to obtaining more than one *Kisan Credit Card* by farmers.

(Paragraph 3.2.2.12)

(iii) Compliance Audit Paragraphs

Audit has reported on several significant deficiencies in critical areas which impact the effectiveness of the State Government. Some important findings arising out of Compliance Audit (16 paragraphs) are featured in the Report. The major observations relate to failure to comply with rules and regulations,

audit against propriety and cases of expenditure without adequate justification and failure of oversight/governance. Some of them are mentioned below:

The decision of MARKFED, Bhopal to accept the rates of transportation at much higher rate as compared to previous year led to extra cost amounting to ₹ 1.30 crore.

(Paragraph 3.3.1)

In Alirajpur, Anuppur, Betul (North) and Vidisha, application of provisional/incorrect rates of Net Present Value has resulted into an amount of ₹ 5.89 crore being outstanding for recovery from the user agencies for use of diverted forest land.

(Paragraph 3.3.2)

Delay in implementation of revised rates of entry fees in the National Parks/Sanctuaries/Tiger Reserves of Madhya Pradesh led to irrecoverable loss of ₹ 62.68 lakh to the Government.

(Paragraph 3.3.3)

In ND Division No. 32 Barwaha, clause for central excise exemption was not included in the Notice Inviting Tender for a tender on turnkey basis which led to undue benefit to the contractor amounting to ₹ 22.26 crore, which would have been otherwise extended to the Government, by way of reduced project cost.

(Paragraph 3.3.4)

The Executive Engineer, ND Division No. 7, Satna irregularly granted mobilisation advance of ₹ 1.89 crore to the contractor in contravention to the provisions of the contract and there was short recovery of penalty of ₹ 6.78 crore.

(Paragraph 3.3.5)

The Executive Engineer, Omkareshwar Project Canal Division, Dhamnod (Dhar) adopted incorrect prices of Petrol, Oil and Lubricants which resulted in excess payment of ₹ 7.89 crore to the contractors. However, after being pointed out by audit, an amount ₹ 7.82 crore has been recovered

(Paragraph 3.3.6)

In ND Division No. 16, Kukshi, District Dhar, the Executive Engineer made incorrect provision and executed excess thickness of cement concrete lining work against the irrigation specifications resulting in extra cost of ₹ 1.27 crore.

(Paragraph 3.3.7)

The Executive Engineer, Public Works Department (B&R) Division, Ujjain executed excess thickness of Crusher Run Macadam against the IRC-37 specification which led to unauthorised payment of ₹ 98.25 lakh.

(Paragraph 3.3.8)

Injudicious fixation of higher rate for item “clearing and grubbing” in the Schedule of Rates led to extra cost of ₹ 4.76 crore in Public Works Division Simhastha.

(Paragraph 3.3.9)

Audit noticed extra cost of ₹ 5.65 crore due to inclusion of higher rate for RCC pipe, royalty of ₹ 3.26 crore for hard rock not recovered, undue financial aid to contractor on account of payment of ₹ 40.82 lakh made to Railway authority and irregular payment of ₹ 48.85 lakh for temporary land acquisition in execution of Khan River diversion project under Simhastha-2016.

(Paragraph 3.3.10)

In Water Resource division-I, Jhabua, the value of the excavated hard rock was not included by the Executive Engineer in the books (Material-at-Site) of the division, which led to probable loss of ₹ 21.23 crore to the Government.

(Paragraph 3.3.11)

Due to inadequate estimation and poor planning, the seepage problem could not be resolved even after constructing RCC duct with less water way area and diversion channel. This led to infructuous expenditure of ₹ 3.00 crore in Sanjay Sarowar Bhingarh Right Bank Main canal under Tilwara left bank canal, Division-Keolari (Seoni).

(Paragraph 3.3.12)

The Executive Engineer, Pancham Nagar Project Survey Division, Hatta made incorrect provision of lead for sand from 100 km clubbed in the cement concrete item resulting in excess payment of ₹ 1.58 crore to the contractor.

(Paragraph 3.3.13)

Adoption of incorrect clubbed rate of earthwork instead of adoption of complete item for earthwork resulted in extra cost of ₹ 1.31 crore in Water Resource Department Division Manawar and Shajapur.

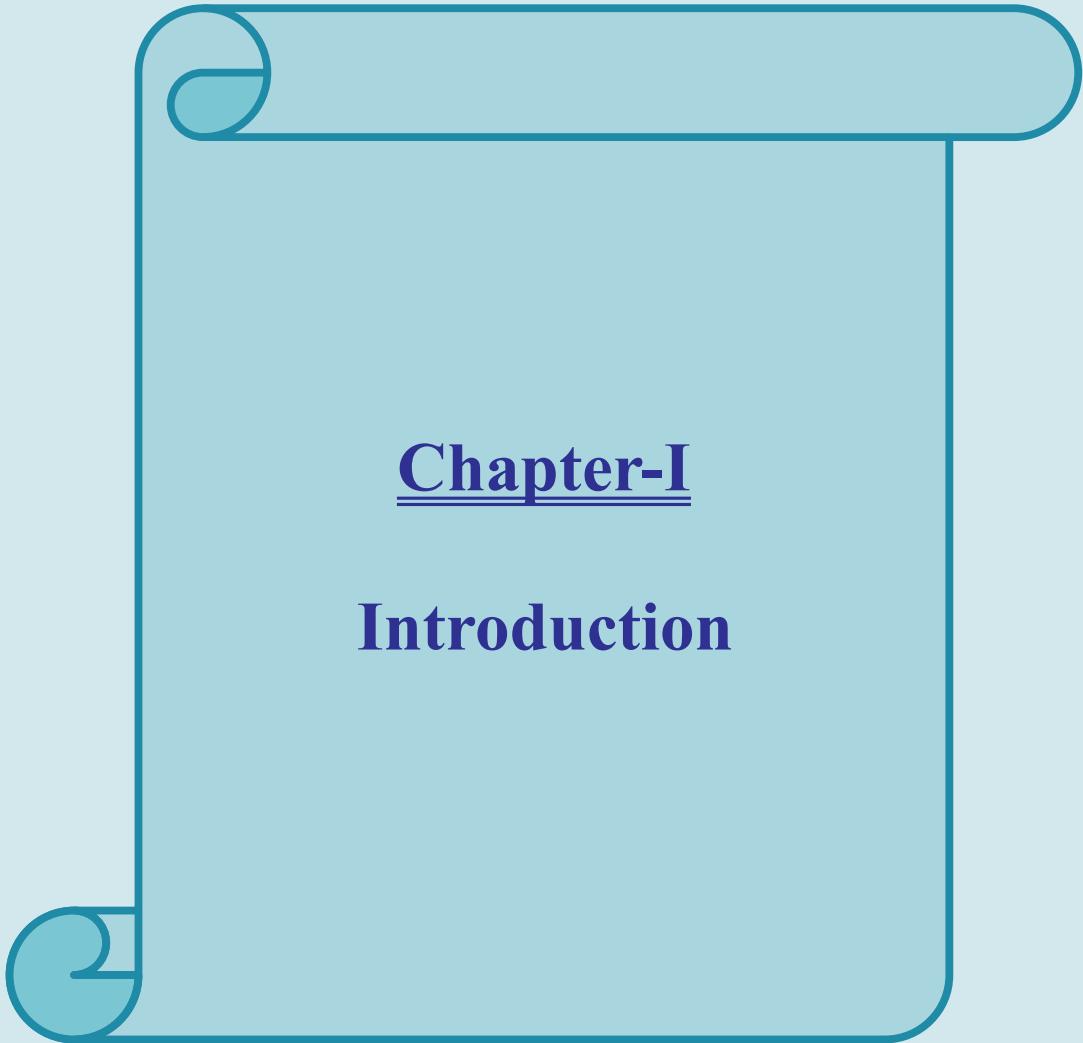
(Paragraph 3.3.14)

Adoption of higher clubbed rates for providing and placing of Cohesive non-swelling item resulted in extra cost of ₹ 1.09 crore in six WR Divisions.

(Paragraph 3.3.15)

Incorrect provision and execution of tamping in canal work as a separate item resulted in extra cost of ₹ 77.36 lakh in 12 canal lining works for 11 schemes in seven divisions. However, after being pointed out by audit, an amount ₹ 12.56 lakh has been recovered.

(Paragraph 3.3.16)



Chapter-I

Introduction

CHAPTER-I

Introduction

1.1 Budget Profile

There are 54 Departments in the State at the Secretariat level, headed by Additional Chief Secretaries/Principal Secretaries/Secretaries, who are assisted by Commissioner/Directors and subordinate officers under them. Of these, 15 Government Departments and 67 Public Sector Units (PSUs)/two Autonomous bodies coming under these Departments, are under the audit jurisdiction of the Accountant General (Economic and Revenue Sector Audit) Madhya Pradesh. These Departments were covered in audit and the major audit findings included in this Audit Report. The position of budget estimates and actuals there against by the State Government during 2011-16 is given in table 1.1.

Table 1.1: Budget and expenditure of the State Government during 2011-16

(₹ in crore)

Particulars	2011-12		2012-13		2013-14		2014-15		2015-16	
	Budget Estimates	Actual	Budget Estimates	Actual	Budget Estimates	Actual	Budget Estimates	Actual	Budget Estimates	Actual
Revenue Expenditure										
General Services	18,220.45	16,228.64	20,577.43	17,705.14	22,295.27	20,590.93	24,243.56	22,365.11	32,626.15	25,700.26
Social Services	20,277.33	20,296.94	24,992.18	24,375.47	30,100.70	27,768.21	42,092.49	32,067.15	43,217.07	42,650.93
Economic Services	12,208.06	12,964.91	14,251.77	16,823.35	17,465.48	16,971.33	27,796.22	23,715.12	27,180.85	25,528.52
Grants-in-aid and contributions	3,217.65	3,203.22	3,722.12	4,064.57	4,527.20	4,539.29	4,881.55	4,225.44	5,810.85	5,890.99
Total (1)	53,923.49	52,693.71	63,543.50	62,968.53	74,388.65	69,869.76	99,013.82	82,372.82	1,08,834.92	99,770.70
Capital Section										
Capital Outlay	8,721.93	9,055.16	10,820.22	11,566.89	11,113.61	10,812.52	14,143.36	11,877.68	18,139.56	16,835.47
Loans and advances disbursed	3,200.21	15,760.56	5,667.26	5,378.25	6,444.60	5,077.52	3,883.82	12,534.61	4,224.58	3,157.91
Inter-State settlement	0	3.70	0	7.02	0	2.36	0	0.98	0	1.94
Repayment of public debt*	6,800.10	3,149.79	7,482.72	3,583.94	8,017.43	4,004.65	9,177.00	4,920.52	8,773.17	4,860.36
Contingency fund	100.00	100.00	200.00	0	200.00	0	200.00	301.08	500.00	0
Public account disbursements	1,53,133.63	73,279.04	2,24,574.20	82,735.57	3,13,354.87	93,063.99	2,85,344.25	1,08,165.30	2,15,110.50	1,28,336.75
Closing Cash Balance	-78.79	7,775.88	-107.22	7,074.81	-123.16	4,477.03	-76.82	5,401.96	-513.02	10,898.72
Total (2)	1,71,877.08	1,09,124.13	2,48,637.18	1,10,346.48	3,39,007.35	1,17,438.07	3,12,671.61	1,43,202.13	2,46,234.79	1,64,091.15
Grand Total (1+2)	2,25,800.57	1,61,817.84	3,12,180.68	1,73,315.01	4,13,396.00	1,87,307.83	4,11,685.43	2,25,574.95	3,55,069.71	2,63,861.85

* Excluding net transactions under ways and means advances and overdraft

(Source: Finance Accounts and Budget documents)

1.2 Application of resources of the State Government

During 2015-16, total expenditure (revenue, capital, loans and advances and Inter-State settlement) of the State was ₹ 1,19,766 crore against ₹ 1,06,786 crore during 2014-15. Revenue expenditure during the year (₹ 99,771 crore) increased by 21.12 per cent over the previous year (₹ 82,373 crore). Revenue Expenditure constituted 83.30 per cent of total expenditure. Capital Expenditure during 2015-16 increased by 41.74 per cent over the previous year.

Total expenditure of the State during the period 2011-16 increased by ₹ 42,253 crore (54.51 per cent).

1.3 Grants-in-aid from Government of India

The Grants-in-aid received from the Government of India (GoI) during the years 2011-12 to 2015-16 have been given in **table 1.2**.

Table 1.2: Grants-in-aid from GoI

(₹ in crore)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Non-Plan Grants	2,114	333	3,540	4,425	3,990
Grants for State Plan Schemes	4,215	7,099	5,536	9,011	13,371
Grants for Central Plan Schemes	364	500	153	1,263	359
Grants for Centrally Sponsored Schemes	3,236	4,108	2,548	2,893	610
Grants for Special Plan Schemes	0	0	0	0	0
Total	9,929	12,040	11,777	17,592	18,330
Percentage of increase(+)/decrease(-) over previous year	9.39	21.26	(-)2.18	49.38	4.19

(Source: Finance Accounts of respective years)

1.4 Planning and conduct of audit

The audit process starts with the risk assessment of various Departments, autonomous bodies, schemes/projects, etc. criticality/complexity of activities, level of delegated financial powers, internal controls and concerns of stakeholders and previous audit findings. Based on this risk assessment, the frequency and extent of audit are decided and an Annual Audit Plan is formulated.

After completion of audit, Inspection Report (IR) containing audit findings is issued to the head of the office with request to furnish replies within four weeks. Whenever replies are received, audit findings are either settled or further action for compliance is advised. The important audit observations pointed out in these IRs are processed for inclusion in the Audit Reports of the Comptroller and Auditor General of India, which are submitted to the Governor of Madhya Pradesh under Article 151 of the Constitution of India.

During 2015-16, compliance audit of 508 Drawing and Disbursing Officers of the State and two autonomous bodies were conducted by the office of the Accountant General (Economic and Revenue Sector Audit) Madhya Pradesh. Besides, four Performance/Compliance Audits were also conducted.

1.5 Lack of responsiveness of Government to Inspection Reports

The Accountant General (Economic and Revenue Sectors Audit) Madhya Pradesh conducts periodical inspection of Government Departments by test-check of transactions and verify the maintenance of important accounting and other records as per the prescribed rules and procedures. These inspections are followed by issue of Audit IRs. When important irregularities, etc., detected during audit inspection are not settled on the spot, these IRs are issued to the heads of offices inspected, with a copy to the next higher authorities.

The heads of offices and next higher authorities are required to report their compliance to the Accountant General (AG) within four weeks of receipt of IRs. Serious irregularities are also brought to the notice of the Heads of the

Departments by the office of the AG, Madhya Pradesh through a quarterly report of pending IRs.

As of 30 June 2016, 5,894 IRs (23,411 paragraphs) were outstanding against economic sector Departments¹. Of these, 4,794 paragraphs relating to 1,773 IRs had not been settled for more than 10 years. The year-wise position of these outstanding IRs and paragraphs are detailed in **Appendix 1.1 (A and B)**.

During 2015-16, seven meetings of the High Power Committee² were held in which 536 IRs and 2,363 paragraphs were discussed, out of which 174 IRs and 1,332 paragraphs were settled.

The Departmental officers failed to take action on observations contained in IRs within the prescribed time frame resulting in erosion of accountability.

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

1.6 Response of Government to significant audit observations

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

As per the provision of Comptroller and Auditor General of India's Regulations on Audit and Accounts, 2007, the Departments are required to send their responses to draft performance audit reports/draft paragraphs proposed for inclusion in the Comptroller and Auditor General of India's Audit Reports within six weeks. It was brought to their notice that in view of likely inclusion of such paragraphs in the Report of the Comptroller and Auditor General of India, to be placed before the State Legislature, it would be desirable to include their comments in the matter. They were also advised to have meeting with the AG to discuss the draft reports of Performance Audits. These draft reports and paragraphs proposed for inclusion in the Report were also forwarded to the Additional Chief Secretaries/Principal Secretaries/Secretaries concerned for seeking their replies. For the present Audit Report, draft reports on four Performance/Compliance Audits and 16 paragraphs were forwarded to the concerned Administrative Secretaries. But replies of the Government have been received in case of two Performance Audit and 10 paragraphs only. However, discussion on audit findings has taken place with

¹ Animal Husbandry, Civil Aviation, Commerce Industries & Employment, Co-operation, Farmer Welfare and Agriculture Development, Fisheries, Forest, Horticulture & Food Processing, Madhya Pradesh Rural Road Development Authority, Narmada Valley Development, New and Renewable Energy, Public Works, Rural Industries, Tourism and Water Resources Departments.

² High Power Committee comprises of Group Officer and Branch Officer from office of the Accountant General (E&RSA) and Zonal Head of the Department (Chief Engineer/Joint Director)/Head of the Unit (Executive Engineer/Deputy Director) of the State Government.

the Government in exit conference in respect of four Performance/Compliance Audits, seven paragraphs of Water Resources Department, four paragraphs of Narmada Valley Development Authority and two paragraphs of Public Works Department.

1.7 Follow-up on Audit Reports

According to the Rules of procedure for the internal working of the Committee on Public Accounts, the Administrative Department were to initiate, *suo motu* action on audit paragraphs and reviews featuring in the Comptroller and Auditor General's of India Audit Reports (ARs) regardless of whether these are taken up for examination by the Public Accounts Committee or not. They were also to furnish detailed notes, duly vetted by Audit indicating the remedial action taken or proposed to be taken by them within three months of the presentation of the ARs to the State Legislature.

Out of total 73 paragraphs pertaining to Economic (Non-PSUs) Sectors in the Audit Reports for the years 2010-11, 2012-13, 2013-14 and 2014-15 departmental replies in respect of 21 paragraphs were not received (December 2016) (table 1.3).

Table 1.3: Receipt of departmental replies on the paragraphs included in Audit Reports of Economic Sector

Year of Audit Report	Department(s)	Departmental replies pending as of 31.12.2016	Date of presentation in the State Legislature	Due date for receipt of Departmental Replies
2010-11	Water Resources	02	12-12-2012	12-03-2013
2012-13	Water Resources	04	22-07-2014	22-10-2014
2013-14	Water Resources	01	22-07-2015	22-10-2015
2014-15	Farmer Welfare and Agriculture Development	01	17-03-2016	17-06-2016
	Madhya Pradesh Rural Road Development Authority	02		
	Public Works	02		
	Water Resources	09		
Total		21		

(Source: Data reconciled with Vidhan Sabha Secretariat)

1.8 Recoveries at the instance of Audit

The audit findings involving recoveries that came to notice in the course of test audit of accounts of the Departments of the State Government were referred to various departmental Drawing and Disbursing Officers (DDOs) for confirmation and further necessary action under intimation to audit.

During 2015-16, recovery of ₹ 146.18 crore was pointed out in audit. During the same period, the DDOs concerned had effected recovery of ₹ 39.13 crore in respect of recovery pointed in earlier years and current year. A few cases of recoveries with significant money value are given in table 1.4.

Table 1.4: Recoveries pointed out by audit and accepted/recovered by the Departments
(₹ in crore)

Department	Particulars of recoveries noticed	Recoveries pointed out in Audit and accepted by the Departments during 2015-16 in respect of earlier years and current year			Recoveries effected during 2015-16 in respect of earlier years and current year	
		Number of cases	Pointed out	Accepted	Number of cases	Amount involved
Co-operation Department	Outstanding Audit Fees	01	14.60	14.60	01	8.22
Co-operation Department	Non-recovery of share capital, loans and interest under ICDP schemes	01	12.71	12.71	01	10.55
Narmada Valley Development Department	Excess payment of price escalation	01	7.98	7.82	01	7.82
Panchayat & Rural Development Department	Extra cost for construction/upgradation of Rural roads	01	3.63	3.63	01	1.86
Public Works Department	Irregular and unauthorised payment to contractor on account of price escalation beyond the scope of agreement	01	1.36	1.36	01	1.36
Public Works Department	Non-recovery of Royalty charges	01	1.15	1.15	01	1.15

1.9 Status of placement of Separate Audit Reports of Autonomous Bodies in the State Assembly

Several Autonomous Bodies have been set up by the State Government. The audit of accounts of two autonomous bodies under the Department in Economic Sector in the State has been entrusted to the Accountant General (Economic and Revenue Sector Audit), Madhya Pradesh. The status of entrustment of audit, rendering of accounts to Audit, issuance of Separate Audit Reports (SAR) and their placement in the Legislature is given in **table 1.5**.

Table 1.5: Status of rendering Accounts of the Autonomous Bodies

Sl. No.	Name of body	Period of entrustment	Year up to which accounts were rendered	Period up to which SARs were issued	Placement of SAR in the Legislature	Delay ³ in submission/ non-submission of accounts (in months)
1	Madhya Pradesh (MP) Khadi and Village Industries Board, Bhopal	Entrustment under 19 (3) C&AG (DPC) Act	2013-14	2012-13	SARs for the year 2012-13 was issued in November 2015 and the same was placed in state legislature on 28 July 2016.	2013-14 (24) 2014-15 (15) 2015-16 (03)
2	Madhya Pradesh Electricity Regulatory Commission (MPERC), Bhopal	Entrustment vide Act of Parliament	2015-16	2014-15	SAR for the year 2014-15 was issued in September 2015 and laid in Legislature on 9 December 2015.	No delay

³ Period of delay taken from the due date of receipt of accounts i.e. 30 June of the ensuing financial year till 30 September 2016.

As seen from the **table 1.5**, there were significant delays of up to 24 months in submission of accounts by Madhya Pradesh (MP) Khadi and Village Industries Board. Inordinate delays in submission of accounts and presentation of the SARs to the State Legislature result in delays in scrutiny of the functioning of these bodies, where Government investments are made, besides delays in initiating necessary remedial action on financial irregularities in the ABs.

Chapter-II

Performance Audits

- 2.1 Implementation of National Food Security Mission**
- 2.2 Implementation of Madhya Pradesh Water Sector Restructuring Project**

Chapter-II

Performance Audits

Farmer Welfare and Agriculture Development Department

2.1 Implementation of National Food Security Mission

Executive Summary

National Food Security Mission (NFSM) is a centrally sponsored crop development scheme which aimed at achieving additional production of food grains and restoring soil health. NFSM provided for demonstration of production and protection technologies, distribution of seeds, nutrient managements, farm mechanisation and training as major interventions in the scheme. The scheme is implemented in identified districts of different States under five components (Rice, Wheat, Pulses, Coarse cereals and Commercial Crops). For 12th Five Year Plan (2012-13 to 2016-17), the scheme had set targets for additional production of 10 million tonnes of rice, 8 million tonnes of wheat, 4 million tonnes of pulses and 3 million tonnes of coarse cereals.

In Madhya Pradesh, the scheme was being implemented in eight districts under NFSM-Rice, 17 districts under NFSM-Wheat and all 51 districts under NFSM-Pulses. Since 2014-15, NFSM-Coarse cereals and NFSM-Commercial crops were being implemented in 16 districts and eight districts respectively. During 2012-13 to 2015-16, the State had incurred ₹ 945.18 crore out of ₹ 1,051.41 crore received as grants-in-aid from the Government of India for activities to be undertaken under the scheme. A performance audit of the implementation of NFSM in the State covering the period from 2012-13 to 2015-16 revealed the following:

Impact of scheme on production of food grains in NFSM districts

The objective of NFSM was to achieve additional production target of 25 million tonnes of food grains in 12th Five Year Plan period at national level. However, State Government did not communicate any target to NFSM districts. As a result, the progress of NFSM districts in achieving additional production targets during 2012-13 to 2015-16 could not be ascertained.

Two *per cent* of the total farmers in the State had been benefitted under NFSM, as such the contribution of NFSM in overall food grain production of the State was limited.

The scheme could only marginally increase the sown area of rice by five *per cent* in NFSM-Rice districts. This was substantially lower than average increase of 26 *per cent* in the sown area of rice during 2012-15 at the State level. Any of the eight NFSM-Rice districts in 2012-13, six districts in 2013-14 and five districts in 2014-15 could not attain even the average yield of rice in the State. The district wise production data of crops for the year 2015-16 was awaited as of December 2016.

The scheme could not maintain sustained growth of the wheat in NFSM districts, as the sown areas in eight out of 17 NFSM districts decreased in 2014-15 as compared to 2013-14. The average yield of wheat in NFSM

districts was 2,872 kg/hectare during 2014-15, which was lower than the State average yield of 3,079 kg/hectare. NFSM-Wheat districts also could not achieve the level of State average yield during any of the years.

The production of pulses was highest (50.43 lakh MT) during 2012-13, which was the first year of implementation of NFSM. It reduced during subsequent years to 39.18 lakh MT during 2013-14 and 43.50 lakh MT during 2014-15. However, the provisional data for production of pulses for the year 2015-16 had again indicated increase in production. Thus, the impact of NFSM on production of pulses during successive years of implementation was not conspicuous.

(Paragraph 2.1.6)

Planning

District Annual Action Plans were not prepared after obtaining inputs from the Block offices. As a result, items without demand from the farmers were also included under various interventions of NFSM.

Directorate did not prepare the perspective plan for scheme implementation in the State. The baseline survey and feasibility studies were also not conducted due to which the status of crop production, its potential and demand remained unassessed.

(Paragraph 2.1.7)

Execution of scheme interventions

Distribution of seeds: Out of budget allocation of ₹ 177.14 crore for distribution of rice, wheat, pulse and coarse cereals seeds during 2012-13 to 2015-16, Department incurred only ₹ 39.26 crore (22 per cent). The shortfall in achievement of physical targets for distribution of quality seeds was 79 per cent in high yield variety of rice seeds, 57 per cent in wheat seeds, 63 per cent in pulse seeds and 94 per cent in coarse cereal seeds. The distribution of pulse seeds in the State was decreasing during the years 2012-13 to 2015-16, which reduced to only 17 and 10 per cent during the years 2014-15 to 2015-16 respectively. The shortfall in achievement of physical targets was attributed to inadequate availability of seeds.

District offices could not ensure quality of seeds distributed to farmers, which put to risk the production and income generation of farmers. Out of 3,126 samples taken for quality testing in 17 test-checked districts, 582 samples were collected after sowing period. Out of 3,110 quality test reports received, 1,218 reports were received after sowing period. Further, 369 samples of certified seeds were found sub-standard.

(Paragraph 2.1.8)

Field demonstration: Department incurred an expenditure of ₹ 153.37 crore during the years 2012-16 on field demonstration of production and protection technologies. However, the objective of demonstration remained largely unfulfilled due to failure in preparation of comparative demonstration results of demonstration plot (for improved practices) and control plot (for farmer's practices) and lack of involvement of scientists. District offices failed to adhere the guidelines for conducting cropping system based demonstrations,

which deprived awareness generation among farmers about cropping pattern that could be adopted to increase the farm level economy.

(Paragraph 2.1.9)

Farm mechanisation: The Department did not fix the agencies and rates of farm implements as envisaged under the NFSM operational guidelines. The assistance to farmers on purchase of farm implements from unapproved agencies and on unapproved rates resulted in irregular expenditure of ₹ 261.81 crore.

The Department did not adhere subsidy norms on sprinkler sets and ‘pipe for carrying water from source to field’, which resulted in irregular excess assistance of ₹ 5.11 crore to 8,337 farmers in 14 districts.

(Paragraph 2.1.11)

Fund Management

Out of ₹ 1,062.92 crore available for implementation of NFSM in the State, Department utilised ₹ 945.18 crore (88 *per cent*) during 2012-13 to 2015-16. However, the utilisation of NFSM fund had a decreasing trend, as it reduced from 95 *per cent* in 2012-13 to 64 *per cent* in 2015-16. Directorate released ₹ 26.63 crore in eight test-checked districts during 2012-13 and 2013-14 for implementation of NFSM-wheat, but these districts were not covered under the scheme.

(Paragraph 2.1.15)

Monitoring of the scheme

The scheme was implemented in the State through Directorate of Farmers Welfare and Agriculture Development and its district offices. However, the operational guidelines for NFSM provided implementation of scheme at district level through ‘Agricultural Technology Management Agency’, which consisted of representatives of all line departments concerning agriculture and allied sectors, research institutions at the district level and farmer’s organisations. As a result of this deviation, the interventions under NFSM could not be dovetailed with Strategic Research and Extension Plan of Districts.

District level project management teams, which was responsible to help in implementation and monitoring of the scheme, were not functional in most cases. Further, the activities of mission was not reviewed by State Food Security Mission Executive Committee.

(Paragraph 2.1.16)

2.1.1 Introduction

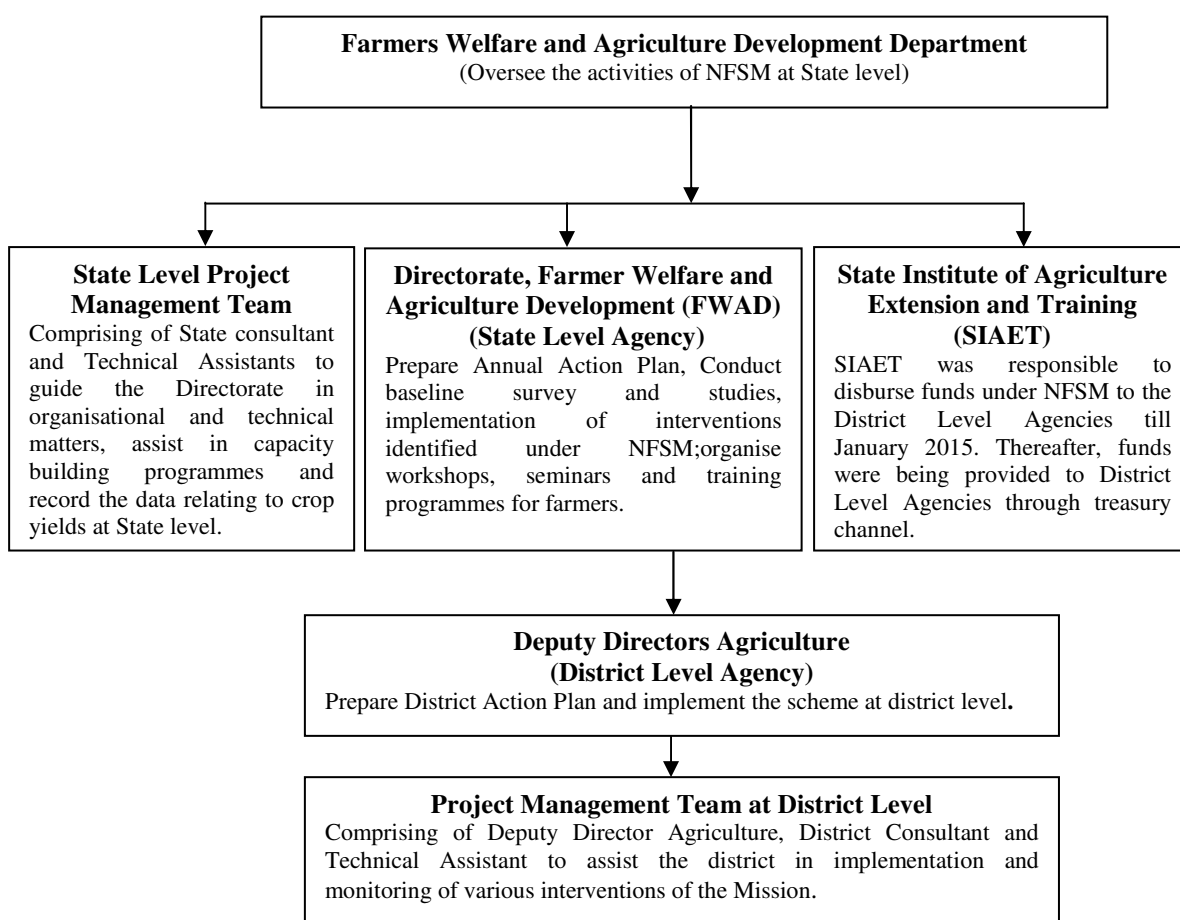
National Food Security Mission (NFSM), launched as a Centrally Sponsored Scheme by Government of India (GoI) (October 2007) during the 11th Five Year Plan, is a crop development scheme that aimed at achieving additional production of food grains and restoring soil health. The scheme was continued during the 12th Five Year Plan (2012-13 to 2016-17) setting new targets of additional production of 25 million tonnes of food grains comprising of 10 million tonnes of rice, 8 million tonnes of wheat, 4 million tonnes of pulses and 3 million tonnes of coarse cereals by the end of the 12th Five Year Plan.

The scheme had been implemented in identified districts of different States under five components, viz., NFSM-Rice, NFSM-Wheat, NFSM-Pulses, NFSM-Coarse cereals and NFSM-Commercial Crops.

In Madhya Pradesh, the scheme was being implemented in eight districts under NFSM-Rice, 17 districts under NFSM-Wheat and all 51 districts under NFSM-Pulses. Since 2014-15, NFSM-Coarse cereals and NFSM-Commercial crops were being implemented in 16 districts¹ and eight districts² respectively. During 2012-13 to 2015-16, the State had incurred ₹ 945.18 crore out of ₹ 1,051.41 crore received as grants-in-aid from the GoI for activities to be undertaken under the scheme.

2.1.2 Organisational set-up

The organisational set up for implementation of NFSM in the State is shown in the following chart:



2.1.3 Audit Objectives

The performance audit was conducted to ascertain whether:

- the objectives of the scheme to increase the production of food grains in the identified districts, restoration of soil fertility and productivity at the individual farm level, were achieved;

¹ Alirajpur, Badwani, Betul, Chhindwara, Dhar, Dindori, Khargone, Jhabua, Mandla, Mandsaur, Morena, Rajgarh, Ratlam, Shajapur, Shivpuri and Singrauli

² Badwani, Betul, Burhanpur, Gwalior, Harda, Hoshangabad, Khargone and Narsinghpur

- interventions were properly planned and executed efficiently and effectively as per the operational guidelines of the scheme, and requisite records and data were maintained at various levels;
- funds were released, accounted for and utilised by the agencies in compliance with the provisions of the scheme; and,
- monitoring and evaluation had been done as envisaged under NFSM.

2.1.4 Audit Criteria

The audit findings were benchmarked against the following criteria:

- NFSM guidelines (12th Five Year Plan)
- NFSM Commercial crops Operational Guidelines (12th Five Year Plan)
- Provision of General Financial Rules
- Instructions issued through Government orders from time to time
- Impact Evaluation Report of the Scheme

2.1.5 Scope and methodologies of audit

The implementation of NFSM in the State during the period 2012-16 was reviewed in the Performance Audit conducted during January 2016 to July 2016. For test check of records, 17 districts³, out of 51 districts in the State, were selected on random sampling method. These selected districts included five NFSM-Rice districts, seven NFSM-Wheat districts, 17 NFSM-Pulse districts, five NFSM-Coarse cereals districts and three NFSM-Commercial crop districts (**Appendix 2.1**). The records of offices of Deputy Directors, Agriculture in the selected districts were test checked during the performance audit. In addition, scheme related information was also collected from the Directorate, Farmer Welfare and Agriculture Development. A beneficiary survey was also carried out to assess the satisfaction amongst beneficiaries of various interventions implemented in NFSM.

The audit objectives, scope, criteria and methodology were discussed with the Principal Secretary, Farmer Welfare and Agriculture Development Department in the entry conference held on 24 February 2016. The exit conference was held on 10 November 2016 with the Principal Secretary to discuss the audit findings. The reply of the Government on the draft report was received in December 2016. Views expressed during the exit conference and replies of Government have been incorporated suitably in the report.

Audit findings

2.1.6 Production of food grains

Madhya Pradesh has received National Krishi Karman Award⁴ 2012-13 and 2014-15 for achieving highest food grain production and National Krishi Karman Award 2013-14 for achieving highest wheat production. The sown

³ Bhind, Chhattarpur, Damoh, Dhar, Dindori, Guna, Harda, Hoshangabad, Indore, Khargone, Mandla, Panna, Shajapur, Sidhi, Seoni, Ujjain and Vidisha.

⁴ An yearly award given under NFSM to best performer States for raising country's food grain production

areas of rice, wheat and pulses, their production and yields in the State during 2012-13 to 2015-16 over the base year level (i.e., 2011-12 for implementation of NFSM during 12th Five Year Plan) were as shown in the **table 2.1.1**.

Table 2.1.1: Year wise position of sown areas, production and yield of rice, wheat and pulses in Madhya Pradesh

Year	Sown area (in 000' hectare)			Production (in 000' MT)			Yield (in kg/ha)		
	Rice	Wheat	Pulse	Rice	Wheat	Pulse	Rice	Wheat	Pulse
2011-12 (Base Year)	1,703	5,261	4,763	2,280	14,544	3,718	1,339	2,764	781
2012-13	1,801	5,613	5,329	3,113	16,518	5,043	1,728	2,943	946
2013-14	1,930	5,976	4,832	5,361	17,478	3,918	2,778	2,925	810
2014-15	2,153	6,002	4,911	5,438	18,480	4,350	2,526	3,079	885
2015-16 (Provisional)	2,024	5,911	5,267	5,614	18,510	5,125	2,774	3,131	973

(Source: State Land Records data provided by the Directorate, Farmer Welfare and Agriculture Development)

Table 2.1.1 indicates that the production of food grains increased over the base year levels. The percentage increase was 146 *per cent* in rice, 27 *per cent* in wheat and 38 *per cent* in pulses. The growth in production could be attributed to increase in the sown areas as well as increase in per hectare yields of the respective crops with inter-year variations. However, the yield of rice decreased by nine *per cent* in the year 2014-15 as compared to the previous year and the yield of pulses decreased by 14 *per cent* during 2013-14 with reference to 2012-13.

The Government stated (December 2016) that the productivity of wheat and pulses in 2013-14 affected due to less rainfall and hailstorm. The Government further stated that the productivity of rice in 2014-15 affected due to pre-monsoon rain and less rainfall during the rainy season.

Implementation of NFSM Coarse Cereals and Commercial crops in the State was commenced from the year 2014-15. The overall status of production of coarse cereals and commercial crops with base year 2013-14 was as depicted in **table 2.1.2**.

Table 2.1.2: Sown area, production and yield of Coarse Cereals (CC) and Commercial crops (Sugarcane: S, Cotton: C)

Year	Sown area (in 000' hectare)			Production (in 000' MT)			Yield (in kg/ha)		
	CC	Commercial crops		CC	Commercial crops		CC	Commercial crops	
		S	C		S	C		S	C
2013-14 (Base Year)	1,535	73	514	2,934	3,623	1,090	1,911	49,630	2,120
2014-15	1,711	111	636	3,428	4,567	1,243	2,004	41,144	1,954
2015-16 (Provisional)	1,700	103	547	4,295	7,750	1,070	2,526	75,243	1,956

(Source: State Land Records data provided by the Directorate, Farmer Welfare and Agriculture Development)

As depicted in **table 2.1.2**, the production of coarse cereals and commercial crops increased over the base year (2013-14) levels by 46 *per cent* and 114 *per cent* respectively. However, there was 17 *per cent* decrease in yield of sugarcane during 2014-15, though the provisional figures of 2015-16 indicated

52 *per cent* increase in its yield. The production of cotton decreased from 1,090 tonne in 2013-14 to 1,070 tonne in 2015-16 and its yield also declined by eight *per cent* in the year 2014-15 and 2015-16 as compared to the year 2013-14. Directorate informed (February 2017) that the decline in production of cotton was due to unavailability of indigenous cotton seeds and change of cotton area to pulses area.

2.1.6.1 Production of food grains in NFSM districts

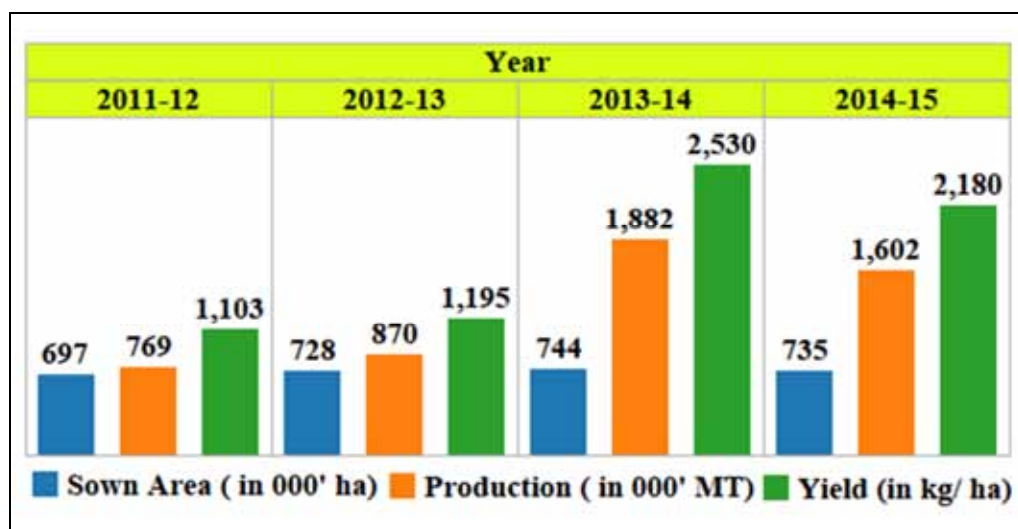
The targets for additional production were not fixed for NFSM districts.

The objective of NFSM was to achieve additional production target of 25 million tons of food grains at national level. However, Directorate of Farmer Welfare and Agriculture Development informed (January 2017) that GoI had not communicated any target for production under NFSM and also State Government had not fixed any target for NFSM scheme. In the absence of any production targets, the progress of NFSM districts with reference to the scheme objectives to achieve additional production targets for different food grains could not be ascertained in audit.

The sown area, production and yield of three components (Rice, Wheat and Pulses) in NFSM districts of the State during 2011-12 (Base Year) to 2014-15 were as shown in **charts 2.1.1, 2.1.2 and 2.1.3**. The Department could not provide (December 2016) the district-wise data for 2015-16 due to which the performance of NFSM (Rice and Wheat) districts during 2015-16 and overall performance under NFSM (Coarse cereals and Commercial Crops) were not available.

- **Impact of the scheme in NFSM-Rice districts**

Chart 2.1.1: Sown area, production and yield of rice in districts under NFSM-Rice



The scheme could only marginally increase the sown area of rice.

NFSM-Rice was implemented in eight⁵ districts of Madhya Pradesh. As indicated in **chart 2.1.1**, there was marginal increase of five *per cent* in the sown area of rice during 2014-15 in NFSM districts as compared to the year 2011-12. However, this increase was substantially lower than the average growth rate of 26 *per cent* in the sown areas of rice at State level. Further, the average yield of rice in NFSM districts was 2,180 kg/hectare in 2014-15, which was less than average yield of 2,526 kg/hectare at State level. The eight

⁵ Anuppur, Damoh, Dindori, Katni, Mandla, Panna, Rewa and Sidhi

districts under NFSM-Rice in 2012-13, six districts in 2013-14 and five districts in 2014-15 could not achieve the average yield of the State, as detailed in **Appendix 2.2**.

There was substantial increase in yield of rice from 1,195 kg/hectare during 2012-13 to 2,530 kg/hectare during 2013-14. The Directorate stated (December 2016) that use of hybrid and high yielding variety seeds, adoption of System of Rice Intensive technique etc. by the farmers contributed to the increase. The reasons attributed for sudden rise in the yield of rice was doubtful, as the actual distribution of hybrid and high yield varieties seeds was quite less in 2013-14 (2,948 quintal) as compared to 2012-13 (8,264 quintal), as discussed in succeeding paragraph 2.1.8.1. Further, three districts (Katni, Mandla and Sidhi) had steep growth of yield in 2013-14 followed by abrupt decline of yield in 2014-15, as depicted in **table 2.1.3**, which necessitates a review of data related to yield and production of NFSM-Rice districts during 2013-14 by the Department.

Table 2.1.3: Statement showing yield of Rice in the three NFSM Districts

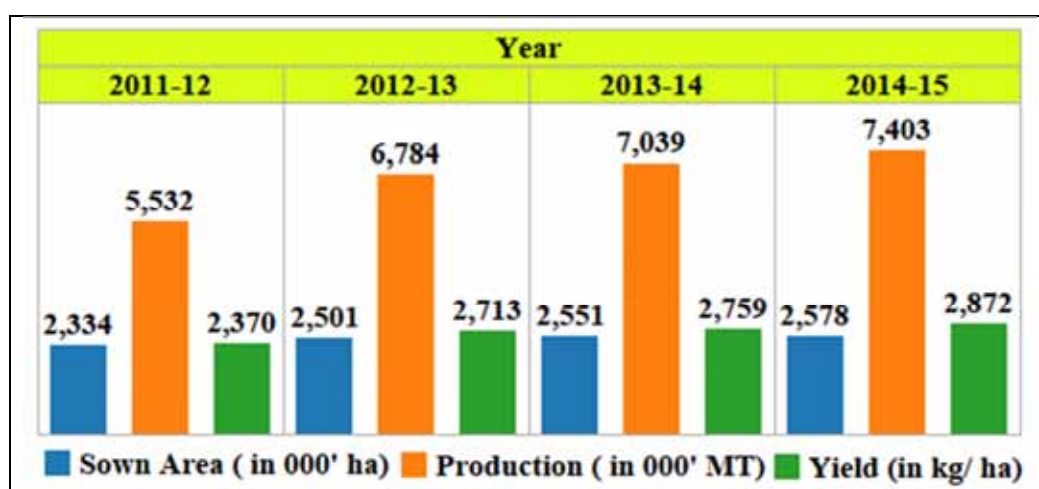
District	Yield of rice in kg/hectare during 2012-15		
	2012-13	2013-14	2014-15
Katni	1,226	3,729	2,182
Mandla	672	2,634	1,515
Sidhi	1,398	2,464	1,232

The Government stated (December 2016) that the percentage growth in production in NFSM districts was almost equal to the average growth of production at State level. It further stated that during 2014-15 the production of rice affected due to less monsoon. However, efforts were made to increase the production by advising farmers to use modern agricultural techniques.

The reply of Government is not acceptable, as the scheme could only marginally increase the sown area of rice in these districts which was quite lower than average increase in the State as a whole. Further, NFSM districts could not attain even the average yield of rice at State level during 2012-15.

- **Impact of the scheme in NFSM-Wheat districts**

Chart 2.1.2: Sown area, production and yield of wheat in districts under NFSM-Wheat



The average yield of wheat in NFSM districts was less than State average.

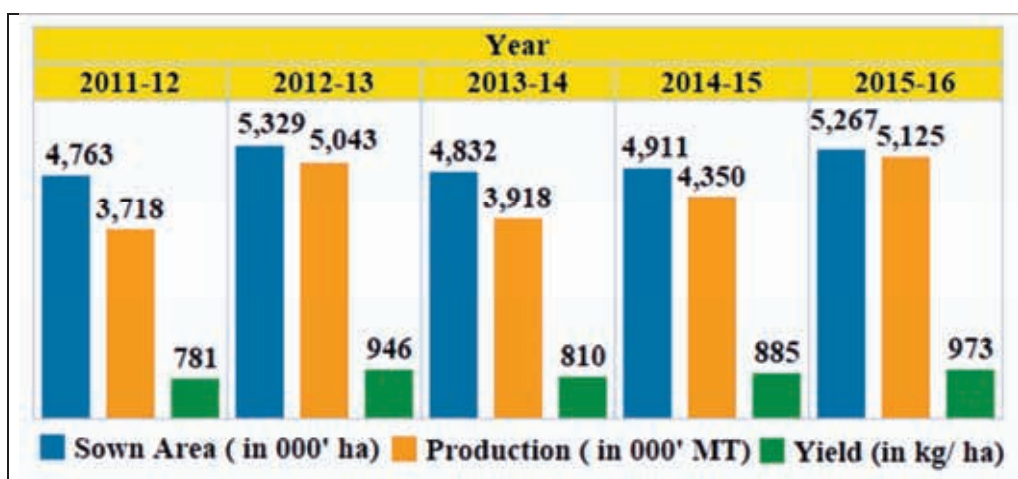
NFSM-Wheat was implemented in 17 districts⁶ of the State. As indicated in **chart 2.1.2**, the production of wheat in the NFSM districts increased from 55.32 lakh MT in 2011-12 to 74.03 lakh MT in 2014-15. However, the average yield of wheat in NFSM districts was 2,872 kg/hectare in 2014-15, which was much below the State average of 3,079 kg/hectare. Out of 17 NFSM-Wheat districts, only five districts⁷ in the year 2012-13, five districts⁸ in the year 2013-14 and seven districts⁹ in 2014-15 could achieve yield above the State average, as depicted in **Appendix 2.3**.

The Department stated (December 2016) that low productivity districts were identified for implementation of NFSM-Wheat. The percentage growth in production in NFSM districts was more than the average growth of production at State level.

The reply of Government is not acceptable, as NFSM districts could not attain even the average yield of wheat at State level during 2012-16. Further, the scheme could not provide sustained growth of the wheat production in NFSM districts and the sown areas in eight districts (Ashok Nagar, Chhattarpur, Katni, Panna, Rajgarh, Sagar, Shivpuri and Tikamgarh) decreased in 2014-15 as compared to previous year.

- **Impact of the scheme in NFSM-Pulses districts**

Chart 2.1.3: Sown area, production and yield of pulses in districts under NFSM-Pulses



Production level of pulses during the year 2012-13 could not be achieved in subsequent years.

All 51 districts of the State were selected under NFSM-Pulses during 12th Five Year Plan as against 20 districts in 11th Five Year Plan. As indicated in **chart 2.1.3**, there was marginal increase of three *per cent* in the sown area of pulses in the State during 2011-12 to 2014-15. The production of pulses was the highest during 2012-13, which was the first year of implementation of NFSM and it substantially decreased during subsequent years. However, the provisional data for production of pulses for the year 2015-16 had again indicated increase in production. Thus, the impact of NFSM on pulses was not conspicuous.

⁶ Ashoknagar, Chhattarpur, Guna, Katni, Khandwa, Khargone, Panna, Raisen, Rajgarh, Rewa, Sagar, Satna, Shivpuri, Sidhi, Seoni, Tikamgarh and Vidisha

⁷ Guna, Khandwa, Raisen, Satna and Shivpuri

⁸ Guna, Raisen, Satna, Shivpuri and Seoni

⁹ Guna, Khandwa, Khargone, Raisen, Rajgarh, Rewa and Satna

The Government stated (December 2016) that adverse climatic conditions affected production of Pulses during the years 2013-14 and 2014-15.

As evident from above, NFSM districts could not achieve the average yield of the State in rice and wheat. The average yield of pulses decreased in the State. Further, as production targets were not provided to the NFSM districts, the achievement of these districts could not be measured. Moreover, only two *per cent* of the total farmers in the State had been benefitted under NFSM, as such the contribution of NFSM in overall food grain production of the State was limited.

2.1.7 Planning

2.1.7.1 Preparation of Annual Action Plans

Inputs from district level PRIs/Block offices were not obtained for preparation of the District Action Plans

Paragraph 8.1 of NFSM guidelines stipulated that the District Food Security Mission Executive Committee (DFSMEC) would prepare the Annual Action Plan (AAP) at district level keeping in view their priority and potential and submit the same to the State level agency. DFSMEC would have representatives of line Departments, *Krishi Vigyan Kendras*, Agricultural Technology Management Agency (ATMA) and Self Help Groups of Farmers. Further, inputs from district level Panchayati Raj Institutions (PRIs) was to be obtained for preparation of AAP. State level agency would prepare State AAP based on district AAPs, which would be vetted by the State food Security Mission Executive Committee (SFSMEC) and submitted to the Ministry of Agriculture, GoI for approval.

Audit scrutiny revealed that district AAPs in test checked districts were prepared by Deputy Directors of Agriculture instead of DFSMECs. Inputs from the district level PRIs/block offices district AAPs were also not obtained for preparation of district AAPs. Thus, district AAPs were not prepared after required consultation of stakeholders.

Two DDAs, Khargone and Sidhi intimated that AAP was prepared by adding 10 *per cent* to the progress achieved during the preceding year. DDA Shajapur intimated that they implemented the targets received from the Directorate. Eleven¹⁰ DDAs intimated that the AAPs were prepared after discussion with the Block offices in the weekly meetings. However, these 11 DDAs could not produce minutes of meeting with block offices. Further, no information was received from three DDAs (Bhind, Panna and Harda).

The Government stated (December 2016) that AAPs were prepared at District level after deliberations with the *krishi sthai samiti*¹¹. All district offices have been instructed to maintain minutes of such meetings.

The reply is not acceptable, as DDAs had not informed this practice being adopted by them before preparation of AAPs. As a result of not taking input from Block offices/PRIs, items without demand from the farmers were also included under various interventions as discussed in paragraphs 2.1.8, 2.1.11 and 2.1.13.1.

¹⁰ Chhattarpur, Damoh, Dhar, Dindori, Guna, Hoshangabad, Indore, Mandla, Seoni, Ujjain and Vidisha

¹¹ *Krishi Sthai Samiti* is a committee established under the three tier *Panchayati Raj* system.

Perspective plan and baseline survey was not conducted to determine the status of crop production, its potential and demand.

2.1.7.2 Preparation of Perspective Plan and conduct of Baseline Study

Paragraph 4.2.4 of the guidelines stipulates that State level agency will prepare perspective plan in consonance with the mission's goals and objectives in close co-ordination with the State Agriculture Universities and Indian Council of Agricultural Research. The State Level Agency also had to organise/conduct baseline survey and feasibility studies in the area of operation (district, sub-district or a group of districts) to determine the status of crop production, its potential and demand.

Audit scrutiny revealed that the Directorate, which was the State level agency for NFSM, did not prepare the perspective plan. The baseline survey and feasibility studies were also not conducted due to which the level of crop productivity and its potential remained unassessed.

The Government stated (December 2016) that AAPs received from districts, suggestions received from State Agricultural Universities and tentative outlay/programme received from GoI were taken into consideration for preparing the State level AAP. In respect of conducting baseline survey, the Government replied that this was done on the basis of data provided by the State Land Record.

The reply is not acceptable, as State level agency did not prepare the perspective plan though required under the scheme. Further, State Land Record data did not contain the database of potential and demand of crop in the areas of operation, which was to be assessed in baseline survey and feasibility studies under NFSM.

2.1.8 Execution of Interventions

In order to enhance the efficiency of the farmers in performing field operations and economise upon the cost of cultivation, NFSM guidelines provided for following major interventions:

- Accelerated Crop Production Programme (ACPP), under which demonstrations of production and protection technologies in cropping system based mode was to be done;
- Need based inputs, which had distribution of hybrid/certified seed, nutrient management/soil ameliorants¹², plant protection measures, farm mechanisation and training as its sub-interventions; and,
- Award for the best performing districts and local initiatives.

Each intervention had an interactive role with other interventions and their synchronised implementation under each crop component could only produce the intended results. The intervention-wise shares in budget allotment were as shown in **table 2.1.4**.

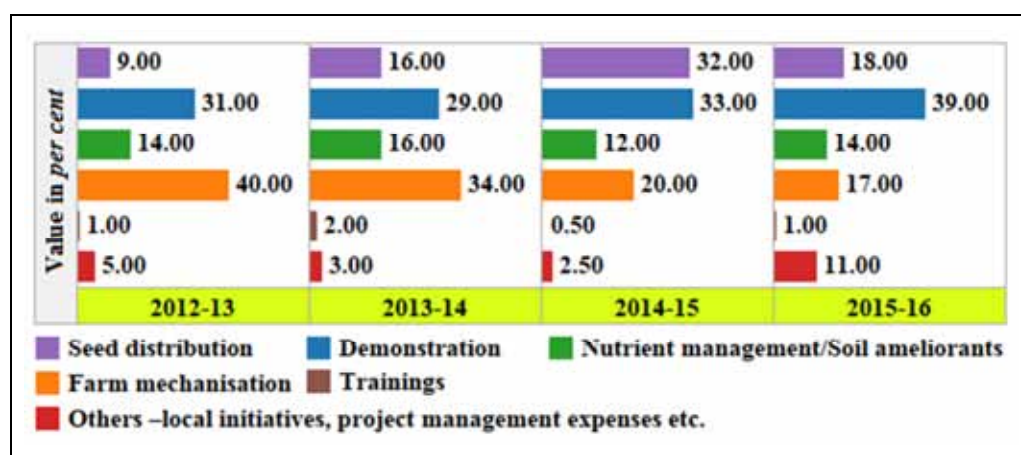
¹² Stuff that makes the soil more pleasant for plants to grow in and/or provide nutrients for the soil.

Table 2.1.4: Budget allocation during 2012-16 for interventions under NFSM

Name of intervention	Allocation during 2012-16	
	Amount in ₹ lakh	Allocation per cent
Seed distribution	17,714	20
Demonstration	30,125	33
Nutrient management/soil ameliorants	12,511	14
Farm mechanization	23,907	27
Trainings	978	1
Others –local initiatives, project management expenses, etc.	4,885	5
Total	90,120	100

The share of the above interventions during the years 2012-13 to 2015-16 was as depicted in **chart 2.1.4**.

Chart 2.1.4: Showing the share of various interventions



As evident from the **chart 2.1.4**, the budget allocation on ‘farm mechanisation’ decreased during successive years from 40 *per cent* in the year 2012-13 to 17 *per cent* in the year 2015-16. The share of allocation under ‘seed distribution’ increased from nine *per cent* in the year 2012-13 to 32 *per cent* by the year 2014-15, but it decreased to 18 *per cent* in 2015-16. The pattern of budget allocations, as indicated in **table 2.1.4** and **chart 2.1.4** did not indicate any synchronisation in interventions implemented under the scheme. The component-wise intervention targets and achievements in the selected districts are discussed in the succeeding paragraphs.

2.1.8.1 Distribution of Seed

Seed is one of the most critical inputs for enhancing productivity of crops. Paragraph 14.2.1 of NFSM operational guidelines stipulated that seed producing agencies¹³ authorised by the State would distribute seeds to the farmers in selected districts. The norms for assistance to the farmers for purchase of seeds was as detailed in **table 2.1.5**.

¹³ National Seed Corporation (NSC)/State Seed Corporations (SSCs)/State Agricultural Universities (SAUs)/Indian Council for Agricultural Research (ICAR) Institutes/Private Companies.

Table 2.1.5: Norms for assistance to the farmers for purchase of seeds

Name of crop	Hybrids	Varieties less than 10 years
Rice	₹ 50/kg or 50 per cent of cost, whichever is less	₹ 10/kg
Wheat	--	₹ 10/kg
Pulses	--	₹ 25/kg or 50 per cent of cost, whichever is less
Coarse cereals	₹ 50/kg	₹ 15/kg or 50 per cent of cost, whichever is less

There was shortfall in achieving targets for distribution of rice, wheat, pulses and coarse cereal seeds in NFSM districts.

Out of budget allocation of ₹ 177.14 crore for distribution of rice, wheat, pulse and coarse cereal seeds during 2012-13 to 2015-16, Department could incur only ₹ 39.26 crore. The crop wise status of physical target and achievement under this intervention was as follows:

Distribution of rice seeds

The physical targets and achievements of rice seeds during the years 2012-13 to 2015-16 were as shown in **table 2.1.6**.

Table 2.1.6: Physical targets and achievements of Distribution of rice Seed

(in quintals)

Year	Hybrid Varieties						High Yielding Varieties					
	In eight NFSM-Rice Districts			Test Checked Districts (five districts)			In eight NFSM-Rice Districts			Test Checked Districts (five districts)		
	T	A	Per cent	T	A	Per cent	T	A	Per cent	T	A	Per cent
2012-13	500	1,464	293	175	110	63	15,000	6,800	45	6,720	2,216	33
2013-14	2,000	71	4	760	0	0	20,000	2,877	14	8,200	1,395	17
2014-15	5,900	52	1	2,170	0	0	31,000	2,002	6	11,300	288	3
2015-16	2,400	8	0	1,800	0	0	15,000	5,236	35	13,600	5,068	37
Total	10,800	1,595	14.77	4,905	110	2	81,000	16,915	21	39,820	8,967	23

(Source: Progress report of the District offices)

Thus, the distribution of hybrid and high yield variety rice seeds in the NFSM districts was only 15 per cent of target for hybrid and 21 per cent of target for distribution of high yielding varieties of rice seeds during the years 2012-16.

Distribution of wheat seeds

During the years 2012-14, assistance was provided to farmers for purchase of certified wheat seed “varieties less than 10 years”. However, assistance for purchase of High Yield Varieties was provided during the years 2014-15 to 2015-16. The physical targets and achievements in distribution of wheat seeds during the years 2012-16 were as shown in **table 2.1.7**.

Table 2.1.7: Physical targets and achievements of Distribution of Wheat Seed

(in quintals)

Year	In 17 NFSM-Wheat Districts			Test checked (seven districts)		
	Target	Achievement	Achievement per cent	Target	Achievement	Achievement per cent
2012-13	1,40,000	1,07,983	77.13	25,471	16,697	65.55
2013-14	2,40,000	1,17,873.80	49.11	46,000	16,070	34.93
2014-15	2,40,000	42,040.57	17.52	84,000	20,483	24.38
2015-16	68,004	25,843	38.00	32,860	9,190	27.96
Total	6,88,004	2,93,740.37	42.69	1,88,331	62,440	33.15

(Source: Progress report of the District offices)

Thus, there was substantial shortfall in achieving targets for distribution of wheat seeds. Directorate informed (January 2017) that target for 2015-16 was kept low in view of the tentative outlay communicated by GoI. However, the achievement against even the reduced target was dismal.

Distribution of Pulse seeds

NFSM-Pulse was implemented in all 51 districts. During the years 2012-14, assistance was provided to farmers for purchase of pulse seed varieties ‘less than 10 years old’ and ‘more than 10 years old’. During the years 2014-16, assistance was provided for purchase of high yield varieties. The physical targets and achievements of distribution of pulse seeds were as shown in **table 2.1.8**.

Table 2.1.8: Physical targets and achievements of Distribution of Pulse Seed (in quintals)

Year	Seed variety	State (51 districts)			Test checked (17 districts)		
		Target	Achievement	Achievement per cent	Target	Achievement	Achievement per cent
2012-13	< 10 years	16,500	14,837	90	7,170	12,315	172
	>10 years	50,590	41,429	82	22,250	17,869	80
2013-14	< 10 years	32,000	26,015	81	25,797	19,065	74
	>10 years	1,53,650	1,12,650	73	74,848	70,839	95
2014-15	HYV	2,65,000	45,656	17	1,21,460	42,674	35
2015-16	HYV	1,80,080	18,116	10	75,790	10,298	14
Total		6,97,820	2,58,703	37	3,27,315	1,73,060	53

(Source: Progress report of the District offices)

Thus, the progress in distribution of pulse seeds in the State as a whole was decreasing during the years 2012-13 to 2015-16, which reduced to only 17 and 10 per cent during the years 2014-15 to 2015-16 respectively.

Distribution of Coarse Cereal seeds

NFSM-coarse cereal was implemented in the State from the year 2014-15. The achievement of distribution of Coarse Cereal seeds during the years 2014-16 were as given in **table 2.1.9**.

Table 2.1.9: Targets and Achievements of Distribution of Coarse Cereal seeds (in quintals)

Year	Hybrid						High Yielding Varieties					
	State (16 districts)			Test Checked District (five districts)			State			Test Checked Districts (five)		
	T	A	Per cent	T	A	Per cent	T	A	Per cent	T	A	Per cent
2014-15	4,450	905	20.33	1,411	180	12.75	6,500	169	2.6	1,316	0	0
2015-16	9,499	0	0	1,100	0	0	9,736	835	8.57	1,050	0	0
Total	13,949	905	6.48	2,511	180	7.17	16,236	1,004	6.00	2,366	0	0

(Source: Progress report of the District offices)

As indicated in **table 2.1.9**, the progress in distribution of hybrid and high yield variety Coarse Cereal seeds in the State was meagre, as only six per cent targets for distribution of hybrid and high yield variety Coarse cereal seeds could be achieved during the years 2014-16.

Thus, the overall performance in the State in distribution of quality seeds to farmers was deficient in all the crop components. Test checked districts

intimated unavailability of seeds, lack of demand from farmers etc. as the reason for meagre achievement. It is pertinent to mention that 250 out of 260 beneficiaries of this intervention reported in the beneficiary survey that they had achieved higher yield by using seeds provided by the department. This necessitates a review in the mechanism of seed distribution to interested farmers so as to achieve the additional production targeted under the NFSM scheme.

The Government stated (December 2016) that targets of distribution of rice, wheat and pulse seeds were affected due to inadequate availability of high yielding varieties (below 10 years) and distribution of coarse cereal seeds due to problem in availability of hybrid/high yield varieties. Efforts would be made to ensure availability of seeds during the coming season.

The reply is not acceptable, as the State Government was responsible for ensuring availability of quality seeds for distribution to beneficiary farmers.

2.1.8.2 *Functioning of District Seed committee*

Paragraph 12.5 of operational guidelines stipulated that a district level Seed Committee will be constituted by the Chairman of the DFSMEC to ensure availability and distribution of seeds to the farmers. The seed committee had to verify the list of beneficiaries for seeds, its indent and its ultimate distribution to end users.

Audit scrutiny revealed that, Seed Committee was not constituted in five¹⁴ out of test checked 17 districts. In remaining 12 districts, where these committees were formed, it could not be ascertained from records as to whether the seed committees verified the list of beneficiaries for seeds and its distribution.

The Government stated (December 2016) that instructions had been issued to the district offices for setting up District Seed Committees and conduct regular meetings.

2.1.8.3 *Quality of seeds*

Quality of seeds distributed to farmers is being regulated under the Seed Act 1966, vide which no person shall carry on the business of selling, keeping for sale, offering to sell, bartering or otherwise supplying any seed of any notified kind or variety, unless such seed conforms to the minimum limits of germination and purity. NFSM envisages for distribution of certified seeds to farmers.

Audit scrutiny revealed that test checked 17 districts received a target of conducting 3,766 seed quality tests from the Directorate during the years 2014-15 and 2015-16, out of which 3,126 (83 *per cent*) seed samples were taken as detailed in **Appendix 2.4**. Seeds were to be sampled and tested before distribution to farmers. However, 582 samples were collected after the sowing period (*Kharif*: last week of June to 1st week of July; *Rabi*: mid-October to first week of November) in seven¹⁵ test checked districts.

Out of 3,110 reports for quality tests received, 1,218 results were received after the sowing period. Further, 369 samples of certified seeds (11.86 *per cent*

Quality of seeds were not ensured due to delay in taking samples and receipt of results after the sowing period.

¹⁴ Hoshangabad, Mandla, Sidhi, Ujjain and Vidisha

¹⁵ Damoh, Dhar, Hoshangabad, Mandla, Sidhi, Ujjain and Vidisha

of total reports received) were found sub-standard. The quantum of seeds distributed from these substandard lots could not be verified, as related records were not made available.

Delay in taking samples and delayed receipts of quality test reports of seeds led to sowing of substandard seeds by the farmers, which put to risk, the production and income generation of farmers.

The Government stated (December 2016) that instructions had been issued to district offices for timely collection of seed samples and the strict compliance would be ensured.

2.1.9 Field demonstrations

Under NFSM scheme, field demonstration of production and protection technologies was to be conducted on cropping system as well as on sole crop. At least 30 *per cent* demonstrations were to be done on cropping system based approach. The demonstrations were to be conducted by dividing the fields in two blocks, one for improved practices (Demonstration plot) and the other for farmer's practices (Control plot). The District Consultants/Technical Assistants of NFSM were to monitor the conduct of demonstrations and report the outcome in prescribed format to the district level Project Management Team (PMT).

Selection of beneficiaries was to be done adopting participatory approach by holding meetings in the village by explaining the objectives of the demonstrations. The cost of demonstration for one hectare area for sole crop was ₹ 7,500 and ₹ 12,500 for a cropping sequence, while the cost of demonstration for one hectare area for coarse cereals was ₹ 5,000.

Year-wise targets and achievement of demonstration in the State and selected districts during 2012-16 are indicated in **Appendix 2.5**. An abstract thereof is given in the **table 2.1.10**.

Table 2.1.10: Targets and Achievement of Demonstrations during 2012-13 to 2015-16

(Physical in numbers and Financial ₹ in crore)

Intervention	State				Test checked Districts			
	Physical		Financial		Physical		Financial	
	Target	Achievement	Target	Achievement	Target	Achievement (per cent)	Target	Achievement (per cent)
Rice	17,948	16,308	13.46	9.42	11,445	8,914 (77.89)	8.93	5.14 (57.46)
Wheat	71,761	73,306	69.55	52.08	30,330	29,245 (96.42)	27.26	22.11 (81.11)
Pulse	4,89,393	5,04,112	316.90	282.38	2,42,234	2,41,203 (99.57)	141.71	123.40 (87.08)
Coarse Cereals	46,580	29,434	23.29	8.52	11,800	9,200 (77.97)	5.90	2.72 (45.93)
Total	6,25,682	6,23,160	423.20	352.40	2,95,809	2,88,562 (97.55)	183.80	153.37 (83.44)

(Source: Progress report of the State and District offices)

Thus, there were shortfall in achieving targets of field demonstrations under coarse cereals and rice, while the targeted demonstrations under wheat and pulse were almost fully achieved.

The Government stated (December 2016) that targeted coarse cereals and rice demonstrations could not be achieved due to shortage of quality seeds.

The reply is not acceptable, as the State Government was responsible for ensuring availability of quality seeds for demonstration as well as for distribution to beneficiary farmers.

2.1.9.1 Finalisation of Field Demonstration Technology

Demonstrated technology lacked location specific requirements due to adoption of generalised package.

Operational guidelines provided that a package of inputs to be provided for the demonstrations was to be identified in consultation with Regional Research Stations of SAUs/KVKs¹⁶ located in the area. Audit scrutiny revealed that the Directorate had prepared a package of inputs for demonstrations in consultation with SAUs at the State Level and provided to the districts for compliance. Due to adoption of this package by the districts, without its ratification from the district level research stations of SAU/KVKs, the technology adopted lacked location specific requirements.

The Government stated (December 2016) that instructions had been issued for making changes in the package, after consultation with district level research stations of KVKs.

2.1.9.2 Cropping system based field demonstrations

Cropping system based approach entails that field demonstrations are done in cropping sequence on the same plot of land. NFSM guidelines provided for conducting 30 per cent demonstrations on cropping system.

Test checked districts did not adhere to the required norms for conducting demonstrations on cropping system. Out of total 2.89 lakh demonstrations conducted by test checked districts during period 2012-16, only 6,555 demonstrations were conducted on cropping system which worked out to only 2.27 per cent, as detailed in the **Appendix 2.6**.

The Government stated (December 2016) that instructions had been issued (November 2016) for conducting cropping system based demonstrations at appropriate time.

The fact remains that the failure of District offices in adhering the guidelines for conducting cropping system based demonstrations deprived awareness generation among farmers about cropping pattern that could be adopted to increase the farm level economy.

2.1.9.3 Records for demonstration results

The results of demonstrations should be compiled at Block, district and State Level. At the State level, the results of the demonstrations should be compiled in the form of document. A demonstration register was to be maintained at Block level containing all information regarding selection of farmer, date of soil testing, name of seed variety used, date of sowing, name and quantity of materials used and results of crop cutting experiments. Each result should bear signatures of the farmer, Rural Agricultural Extension Officer (RAEO), Senior Agriculture Development officer (SADO). The guideline additionally

¹⁶ State Agricultural Universities/Krishi Vigyan Kendra

provides that the results should be prepared by the Districts and Technical consultants of NFSM.

Records of demonstration were not provided for verification by eight test-check districts (Bhind, Chhattarpur, Dindori, Hoshangabad, Indore, Mandla, Seoni and Vidisha), though 1,73,636 demonstrations were reported to be held in these districts during last four years incurring expenditure of ₹ 91.71 crore. In another seven test-checked districts¹⁷, the results of demonstration did not provide the comparative results of demonstration and control plot and also did not have joint signatures of farmer, RAEO and SADO. Role of Consultants in preparation of results in these districts were also not ascertainable as the results did not have their signatures. District Ujjain provided only summary of results of all demonstrations, instead of farmer-wise demonstration results.

The Government in its reply stated (December 2016) that results of demonstrations may not had been prepared due to shortage of staff in districts offices and issued instructions (December 2016) for proper maintenance of records.

The fact remains that the expenditure of ₹ 91.71 crore in eight test checked districts for 1,73,636 demonstrations rendered unfruitful in the absence of records for demonstration results. Further, the preparation of results of demonstration without mentioning the comparative results of demonstration plot and control plot resulted in defeating the very purpose of informing farmers about the benefits of demonstrated technology.

2.1.9.4 Use of Display board

Display board containing information regarding number of farmers, village, variety of seed used, type of demonstration, fertilizers applied, bio-fertilizers applied, micronutrient applied, date of sowing/transplanting, Seed Rate and Spacing, mobile number of District Consultant/Technical Assistant were to be displayed at the demonstration plots.

Audit scrutiny revealed that expenditure was incurred for placing display boards of demonstrations in the demonstration plots. However, joint physical verification of display boards in two districts - Chhattarpur and Seoni revealed that the display boards did not contain all information as required under the guidelines. Further, DDA Khargone intimated that display boards were not used in 2015-16.

¹⁷ Damoh, Dhar, Guna, Harda, Khargone, Panna and Sidhi



Display board showing incomplete information, on the plot of farmer at Village Pachwara Block Nowgaon, District Chhattarpur

Demonstration plot in village Dhooma block Lakhnadon District Seoni Display board having incomplete information

The Government stated (December 2016) that orders had been issued to districts for displaying complete information on the display boards.

2.1.9.5 Conduct of Field day

NFSM operational guidelines stipulated that a field day should be organised during reproductive phase of crop preferably at grain filling stage, ensuring participation of scientists for providing critical observations and solutions to the problems of farmers.

Audit scrutiny revealed that field day was conducted in six districts¹⁸. However, it was not organised in five districts¹⁹, which was attributed either to unavailability of scientists or to restrictions on drawal of advances imposed by the treasuries. In Indore district, field day was conducted without participation of scientists. However, status regarding conducting of field day in other five districts²⁰ was neither found on record nor provided by the districts.

The Government in its reply stated (December 2016) that instructions for conducting field day has been issued (December 2016) to the district offices.

2.1.10 Need based inputs

2.1.10.1 Nutrient management/Soil Ameliorants

As per Para 14.2.2 of NFSM guidelines, the micro-nutrients /lime /gypsum or other sulphur containing fertilizers such as phosphor-gypsum/bentonite sulphur was to be applied as a basal/foliar application²¹ based on the recommendations of ICAR/SAUs concerned. The DFSMEC was to finalise the list of beneficiaries in consultation with Village *Panchayat*. Fifty per cent of the cost of these inputs or the maximum assistance as indicated in the **table 2.1.11**, was to be borne by the Government and the balance was to be borne by the farmers.

¹⁸ Chhattarpur, Guna, Khargone, Mandla, Shajapur and Ujjain

¹⁹ Damoh, Dhar, Panna, Sidhi, and Vidisha

²⁰ Bhind, Dindori, Harda, Hoshangabad and Seoni.

²¹ Basal applications are administered directly on the land prior to or at the time of sowing, and foliar applications are administered on the standing crops.

Table 2.1.11: Norms under NFSM for nutrient-wise admissible assistance

Name of nutrient	Admissible assistance (in ₹)
Micro-nutrients	500 per ha
Liming or paper mud of acidic soil	1,000 per ha
Gypsum/other sources of Sulphur	750 per ha
Bio-fertilizers such as Rhizobium, phosphate solubilizing bacteria (PSB) in pulses	100 per ha

The year-wise physical and financial targets and achievement under this intervention in the state and selected districts during the years 2012 to 2016 were as detailed in **Appendix 2.7 to 2.9**. An abstract thereof is given in the **table 2.1.12**.

Table 2.1.12: Targets and Achievements of distribution of Nutrient management /Soil Ameliorants
(Physical in ha and Financial ₹ in crore)

Intervention	NFSM districts in State					Test checked Districts				
	Targets		Achievement			Targets		Achievement		
	Phy.	Fin	Phy	Per cent	Fin	Phy.	Fin	Phy	Per cent	Fin
Micronutrients										
Rice (Appendix 2.7)	73,500	3.68	73,709	100.28	2.98	39,850	1.99	26,291	65.97	1.25
Wheat (Appendix 2.8)	4,20,000	21.00	3,30,439	78.68	15.05	1,99,259	9.96	1,84,296	92.49	8.57
Pulse (Appendix 2.9)	9,24,428	46.22	7,26,374	78.58	28.87	2,50,390	13.07	2,28,499	91.26	10.08
Lime/gypsum										
Wheat (Appendix 2.8)	1,23,000	7.93	55,672	45.26	2.30	46,660	2.68	21,490	46.06	1.10
Pulse (Appendix 2.9)	1,64,376	12.33	1,39,620	84.94	7.74	68,630	5.38	54,851	79.92	3.19
Rizobium culture/Phosphate solubilizing bacteria										
Pulse (Appendix 2.9)	4,71,300	8.14	3,33,402	70.74	3.64	2,09,516	4.60	1,53,914	73.46	1.71

Thus, the targets for distribution of micronutrients, lime/gypsum and rizobium culture were not achieved by the test checked districts. Further scrutiny revealed the following:

(i) Use of Integrated Nutrient Management (INM) package

Directorate provided a generalized INM package, prepared after consultation with state level SAUs to the districts, for implementation. Four²² out of seventeen districts intimated use of INM in accordance to the provided package. As a result, INM package were distributed to farmers without ascertaining location specific requirements.

The Government stated (December 2016) that instructions were issued (December 2016) to all district offices to decide the package of inputs at district level.

(ii) Records for distribution of INM at district level not maintained

None of the test checked districts could provide acknowledgement of farmers for receipt of items distributed under the INM package. The DDAs intimated that acknowledgements were available with Rural Agriculture Extension

Inputs distributed under INM package lacked location specific requirements due to adoption of generalised package without ratification from local SAU/KVKs.

²² Chhattarpur, Khargone, Mandla and Panna

Officers working in village level. Thus, the Block and District level offices were showing physical progress on the basis of acknowledgement provided by RAEOs for materials worth ₹ 25.87 crore received by them for distribution to farmers, without ascertaining its actual disbursement, to end users.

The Government issued instructions (December 2016) to district offices for maintenance of distribution related records at the Block level.

(iii) INM package not distributed

Audit scrutiny of progress reports of districts revealed that micronutrients under pulse, wheat and rice in six districts (Sidhi, Guna, Shajapur, Khargone, Damoh and Hoshangabad), lime/gypsum under pulse and wheat in nine districts (Vidisha, Panna, Damoh, Indore, Hoshangabad, Sidhi, Shajapur, Guna and Chhattarpur), rizobium culture under pulse in three districts (Shajapur, Indore and Hoshangabad), were not distributed during the period 2012-13 to 2015-16, as detailed in the **Appendix 2.10**.

The Government stated (December 2016) that inputs under the package were distributed according to its local availability and demand of farmers. However, instruction for achieving the targets had again been issued to the district offices.

(iv) Depiction of physical achievement without expenditure

Audit scrutiny of progress reports of 17 districts revealed that three²³ districts had shown total physical achievement of 14,372 hectare in distribution of micronutrients, four districts²⁴ showed physical achievement of 2,675 hectare in distribution of lime gypsum, and two districts²⁵ had shown physical achievement as 14,980 hectare in distribution of rizobium culture/ bio-fertilizers, with corresponding financial achievement as “zero”, as detailed in the **Appendix 2.11**.

The Government stated (December 2016) that factual position had been called for from the concerned district offices.

2.1.10.2 Plant protection measures

As per para 14.2.3 of NFSM guidelines (2012), financial assistance of ₹ 500 per hectare or 50 per cent of the cost, whichever is less, was to be provided for Integrated Pest Management (IPM) including Plant Protection (PP) chemicals, bio-pesticides and weedicides in the identified districts. The DFSMEC were to finalise the list of beneficiaries in consultation with Village Panchayat.

Year wise physical and financial targets and achievement under this intervention in the State and selected districts during 2012-16 are indicated in **Appendix-2.7, 2.8 and 2.12**. An abstract thereof is given in the **table 2.1.13**.

²³ Damoh, Dhar, Sidhi

²⁴ Chhattarpur, Damoh, Dhar and Sidhi

²⁵ Chhattarpur and Sidhi

Table 2.1.13: Targets and Achievements of distribution of Plant Protection measures
(Physical in ha and Financial ₹ in crore)

Intervention	NFSM districts in State				Test checked Districts			
	Targets		Achievement		Targets		Achievement	
	Phy.	Fin	Phy (per cent)	Fin (per cent)	Phy.	Fin	Phy (per cent)	Fin (per cent)
PP Chemicals & bio-agents								
Pulse (Appendix 2.12)	7,19,261	35.96	6,14,187 (85.39)	27.04 (75.19)	2,81,512	14.49	2,70,427 (96.06)	12.67 (87.44)
Rice (Appendix 2.7)	73,544	3.68	63,618 (86.50)	2.94 (79.89)	42,100	2.11	33,865 (80.44)	1.58 (74.88)
Wheat (Appendix 2.8)	1,63,930	8.20	1,50,895 (92.05)	6.72 (81.95)	88,675	4.43	85,254 (96.14)	4.32 (98.18)
Weedicides								
Pulse (Appendix 2.12)	85,064	4.25	49,656 (58.37)	2.00 (47.17)	42,504	2.14	22,554 (53.06)	0.82 (38.32)
Rice (Appendix 2.7)	26,250	1.31	12,500 (47.62)	0.47 (35.88)	18,730	0.94	8,800 (46.98)	0.36 (38.30)
Wheat (Appendix 2.8)	11,000	0.55	6,639 (60.35)	0.15 (27.27)	3,710	0.18	2,060 (55.53)	0.08 (44.44)
IPM Package								
Pulse (Appendix 2.12)	2,00,000	15.00	2,13,715 (106.86)	15.77 (105.13)	88,671	7.00	94,303 (106.35)	7.77 (111.00)
Pulse (Appendix 2.12)	27,000	0.68	12,946 (47.95)	0.28 (41.18)	12,684	0.52	9,456 (74.55)	0.39 (75.00)

Audit scrutiny in test checked districts revealed the following:

(i) Assistance given on unapproved rate

In Damoh, assistance for Plant Protection chemicals and bio-agents in wheat (2012-13) was given at the rate of ₹ 783 per hectare in place of the approved norms of ₹ 500 per ha. Deputy Director stated that actual expenditure on distribution of the item (for 2,970 ha.) was ₹ 14.85 lakh, which was as per the norms. The reply is not acceptable, as expenditure on the assistance for Plant Protection chemicals and bio-agents was shown as ₹ 23.28 lakh in the progress report submitted by the district, thereby assistance to farmers worked out to ₹ 783 per hectare (for 2,970 ha.).

The Government stated (December 2016) that factual position was being ascertained from the concerned district.

(ii) Showing physical achievement without expenditure

Audit scrutiny of progress reports of 17 districts revealed that two districts (Damoh and Sidhi) have shown physical distribution of required quantity of weedicides for 1,750 ha, while two other districts (Hoshangabad and Sidhi) had shown physical distribution of required quantity of Plant Protection (PP) chemicals and bio-agents for 7,050 ha, but corresponding financial achievement was shown as “zero”, as depicted in the **Appendix-2.11**.

The Government stated (December 2016) that factual position had been called for from the districts and also issued instructions to avoid such instances in future.

(iii) IPM package not distributed

Audit scrutiny of progress reports of districts revealed that IPM package including inputs for plant protection were not distributed in five districts (Sidhi, Guna, Shajapur, Panna and Indore) during 2012-13 to 2015-16, as detailed in the **Appendix-2.10**.

The Government stated (December 2016) that inputs were distributed according to their local availability and demand from farmers. All district offices had been instructed to achieve the targeted distribution.

2.1.11 Farm Mechanisation

As per para 14.2.4 of NFSM guidelines, in order to facilitate timely completion of field operations, improving efficacy of field operations, increasing cropping intensity and economising the cost of cultivation, assistance of 50 per cent of the cost or the ceiling amount fixed for each machine was available to the selected farmers. SFSMEC would nominate the agency for sale of farm implements and fix the cost of the implements for supplying the same to the farmers. The list of beneficiaries (50 per cent to be selected from farmers selected for cluster demonstration) was to be prepared by the District Agriculture officer in consultation with *Zila Parishad* and approved by the DFSMEC. Targets and achievements under this intervention during the years 2012-13 to 2015-16 in the State as a whole and in test checked districts were as shown in **table 2.1.14**.

Table 2.1.14: Targets and Achievements of farm mechanisation**{Physical (Phy) in number and Financial (Fin) ₹ in crore}**

S. No.	Farm Implements	NFSM districts in State				Test checked Districts			
		Target		Achievement		Target		Achievement	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Conoweeder	5,300	3.22	2,652	0.29	2,760	0.40	1,563	0.21
2	Manual Sprayers	45,525	2.73	26,146	1.34	14,840	0.89	9,545	0.53
3	Knap-sack Sprayers	48,147	14.44	1,55,487	12.37	23,458	7.04	69,009	5.60
4	Zero Till seed drill	295	0.44	80	0.10	88	0.13	7	0.009
5	Multi crop planter (MCP)	103	0.15	0	0.00	29	0.04	0	0
6	Seed drill	21,802	32.70	13,909	19.77	9,265	13.90	6,662	9.20
7	Power weeders	57	0.08	4	0.006	23	0.03	0	0.00
8	Rotavator	16,914	55.32	12,312	37.54	7,169	23.16	5,056	14.66
9	Diesel/Electric Pump	36,761	36.76	31,835	28.13	16,753	16.75	12,642	11.59
10	Sprinkler set	1,21,093	97.98	1,17,356	89.78	56,520	45.76	54,549	41.79
11	Assistance for pipe for carrying water from source to the field	57,243	85.86	48,297	68.27	18,460	27.69	14,203	18.82
12	Laser land leveler	48	0.72	3	0.08	19	0.29	2	0.03
13	Zero till MCP	71	0.10	0	0.00	18	0.03	0	0.00
14	Ridge Furrow Planter	64	0.09	2	0.003	11	0.02	0	0.00
15	Mobile sprinkler raingun	426	0.63	488	0.42	297	0.46	92	0.06
16	Chiseller	42	0.03	0	0.00	14	0.01	0	0.00
17	Tractor mounted sprayer	60	0.06	0	0.00	15	0.02	0	0.00
18	Multi crop thresher	1,880	7.52	1,150	3.71	706	2.82	387	1.25
19	Drum seeder	15	0.002	0	0.00	8	0.005	0	0.00
	Self-propelled paddy transplanter	7	0.05	0	0.00	4	0.03	0	0.00
	Total	3,55,853	338.85	4,09,721	261.81	1,50,457	139.475	1,73,717	103.749

(Source: Progress report of the State and District offices)

As evident from table 2.1.14, during 2012-16 out of 1.50 lakh farm implements to be distributed, the Government did not distribute Multi crop planter, Zero till multi crop planter, Chiseller, Tractor mounted sprayer, Drum seeder and Self-propelled paddy transplanter. During the course of performance audit, feedback from 330 beneficiaries under this intervention was obtained. Of which, 291 beneficiaries intimated satisfaction out of the equipment received by them and reported higher yield by using these equipment.

2.1.11.1 Irregular expenditure due to not fixing supplying agencies and rates for farm implements

The Department did not nominate the agencies and also did not fix the price of different farm implements to be supplied to farmers, though it was required as per NFSM operational guidelines. Thus, the assistance to farmers on purchase of 4.10 lakh farm implements from unapproved agencies and on unapproved rates resulted in irregular expenditure of ₹ 261.81 crore during the years 2012-16. Further, the Department had no control over the rates of farm implements fixed by the supplying agencies, as a result affordability of these implements by farmers was not ensured.

SFSMEC did not fix the agencies and rate of farm implements to be provided to farmers rendering expenditure of ₹ 261.81 crore irregular.

In the exit conference (November 2016), the Principal Secretary stated that they had no role in fixation of rates or agencies as the implements were distributed by MP Agro or Marketing Federation (MARKFED), who had their own system for selection of supplier and rates of implements.

The reply is not acceptable, as guidelines provided that State Food Security Mission Executive Committee (SFSMEC) would nominate the agency for sale of farm implements and fix the cost of the implements for supplying the same to the farmers. Further, there was no relaxation under NFSM for procurement through MP Agro or MARKFED. Thus, assistance to farmers for purchase on unapproved rates and from unapproved agencies was in violation of NFSM operation guidelines.

2.1.11.2 Prescribed norms for selection of the farmers not ensured

The district offices did not have a system to ensure that the prescribed norms were followed for selecting 50 per cent farmers from those who were also selected under the intervention Demonstration.

The Government accepted (December 2016) the audit observation and issued instructions to the district offices to follow the provisions of guidelines.

2.1.11.3 Irregular excess assistance on distribution of implements

The Directorate had provided assistance for sprinkler sets at the rate of ₹ 7,500 per hectare or 50 per cent of the cost whichever is less up to 2013-14. From 2014-15 ceiling rate was revised to ₹ 10,000 per ha. In two (Shajapur and Ujjain) out of 17 test checked districts audit scrutiny revealed that 470 farmers having less than one ha land were provided assistance at the maximum rate, in place of giving it on *pro-rata* basis resulting in grant of irregular excess assistance ₹ 12.89 lakh as detailed in the **Appendix 2.13**.

Similarly, the prescribed norms of assistance for “pipe for carrying water from source to field” as per NFSM guidelines 2012 was 50 per cent of the cost, or ₹ 25 per metre for maximum 600 metre, whichever is less with a financial

The pattern of assistance were not followed in providing sprinkler sets (₹ 12.89 lakh) and pipe for carrying water from source to field (₹ 4.98 crore), resulted in providing excess assistance of ₹ 5.11 crore.

ceiling of ₹ 15,000. In 14 out of 17 test checked districts, audit scrutiny revealed that the criteria of ₹ 25 per metre was not followed, due to which 7,867 farmers who purchased pipes less than 600 metre were provided assistance at the maximum rate of ₹ 15,000, which resulted in grant of irregular excess assistance of ₹ 4.98 crore as detailed in the **Appendix 2.14**.

The Government stated (December 2016) that explanation has been called for from the concerned district offices.

Thus, the farm implements required for improving efficiency as well as economy in cultivation were not made available at affordable price, due to violation of provisions of clause 14.2.4 of guidelines. Implements for which there was no demand from farmers were also included in the plan resulting in zero/minimum progress in its distribution. Subsidy norms were not adhered to in respect of distribution of sprinkler sets and pipeline.

2.1.12 Crop Based Training Programme

For speedy dissemination of improved crop production practices, training to farmers was to be provided (Para 14.2.5). Four sessions of each training, one each at the beginning, and one each during, the *Rabi* and *Kharif* season was contemplated. The training was to be imparted by crop/subject matter specialists of ICAR institutes/SAUs/KVKs. Each session will have a group of 30 farmers and the participants in all four sessions were to be same. Year-wise physical and financial targets and achievement under this intervention in the state and selected districts during 2012-16 are indicated in **Appendix 2.15**. An abstract thereof is given in the **table 2.1.15**.

Table 2.1.15: Targets and achievements of Crop based trainings

(Physical in number and financial ₹ in crore)

Crop	NFSM districts in State				Test checked Districts			
	Target		Achievement		Target		Achievement	
	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
Pulse	4,734	6.63	3,836	5.10	1,731	2.42	1,524	1.98
Wheat	1,865	2.61	1,689	2.13	729	1.02	719	0.83
Rice	385	0.54	371	0.50	187	0.26	183	0.25
Total	6,984	9.78	5,896	7.73	2,647	3.70	2,426	3.06

(Source: Progress report of the State and District offices)

The reason for shortfall in conduct of trainings as stated by the respective Deputy Directors of test-checked districts was unavailability of trained staff in sufficient numbers. District Shajapur intimated refusal of block level officer (SADO) to conduct training as the reason for shortfall.

The Government stated (December 2016) that instructions had been issued to all district offices for achieving the targets.

2.1.12.1 Scientists not involved for providing training

Audit scrutiny revealed that departmental/retired officers were associated for training instead of crop/subject matter specialists of ICAR institutes/SAUs/KVKs etc. Specific course curriculum to suit the local conditions was not developed by the District Consultant as required in the guidelines. As a result, expertise of the ICAR institute/SAUs/KVKs was not put to use for dissemination of knowledge to the farmers even though an

Scientists from ICAR/SAUs/KVKs were not involved for providing training rendering unfruitful expenditure of ₹ 3.05 crore in training.

amount of ₹ 3.05 crore was spent during the years 2012-16 on training of farmers in the test checked districts.

The Government stated (December 2016) that trainings were provided by departmental/retired officers due to unavailability of scientists at district level.

The reply is not acceptable, as conduct of training programme without specific course curriculum to suit local conditions and without involving scientists affected the standard of training imparted to the farmers.

2.1.13 Local Initiatives

Interventions taken up under Local Initiatives were not part of SREP of the Districts resulting in inclusion of items without demands from farmers.

As per para 14.8 of NFSM guidelines, financial assistance of 50 per cent of the cost of each intervention provided to States to undertake location specific interventions (not covered under the normal activities of the Mission), which would help in boosting the production of rice, wheat, pulses and coarse cereals. These interventions were to be selected in consultation with *Zilla Parishad* and need to be part of the Strategic Research and Extension Plan (SREP) of the district.

The year wise physical and financial targets and achievement under this intervention in the State and selected districts during 2012-16 are indicated in **Appendix 2.16 to 2.18**. An abstract thereof is given in the **table 2.1.16**.

Table 2.1.16: Targets and Achievements in Activities under Local initiatives

(Physical in number and financial ₹ in crore)

Name of Activity	NFSM districts in State					Test checked Districts				
	Target		Achievement			Target		Achievement		
	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Percent	Fin
Paddy (Appendix 2.16)										
Pipe for carrying water from source to field	2,400	3.60	2,432	101.33	3.39	1,256	1.88	1,309	104.22	1.88
Winover	6,680	1.67	1,826	27.34	0.36	4,023	1.01	1,192	29.63	0.27
Demonstration by NGOs	250	0.19	0	0.00	0	56	0.04	0	0.00	0
Wheat (Appendix 2.17)										
Pipe for carrying water from source to field	735	1.10	745	101.36	1.10	307	0.46	447	145.60	0.53
Activity not specified		1.20	0	0.00	0.00	0	0	0	0.00	0
Multi Crop Thresher	842	3.37	31	3.68	0.004	153	0.61	11	7.19	0.00
Demonstration by NGOs	1,280	0.96	170	13.28	0.03	150	0.11	0	0.00	0.00
Pulse (Appendix 2.18)										
Pipe for carrying water from source to field	1,290	1.94	1,290	100.00	1.94	2,890	4.34	2,943	101.83	4.59
Seed Treatment Drum	39,194	3.92	1,916	4.89	0.13	14,538	1.46	119	0.82	0.01
Spiral Grader	39,000	7.80	3,821	9.80	0.13	14,878	2.94	560	3.76	0.05
Demonstration by KVK	3,000	2.25	1,122	37.40	0.60	902	0.68	432	47.89	0.24

(Source: Progress report of the State and District offices)

Audit scrutiny revealed that activities were taken under this intervention as per targets received from the Directorate. As the targets provided to the districts for activities under Local Initiatives were not a part of the District SREP, the physical targets for these activities (except pipe for carrying water from source to field) remained unachieved ranging from lowest zero per cent under the 'demonstration by NGOs' (Appendix 2.16 and 2.17), followed by 0.82 per

cent under ‘seed treatment drum’ and 3.76 per cent under ‘spiral grader’ (**Appendix 2.18**) during 2015-16.

Further scrutiny revealed that “pipe for carrying water from source to field”, which was available under the normal NFSM activity of “Efficient water application tools”, was also carried out under local initiatives. This was contrary to NFSM guidelines for taking up only those activities under local initiative, which were not undertaken under normal activities

The Government accepted (December 2016) the audit observation and assured to prepare annual action plan in future on the basis of provisions given in the guidelines.

2.1.14 Award for the best performing districts

As per 14.7 of NFSM guidelines (2012), cash award of ₹ five lakh in every two years to be given to the best performing districts for each of the four NFSM components – Rice, Wheat, Pulses and Coarse Cereals. The SFSMEC on the basis of criteria for assessing the performance was required to select the districts for giving the award. However, Department did not submit proposals for award for the best performing district to GoI so far.

The Government stated (December 2016) that action was in progress. Thus, the State failed to provide encouragement to districts for better performance under NFSM during the years during the years 2012-16.

2.1.15 Fund Management

Mechanism of fund flow as prescribed in paragraph 7 of NFSM guidelines (12th Five Year Plan) stipulated that funds for implementing the Mission’s programme would be released to State Governments, which in-turn would release the funds to the State Level Agency. The State Level Agency would make fund available to the District Level Agency in accordance with the approved programme of the districts. Funds were to be released in instalments based on the progress report and submission of utilisation certificates (UCs).

Audit scrutiny revealed that GoI released grants-in-aid during the years 2012-13 and 2013-14 under the NFSM directly to State Institute of Agriculture Extension and Training (SIAET), the State Nodal Agency for implementation of NFSM in Madhya Pradesh. Upon receiving the demand from the Directorate, SIAET disbursed NFSM fund to Deputy Directors, Agriculture at district level through electronic transfer in their respective bank accounts. However, from 2014-15 onwards, grants-in-aid under NFSM were released directly to State Government, which were disbursed by the Directorate to the district offices through State Budget/State Treasury System.

The status of year-wise availability and utilisation of funds under NFSM during the years 2012-13 to 2015-16 is depicted in the **table 2.1.17**.

Table 2.1.17: Year-wise availability and utilisation of fund under NFSM

(₹ in crore)

Year	Grant received from GOI	Previous unspent balance	Interest received	Total fund available during the year	Expenditure during the year	Unspent balance	Utilisation (per cent)
2012-13	247.14	6.68	2.04	255.86	241.85	14.01	95
2013-14	366.07	14.01	2.33	382.41	334.78	47.63	88
2014-15*	214.70	47.63	0	262.33	179.18	83.15	68
2015-16*	223.50	72.75	0.46	296.71	189.37	107.34	64

(Source: Data as provided by the Directorate)*Unaudited figures

NFSM funds could not be utilised fully by the State during 2012-16.

Utilisation of the NFSM funds by the State revealed a decreasing trend, ranging from highest 95 *per cent* in 2012-13 to 64 *per cent* by the year 2015-16. Audit scrutiny revealed that consequent upon the introduction of budgetary system for providing funds from 2014-15, the test checked districts could not utilise 26.88 *per cent* of the total budget allocation of ₹ 106.35 crore during the years 2014-16, which lapsed or were surrendered as detailed in the **Appendix 2.19**.

Further, the opening balance for the year 2015-16 (₹ 72.75 crore) did not correspond to the unspent balance of the year 2014-15 (₹ 83.15 crore). The difference was due to submission of incorrect provisional utilisation certificate for the year 2015-16, which the Government had assured to rectify before sending final utilisation certificate.

With reference to unspent balances, the Government stated (December 2016) that funds could not be utilised during the years 2012-13 and 2015-16 due to release of funds in end of March by GoI. It further stated that funds could not be utilised during the years 2013-14 and 2014-15 due to initiation of quarterly budget system, low rainfall, drought and server related problems in the treasuries.

The reply is not acceptable as entire grants-in-aid for the year 2015-16 was received from GoI by September 2015 and only ₹ 3 crore out of grants-in-aid of ₹ 247.14 crore for 2012-13 was received in March 2013. The constraints like initiation of quarterly budget system and server related problems during the years 2013-14 and 2014-15 could have been overcome through better financial planning and technical support. Further, the fact remains that the shortfall in achievements of targets under various interventions during the years 2012-16, as brought out in preceding paragraphs, led to accumulation of unutilised balance of ₹ 107.34 crore as of March 2016.

2.1.15.1 Maintenance of accounts

As per paragraph 4.2.3 of NFSM operational guidelines, separate accounts for the Scheme was to be maintained by State and District Level Agencies as per the Account Code prescribed by the National Food Security Mission Executive Committee (NFSMEC). The annual accounts were to be audited by a Chartered Accountant every year.

Audit scrutiny revealed that account code prescribed by NFSMEC was not available in the test-checked district offices. Further, audit of Annual Accounts of the NFSM for the years 2014-15 and 2015-16 has not been taken up so far (December 2016). In the absence of certification of accounts, reasonable assurance about regularity of receipts and proper utilisation of funds could not be ascertained. Further, State Government could not submit the final Utilisation Certificates to GoI for the years 2014-15 and 2015-16 due to delay in finalisation of audited annual accounts of NFSM.

The Government intimated (December 2016) that separate account code had not been received from GoI. However, Government did not intimate the reasons for delay in finalisation of annual account of NFSM for the years 2014-15 and 2015-16.

2.1.15.2 Operation of NFSM Bank account

In order to ensure proper utilisation and monitoring of funds provided to the districts under NFSM, Directorate Farmers Welfare and Agriculture Development (FWAD), Government of Madhya Pradesh had issued instructions (September 2011) to all district offices to open a separate bank account for NFSM. The system of transferring fund to the bank accounts of district offices was discontinued from 2014-15 and funds were provided through the treasury system on quarterly basis. With the change in the mechanism for scheme financing, NFSM bank accounts were not to be operated for the scheme and therefore, no longer required to be continued. Audit scrutiny of records, however, revealed that the Directorate did not issue any order for closure of the NFSM bank account.

Further scrutiny revealed that out of 17 test checked Deputy Directors Agriculture (DDAs), 12 DDAs²⁶ did not close the NFSM Bank account and had a balance of ₹ 8.68 crore (**Appendix 2.20**). These accounts were also being used by DDAs to park unutilised funds of other schemes²⁷, which was irregular. Thus, the unutilised amount in NFSM bank accounts were continued to be held by district offices, in the absence of any order for its refund to the Directorate.

The continuance of NFSM bank account without any purpose had also exposed these bank accounts to the risk of misuse. Audit scrutiny of records revealed that Deputy Director Agriculture, Vidisha had withdrawn an amount of ₹ 1.66 lakh and used it for activities (office expenses etc.) other than NFSM activities. These withdrawals included cash withdrawals of ₹ 0.79 lakh (of which ₹ 0.50 lakh was paid in cash to a travel agency) and vouchers for utilisation of balance amount of ₹ 0.29 lakh was not found on record. DDA intimated (February 2016) that funds were withdrawn from NFSM bank accounts to meet urgent office expenses for which they did not have budget provision.

Audit scrutiny revealed that none of the district offices were conducting reconciliation of bank accounts with the transactions from cash book on

Directorate did not issue instructions for closure of NFSM Bank accounts of district offices, though these accounts were not to be operated for the scheme since 2014-15. Unutilised balance of ₹ 8.68 crore was available in the accounts of 12 test-checked district offices.

²⁶ Bhind, Chhattarpur, Dhar, Dindori, Guna, Hoshangabad, Mandla, Panna, Seoni, Shajapur, Sidhi and Vidisha.

²⁷ Rashtriya Krishi Vikas Yojna, Beej gram, Krishi Vigyan Kendra, sukharahat, soil health.

monthly basis, which was contrary to the instructions²⁸ (July 2014) of the Finance Department, Government of Madhya Pradesh issued to all departmental officers maintaining bank accounts under various government schemes. Further, there was a difference of ₹ 6.38 crore between the figures of available balances as per cash book and that shown in the pass book in 12 out of 17 test checked districts, as detailed in **Appendix 2.20**. However, the reasons for the difference could not be ascertained in the absence of bank reconciliation statements.

The Government stated (December 2016) that the remaining bank accounts would be closed immediately after utilising the off-budget funds. The Government further stated that instructions had been issued to the district offices for conducting bank reconciliations.

The reply is not acceptable, as an unutilised off-budget fund was required to be channelised through State Budget/State Treasury System due to change in the mechanism for scheme financing since the year 2014-15.

2.1.15.3 Diversion of funds due to release of NFSM funds to districts not identified for NFSM-Wheat

During the years 2012-14, eight unidentified NFSM-Wheat districts were provided funds under the mission; while one identified NFSM-Rice district and five identified NFSM-Coarse cereal district were not provided funds.

Audit scrutiny revealed that eight districts, where NFSM-Wheat was not to be implemented, were provided funds of ₹ 26.63 crore of scheme fund, against which an amount of ₹ 27.21 crore had been spent by these districts. In addition, one identified NFSM-Rice district and five identified NFSM-Coarse cereal districts were not provided funds during the years 2012-14. The details were as shown in **Appendix 2.21**.

The Government stated (December 2016) that though 12th Five Year Plan commenced from the year 2012-13, the guidelines was received from GoI in April 2014, due to which targets were given to districts identified for implementation of NFSM in 11th Five Year Plan.

The fact remains that the release of NFSM funds to districts where NFSM was not to be implemented resulted in diversion of funds for which approval from GoI was to be obtained. In addition, farmers of six other identified districts were prevented from getting benefits under the scheme due to failure to provide funds to these identified districts.

2.1.16 Monitoring of the Scheme

2.1.16.1 Organisational Mismatches in implementing agencies at State and District levels

As per NFSM guidelines for 11th Five Year Plan (2007-12), the State Government were required to nominate or create a suitable autonomous agency registered under the Societies registration Act for implementing NFSM at State and district levels. Such an agency could be the State Agricultural Management & Extension Training Institute (SAMETI) at the State level and the ATMA at the district level.

ATMA is a registered society of key stakeholders at district level, involved in project planning and implementation of various farm activities for sustainable agricultural development. It consisted of the district level representatives of all

²⁸ Letter no. 2014/3499 dated 16.7.2014

Autonomous agency set-up for implementation of NFSM at State level was reduced to mere custodian of funds. The organisational structure of ATMA at district level was not utilised for implementation of scheme.

line Departments concerning agriculture & allied sectors, research institutions, farmers' organisations and NGOs. The operational guidelines of implementation of the scheme during 12th Five Year Plan (2012-17) envisaged for continuance of these nominated agencies during 12th Plan period.

Audit scrutiny revealed that State Government constituted an autonomous body, 'State Institute of Agriculture Extension and Training' (SIAET) in December 2007. The fund for implementation of NFSM during 2012-14 was directly released by the GoI to SIAET, considering it as implementing agency for the scheme. However, SIAET was not functioning as implementing agency, except for a brief period March 2014 to January 2015.

State Government declared (October 2011) SIAET as custodian of the funds of Mission and the scheme implementation was entrusted to Directorate of Farmers Welfare and Agriculture Development (FWAD). Similarly, the scheme was being implemented at district level by Deputy Director of FWAD instead of ATMA.

The reasons for these organisational mismatches could not be ascertained from the records. The Government stated (December 2016) that though an Autonomous agency was created, shortage of staff and unavailability of extension officers in the agency caused implementation of the mission by the department itself.

The reply is not acceptable, as the failure to utilise the institutional arrangements of SIAET and ATMA was a deviation from the operational guidelines for NFSM. State Government was responsible for adequate strengthening of these agencies. Further, the activities under NFSM could not be dovetailed with Strategic Research and Extension Plan²⁹ of Districts and failed to have convergence from other schemes, which could have been facilitated through ATMA structure.

2.1.16.2 Project Management Teams at State and District Level

Paragraph 4.4.2 of operational guidelines stipulated constitution of a Project Management Team (PMT) at the State and District Level with Consultants and Technical Assistants, appointed on contractual basis, as the members of the PMT. The State/District level PMT had the responsibility of ensuring collaboration among various line departments concerning agriculture & allied sectors to achieve the targets, providing guidance in organizational and technical matters, helping in implementation and monitoring of the various interventions of the mission. In addition, the PMT had also to assist in capacity building programmes; monitor the implementation of each demonstration, record the data on crop yield through crop cutting experiments, compiling the results of each demonstration at block, district and State level in the form of a booklet, assist the district/State agencies in concurrent evaluation, document and disseminate the success stories, and undertake publicity/information campaign to create awareness about the Mission activities.

²⁹ Under the ATMA model, Strategic Research and Extension Plan is the basic document from which the Block Action Plan, District Action Plan and State Extension Work Plan are to be derived on an annual basis.

State Government had constituted the PMTs at the State and District level in November 2007. Audit scrutiny of records revealed that the consultants and technical assistants appointed on contractual basis for PMTs were being utilised for routine office works. Out of test checked 17 DDAs, only five³⁰ DDAs actually constituted district PMTs that too without including District Consultants and Technical Assistants as members of PMT. Further, Khargone district did not constitute PMT and the status of constitution of PMTs in remaining 11 districts could not be ascertained in audit in the absence of related records.

Thus, district PMTs were not functional in most of the cases. As a result, the Directorate was dependent upon the crop production data of Revenue Department. However, there was time lag in availability of data from Revenue Department. The production related data of NFSM districts for the year 2015-16 was not available with the Department as of December 2016. Since these data were vital for the planning, implementation and monitoring of the interventions under NFSM, its delayed availability with the Directorate affected the implementation of scheme. Moreover, as the scheme was not implemented at district level through ATMA and also PMT were not functional, the requisite collaboration with various line departments could not be ensured. Further, results of each demonstration were not compiled at State level in the form of a booklet as required in the guidelines.

The Government intimated (December 2016) that contractual nature of appointment of PMT staff forced these employees to leave the job, due to which there were vacancies. Process for filling up vacant posts in PMT was being initiated. All the district offices were being instructed for setting up the PMT again. The Government also stated that crop cutting experiments were done by the Revenue Department.

The reply is not acceptable, as NFSM provided for recording of crop cutting data through PMT. Further, State Government was responsible for ensuring availability of sufficient manpower for State/District levels PMTs.

2.1.16.3 Functioning of State Food Security Mission Executive Committee (SFSMEC)

Paragraph 4.2.1 of Operational guidelines of NFSM stipulated constitution of the SFSMEC under the chairmanship of Chief Secretary along with the Secretaries from various Government Departments³¹ as its members. State Government constituted (October 2007) the SFSMEC and made it responsible to monitor the activities of the Mission, suggest state-specific changes required if any, in the operational guidelines prescribed by the Central Government and send the State Annual Action Plan after due approval to GoI.

The existence of SFSMEC during the years 2012-13 to 2015-16 could not be ascertained in audit, as the Directorate could not produce minutes of meetings of this Committee. Audit noticed that State Action Plan was sent to GoI without approval of SFSMEC.

Working of SFSMEC during 2012-16 could not be ensured in absence of minutes of meetings. SAP was sent to GoI without approval of SFSMEC.

³⁰ Chhattarpur, Dhar, Indore, Panna and Shajapur

³¹ Departments of Agriculture, Irrigation, Power, Panchayati Raj, Tribal Affairs and Social Welfare.

The Government stated (December 2016) that SFSMEC had been set up. However, review of NFSM was done in Departmental review meetings headed by Chief Minister and also in other review meetings organised under the chairmanship of Principal Secretary and Agricultural Production Commissioner. The Government also assured that SFSMEC meetings would be held soon.

The fact remains that the activity of Mission was not reviewed by SFSMEC during the years 2012-13 to 2015-16.

2.1.16.4 District Food Security Mission Executive Committee

Paragraph 4.3.2 of operational guidelines envisaged for constitution of District Food Security Mission Executive Committee³² (DFSMEC) for project formulation, implementation and monitoring of the scheme components through the Agriculture Department.

All the test-checked districts intimated constitution of the DFSMEC. However, only four districts³³ produced minutes of meetings in support of the working of DFSMEC. Therefore, the working of DFSMEC in 13 districts was not evident from records produced in audit.

The Government stated (December 2016) that district offices would be instructed for timely conduct of DFSMEC meetings. The Government also stated that instructions would be given to District offices to evaluate the activities of the scheme through DFSMEC.

2.1.17 Impact Evaluation Study on NFSM

After completion of 11th five year plan period, an impact evaluation Study was conducted by Department of Agriculture and Co-operation, Ministry of Agriculture GoI. Six districts³⁴ of the State were also covered for the study. Some of the recommendations of the report with reference to the State and status of their implementation were as under:

- Impact evaluation report mentioned that during the entire period of 11th Plan, only eight meetings of SFSMEC were held in the State, which worked out to an average of 1.6 meeting per year. It was recommended that the SFSMEC meeting be held at least once in every quarter to oversee the activities of the Mission in the State more closely. However, audit scrutiny revealed that SFSMEC meeting were not conducted during the 12th Plan, as discussed in Para 2.1.16.3.
- According to Impact evaluation report, District Consultants and Technical Assistants engaged under the mission at district level were mostly utilised for office work of routine nature and not for intended technical service and monitoring of NFSM intervention. The similar trend continued during the period of performance audit, as discussed in para 2.1.6.2.
- Impact evaluation report further mentioned that convening of meetings of DFSMEC was poor and in majority of cases DFSMEC meeting was combined with other review meetings of the Agriculture Department which

³² DFSMEC had representatives from the line departments

³³ Dhar, Khargone, Sidhi and Ujjain

³⁴ Shahdol, Rajgarh, Dewas, Satna, Dindori, and Tikamgarh

resulted in lack of focus and in-depth deliberation. The record of meetings was also not maintained properly.

The performance audit revealed continuance of the shortcoming, as minutes of DFSMEC meeting were available in only four out of 17 districts, as discussed in paragraph 2.1.16.4.

- As per Impact evaluation report, Separate seed Committee were not constituted in half of the studied districts and suggested all districts to put in place Seed Committees to ensure adequate availability of seed to avoid adverse impact on production of crops.

The performance audit revealed that seed committees were not formed in five test checked districts, as discussed in para 2.1.8.2. Thus, follow up measures for remedial action suggested in the Impact Evaluation Report, for effective implementation and monitoring of the mission were not taken.

2.1.18 Conclusion

Targets for production of food grains were not fixed for NFSM districts in the State. As a result their progress in achieving scheme objective of additional production could not be ascertained. Despite an expenditure of ₹ 945.18 crore under NFSM in the State during 2012-16, only two *per cent* of the total farmers in the State had benefitted.

NFSM districts could increase the sown area of rice by five *per cent* only as against the average growth rate of 26 *per cent* in sown area of rice at State level. NFSM-Wheat districts also did not achieve sustained growth, as the sown areas decreased in 2014-15 as compared to previous year. Production of pulses was substantially decreased by 22 *per cent* in 2013-14 and by 14 *per cent* in 2014-15 as compared to 2012-13. Thus, the impact of NFSM on pulses was not conspicuous. However, utilisation of funds received under NFSM by the Department decreased from 95 *per cent* in 2012-13 to 64 *per cent* in 2015-16.

The Government did not provide adequate seeds in time. As a result, the objective of the Scheme of distributing quality seeds at subsidised rates could not be achieved. However, a beneficiary survey of farmers conducted by the audit revealed that 250 out of 260 farmers reported the achievement of higher yield by using quality seeds provided by the Department.

District offices could not ensure quality testing of seeds distributed to farmers before its sowing, which put to risk, the production and income generation of farmers.

The Department did not fix the agencies and rates of farm implements as required under the NFSM operational guidelines. The assistance to farmers on purchase of farm implements resulted in irregular expenditure of ₹ 261.81 crore.

Norms for providing subsidy to farm implements such as pipes and sprinkler sets were not adhered to by the Department. As a result, the Department provided irregular subsidy of ₹ 5.11 crore to 8,337 farmers in 14 districts.

Perspective plan for implementation of scheme in the State was not prepared. Baseline survey and feasibility studies were also not conducted due to which the status of crop productivity and its potential remained unassessed. Inputs from the Block offices were not obtained for preparation of District Annual Action Plans.

The objective of demonstration to disseminate the knowledge of improved practices were largely not fulfilled due to deficiencies in conducting cropping system demonstrations, lack of involvement of scientist and deficiency in preparation of results of demonstration. In eight test checked districts, expenditure of ₹ 91.71 crore on 1.74 lakh demonstrations rendered unfruitful due to failure to maintain prescribed records for demonstration results.

Inadequate coordination at State and District level of the Department to ensure proper functioning of Project Management Teams affected the planning, implementation and monitoring of the scheme.

2.1.19 Recommendations

State should provide production targets to districts and monitor its progress to ensure achievement of objective of increase in sown areas, production and yield in all crop components. State should also strive to widen the coverage of farmers under the scheme to provide benefits of scheme to maximum farmers.

The Department should evolve a mechanism to ensure full utilisation of funds received during a financial year.

Government has accepted the recommendation.

Mechanism of seed distribution and their quality testing should be strengthened to ensure availability of certified seeds to all interested farmers.

State should ensure preparation of demonstration results in a manner that farmers get awareness of benefits of using demonstrated technology, besides involvement of scientists in demonstrations.

Government has accepted the recommendation.

State should ensure proper functioning of various institutions prescribed for implementation and monitoring of the NFSM at State and District level. Baseline survey and feasibility studies should be conducted to assess the resource endowments of farmers, level of crop production, its potential and demand.

Government has accepted the recommendation.

Water Resources Department

2.2 Implementation of Madhya Pradesh Water Sector Restructuring Project

Executive Summary

The Madhya Pradesh Water Sector Restructuring Project (MPWSRP) was taken up by Water Resources Department (WRD), Government of Madhya Pradesh (GoMP) with assistance from the World Bank. It aimed to modernise 654 irrigation schemes in five river basins (Chambal, Betwa, Ken, Sindh and Tons). The Project Implementation Plan (PIP) also envisaged for agricultural intensification and diversification through effective collaboration with line departments, such as Farmer Welfare and Agriculture Development and Horticulture and Food Processing.

Investment clearance to MPWSRP for ₹ 1,919 crore on 2011-12 price level was accorded by the Planning Commission. The administrative approval of the project was revised (April 2015) to ₹ 2,498 crore from ₹ 1,919 crore (August 2004). MPWSRP, after five time extensions, was closed (June 2015) with total expenditure of ₹ 2,497.52 crore.

A performance audit on implementation of MPWSRP during the period 2010-11 to 2015-16 revealed delayed implementation of the project, poor integration of line Departments, deficient contract management and lack of monitoring. The significant audit findings were as follows:

Changes in scope of assets modernisation

The project aimed to rehabilitate and modernise 654 existing irrigation schemes of these five river basins with a total Culturable Command Area of 6.18 lakh hectares. As a result of slow performance of the project, the scope of MPWSRP was restructured in June 2012 and 362 irrigation schemes were dropped. Out of the balance 292 schemes, WRD could rehabilitate 228 schemes only by the end of the project.

(Paragraph 2.2.7.1)

In the year 2012, the Department reduced the allocation of funds in all basins ranging from 51.43 *per cent* to 78.68 *per cent* except the Sindh basin, where allocation was increased by 488.93 *per cent* due to significantly large allocation on Chambal Canal System.

(Paragraph 2.2.8.2)

During 2012-14 the Department incurred 24 *per cent* of overall expenditure of MPWSRP on execution of Chambal Canal System. The overemphasis resulted in basin wise imbalances in irrigation schemes and this, coupled with the delay in implementation of modernisation plan resulted in exclusion of 362 minor irrigation scheme from project. CC lining, which was easy for execution constituted 94 *per cent* of the expenditure and Chambal Canal System during 2012-14. It also affected the farm level economy of envisaged beneficiaries of excluded schemes.

(Paragraph 2.2.7.1)

Agriculture intensification and diversification

Against the estimated provision of ₹ 144.61 crore in the Project Implementation Plan (PIP) for the line departments, actual expenditure was ₹ 115.04 crore which was 4.61 *per cent* of the total expenditure under the MPWSRP. Poor integration with line departments, absence of sustainable water supply to farmers and lack of training to Water User Associations (WUAs) impacted crop diversification.

During beneficiary survey, 133 out of 334 (40 *per cent*) farmers reported of not participating in any training programme of FW&AD. Thus, there was lack of effort at institutional level to generate awareness among farmers about the benefits of crop diversification.

Agriculture intensification and diversification did not correspond to the increase in the achievement of irrigated area under MPWSRP. The impact of sown area of gram, *arhar* and mustard was taken as an indicator for agriculture intensification in PIP. Audit scrutiny revealed reduction in sown areas of gram and *arhar* during 2014-15 by 20 *per cent* and 35 *per cent* respectively as compared to 2011-12. Further, the sown area of mustard was reduced in 2014-15 by 19 *per cent* as compared to 2012-13. Plantation area of fruits, vegetables and spices remained low ranging from 2.90 *per cent* to 7.31 *per cent*, as against the target of 21 *per cent* of the irrigated area envisaged in PIP and was even below state average of nine *per cent*.

(Paragraph 2.2.7.4)

Contract management and execution

The Department incurred ₹ 263.85 crore on CC lining beyond the scope of Scheme Modernisation Plans (SMP) without any assessment of necessity justifying deviation from SMP.

(Paragraph 2.2.8.3)

Provisions of specifications appended with NCB were ignored by Chief Engineer at the time of according technical sanction, which led to irregular expenditure of ₹ 65.18 crore in works for trimming of earthwork and CC lining of canals, besides, inadequate quality control of works.

(Paragraphs 2.2.9.2, 2.2.9.4, 2.2.9.6 and 2.2.10.3)

Adherence with agreement clauses was not ensured by Executive Engineers resulting into undue financial benefits to contractor amounting to ₹ 68.74 crore on inadequate additional security deposit, liquidated damages, royalty charges and insurance coverage of works.

(Paragraphs 2.2.9.9, 2.2.9.10, 2.2.9.11 and 2.2.9.12)

Provisions of schedule of rates were not followed, as instances of extra cost of ₹ 24.02 crore due to incorrect lead of metal, incorrect rate for embankment and inclusion of inadmissible items of blasting and excess payment on account of shrinkage allowance were noticed.

(Paragraphs 2.2.9.3, 2.2.9.5, 2.2.9.7 and 2.2.9.14)

Quality control and monitoring

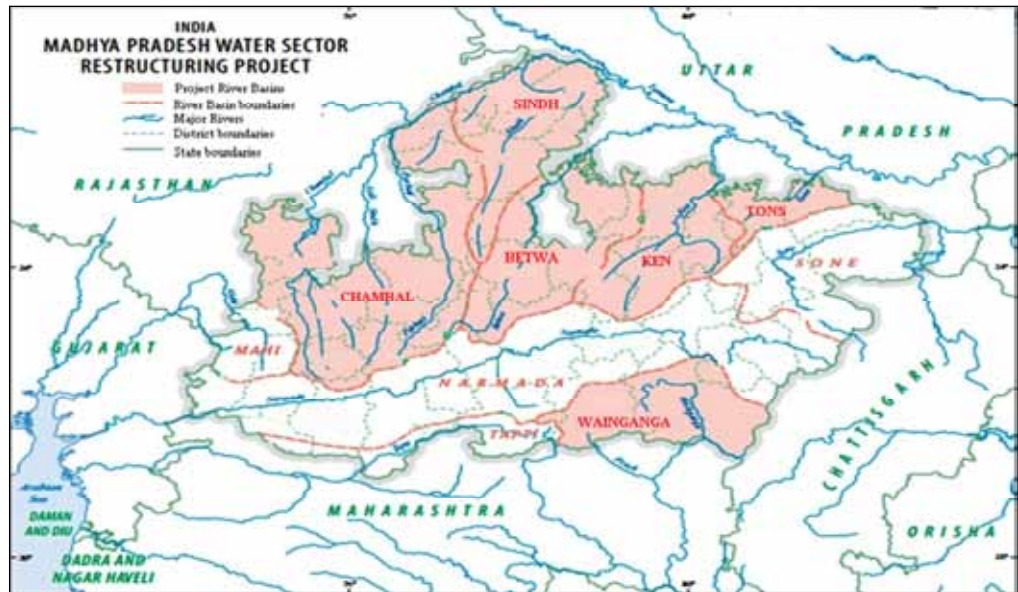
Quality control and monitoring of the project was inadequate as core tests of works were not ensured resulting in undue financial aid of ₹ 20.47 crore to contractors, below specifications works of cement concrete lining were executed and undue benefits to the contractors were extended.

(Paragarph 2.2.10.3)

2.2.1 Introduction

The Water Resources Department (WRD), GoMP is responsible for providing irrigation by creation of irrigation assets in 10 river basins³⁵ in the State. The Madhya Pradesh Water Sector Restructuring Project (MPWSRP) was taken up to improve water resource management and service delivery in five river basins (Chambal, Betwa, Ken, Sindh and Tons). These river basins were selected due to their contiguity, presence of ageing irrigation schemes and high incidence of poverty.

The project aimed to rehabilitate and modernise 654 existing irrigation schemes of these five river basins with a total Culturable Command Area (CCA) of 6.18 lakh hectares, with the provision of appropriate extension for agriculture, horticulture, livestock management and fisheries. Later, WRD added (March 2008) one more i.e. Wainganga basin for the project for CCA of 43,136 ha.



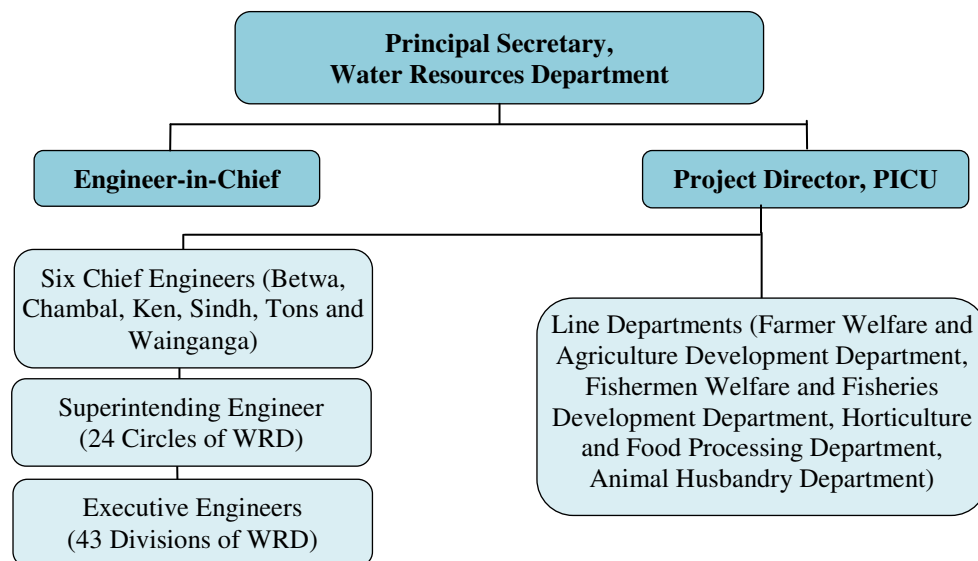
GoMP accorded (August 2004) administrative approval of MPWSRP for ₹ 1,919 crore. The project was taken up with the assistance from the World Bank and a loan agreement was executed between Government of India (GoI) and International Bank of Reconstruction and Development³⁶ (IBRD) on 30 November 2004. MPWSRP was initially scheduled to be completed by 31 March 2011, which after five time extensions completed in June 2015.

³⁵ Betwa, Chambal, Ken, Mahi, Narmada, Sindh, Son, Tapti, Tons and Wainganga

³⁶ IBRD is a World Bank institution offers loans to middle income developing countries.

2.2.2 Organisational set-up

The Principal Secretary, WRD is the administrative head of the Department at Government level. Project Implementation and Coordination Unit (PICU) was responsible for the overall implementation of the project. Chief Engineers (CEs), Superintending Engineers (SEs) and the Executive Engineers (EEs) of the concerned divisions of WRD assisted the Project Director (PD), PICU in implementation of the project. An Empowered Committee (EC) headed by the Chief Secretary was formed in March 2005 at the apex level, to review the progress of the MPWSRP. Structure of organisation set-up is given below in the organogram:



2.2.3 Audit objectives

Audit objectives for the Performance audit were to examine whether:

- All the components of MPWSRP were completed as envisaged and the project achieved intended objectives,
- Funds were available on time and utilised efficiently and economically,
- Execution of work of rehabilitation and modernisation of irrigation works were carried out efficiently and economically as planned and as per specifications and the terms and conditions of the contract and
- Quality control and monitoring mechanism were in place and quality parameters were adhered to.

2.2.4 Audit criteria

The audit findings are based on the criteria derived from the following:

- Guidelines issued by the World Bank,
- Indian Standard (IS) codes of practice issued by Bureau of Indian Standards,
- Provisions of Madhya Pradesh Works Department (MPWD) manual, Specifications for irrigation works and Unified schedule of Rates (USR) for Works,

- Technical circulars and other orders issued by Departments,
- Detailed project reports and plan documents, and
- Terms and conditions of agreements for execution of works.

2.2.5 Scope and methodologies of Audit

The Department incurred ₹ 1,797.80 crore between the period of 2010-11 and 2015-16 under MPSWRP. The works under MPWSRP was being executed through 43 divisions of WRD in six river basins under six controlling offices (Chief Engineers).

The implementation of MPWSRP during 2010-11 to 2015-16 was covered in audit. Thirteen divisions³⁷ were selected using stratified random sampling for the performance audit so as to have at least one division from each basin. The records of PD, PICU and 13 selected divisions were test-checked in the performance audit during January 2016 to June 2016. In selected 13 divisions, 105 agreements of completed works valuing to ₹ 1,424.35 crore were analysed, out of which 94 agreements were entered into during period of 2010-16 at a cost of ₹ 968.13 crore.

Entry conference was held on 02 February 2016 with Additional Chief Secretary, WRD to appraise the audit objectives, audit criteria, scope and methodologies of audit. The draft report was issued to the Government in August 2016. The audit findings were also discussed during the exit conference held on 03 October 2016 with the Principal Secretary. The responses of the Government on audit observations have been suitably incorporated in the Performance Audit.

Information relating to the project was also collected from the CEs of six river basins and line departments of Farmer Welfare and Agriculture Development, Horticulture and Food Processing, Fishermen Welfare and Fisheries Development (FW&FD) and Animal Husbandry and Jawahar Lal Nehru Krishi Vishwavidyalaya (JNKVV). Besides, beneficiary survey and interviews with stakeholders of line departments were also conducted (June 2016, December 2016 and January 2017) and their responses have suitably been incorporated in the Performance Audit.

Audit acknowledges the cooperation extended by the Department for conducting the Performance Audit.

2.2.6 Lessons learnt and sensitivity to error signals

The performance audit on MPWSRP for the period from 2005-06 to 2009-10 was earlier reported as Para 1.3 of C&AG Audit Report (Civil) for the year ended 31 March 2010. Major shortcomings and Government's reply to the Public Account Committee (PAC) was as detailed in **table 2.2.1**.

³⁷ WRD Divisions - Balaghat, Bhind, Dewas, Gohad, Jaura, Rajgarh, Raisen, Sagar, Satna, Sabalgarh, Shajapur, Sheopurkala and Morena

Table 2.2.1: Major Shortcomings pointed out in the previous Audit Report and Government's reply to the PAC

Details of paragraph	Reply of the Department
Avoidable liability towards commitment charges	World Bank took more time in giving the <i>No objection certificate</i> for SMP, consultancy appointment and goods procurement. Relaxation from the payment of commitment charges had been sought.
Shortfall in achieving targets	There was a delay in sanctioning SMPs from the World Bank ranging from 6 months to 12 months. Therefore, tender process could not be completed as per procurement plan. Later on, World Bank relaxed the process of approval. Many works were rescinded due to not achieving the progress of works.
Failure to create irrigation potential	Efforts were being made for the creation of irrigation potential through works of Chambal, Harsi and Medium projects on priority basis.
Undue financial benefit to the contractor	Instructions had been issued to retain the amount of unbalanced items till completion of the work.
Failure to recover liquidated damages	The recovery for liquidated damages for not achieving the milestone was being made as per agreement.
Loss due to recovery not made from the defaulting contractor	Action had been initiated for balance recovery from other works of the same contractor.

Performance Audit of MPWSRP for the period 2011-12 to 2015-16 revealed that most of the deficiencies as pointed out in earlier CAG's report persisted, as discussed in succeeding paragraphs.

Audit findings

2.2.7 Planning and implementation

2.2.7.1 Changes in the scope of assets modernisation under MPWSRP

The MPWSRP was aimed to modernise 654 irrigation schemes of five river basins (Chambal, Sindh, Betwa, Ken and Tons) of the State. These irrigation schemes were identified for rehabilitation due to dilapidated canals rendering substantial gap between irrigation potential created and potential utilised. Audit scrutiny revealed that MPWSRP lost its focus during project implementation due to frequent changes in its planned scope, which affected the modernisation plan of these irrigation assets and their beneficiary farmers, as discussed in the succeeding paragraphs.

- **Large drop out of irrigation schemes from project scope**

The initial scope of MPWSRP included rehabilitation of 654 irrigation schemes covering CCA of 6.18 lakh hectare. It comprised of 5 Major, 33 Medium and 616 Minor irrigation schemes consisting of both gravity irrigation delivery systems and Lift Irrigation Schemes (LISs). The project was planned to be completed by March 2011.

As pointed out in the Audit Report (Civil) of Comptroller and Auditor General for the year ended March 2010, WRD could take up only 100 schemes (15 per cent) and only nine schemes were completed in five years against the project period of six years. The delays in engagement of consultants followed by consequential delays in deliverables resulted in the delay of project.

As a result of slow performance of the project, the scope of MPWSRP was restructured in June 2012 and 362 irrigation schemes were dropped from the

As a result of slow implementation of PIP, 362 irrigation schemes were dropped from the scope of modernisation under MPWSRP.

scope of MPWSRP. However, WRD could actually rehabilitate 228 irrigation schemes as against the restructured planning of 292 schemes by the end of the project. The scheme-wise details of planned and executed schemes are shown in **table 2.2.2**.

Table 2.2.2: Status of revision of schemes

Type of scheme	Major	Medium	Minor	Total
Identified schemes in original PIP in 2004	5	33	616	654
Command area in ha (as per PIP)	2,97,150	90,063	2,31,548	6,18,761
Schemes as per revised plan in 2012	4	23	265	292
Command area in ha (as per revision in 2012)	3,29,949	82,337	76,093	4,88,379
Schemes actually executed	5	21	202	228
Command area in ha (as per execution)	5,22,736	70,413	57,785	6,50,934

(Source: Information furnished by the PICU)

On being pointed out, PICU replied (July 2016) that 217 irrigation schemes, comprising of one major, one medium and 215 minor schemes, were dropped from the scope of MPWSRP to avail Central assistance under Repair, Renovation and Restoration (RRR) scheme and 'Bundelkhand draught mitigation package'. It also informed that 148 scheme were excluded as these were found unfeasible for rehabilitation due to loss of catchment and command areas owing to urbanisation and hydrological problems.

The reply was not acceptable, as the exclusion of 362 schemes from the scope of MPWSRP was not a result of well thought out plan, but it was due to delay in rehabilitation of identified irrigation assets. 'Bundelkhand draught mitigation package'³⁸, was approved by Government of India in December 2009 by which time 248 out of 250 irrigation schemes of Betwa river basin and 117 out of 118 irrigation schemes of Ken river basin was planned for taking up in phases under MPWSRP. As such, shifting of 79 irrigation schemes of MPWSRP to Bundelkhand draught mitigation package' was indicative of the failure of WRD to modernise these irrigation assets as per stipulated scheduled under MPWSRP. Besides, these delays worsen the draught situation in Bundelkhand region. Further, the Department could not explain the reason for dropping 64 schemes from the restructured scope of MPWSRP.

Thus, the scope of assets modernisation under MPWSRP was subject to major change at the implementation stage. Further, the delayed implementation of project rendered 148 schemes (22 per cent of total identified scheme) unfeasible.

- **Overemphasis on rehabilitation of Chambal Canal System due to easy execution**

Under the project implementation plan of MPWSRP, the emphasis on major, medium and minor irrigation schemes in terms of CCAs were 48 per cent, 15 per cent and 37 per cent. However, as depicted in **table 2.2.2**, the CCA of rehabilitated major schemes was 5.22 lakh hectares, which was more than 80

³⁸ Bundelkhand package was applicable for Betwa and Ken river basins only.

per cent of total CCA of 6.50 lakh hectare achieved under MPSWRP. Thus, WRD overemphasised the execution of major schemes as compared to minor and medium irrigation schemes. However, the Department could not provide the information as to whether it had actually taken all the left over minor and medium schemes in any other rehabilitation programme for irrigation assets.

The department entered into agreements of CC lining valuing to ₹ 606.24 crore after year 2012 emphasising modernisation of Chambal Canal System to achieve timelines of MPWSRP.

Further scrutiny revealed that WRD gave over major thrust on Chambal Canal System, which was a major irrigation scheme under Sindh river basin. The rehabilitated CCA of Chambal Canal System was 3.62 lakh hectare, which was *56 per cent* of total CCA rehabilitated under MPWSRP. This was substantially higher than the planned rehabilitation of 1.86 lakh hectare CCA of the Chambal Canal System in original PIP and 2.12 lakh hectare in the restructured scope of MPWSRP.

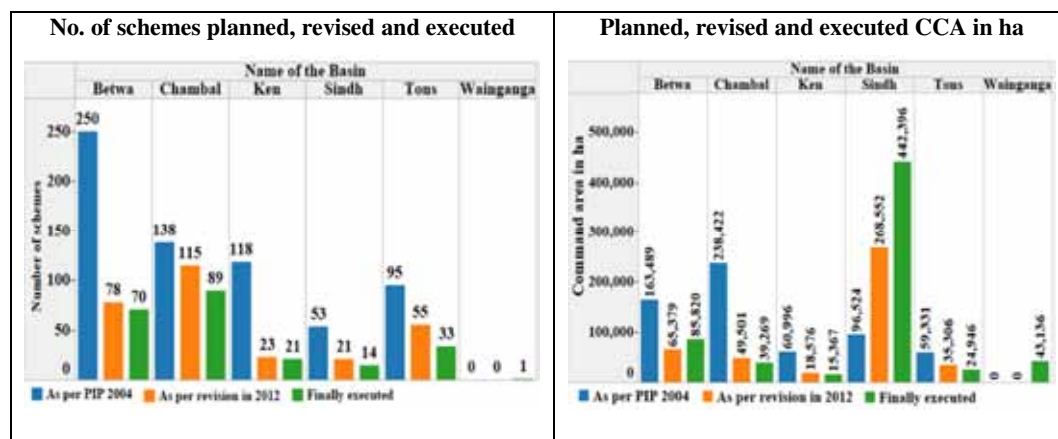
The expenditure on modernisation of Chambal Canal System was ₹ 1,156.33 crore, which was *46 per cent* of total expenditure of ₹ 2,515.65 crore on MPWSRP. This was quite skewed as compared with the initial planned allocation in PIP, which earmarked only ₹ 276.05 crore for Chambal Canal System that was *14 per cent* of original administrative approval of ₹ 1,919 crore for the entire project. Audit noticed that works valuing ₹ 606.24 crore (*24 per cent* of total expenditure under MPWSRP) were taken up during 2012-13 to 2013-14 for Chambal Canal System. Of these, CC lining constituted ₹ 571.65 crore (*94.29 per cent*) of works awarded for Chambal Canal System during 2012-14, which could be easily executed in a short span of time with high volume of expenditure.

Thus, the easy execution of Chambal Canal System prompted WRD for its overemphasis after restructuring of the project in June 2012, when the closure date of project was fixed by the World Bank as June 2015. The overemphasis on modernisation of Chambal Canal System helped Department in achieving the required financial progress for closing the project within the revised target date for completion of project. The haste of Department and other irregularities in execution of works of Chambal Canal System are further highlighted under Para 2.2.8.3 of the report.

- **Basin wise imbalances in rehabilitation and its effect on beneficiaries**

The overemphasis on modernisation of Chambal Canal System coupled with large number of dropped out schemes from the scope of MPWSRP resulted in basin wise imbalances in total number of schemes planned and executed, as detailed in the **chart 2.2.1**.

Chart 2.2.1



The basin wise details of achieved command area excluding Chambal Canal System and Wainganga Canal Systems (which was not originally planned for rehabilitation under MPWSRP), are detailed in **table 2.2.3**.

Table 2.2.3: Basin-wise details of achieved command area excluding Chambal Canal System and Wainganga Canal System

Name of Basin	Betwa	Chambal	Ken	Sindh	Tons	Grand Total
Total Schemes planned	250	137	118	53	95	653
Total schemes taken up	70	89	21	13	33	226
Percentage of schemes left	72	35.04	82.20	75.47	65.26	65.39
CCA to be covered in ha	1,63,489	54,389	60,996	96,524	59,331	4,34,729
CCA Actually covered in ha	85,820	39,269	15,367	80,295	24,946	2,45,697
Shortfall in area to be covered in <i>per cent</i>	47.51	27.80	74.81	16.81	57.95	43.48

(Source: Information furnished by the PICU)

Thus, there was significant shortfall in achieving the CCAs of medium and minor schemes to be covered in all the five basins. Incidentally, WRD had in its River Basin Plan (2015) for Chambal basin, of which 28 *per cent* planned CCA was left, accepted that cultivators had to rely solely on ground water sources and with continued extraction, the future could be bleak, if they lose the only source left.

Large number of minor schemes were dropped out from all the five basins due to emphasis on one major scheme.



View of empty Bamyliya Bhatti tank (Status as on December 2016).

During beneficiary survey (December 2016) of the minor irrigation schemes in Chambal river basin, 12 out of 15 beneficiaries of Bamyliya Bhatti and Bhourli tank minor irrigation schemes, reported lack of availability of water through canals and 10 beneficiaries reported reduced production.

In the exit conference (October 2016), the Principal Secretary, WRD stated that Department assessed command area wise achievement as a whole. In its

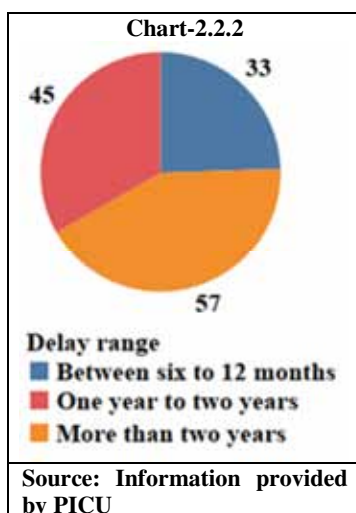
written reply, the Government stated (November 2016) that changes in number of scheme was done to utilise funds available as grant for Bundelkhand area. Also, some of the LIS schemes included in initial planning were removed. The final project outcome have shown achievement of 6,51,000 ha area against target of 4,95,000 ha. Hence, the objective was achieved as planned. It was further stated that Wainganga basin was included in the scope through a modification in the loan agreement.

The reply is not acceptable as basin wise actual results were markedly different as compared to planned rehabilitation under the project. Further, 362 schemes were excluded from the scope of MPWSRP as a result of failure of Department to timely complete these as per PIP. Further, Department emphasised on the work of modernisation of major projects only to utilise available fund before completion date of June 2015 for the project. As a result of overemphasis on modernisation of only one irrigation scheme and large number of dropped out schemes, MPWSRP could not achieve the intended objective of assets modernisation of the selected five basins and it also affected the farm level economy of envisaged beneficiaries of excluded schemes.

2.2.7.2 Delay in start of works after approval of SMPs

The 135 works were commenced belatedly even after approval of SMPs, of which 104 works were delayed during execution.

The PIP of MPWSRP had classified irrigation schemes in six categories based on their CCAs. Depending upon their respective categorisation, the asset modernisation of these irrigation schemes were planned to be completed in a phasewise manner within a period of one year to four years from their commencement. Works were to be commenced within two months from the approval of SMPs from World Bank.



Audit scrutiny of records revealed that 135 works out of 228 works having command area of 1.42 lakh hectare were commenced with delays ranging from seven months to 68 months from date of approval of SMPs by World Bank. The details of delays in commencing works are depicted in the **Chart 2.2.2**. As a result of delays in commencement of works together with delays at implementation level, out of 135 works 104 works were completed with a delay ranging from 1 month to 54 months (as detailed in **Appendix 2.22**).

The Government stated (November 2016) that there were delays on the part of consultants in preparation of tender document. To avoid such delays, centralised procurement in PICU was implemented successfully and the procurement process was speeded up.

The fact remains that the failure of PICU to monitor the progress of works and take timely remedial actions in cases where consultants delayed preparation of tender documents, resulted in delays in completion of assets modernisation under MPWSRP.

2.2.7.3 Works of micro distribution network

Earmarked funds of ₹ 205.52 crore for micro distribution network and canal automation were diverted for other works.

SMPs of irrigation schemes envisaged for micro distribution network works, which included the works of construction of water course, construction of division boxes at off take points of field channels, construction of farm road culverts and Adjustable Proportional Module (APM)³⁹. Canal automation was to be done by establishing Project Operation Centre (POC) and Remote Monitoring Unit (RMU) and using SCADA⁴⁰ application for communication to the operator at regulating structures of canals.

The provision for construction of micro distribution network and canal automation under Chambal Canal System was as detailed in **table 2.2.4**.

Table 2.2.4: Provision for micro distribution network and canal automation in Chambal Canal System

(₹ in crore)

Name of Canal	Details of reaches	Provision of Micro Distribution Network in Command Area	Canal Automation	Total
Chambal Right Main Canal	km 0 to km 120	47.77	2.32	50.09
	km 120 to km 169	7.57	0.94	8.51
Lower Main Canal	km 0 to km 50	33.31	1.50	34.81
Ambah Branch Canal	km 0 to km 83.90	34.69	1.66	36.35
	km 83.90 to km 143.40	22.63	1.41	24.04
Morena Branch Canal	km 0 to km 36.60	50.53	1.19	51.72
Total		196.50	9.02	205.52

(Source: SMP for Chambal Canal System)

Scrutiny of records revealed that works related to micro distribution network and canal automation were not executed. Thus, the provision of ₹ 205.52 crore earmarked for micro distribution network and canal automation were diverted for other purposes.

The Government stated (November 2016) that earlier projects in isolation were taken up for command area development works. Later the Department made a large scale scheme for Command Area Development (CAD) with Central assistance. Accordingly, separate wing of command area was strengthened and the proposals were framed for central assistance. Therefore, the World Bank loan component was not used in CAD works. However, full irrigation has been provided in Chambal Canal System.

The reply is not acceptable as there were provision for works of micro distribution network and canal automation in the SMPs for the purpose of assurance of regulated water supply on rationalised basis. Further, the requirement of central assistance was mainly due to excess expenditure in execution of lining work in main canal and distributaries of Chambal Canal System, as discussed in para 2.2.8.3.

³⁹ APM is a structure for equitable distribution of water to cultivators adopted by WRD vide technical circular 34, issued (25-11-91) by the E-in-C, WRD.

⁴⁰ Supervisory control and data acquisition system

2.2.7.4 *Integration with line departments for improving productivity of irrigation assets*

PIP envisaged for agricultural intensification and diversification under MPWSRP through improved agricultural support services, strengthening of researchers-extensionists-farmer-market linkages, effective collaboration of GoMP line Departments (WRD, FW&AD, Horticulture and Food Processing Department and JNKVV, Jabalpur). It was expected that the project would lead to increased cropping intensity, improved productivity of oilseed, pulse and cereal crops; expansion of area and productivity of vegetables, fruits, flowers, spices and other high value crops.

The line department wise details of original provision, restructured provision and expenditure during 2004-05 to 2015-16 are shown in **table 2.2.5**.

Table 2.2.5 Line department wise provision and expenditure incurred

(₹ in lakh)

Name of line department	Original Provision as per PIP	Restructured estimated provision	Total expenditure
Farmer Welfare and Agriculture Development	4,907	2,846	2,763
Horticulture and Food Processing	2,384	2,423	2,382
Animal Husbandry	2,415	2,415	3,415
Fisherman Welfare & Fisheries Development	3,445	1,902	1,902
Agriculture universities	1,310	1,064	1,042
Total	14,461	10,650	11,504

(Source: Information furnished by the PICU)

As evident from above, actual expenditure was ₹ 115.04 crore, which was 79.55 per cent of the estimated provision and 4.61 per cent the total expenditure under the project. Audit scrutiny revealed following:

- ***Agriculture intensification and diversification***

As per PIP, conversion of rainfed area into irrigated was taken as criteria for agriculture intensification. CCA of Chambal Canal System and Wainganga Canal System was 4,05,238 ha, which was 62 per cent of total area covered through MPWSRP. In Bhind, Morena and Sheopur districts covered by Chambal Canal System, there was marginal increase in conversion of rainfed area to irrigated area in as detailed in **table 2.2.6**.

Table 2.2.6: Status of total area of all crops and total irrigated area in Bhind, Morena and Sheopur districts of Chambal Canal System

Year	Total area of all crops in ha	Total irrigated area in ha	Percentage of irrigated area with area of crops
2010-11	9,88,228	4,59,174	46.46
2011-12	9,85,960	4,90,335	49.73
2012-13	9,94,808	5,13,944	51.66
2013-14	10,39,768	5,43,757	52.30
2014-15	10,52,208	5,93,733	56.43

(Source: Data from MP Land records website)

Thus, the area of total crops was increased along with increase in irrigated area. Further, in case of command area of Wainganga Canal System in

There was inadequate training to WUAs and conversion of rainfed area to irrigated area.

Balaghat district, rice sown area was 2,55,517 ha in year 2011-12 which remained as 2,59,790 ha in year 2015-16.

Agriculture intensification and diversification did not correspond to the increase in the achievement of irrigated area under MPWSRP. The impact of sown area of gram, *arhar* and mustard was taken as an indicator for agriculture intensification in PIP. The status of sown area of gram, *arhar* and mustard in 10 test checked districts during 2011-12 to 2015-16 was as depicted in **table 2.2.7**.

Table 2.2.7: Details of sown areas of gram, arhar and mustard in test-checked districts

(Area in hectare)

Year	2011-12	2012-13	2013-14	2014-15	2015-16
Gram	7,47,245	7,60,213	7,24,888	6,45,410	5,99,155
Arhar	1,29,879	1,05,050	73,924	69,546	84,244
Mustard	Not available	3,89,129	3,88,173	3,20,348	3,13,730

(Source: Data from MP Land records website)

Thus, the sown area of Gram was reduced from 7.47 lakh hectare in 2011-12 to 5.99 lakh hectare in 2015-16 (19.81 *per cent*) and the sown area of *Arhar* was reduced from 1.29 lakh hectare in 2011-12 to 0.84 lakh ha (35.14 *per cent*) in 2015-16. Further, the sown area of mustard was reduced from 3.89 lakh ha in 2012-13 to 3.13 lakh ha (19.38 *per cent*) in 2015-16. Thus, as per production model, post MPWSRP agriculture intensification was negative.

- As per PIP, Agriculture Extension and Training Centres of FW&AD were to organise training for farmers/ WUAs for sustainable use of land and water resources. JNKVV organized 196 trainings against target of 275 trainings to WUAs during 2006-07 to 2015-16 as activities of Capacity building⁴¹ indicating shortfall in achievement of targets. During beneficiary survey, 133 out of 334 (40 *per cent*) farmers reported of not participating in any training programme of FW&AD. Thus, there was lack of effort at institutional level to generate awareness among farmers about the benefits of crop diversification.

During interview of 75 Rural Agriculture Extension Officers (RAEOs) of 96 villages in 10 districts, it was noticed from the details of production reported that crop diversification did not take place in 74 villages (77 *per cent*) of 64 RAEOs. On enquiring about crop diversification by the farmers, 53 *per cent* of farmers either denied or not replied.

Diversification through horticulture crops

As per PIP, diversification analysis, fruits, vegetables and spices would be planted in 21 *per cent* of the designed irrigated area in the project area as compared to the state level coverage of nine *per cent*.

In command area of Chambal Canal System plantation area of fruits, vegetables and spices remained low ranging from 2.90 *per cent* to 7.31 *per cent* as detailed in **table 2.2.8**.

Targeted diversification of 21 per cent was not achieved through horticulture crops.

⁴¹ Capacity building covers training to field officers, training to WUAs at *krishi vikas kendras* and workshops and seminars at *krishi vikas kendras*.

Table 2.2.8: Status of fruits, vegetables and spices planted in Bhind, Morena and Sheopur districts of Chambal Canal System

(Area in ha)

Year	Fruits	Vegetables	Spices	Total Area	Per cent with respect to command area of Chambal Canal System
2011-12	112	8,092	4,852	13,056	3.61
2012-13	85	6,828	3,581	10,494	2.90
2013-14	82	6,782	3,701	10,565	2.92
2014-15	160	7,483	13,522	21,165	5.85
2015-16	349	8,622	17,490	26,461	7.31

(Source: Data from MP Land records website)

As detailed above, though the area of fruits and spices was increased in years 2014-15 and 2015-16 but it was remained constant in case of vegetables indicating inadequate diversification.

The Director, Horticulture and Food Processing Department informed (December 2016) that poly sheds were supplied to farmers for strengthening and farm mechanisation of nurseries. However, 39 out of 42 Rural Horticulture Extension Officers (RHEOs) (93 *per cent*) of eight districts did not furnish details of use of poly house when requisitioned. In case of Bhind district two RHEOs stated (January 2017) that activities relating to horticulture were not taken up during period from 2010-11 to 2015-16. Thus, diversification through horticulture crops was affected with underutilisation of poly sheds and less integration in whole command of Chambal Canal System.

Out of 334 farmers surveyed, only 101 (30 *per cent*) farmers reported supply of sufficient water to fields from canals. Further, 12 members of WUAs of Bila tank of Sagar reported insufficient availability of water and reduced days of supply from canal.

Extension activities through Fisheries and Animal Husbandry Department

The MPWSRP aimed to increase the fish seed production from the existing water resources. FW&FD developed fish production in 26,931 ha under 170 reservoirs. However, 21 (46 *per cent*) out of 46 fisheries inspectors of five districts⁴² reported that there was adverse impact on fish production due to release of water from tanks.

FW&FD provided (September 2010) funds of ₹ 84.33 lakh to WRD Division, Satna for construction of dormitory-cum-rest house at fish farms in Pondi. The work was not completed (June 2015) due to delay in approval of rates by FW&FD Department. Later the amount of ₹ 88.42 lakh was returned to PD, PICU, unutilised. Thus, intended benefits could not be achieved despite availability of funds.

- As per Project Appraisal Document (PAD), support would be provided for farming System Research and Demonstration to improve milk production, breed improvements, maximisation of fodder use, on-farm fodder production, and fodder nurseries. These activities were dropped during restructuring in June 2012 to allow more focused attention on the other agricultural, horticultural and fisheries activities.

⁴² Dewas, Morena, Raisen, Satna and Sheopur

Audit scrutiny of records revealed that the department incurred ₹ 34.15 crore on earmarked activities. In restructured estimate, provision of ₹ 24.15 crore was made for the Animal Husbandry Department (AHD), of which ₹ 20.54 crore were remitted (2013-16) to the MP Co-operative Dairy Federation Ltd. for establishment of cattle feed plants at Shivpuri, which were not started up to January 2017 even after an expenditure of ₹ 19.29 crore.

In the exit conference (October 2016), the Principal Secretary expressed concern on non-completion of work by the AHD and directed the PD, PICU to look in to the matter. The Government stated (November 2016) that replies are sought from the line Departments.

The work of MPWSRP was closed in June 2015, however, the Department was not aware of physical and financial progress of works by the line Departments.

2.2.8 Fund flow and expenditure

The Planning Commission accorded (July 2004) investment clearance to MPWSRP for ₹ 1,919 crore on 2011-12 price level. The State Government revised (April 2015) the administrative approval of the project to ₹ 2,498 crore from ₹ 1,918.57 crore (August 2004). The flow of fund through World Bank loan was based on the eligible expenditure that qualified for reimbursement. The World Bank provided funds to the project by depositing money in the account of the project maintained by the Reserve Bank of India.

The fund for the project was routed through State budget. Accordingly, allotments were made to the WRD under MPWSRP scheme. The funds to WRD divisions and line Departments were provided through PD, PICU, Bhopal. The total expenditure incurred up to March 2016 after closure of the project was ₹ 2515.65 crore. The status of committed distribution of funds, allotment to PICU and expenditure under MPWSRP for the last six years ending 2015-16 was detailed in **table 2.2.9**.

Table 2.2.9: Financial Achievements of the Project as of March 2016

(₹ in crore)

Financial year	Committed distribution ⁴³ of funds	Allotment to PICU	Expenditure
2010-11	128.60	310.10	277.77
2011-12	320.00	200.00	171.28
2012-13	200.67	218.38	208.04
2013-14	300.00	336.43	328.67
2014-15	404.60	457.95	436.62
2015-16	295.76	377.00	375.42 ⁴⁴
Total	1,649.63	1,899.86	1,797.80

(Source: Information provided by PICU)

Audit scrutiny of fund flow and expenditure revealed the following:

2.2.8.1 Avoidable liability of commitment charges

As per section 2.05 of Article-II of the loan agreement with the World Bank, the borrower was to pay commitment charges at 3/4th of one *per cent* per

⁴³ As per information provided by PD, PICU

⁴⁴ Expenditure of financial year 2015-16 up to closing of MPWSRP was ₹ 357.29 crore and for rest of the period of financial year was ₹ 18.13 crore which was not reimbursable.

annum on the principal amount of the loan not withdrawn as per agreed schedule.

Avoidable liability of ₹ 1.12 crore was created on account of commitment charges due to delayed utilisation of World Bank loan.

As evident from **table 2.2.9**, Department incurred an expenditure of ₹ 171.28 crore against committed distribution of funds of ₹ 320 crore in the year 2011-12. The short utilisation of ₹ 148.72 crore (46.48 per cent) resulted in accrual of liability of commitment charges of ₹ 1.12 crore. The accrued liability of committed charges of ₹ 8.26 crore due to short utilisation of fund during 2005-10 was already reported in the earlier Audit Report (Civil) for the year ended 31 March 2010. The avoidable liability of commitment charges could be attributed to slow progress in modernisation of irrigation asset by WRD and short utilisation of funds by line departments, as discussed in paras 2.2.7.1 and 2.2.7.4.

The Government stated in exit conference (October 2016) that the State Government was not aware of the liability of commitment charges as loan agreement was executed between Government of India and the World Bank. It was further stated (November 2016) that no provision for commitment charges was ever made by the Department nor any sum paid by the State Government.

The reply is not acceptable, as the payment of commitment charges due to short utilisation of funds was provided under the loan agreement and the Department could not produce any information regarding waiver of this clause by the World Bank.

2.2.8.2 Basin-wise allotment and expenditure

As per PIP, the Department made basin-wise allocation of funds through World Bank loan for modernisation and restructuring of 654 irrigation schemes. However, there was abnormal variation in the earlier allotment (2004), revised allotment (2012) and expenditure (June 2015) as detailed in **table 2.2.10**.

Table 2.2.10: Basin wise status of funds under MPWSRP

(₹ in crore)

Name of the Basin	Allocation as per original PAD (2004)	Revised allotment in 2012	Allocation in 2004 at 2012 price level ⁴⁵	Variation in allocation at 2012 price level	Percentage variation	Expenditure up to June 2015
1	2	3	4	5 = (3-4)	6=5/4*100	7
Chambal	478.51	120	562.95	-442.95	-78.68	111.50
Sindh	202.06	1,400	237.72	1,162.28	488.93	1,360.90
Betwa	402.50	230	473.53	-243.53	-51.43	229.62
Ken	159.07	70	187.14	-117.14	-62.59	66.93
Tons	161.00	50	189.41	-139.41	-73.60	44.35
Wainganga ⁴⁶	0	0	0	0	0	127.99
Total	1,403.14	1,870	1650.75	219.25		1,941.29

(Source: Information furnished by the PICU, WBP)

⁴⁵ Factor of 1.18 was used for converting price levels from year 2004 to 2012 on basis of rates of USD of ₹ 43.86 and ₹ 51.60 respectively as mentioned in Loan ledger of MPWSRP maintained by Aid Accounts and Audit Division, Ministry of Finance (<http://aaad.gov.in>).

⁴⁶ No allotment under Wainganga basin was made as the work in Wainganga basin was executed through the savings due to devaluation of Indian rupee in comparison to the US dollar.

The Department reduced the allocation of funds in all basins ranging from 51.43 per cent to 78.68 per cent except the Sindh basin, where allocation had been increased by 488.93 per cent due to significantly large allocation on Chambal Canal System.

In the PAD (2004), WRD erroneously included Chambal Canal System in Chambal Basin, which was subsequently considered in Sindh Basin at the time of revised allotment in 2012. As evident from **table 2.2.10**, an amount of ₹ 442.95 crore was withdrawn from allocation in Chambal basin. However, instead of increasing the allotment in Sindh basin by the same amount, the department allotted ₹ 1,400 crore which was higher by 105.70 per cent⁴⁷. As discussed in para 2.2.8.3, the excess provision for works under Chambal Canal System was made in view of its easy execution in a short span of time so as to complete the project by June 2015.

The Government stated (November 2016) that the MPWSRP was aimed at achieving overall 4,95,000 ha irrigation irrespective of number of scheme or basin wise area. Moreover, water through Chambal Canal System from Chambal basin was transferred to Sindh basin for irrigation. In PIP, planning for Chambal Canal System was erroneously shown in the Chambal basin instead of Sindh basin. Therefore, expenditure of Chambal Canal system which was earlier shown in Chambal basin was expenditure of Sindh basin and the expenditure reported in Sindh basin actually belongs to the expenditure of Sindh basin only.

The reply is not acceptable, as the project development objective was to improve productivity of water through 654 identified schemes amongst all the selected river basins of the State. Further, Department had allotted ₹ 276.05 crore for Chambal Canal System in PAD (2004), which worked out to ₹ 325.74 crore at 2012 price level. As against, ₹ 917.95 crore was allocated for Chambal Canal System in the revised allocation 2012, which was higher by 182 per cent, and the actual expenditure (₹ 1,156.33 crore) was even more. The overemphasis on Chambal Canal System led to reduced allocation in all basins ranging from 42.86 per cent to 74.92 per cent, which was contrary to project development objectives.

2.2.8.3 Expenditure on works beyond the scope of scheme modernisation plans

Execution of excess quantities and length of CC lining beyond the scope of SMPs led to unjustified expenditure of ₹ 263.85 crore.

Scheme modernisation plans (SMPs) were prepared by the consultant and approved by the Department and the World Bank on the basis of joint transit walk of officers of the Department and the consultant. SMPs provided for lining in selective reaches in Chambal Canal System of Sindh basin.

Audit scrutiny in three WR divisions (Morena, Sabalgarh and Sheopur) revealed that specific reaches were identified for CC lining and provision was made in SMPs for 5,15,295.85 cu m of CC lining in six test checked works. In other two works⁴⁸, the length was provided for lining in 28,737 metre. However, the Department executed the work of CC lining in 11,02,935.02 cu

⁴⁷ ₹ 442.95 crore + ₹ 237.72 crore = ₹ 680.67 crore
(1400-680.67/680.67) *100 = 105.70 per cent

⁴⁸ 1L to 4RC and 6L to 16L Distributory of LMC and 5L distributory of Lower Main Canal

m in six works and in entire length of 71,441 metre in other two works. The excess execution of CC lining was without any assessment of necessity which required deviation from SMPs finalised after joint transit walk. Thus, the excess quantities of CC lining of 5.88 lakh cu m and 42,704 metre resulted in unjustified expenditure of ₹ 263.85 crore (**Appendix 2.23**).

In the exit conference (October 2016), the Department stated that initially the lining was to be done in patches, but later it was realised that lining was required in entire length of canals. The Government in its written reply stated (November 2016) that it was decided to take up lining work in all the possible reaches for efficient use of water in view of the water logging problem after rains and irrigation.

The replies are not acceptable, as the requirement of CC lining was assessed for selected reaches in SMPs through joint walk of officers of WRD and consultants. The reaches for CC lining were identified in view of the risk of seepage of canal waters and water logging. Though WR Division, Jaora followed the provisions of CC lining as detailed in the SMPs, other Divisions deviated from SMPs without assessment of necessity for excess execution of CC lining.

2.2.9 Contract management and work execution

Contract management is the process of systematically and efficiently managing contract creation, execution and analysis for the purpose of financial and operational performance and minimising risk of cost over run and time over run. There were shortcomings in estimation, tendering and execution leading to extra cost/excess payments/undue benefit/inadmissible payments/inflated payments to the contractors valuing ₹ 204.10 crore in respect of 71 contracts of restructuring and modernisation of canals and tanks.

2.2.9.1 Irregular execution of CC lining

As per the provision of Technical Circular (TC) No. 1/84⁴⁹, CC lining in M-10⁵⁰ grade is required to be provided for canals carrying discharge of water from 0.3 cumec to 3 cumec and more. The Department again confirmed (March 2003) the provision for providing CC lining in M-10 grade vide TC No. 47.

Audit scrutiny of records revealed that in case of 30 works under seven WR divisions⁵¹ of restructuring and modernisation of canals, the Department provided and executed 10,63,440 cu m M-15 grade cement concrete lining. Provision and execution of M-15 grade CC lining was contrary to the provisions of TC and criteria for MPWSRP works. This resulted in irregular execution of CC lining of ₹ 47.70 crore as detailed in **Appendix 2.24**.

The Government stated (November 2016) that the work of CC lining was executed as per specifications and broad guidelines of technical specification issued for MPWSRP works. These specifications had been part of agreement. It was mentioned that concrete would be generally governed by IS 456-2000, which provided M-15 as minimum grade of concrete. The technical circular

Irregular expenditure of ₹ 47.70 crore was incurred due to adoption of richer specification for canal lining.

⁴⁹ Technical Circular (TC) No 1/84 issued by the E-in-C, WRD

⁵⁰ This represents cement, sand and coarse aggregate in the ratio of 1:3:6.

⁵¹ Balaghat, Bhind, Jaora, Morena, Sabalgarh, Satna and Sheopur

(TC) 1 of 84-85 was a very old TC and had been under revision since long. Further, Director (Canals), BODHI informed (February 2017) that revised guidelines for canal lining superseding TC 1/84 has been issued (December 2016).

The reply is not acceptable, as IS 456: 2000 did not stipulate M-15 as minimum grade of concrete and the provision of M-10 grade having specified characteristic strength of 10 N/mm² was also included for grades of concrete. Further, the fact remains that TC 1/84 was in force during period of execution and therefore, was to be followed and accountability for overruling the circular without authority was required to be fixed.

2.2.9.2 Extra cost due to unwarranted provision for trimming of earthwork

Extra cost due to unwarranted provision for trimming of earthwork of ₹ 17.73 crore.

As per clause 7 of chapter-III of specifications for canal lining appended with National Competitive Bidding (NCB) document, final preparation of sub-grade for placement of concrete included provision of work of trimming in canal section up to the underside of concrete lining and preparation of sub-grade for concrete placement include removal of pride section⁵². Pride section equivalent to thickness of lining on the sides and bed on the underside of lining shall be left unexcavated. The rate for providing and laying embankment was including the cost of final preparation of sub-grade for placement of concrete lining and no separate payment on this account was admissible.

Audit scrutiny of records of 37 works⁵³ in seven WR divisions⁵⁴ revealed that item of earthwork was prepared by inclusion of items of stripping, excavation (housing), earthwork for embankment, watering and compaction. It was noticed that a separate item of trimming was provided in the schedule of items of NCB and an amount of ₹ 17.73 crore was paid for execution of 178.78 lakh sq m. Since the item of final preparation of sub-grade for placement of concrete already included provision and execution of trimming, inclusion of trimming as a separate item and payment was contrary to provisions of NCB. This resulted in extra cost due to unwarranted provision for trimming of earthwork of ₹ 17.73 crore, as detailed in **Appendix 2.25**.

The Government stated (November 2016) that the item of mechanised trimming was included as per item provided in USR. It was essential to trim the sub-grade to keep the thickness of lining in uniformity and there were small undulations in sub-grade even after compaction.

The reply is not acceptable, as the specification of canal lining appended with NCB document stipulated that the final preparation of sub-grade included work of trimming. Therefore, separate payment on account of trimming was inadmissible and accountability of respective officers was required to be fixed for incorrect inclusion of this item in estimates and approving the same in TS.

⁵² Section of canal having uneven surfaces

⁵³ WRD Dn Bhind and WRD Dn Gohad

⁵⁴ Balaghat, Bhind, Gohad, Jaora, Morena, Sabalgarh and Sheopur

2.2.9.3 *Excess payment on account of inclusion of lead/rate of Black Trap metal*

The availability of the type of course aggregate in the near vicinity of work area is the main governing factor, while selecting the type of metal for CC work in canal lining during estimation. There is no specific guidelines for use of Black Trap (BT), Basalt or local metal as course aggregate.

Excess payment of ₹ 16.43 crore on account of inclusion of lead/rate of BT metal.

Audit scrutiny of records in case of 18 works in six WR divisions⁵⁵ revealed that estimates for CC lining included provision of extra rate of lead for use of BT metal by including lead charges up to 220 km, as detailed in **Appendix 2.26**. Further scrutiny revealed that the quarry metal available at nearer leads up to 83 km was not used on the ground of using BT metal. The provision for excess lead for BT metal was unwarranted as the course aggregate available in the near vicinity could be used for CC lining work.

Audit scrutiny further revealed that the mix designs were prepared for CC lining works reportedly including coarse aggregate as BT metal. However, the specific gravity⁵⁶ of course aggregate measured in the mixed design was up to 2.65. Since the specific gravity of BT metal ranges from 2.8 to 3.0, as such BT metal was not actually used in the mix designs of concrete and therefore, in CC lining work. Thus, the payment of lead for BT metal without its actual use resulted in avoidable excess payment of ₹ 16.43 crore in 18 works.

The Government stated (November 2016) that the thickness of CC lining provided was 7.5 cm to 10 cm. Twenty mm metal obtained from crusher was used in CC lining. The crusher used BT/ Granite/ Basalt rocks for making metal. The UCSR rate of lead of BT/ Granite/ Basalt metal was same. Therefore, the lead had been added for BT/ Granite/ Basalt metal. As far as the specific gravity of course aggregate in design mix was concerned, the metal might be Granite for which specific gravity was in the range of 2.6 to 2.7. Thus, no excess payment on account of lead/rate of BT metal had been paid.

The reply is not acceptable as the course aggregate available near the vicinity of work area was not used. Further, even after the BT metal with extra lead was included in the estimates of CC lining, EE did not ensure use of BT metal in the work. Thus, the condition on the ground did not warrant extra payment of ₹ 16.43 crore on account of lead for BT metal.

2.2.9.4 *Extra cost due to inclusion of superfluous item of work*

According to clause 9.2 of the specifications of chapter-III canal lining, Air Entraining Agent (AEA) as an admixture shall be added to the concrete in such a manner to ensure uniform distribution of admixture throughout the concrete. Further clause 7 of chapter-II of specifications provides that AEA shall only be added after approval of Engineer-in-Charge. The unit rate of concrete shall cover application of admixture.

Superfluous item of Air Entraining Agent was made in item of CC lining leading to Extra cost of ₹ 5.46 crore.

In two WR divisions, Jaora and Morena, audit scrutiny of records revealed (May and June 2016) that mix designs of CC lining work did not include

⁵⁵ Bhind, Gohad, Jaora, Morena, Sabalgarh and Sheopur

⁵⁶ The specific gravity of solids is defined as dimension less unit is a ratio of density of material to the density of water.

provisions for adding AEA, however the Department ignoring the fact to use CC lining without AEA, allowed use of AEA as detailed in **table 2.2.11**.

Table 2.2.11: Details of cost of AEA

Sl. No.	Name of division	Agreement number	Quantity of AEA in litre	Rate in ₹ per litre	₹ in lakh
1	WR Dn Jaora	01/2007-08	48,134.99	304	146.33
2	WR Dn Morena	01/2007-08	1,25,199.03	319	399.46
Total			1,73,334.02		545.79

(Source: Clubbing statements of the works)

As detailed above, the Department used total 1.73 lakh litre of AEA by ignoring the provisions of specifications of CC lining appended with the agreement and paid an amount of ₹ 5.46 crore to the contractors. The use of AEA was avoidable in view of approved mix designs. Therefore, adding the cost of AEA in clubbing statements and payment thereof was not admissible. This resulted in excess payment to the contractors of ₹ 5.46 crore.

The Government stated (November 2016) that AEA increases the workability of concrete without much increase in water-cement ratio. The compressive strength of concrete is inversely proportional to workability of concrete; therefore the AEA was used in canal lining.

The reply is not acceptable as design mixes were used for the work, in which water cement ratio is also approved and recommended. Further, in other works of canal lining under MPWSRP, AEA was not used. Extra rate for AEA was not admissible in terms of clause 7 of chapter-II of specifications as unit rate of CC lining in USR was inclusive of AEA. Since there was no provision of AEA in mix designs in items of the specification governing the contract, this explanation was not acceptable and shows negligence on the part of the competent authority in ensuring fidelity to the agreement terms.

2.2.9.5 Extra cost due to adoption of incorrect rate of embankment

The USR (2009) of WRD consisted of two separate items of earthwork for new works and maintenance and repair works. Rates of items of earthwork for new works included provision of rates (ranging between ₹ 43 per cu m and ₹ 64 per cu m) with leads for different distances whereas rate of earthwork for maintenance and repair did not include provision for rate of leads and a composite rate of ₹ 38 per cu m with all lead was fixed.

Audit scrutiny of records revealed in 16 works of restructuring and modernisation in five WR divisions⁵⁷ that the rates of earthwork for new work were included erroneously instead of rate of ₹ 38 per cu m for repair and maintenance. Adoption of higher rates of earthwork resulted in extra cost of ₹ 5.21 crore for execution of 24.76 lakh cu m earthwork as detailed in **Appendix 2.27**.

The Government stated (November 2016) that the work of restructuring is a new work and not an ordinary repair and maintenance work for which the rate was ₹ 36 per cu m. It was further, stated that the estimate and clubbing of items were not the part of bid document. Thus, the work was executed on tendered rates offered in open competitive approved rates.

Extra cost of ₹ 5.21 crore was incurred due to adoption of incorrect rate of embankment.

⁵⁷ Balaghat, Rajgarh, Sagar, Sheopur and Shajapur

The reply did not explain why the technical sanction was granted on basis of incorrect rates in contravention of provisions of USR. In the absence of clear nomenclature for separation of USRs, the amount of ₹ 5.21 crore was wrongly paid and needed to be recovered. Therefore, the accountability was to be fixed for granting technical sanction on the basis of incorrect rates.

2.2.9.6 Unwarranted execution of excess thickness of lining

Extra cost of ₹ 4.82 crore was incurred for unwarranted excess thickness of CC lining.

According to the paragraph 25.6.3.2 of specifications for canal lining issued by WRD, maximum 75 mm thick cast in situ lining was to be provided for canals having depth of water less than 2.5 metre and capacity five cumec to 50 cumec discharge of the canals.

Audit scrutiny of records (June 2016) in WR division Jaora revealed that head discharge of Morena Branch Canal (MBC) was 14.16 cumec and depth of water was 1.45 metre, hence the 75 mm thickness of lining was to be adopted for lining in MBC from km 0 to km 36.10. However, the Department adopted thickness of 100 mm using M-15 grade concrete. Therefore, execution of lining in excess of the required thickness in MBC was contrary to the provision of specifications and resulted in extra cost of ₹ 4.82 crore⁵⁸. The Department failed to furnish the reasons for adoption of excessive thickness of canal lining.

The Government stated (November 2016) that thickness of lining for a particular discharge or depth of water should not be less than the minimum thickness prescribed. It can be more as per site condition and requirement. Accordingly the specifications for MPWSRP were drawn and appended with the tender document/agreement. The work was executed accordingly.

The reply is not tenable as per specifications para 5.2 of IS Code IS: 3872, 1993, the range of depth of water should be less than 2.5 metre for the canal having discharge from 5 cumec to 50 cumec and full supply depth up to 2.5 metre, the thickness of canal lining should have been 60-75 mm. The thickness can be increased for deeper channels and when surface deterioration in freezing climate is expected. Contrary to the provisions of IS Code, higher thickness of CC lining was adopted by the Department without any justification for such deviation. Thus, incorrect provision and estimate against the irrigation specifications and execution of higher value of 100 mm thickness in the canal lining by the Department resulted in extra cost of ₹ 4.82 crore.

2.2.9.7 Extra cost due to inclusion of inadmissible item of blasting

Extra cost of ₹ 85.72 lakh was made due to inclusion of item of blasting in CC lining.

According to the item 2512 of USR issued by WRD, the rate of item of CC lining was a complete item for providing and placing of cement concrete inclusive of cost of all the material i.e. cement, sand, metal and water. Besides, leads for carting of material such as cement, metal and sand was included in clubbing for item of CC lining which were payable.

Audit scrutiny of records in WR division Balaghat revealed that Department worked out the rate for composite item of CC lining after clubbing⁵⁹ of the

⁵⁸ 25 per cent of (₹ 3,645 per cu m * 52,919.19 cu m = 19,28,90,447) = ₹ 4,82,22,611

⁵⁹ The clubbing statement is prepared for the work by including various items of USR for working out the rate of composite item.

rates of CC lining in bed, side slopes, leads and blasting. However, providing and placing the material for CC lining was the responsibility of the contractor, the inclusion of separate provision for blasting of stone was not admissible, which resulted in extra cost of ₹ 85.72 lakh, as detailed in **table 2.2.12**.

Table 2.2.12: Details of extra cost of blasting in execution of CC lining

Sl. No.	Name of work	Quantity executed in cu m	Extra rate for blasting in ₹ per cu m	Extra cost in ₹
1.	Wainganga Main Canal Ch 0 to Ch 963	47,916.170	74.80	45,84,129
2.	Mendki Br canal Ch 0 to Ch 1181, Waraseoni Br Canal Ch 0 to Ch 330	31,827.292	74.80	23,80,681
3.	Wainganga Main Canal Ch 963 to Ch 1356	18,043.375	74.80	16,08,026
Total		97,786.837		85,72,836

(Source: Final bill and clubbing statement of the works)

The Government stated (November 2016) that in fact the note 3 (b) of the USR chapter 25- Canal Lining clearly mentions that ‘Blasting charges for metal used concrete items were payable as per item 514 for the quantity required’. Furthermore, in all chapters where concrete work is involved, it is mentioned in the note that ‘the item of blasting charges for metal are payable’. Therefore, inclusion of blasting was admissible.

The reply is not acceptable as the contractor was to provide the complete item of plain cement concrete in terms of item of USR. Further, the term material included metal not the stone. All the material used for the work was to be arranged by the contractor and the cost of materials required for the execution of concrete lining work (metal, sand, cement and water) were included in the unit cost of USR for the respective item of lining. In other works of canal lining under MPWSRP, the item of blasting was not allowed. Thus, incorrect clubbing of rates for blasting resulted in extra cost of ₹ 85.72 lakh to the contractors for execution of 97,787 cu m of CC lining.

2.2.9.8 Irregular award of additional works beyond scope of work

As per para 2.125 of MPWD manual, no material alteration may be made in designs sanctioned by higher authority without the approval of that authority. As per clause of 34.1 of NCB, within 21 days of receipt of letter of acceptance, the successful bidder shall deliver to the employer a performance security for an amount equivalent to five *per cent* of the contract price. Further, as per clause 38.2 of NCB, the Engineer shall not adjust the rates from the change in the quantity, if thereby the initial contract price is exceeded by more than 15 *per cent* except with the prior approval from the employer, i.e. PD, PICU.

Audit scrutiny of records revealed that the Department awarded three works under MPWSRP for restructuring of Chambal Canal System as detailed in **table 2.2.13**.

Additional works of ₹ 31.66 crore were irregularly awarded without prior approval of competent authority.

Table 2.2.13: Details of award of additional works

(₹ in lakh)

Sl. No.	Division	Name of work	Contract Amount	Additional work awarded	Percentage of additional work	Performance security not obtained from contractor
1	WRD, Gohad	Left tail distributary of MOU branch canal Km 0 to 27.90	2,660.87	1,818.14	68.32	90.90
2	WRD, Morena	Restructuring of 33 R/ABC and its minor sub minors	3,161.13	943.30	29.84	47.17
3	WRD, Morena	Ambah Branch Canal from RD Km 147.279 to 162.637 and 60 R and 61 R distributaries of ABC	1,240.43	404.10	32.58	20.21
Total			7,062.43	3,165.54		158.28

(Source: Records of the WR divisions)

As evident from above table, additional works awarded (March 2015) amounting to ₹ 31.66 crore were ranging between 29.84 *per cent* and 68.32 *per cent* of contract amount. Though, the additional works were in excess of 15 *per cent*, approval of PD, PICU was not obtained. Thus, expenditure on account of additional works was irregular. Further, the Department did not obtain performance security of ₹ 1.58 crore from the contractors for safeguarding interest of the Government during execution and defect liability period. This resulted in undue advantage to the contractor to that extent.

The Government stated (November 2016) that MPWSRP being a time bound programme was scheduled to be completed before 30 June 2015 and sufficient time was not available for inviting tenders, therefore, considering the time constraint, these works were awarded to the same contractors at their agreement rates of the existing works.

The reply is not acceptable as the requirements of works had already been assessed in SMPs to complete the works within the scheduled time. Award of additional works without allowing additional time were also irregular and resulted in works of below specification as discussed in paragraph 2.2.10.3. The extension of the scope of work materially changed the value and domain of the contract and not calling for a fresh tender amounted to violation of transparency and accountability norms.

2.2.9.9 Additional security deposit for unbalanced items of works

According to clause 29.5 & 34.1 section-I NCB document of contract and clause 52 of section-3 conditions of contract, if the bid of the successful bidder is seriously unbalanced in relation to the Engineer's estimate of cost of work to be performed under contract, the successful bidder to a level sufficient to protect the employer against financial loss in the event of default, shall deposit additional security deposit for unbalance rate of items within 21 days of receipt of the letter of acceptance.

Audit scrutiny of records revealed (October 2015 to July 2016) that in 15 works of seven WR divisions⁶⁰ (**Appendix 2.28**), the Department did not obtain additional security deposit amounting to ₹ 27.49 crore as per the term of the agreement. Keeping in view the provision of NCB for payment of

Additional security deposit of ₹ 27.49 crore was not obtained in 15 works.

⁶⁰ Jaora, Morena, Raisen, Rajgarh, Sagar, Shajapur and Sheopur

interest at the rate of 12 *per cent* for delayed payment by the Department, the interest on ASD worked out to be ₹ 14.12 crore. Thus, the failure of Department in obtaining the ASD resulted in further undue benefit of ₹ 41.61 crore to the contractor.

The Government stated (November 2016) that as per standard practice under World Bank guidelines, unbalanced bids to the extent of five *per cent* was secured through performance security in addition to the security of five *per cent* against the entire contract amount. Besides, six *per cent* retention money is also deducted from each running bill. It was further stated that wherever it was felt that the Department needs to protect the Government interest/risk, additional security deposit has been obtained from the contractor.

The reply is not acceptable as EE did not ensure adherence of the condition of agreement for deduction of additional security deposit. If the contractor were awarded this benefit, rates could have been negotiated.

2.2.9.10 Liquidated damages for delay in execution of works

Liquidated damages of ₹ 16.11 crore were short levied/not levied for delay in execution of works.

As per conditions of contracts, liquidated damages (LD) as penalty for delays in execution of works on part of the contractor was required to be levied as per rates mentioned in the contract data⁶¹ subject to maximum of 10 *per cent* of final contract price.

Audit scrutiny of records revealed that in nine works under five WR divisions⁶² that there were delays on the part of contractors ranging between 15 months and 48 months and the contractors failed to complete the works till the scheduled closure date of MPWSRP (June 2015). However, the Department did not levy LD at the rate specified in the agreement and deducted LDs of ₹ 99.90 lakh in case of three works against leviable liquidated damages of ₹ 17.10 crore. This resulted in short levy of liquidated damages of ₹ 16.11 crore as detailed in **Appendix 2.29**.

The Government stated (November 2016) that as per agreement, Chief Engineer was the employer and had to decide the compensation event. MPWSRP works were executed with a limited working period of April-June, July-September being rainy season and in October-March canals were used for Rabi season. With this constraint the employer had revised the milestones and hence LDs was not admissible. It was further stated that the work of BMC Ch 902 to Ch 2,565 and its distributaries and minors was carried out under special repair whose completion period was six months and extension was granted under agreement clause. In Chambal Right Main Canal (CRMC) 0 km to 60 km, LD had been imposed but the matter was pending in Hon'ble High Court for decision. In work of 6L to 15L, extension was granted and milestones were revised by the employer, hence no LD was admissible.

The reply is not acceptable as period allowed for execution of work was inclusive of rainy season. Further there was no provision in the agreement for relaxing the provision of imposition of penalty for delay in case of revision of milestone.

⁶¹ Contract data is appended with the contract indicating data to be used with various clauses of the contract.

⁶² Balaghat, Bhind, Raisen, Satna and Sheopur

2.2.9.11 *Collection of royalty charges against use of minerals*

According to the Minor Mineral Act of Mining Department, royalty charges at the prescribed rate shall be deducted from the bills of the contractor for the use of minor minerals on the work. As per amendment issued (March 2013) by the Mining Department, quarry permit holder/contractor engaged in the construction works shall obtain certificate of no mining dues to ensure payment of royalty for the mineral used in the construction works. Further, the mining Department again issued (December 2006) instructions for incorporating the condition in agreements for obtaining no dues certificate from the Collectors for use of minor minerals before payment of final bills of the contractors.

Audit scrutiny of records in eight works under four WR divisions⁶³ revealed that the Department included the special condition 45.1 (c) for obtaining no dues certificate before payment of final bills to the contractors in agreements. However, the contractors had neither submitted certificate of no mining dues nor the Department stopped payment of final bills of the contractors for use of minor minerals in the works. Further, the Department irregularly paid final bills of the contractors by keeping Fixed Deposit Receipts (FDRs) amounting ₹ 4.16 crore without ensuring no dues certificates from the Collectors for an amount of ₹ 6.23 crore of royalty charges (**Appendix 2.30**).

The Government stated (November 2016) that there was no provision in the tender document/agreement regarding recovery/deduction of mining royalty charges. It is the responsibility of the mining Department to collect the royalty charges of minor minerals used for the construction work. However, the Department retained, as additional precautionary measure, sum in the form of FDRs from the contractor's so that whenever any need arises to recover the royalty from the contractor, same can be realized.

The reply is not acceptable as condition 45.1 (c) was provisioned in the agreement of works. The Department was, therefore, required to be stopped the payment of final bills for want of no dues certificate from the Collector. There should be proper mechanism in the Department to ensure collection of royalty charges against the procurement of material. Further, obtaining FDRs against the royalty receivable from the contractors was contrary to the provision of Minor Mineral Act.

2.2.9.12 *Insurance coverage of works*

According to clause 13 of the condition of the contract, the contractor was required to provide the insurance cover, from the date of commencement of the contract to the end of defect liability⁶⁴ for the amounts specified in the contract for covering various hazards.

Audit scrutiny of test checked records of one major, one medium and three minor schemes revealed that in 29 agreements, despite contractual requirement, the Department did not get the works insured in respect of 12

⁶³ Bhind, Gohad, Morena and Sabalgarh

⁶⁴ Defect liability period is a period of one year from the date of completion of the work during which the contractor shall rectify at his cost all defects noticed by the employer during this period.

WR divisions⁶⁵ as detailed in **Appendix 2.31**. The Department did not recover an amount of ₹ 4.79 crore from the contractors on account of insurance premium to get the works insured itself.

The Government stated (November 2016) that directions were being issued to recover the amount on account of insurance coverage from the contractor's sum available with the Department.

2.2.9.13 Excess payment to the contractor due to inflated measurements

As per provisions of MPWD manual, measurement books (MBs) are maintained for the works executed by the Department. The running bills and final bills are paid to the contractor on the basis of actual measurements recorded in the MBs.

Excess payment of ₹ 13.10 crore was made to a contractor for quantities actually not executed.

Audit scrutiny of records revealed that the work of CRMC km 0 to km 60 was started in November 2007 and completed on June 2013. Penultimate bill as 61st running bill was paid (June 2013) to the contractor for total value of ₹ 155.77 crore. The final bill was prepared for payment of ₹ 142.67 crore, which was not finalised till July 2016. This indicated that quantities of items of the work paid to the contractor in 61st running bill were more than quantities measured finally. The value of excess quantities paid for was ₹ 13.10 crore. There was no source to recover the amount due from the contractor.

The Government stated (November 2016) that the CE, Yamuna Basin Gwalior has reported that an amount of ₹ 13.13 crore has been deducted due to non-compliance of repair work by the contractor in defect liability period. Matter is however, under court of Tribunal for decision.

The reply is not acceptable, as deduction for failure to carry out repair work was to be mentioned separately in the bills and it would not affect total value of work done in final bill. Total value of work done in final bill was less than the penultimate bill. Thus, department made excess payment of ₹ 13.10 crore for quantities actually not executed.

2.2.9.14 Excess payment due to not deducting shrinkage allowance

As per the general note of chapter 4 of USR issued (2009) by the WRD, 10 *per cent* sectional measurements were to be deducted for earthwork rolled and watered with light rolling⁶⁶. The estimates of restructuring and modernisation works included provision of light rolling for earthwork.

Excess payment of ₹ 1.52 crore was made to the contractors due to non-deduction of shrinkage allowance.

Audit scrutiny of records revealed that in case of five works of restructuring and modernisation in Gohad WR division, the Department executed total 25,94,278.77 cu m of earthwork for which shrinkage allowance from sectional measurement at rate of 10 *per cent* was not deducted, even though the compaction was executed by light rolling. Test results of compaction of earthwork also indicated compaction at rate of 90 *per cent* of maximum dry density. The failure to deduct the shrinkage allowance resulted in excess payment to the contractors of ₹ 1.52 crore as detailed in **Appendix 2.32**.

⁶⁵ Bhind, Dewas, Gohad, Jaura, Morena, Raisen, Rajgarh, Sabalgarh, Sagar, Satna, Shajapur and Sheopur

⁶⁶ Compaction by non-powered rollers/hand ramming

The Government stated (November 2016) that there was no excess payment to the contractors as earthwork on existing canal sections was done. It was not a new construction. It was also stated that shrinkage height was added in the earthwork and therefore no deduction of shrinkage was made.

The reply is not acceptable as restructuring work in cited cases involved new earthwork for which shrinkage allowance was to be deducted. Therefore, Department had to deduct 10 *per cent* quantity from measurement as per provision of USR, which was not done. The amount of ₹ 1.52 crore was, therefore recoverable from the contractor.

2.2.10 Monitoring and quality control

As per PIP, an effective monitoring system and benchmarks for achievement of the project objectives should be implemented during early stage of the project. All the construction work would be subjected to third party supervision by a reputed company selected through National Competitive Bidding. Quality control should be ensured in execution of works. Performance indicators of irrigated area rehabilitated was included in the restructuring paper of MPWSRP to ensure the realistic impact of project implementation.

Issues relating to monitoring and quality control discussed below were noticed:

2.2.10.1 Constitution of State Water Tariff/Rights Regulatory Commission

As per project objectives in Project Appraisal Document (PAD), a centralised autonomous agency State Water Tariff/ Rights Regulatory Commission (SWaTReC), under Component A of MPWSRP was to be established to review and monitor water sector costs and revenues, and to rationalise and set bulk water user fees to enable the sector institutions to be financially self-sustaining by December 2005 i.e. in early stage of MPWSRP.

Audit scrutiny of records revealed that the World Bank conducted a constraint analysis for slow water sector reforms under Component “Institutions and instruments” and reportedly mentioned that the “Institutions and instruments” was not well understood and proposed that the mandate of the centralised autonomous agency SWaTReC and State Water Resources Data and Analysis Centre (SWRDAC) was to be merged into one institute with overall mandate. However, discussion on role of such regulatory authority was continued till December 2015 even after closure of MPWSRP (June 2015). Thus, purpose of enabling the sector institutions to be financially self-sustaining was defeated.

The Government stated (November 2016) that this component was found to infringe upon the sovereignty of the Legislature and therefore while restructuring the project, the WB dropped this component from the project.

The reply is not acceptable as a centralised autonomous agency was to be established for monitoring water costs and revenue which could not be done.

2.2.10.2 Third party supervision of works

All the construction work would be subjected to third party supervision by a reputed company selected through National Competitive Bidding.

Audit scrutiny of records revealed that the Department was to deploy consultancy services through NCB for third party supervision/ technical examination of works executed under MPWSRP by July 2005, which was not done.

The Government agreeing with the facts stated (October 2016) in exit conference that, Department did not engage any consultant for the work and that supervision work was conducted departmentally.

The reply is not acceptable as independent quality supervision/ assurance was envisaged in the PIP which was not adhered to.

2.2.10.3 *Quality control in execution of works*

Further, Clause 14 (Chapter-3) of contract agreement stipulates that conducting core test⁶⁷ was mandatory to evaluate the quality, density, thickness of concrete lining laid in the respective reaches. The core shall also be tested for compressive strength. The core test shall be considered acceptable if the average equivalent strength of the core is equal to at least 85 per cent of the cube strength. Final payment of the concrete lining shall be made after the satisfactory core test results acceptable to the Engineer. Further, as per clause 16, running payments were required to be made at 80 per cent of the accepted unit rate and the final payment at 100 per cent rate was to be made after receipt of test results of the core. Audit scrutiny revealed the following:

Core tests of works were not ensured and undue financial aid was extended to contractors.

- In case of 12 works under eight divisions⁶⁸, mandatory tests for ascertaining quality, density, thickness and compressive strength of concrete lining laid in the respective reaches were not conducted. However, the full rates of CC lining were paid to the contractors instead of making the payments at the rate of 80 per cent of agreed rate. This resulted in undue financial aid to the contractors to the tune of ₹ 20.47 crore as shown in **Appendix 2.33**. Besides, the quality of these works could not be validated.
- In case of nine works of five WR divisions⁶⁹, mix designs for CC lining was prepared for the works. Audit scrutiny revealed that results of compressive strength of cube tests and compressive strength of core tests were not conforming to required strength of mix designs. Audit scrutiny further revealed that compressive strength of core tests was more than compressive strength of cube tests which was contrary to provisions of average equivalent strength which was not possible. This vitiated the sanctity of test results. Further, the contractors were paid for full amount of CC lining item. The failure of divisions to retain 20 per cent of amount of CC lining due to test results not as per mix design resulted in undue financial aid to the contractor amounting to ₹ 37.17 crore (**Appendix 2.34**).

The Government stated (November 2016) that the Department has Quality Control labs for tests required for construction works. The cube test and core test have been performed for CC lining works in the Departmental labs as and when required.

⁶⁷ Term core tests used for sample testing of CC lining by taking piece from lining work after 28 days for checking thickness, density, strength and quality of lining.

⁶⁸ Balaghat, Dewas, Gohad, Raisen, Rajgarh, Sabalgarh, Satna and Shajapur

⁶⁹ Balaghat, Gohad, Jaora, Sabalgarh and Sheopur

The reply is not acceptable as it does not explain the reason for allowance of full payment against cement concrete lining without performing the core test as well as without ensuring acceptable parameters of core tests.

2.2.10.4 Over reporting of irrigation potential in Chambal Canal System

MPWSRP was aimed to rehabilitate and modernise the irrigation assets in six river basins in the State. Accordingly, performance indicators of irrigated area rehabilitated was included in the restructuring paper of MPWSRP. The water requirement for the proposed rabi crops was estimated at 170 ha per Million Cubic Metre (MCM) and provisioned accordingly in SMPs of Chambal Canal System in Bhind, Morena and Sheopur districts.

Over reporting of irrigation potential was done in case of Chambal Canal System.

Audit scrutiny revealed that the Department reported the works for creation of command of 4.42 lakh ha in the Sindh basin against the proposed irrigation area of 2.73 lakh ha earmarked in SMPs of Chambal Canal System based on availability of water. The Department considered the irrigation achievement by including irrigation from all the sources during the reporting of irrigated command through Chambal Canal System instead of irrigation coverage through only canal network. Year-wise details of water availability⁷⁰, irrigation reported, irrigation as per norms with available water and over reporting are indicated in **table 2.2.14**.

Table 2.2.14: Details of availability of water and irrigation reported

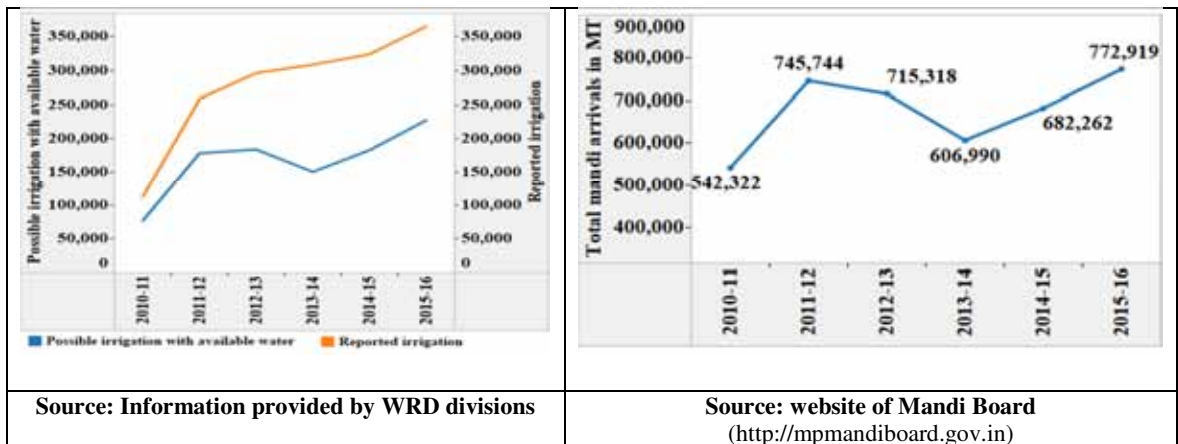
Year	Total Supply of water (in MCM)	Total irrigation reported (in ha)	Irrigation as per norms with available water	Over reporting of irrigation (ha)
2010-2011	451.46	1,12,534	76,748	35,786
2011-2012	1,045.97	2,58,161	1,77,815	80,346
2012-2013	1,080.72	2,96,047	1,83,722	1,12,325
2013-2014	883.47	3,08,453	1,50,190	1,58,263
2014-2015	1,073.91	3,23,784	1,82,565	1,41,219
2015-2016	1,334.36	3,65,327	2,26,841	1,38,486

(Source: Records of the WR Divisions)

As indicated in the **table 2.2.14**, over reporting of Irrigation Area (IA) was ranging from 35,786 ha to 1,58,263 ha with available water in Chambal Canal System during 2010-16. However, in year 2013-14, 105 per cent over reporting of IA was made even though the Department did not execute the works of micro distribution network to optimise the use of water as mentioned in paragraph 2.2.7.3. Possible irrigation, reported irrigation through Chambal Canal System and Mandi arrival in Bhind, Morena and Sheopur districts being irrigated through Chambal Canal System were as detailed below in the **chart 2.2.3**.

⁷⁰ Water availability at Parvati aqueduct, which supplies water for Chambal Canal System in the State.

Chart 2.2.3



The above chart indicates that line pattern of possible irrigation with available water was identical with line pattern of mandi arrivals. Thus, mandi arrivals were corresponding to availability of water and not with reported irrigation. This indicated that the Department had taken in to account the area irrigated through other sources (tube wells, wells, siphoning from the river etc.) while reporting irrigation achievements. As a result, Department did not judge performance indicators of irrigated area and failed to measure the actual impact of modernisation and restructuring of Chambal Canal System.

The Government stated (November 2016) that water requirement depends on the cropping pattern. The majority of cropping pattern of the area was based on oil seed and production of the mustard, for which the water requirement was less than wheat crops. So the achievement in the command area was correct. SMPs of the system was based on the rule of thumb of 170 ha per MCM is not correct.

The reply is not acceptable as wheat was the major *Rabi* crop in area of Chambal Canal System and no change in the cropping pattern as well as no crop diversification in the Chambal Canal System command area had been noticed. SMPs were prepared by considering water requirement of *Rabi* at rate of 170 ha per MCM which was based on the guidelines issued by the E-in-C. The actual irrigation capacity created under MPWSRP should have been calculated on the same basis as adopted in the SMPs so as to correctly measure the impact of scheme.

2.2.10.5 Inadequate monitoring over execution of works under MPWSRP

As per PAD, the day to day project implementation, coordination would rest with the PICU which will undertake all activities related to project coordination, procurement management, financial control and reporting and monitoring and evaluation. Each scheme was to be appraised by the PICU on technical, environmental, social, economic and financial aspects, to ensure adequate quality control envisaged in the project.

Audit scrutiny revealed that lack of firm planning by the PICU in selection of schemes and delayed execution resulted in large drop out of irrigation schemes from the scope of MPWSRP. Department added one more Wainganga basin in this Project in March 2008. However, the SMP of Wainganga Scheme was

submitted to World Bank after five years in March 2013 i.e. after two years of initial intended date of completion (March 2011) of MPWSRP.

During the course of audit, several inconsistencies in estimation, tendering and breach of contract conditions leading to extra/excess payment/ undue benefit/ inadmissible payments etc., were noticed. MPWSRP could not indicate substantial crop diversification due to inadequate integration with line departments for improving productivity of irrigation assets thereby affecting the overall achievement of objective and performance of the project. This indicated deficient internal control over execution of works and inadequate monitoring at PICU level.

2.2.11 Conclusions

The MPWSRP was taken up by the WRD with assistance from the World Bank for restructuring and modernisation of irrigation assets and taking up different activities by the line Departments in six basins. Due to frequent changes in the planning, the implementation of the project could not achieve the objective of balanced and sustainable development of irrigation potential in all river basins through rehabilitation of major, medium and minor schemes even after incurring an expenditure of ₹ 2,498 crore during the project period of 2004-15.

The project aimed to rehabilitate and modernise 654 existing irrigation schemes of these five river basins with a total Culturable Command Area of 6.18 lakh hectares. As a result of slow performance of the project, the scope of MPWSRP was restructured in June 2012 and 362 irrigation schemes were dropped. Out of the balance 292 schemes, WRD could rehabilitate 228 schemes only by the end of the project.

During 2012-14 the Department incurred 24 *per cent* of overall expenditure of MPWSRP on execution of Chambal Canal System. The overemphasis resulted in basin wise imbalances in irrigation schemes and this, coupled with the delay in implementation of modernisation plan resulted in exclusion of 362 minor irrigation scheme from project. CC lining, which was easy for execution constituted 94 *per cent* of the expenditure and Chambal Canal System during 2012-14. It also affected the farm level economy of envisaged beneficiaries of excluded schemes.

Against the estimated provision of ₹ 144.61 crore in the PIP for the line departments, actual expenditure was ₹ 115.05 crore. However, poor integration with the line departments, absence of sustainable water supply to farmers and lack of training to WUAs impacted crop diversification.

Agriculture intensification and diversification did not correspond to the increase in the achievement of irrigated area under MPWSRP. The impact of sown area of gram, *arhar* and mustard was taken as an indicator for agriculture intensification in PIP. Audit scrutiny revealed reduction in sown areas of gram and *arhar* during 2014-15 by 20 *per cent* and 35 *per cent* respectively as compared to 2011-12. Further, the sown area of mustard was reduced in 2014-15 by 19 *per cent* as compared to 2012-13. Plantation area of fruits, vegetables and spices remained low ranging from 2.90 *per cent* to 7.31 *per cent*, as against the target of 21 *per cent* of the irrigated area envisaged in PIP and was even below state average of nine *per cent*.

Provisions of specifications appended with NCB were ignored by Chief Engineer at the time of according technical sanction, which led to irregular expenditure of ₹ 65.18 crore in works for trimming of earthwork and CC lining of canals, besides, inadequate quality control of works.

Adherence with agreement clauses was not ensured by Executive Engineers resulting into undue financial benefits to contractor amounting to ₹ 68.75 crore on inadequate additional security deposit, liquidated damages, royalty charges and insurance coverage of works.

Provisions of schedule of rates were not followed, as instances of extra cost of ₹ 24.02 crore due to incorrect lead of metal, incorrect rate for embankment and inclusion of inadmissible items of blasting and excess payment on account of shrinkage allowance were noticed.

Quality control and monitoring of the project was inadequate as instances of not conducting core tests, execution of below specifications works of CC lining and extension of undue benefits to the contractors were noticed.

2.2.12 Recommendations

The Government should make a firm plan and adequate internal control mechanism to utilise the available loan in time to avoid the payment of commitment charges.

The Department agreed with the recommendation as suggested by the Audit.

The Government should adopt concrete criteria for selection of schemes and distribution of funds throughout the project to avoid slippage in scheme coverage and delays in their execution.

The Department agreed with the recommendation as suggested by the Audit.

The Government should ensure strict adherence with provisions of SMPs for the execution of micro distribution network along with modernisation work of main canal for optimal utilisation of water by end user.

The Department agreed with the recommendation as suggested by the Audit.

The Government should strengthen internal control system for strict adherence with contract management for ensuring recovery of extra cost/ excess payments, penalty for delay, deduction of additional security deposit and insurance coverage of works from the defaulting contractors in order to safeguard its interest.

The Department agreed with the recommendation as suggested by the Audit.

The Government should consider making suitable arrangements for third party supervision of works and strengthening quality control mechanism for conducting the quality tests to ensure execution of works according to the laid down specifications.

The Department agreed with the recommendation as suggested by the Audit.

Chapter-III

Compliance Audits

- 3.1 Audit on Preparation of estimates of road works**
- 3.2 Audit on Crop Insurance Scheme**
- 3.3 Compliance Audit Paragraphs**

Chapter-III

Compliance Audits

Public Works Department

3.1 Audit on preparation of estimates of road works

Executive Summary

Public Works Department is the principal agency of Government of Madhya Pradesh for planning, designing, construction and maintenance of roads, Government buildings and infrastructure development. During the period 2013-16, an expenditure of ₹ 4,559.47 crore was incurred on construction of new roads/upgradation and strengthening of existing roads.

Audit on “Preparation of estimates of road works” for the period 2013-14 to 2015-16 revealed that estimates were prepared on the basis of inadequate data, which resulted in large deviation from estimates at the time of execution, adoption of costlier items without ascertaining their necessity, delayed completion as well as unfruitful expenditure on incomplete roads. The significant audit findings are as follows:

- Pre-requisite activities for preparation of estimates of road works, such as feasibility study and detailed survey and investigation were not carried out. Due to failure in taking levels in 103 road works and erroneous consideration of levels in 93 road works, quantities of earthwork were not provisioned correctly in the estimates resulting in variation (more than 10 per cent) of ₹ 25.71 crore in 68 road works.

(Paragraphs 3.1.2.1 and 3.1.2.2)

- Road works were awarded without ensuring adequate provision in the estimates for acquisition of forest and private lands. As a result, 26 out of 196 test checked road works were delayed for two months to over six years, which included 15 road works on which an expenditure of ₹ 66.86 crore was already incurred remained incomplete even after lapse of 21 to 68 months.

(Paragraph 3.1.2.4)

- Cost of utility shifting in 10 estimates was provisioned on assumption basis without obtaining technical sanction from concerned Departments resulting in delay from 11 months to 27 months in construction of roads, besides increase in cost of road by ₹ 7.14 crore.

(Paragraph 3.1.2.5)

- In 13 estimates, design traffic of road crust was incorrectly computed resulting in adoption of sub-standard specifications in 10 estimates and richer specifications resulting in extra cost of ₹ 2.98 crore in three estimates. It was also observed that though design traffics were worked out correctly in 20 estimates, Department erroneously adopted richer specifications resulting in extra cost of ₹ 21.30 crore.

(Paragraph 3.1.3.1)

- Provisions of cross drainage (96 estimates) and length of road (30 estimates) were made without survey and investigation. As a result, wide

deviation from estimate was noticed in 94 estimates which resulted in excess expenditure of ₹ 32.56 crore. Similarly, length of road specified in the estimate was increased up to three kilo metres in six road works and decreased up to 10.50 kilo metres in 24 road works.

(Paragraphs 3.1.4.1 and 3.1.4.2)

3.1.1 Introduction

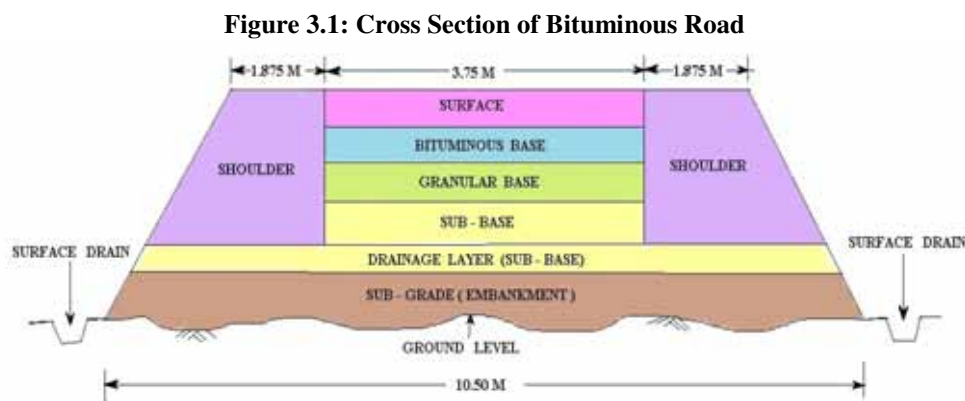
Public Works Department (PWD) is the premier agency of Government of Madhya Pradesh (GoMP) engaged in planning, designing, construction and maintenance of roads, Government buildings and infrastructure development. During the year 2013-14 to 2015-16, PWD incurred ₹ 4,559.47 crore on construction of new roads/upgradation and strengthening of existing roads and ₹ 1,740.39 crore on annual repair works of road.

Preparation of accurate and realistic estimates of road projects is a pre-requisite for ensuring quality in road works and their timely completion within the sanctioned cost, besides planning and management of available resources. Estimates also provide a basis for assessing reasonability of rates quoted by a contractor to ensure economy.

As per para 2.006 of Madhya Pradesh Works Department (MPWD) manual, for every work a properly detailed estimate must be prepared for the sanction of the competent authority. This sanction is known as the “Technical Sanction (TS) to the Estimate”, which must be obtained before the work is commenced. Para 2.028 of MPWD manual further stipulates that an officer according the TS to an estimate is responsible for soundness of design and for incorporating all the items required for inclusion in the estimate with reference to drawing. The administrative approval to the project will be then accorded by the Government in accordance with TS. The Department follows the latest Indian Road Congress (IRC) codes in road works.

Composition of road structure

The road structure cross section is composed of various components, viz., sub-grade, sub-base, drainage layer, base course, surface, shoulder etc. for evaluating the quantities and cost of work. The figure 3.1 indicates different layers of a cross section of bituminous road:



- **Sub-grade-** It is the soil foundation of the natural ground in its final shape after completion of earthwork on which the entire road structure rests.
- **Drainage layer-** A layer of granular material above the sub-grade extended over the entire formation width to drain the sub-soil water.
- **Sub-base** -This work shall consist of laying and compacting well-graded material on prepared sub-grade.
- **Base** – A part of construction resting upon the sub-base/sub-grade, made up of fine compacted material (granular base and bituminous base); the driving surface lies on it.
- **Surface-** Top layer of road on which traffic ply.
- **Shoulder-** The portion immediately beyond the edge of carriage way on which traffic may pass occasionally while crossing.

3.1.1.1 Scope of Audit

The estimates of new roads, strengthening and upgradation of ongoing and completed road works executed during 2013-14 to 2015-16 were examined in audit during November 2015 to June 2016. The audit objective was to ascertain whether pre-requisite activities were adequately undertaken before preparation of estimates; whether detailed estimates were prepared based on the provisions contained in the Departmental manual, IRC specifications and technical circulars; and, whether road works were executed as per the provision made in the estimates.

Out of 57 Public works divisions, 12 divisions¹ were selected on the basis of stratified simple random sampling method. Test-checked divisions executed 391 road works valued ₹ 1,699.25 crore during 2012-13 to 2015-16, of which 196 estimates (50 per cent) valued at ₹ 1,250.74 crore were selected for scrutiny (**Appendix 3.1**). This included road works ranging from 1 km (costing ₹ 38.69 lakh) to 57.84 km (costing ₹ 41.77 crore).

The audit objectives, criteria and methodology were discussed with the Principal Secretary, PWD, Madhya Pradesh during the entry conference held on 17 February 2016. The draft report was issued to the Department in August 2016. The audit findings were also discussed in the exit conference held on 03 November 2016 with the Principal Secretary, PWD. The views expressed during the exit conference have been suitably incorporated in the Audit Report.

Audit findings

3.1.2 Pre-requisite activities before preparation of estimates

3.1.2.1 Preparation of estimate without detailed survey and investigation

The specifications of IRC-19 stipulated two stages of pre-requisite activities namely feasibility study and detailed survey and investigation. These pre-requisite activities include fixing of bench-mark, taking of ground levels at

¹ Ashok Nagar, Balaghat, Damoh, Guna, Indore I, Mandla, Neemuch, Rewa, Sagar, Satna, Sehore, and Vidisha

Estimates were prepared without feasibility study and detailed survey and investigation.

50-100 metre intervals, conducting of traffic survey, pavement design, collection of hydrological, physical and foundation data from concerned authorities, local enquiry and a study of nearby road structures on the same stream in the vicinity, soil and material survey and identification of quantum of land acquisition.

During test-check of records, the Department could not provide feasibility study and detailed survey and investigation reports relating to estimates of road works, though their results were used in some of the estimates. In the absence of related reports, the actual conduct of feasibility study and detailed survey and investigation could not be ascertained in audit.

In 29 estimates, traffic survey was not conducted and crust was also not designed as shown in (**Appendix 3.1**). In remaining 167 road works, location of traffic survey was not mentioned in the traffic census though required in the proforma under IRC-19. Further, scrutiny of records revealed that four divisions (Damoh, Guna, Sagar and Vidisha) used traffic survey and design computation sheets carried out for five roads in 11 road works.

In the exit conference (November 2016), the Principal Secretary stated that survey and investigation was not carried out in upgradation/existing roads as it was not necessary. He agreed that it should be conducted in new road works but it was not carried out due to short length of roads.

The reply is not tenable, as the IRC specifications prescribe for conducting survey and investigation in case of new construction as well as upgradation of existing roads. Further, there was no exemption for short length roads, besides the test-checked new roads were between 1.5 km and 31.9 km that could not be classified as short length road.

The failure of Department to conduct the required pre-requisite activities before preparation of estimates resulted in large deviations from estimates at the time of actual execution, adoption of costlier items without ascertaining their necessity, delayed completion as well as unfruitful expenditure on incomplete roads, as discussed in the succeeding paragraphs.

3.1.2.2 Provision of earthwork in the estimates

Due to failure in taking levels, variations of more than 10 per cent of estimated quantities amounting to ₹ 25.71 crore were noticed in earth works of 68 estimates.

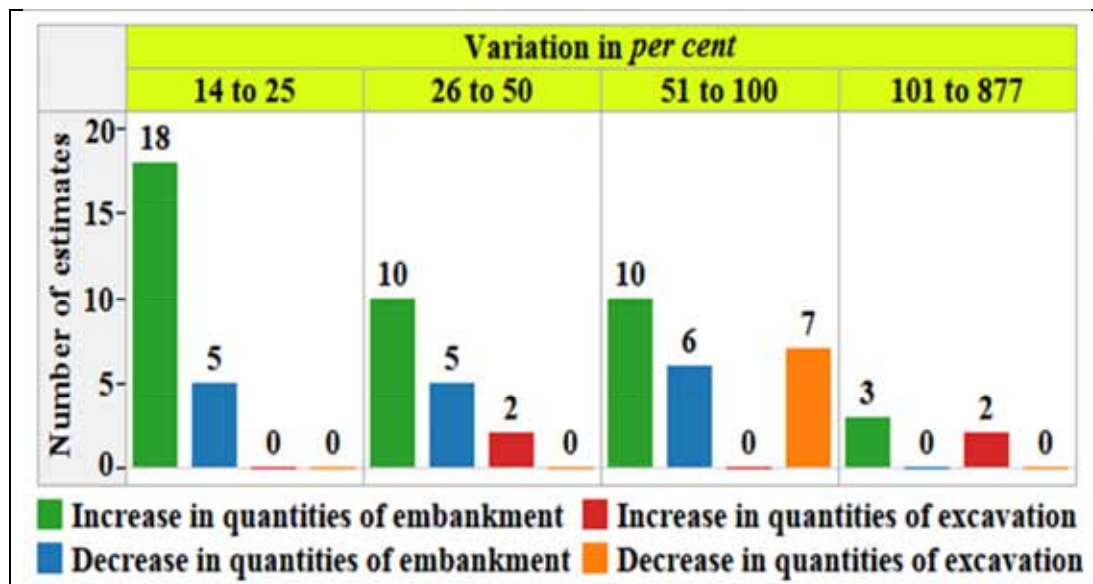
Para 12.3.1 of IRC-19 stipulates that bench-mark should be established at interval of two km and temporary bench-mark at an interval of 250 m. Further, as per para 12.4.2 of IRC-19, levels along the final centre line should be taken. This level helps the computation of quantity of earthwork.

Audit scrutiny of records revealed that bench-marks were not established and levels were also not taken for assessing the quantity of earthwork in 103 works out of 196 works (**Appendix 3.1**). Quantities of earthwork were computed in these estimates by taking average thickness from 200 mm to 600 mm. Levels were mentioned in remaining 93 estimates, however, supporting records for survey to ascertain the levels were not available in Divisions.

Due to failure to take levels as well as erroneous consideration of levels, the computation of quantity of earthwork was not correctly provisioned in the original estimate. The variation of more than 10 per cent of the estimated quantities (increased or decreased) amounting to ₹ 25.71 crore were noticed during execution of excavation and embankment works in 68 cases, as detailed

in **Appendix 3.2**. Of these, levels were reportedly taken in 29 estimates, whereas 39 estimates were prepared without taking levels. Further, there were wide variation (more than 50 per cent) amounting to ₹ 16.86 crore in 23 out of 68 cases. Quantities of earthwork in embankment/excavation varied in comparison to estimates ranging from 14 per cent to 877 per cent as shown in **chart 3.1.1**.

Chart 3.1.1: Range of variation in quantities of earthwork from original estimate during execution



In the exit conference (November 2016), the Principal Secretary stated that quantity of earthwork could vary even in those cases where levels were taken. Variation in the quantity of earthwork could not be avoided in existing roads, however, wide variation in quantity of earthwork should not be in new road works. He further added that reasons for variation in quantity must be recorded at the time of revised TS.

The reply is not acceptable, as levels were not taken for assessing the quantity of earthwork in 103 road works. Moreover, there was no supporting evidence for carrying out surveys to ascertain road levels in remaining 93 roads. Further, 39 roads out of 68 roads in which quantities of earthwork varied ranging from 14 per cent to 100 per cent were new roads.

3.1.2.3 Adoption of costlier item of Granular Base Course

Ministry of Road, Transport and Highways (MoRT&H) specifications for Road and Bridge Works and Schedule of Rates (SOR) of MPWD provide for two types of granular base course items, Water Bound Macadam (WBM)² and Wet Mix Macadam (WMM)³, of which WMM is costlier item. The Engineer-in-Chief (E-in-C) had instructed (December 2010) to use WMM in place of

² WBM is adopted for construction of sub-base, base and surface courses, which consists of coarse aggregate, screening material for filling voids.

³ WMM work shall consist of laying and compacting clean, crushed, graded aggregate and granular material, premixed with water, to a dense mass on a prepared sub-grade/sub -base/base.

Provision for costlier item of WMM in place of WBM, without requisite directions of Engineer-in-Chief, resulted in extra cost of ₹ 10.12 crore.

WBM in the construction/upgradation of Major District Roads (MDR)⁴. Further, the village road works under Pradhan Mantri Gram Sadak Yojana (PMGSY) in the State were being constructed with use of WBM.

Audit scrutiny revealed that in 81 estimates of village roads of 12 divisions, provisions for costlier item of WMM was made and work was executed accordingly. The provision of costlier item of WMM in place of WBM resulted in extra cost of ₹ 10.12 crore, as detailed in **Appendix 3.3**.

Further, as per PWD SOR and para 406 of MoRT&H specifications for Road and Bridge Works issued by Ministry of Road Transport and Highways, WMM shall be prepared in an approved mixing plant of suitable capacity having provision for controlled addition of water and forced/positive mixing arrangement. Audit scrutiny of records revealed that respective Divisions had not given any approval for mixing plant to be used in these 81 road works. Thus, WMM were executed in the work without ensuring use of mixing plant, which was in violation of codal provisions. Besides, it defeated the very purpose of using costlier item WMM for better quality work.

In the exit conference (November 2016), the Principal Secretary stated that orders for use of WMM in place of WBM in village roads would be issued shortly. He also stated that WMM was being executed through WMM mixing plant and no evidence was necessary as the nomenclature of item includes execution of WMM by mixing plant.

The reply is not acceptable, as the item of WMM was executed on village roads without requisite directions of E-in-C. Moreover, all the village roads in the State under PMGSY were constructed with WBM. Further, the evidence for use of mixing plant was required to be kept by the Department in the form of approval for WMM mixing plant by Engineer-in-Charge as stipulated in the SOR and para 406 of MoRT&H specifications for Road and Bridge Works.

3.1.2.4 Provision for forest land and private land acquisition in the estimate

Twenty six road works were delayed from 2 months to 79 months due to delay in acquisition of forest and private land besides an amount of ₹ 9.16 crore was incurred in acquisition of private land and settlement for forest land, which was not provisioned in estimate.

As per appendix 1.25 (vi) of MPWD manual, it is the duty of Executive Engineer (EE) to work out the requirement of land for work, quarries and draw up programme for land acquisition/land transfer with a view to ensure transfer of required land before target date set for starting of works. Further, as per para 17.3.2 of the IRC-19, the general abstract of work should also include cost of land and compensatory afforestation.

Audit scrutiny revealed that the existence of forest land and private land in the road way was not taken into consideration at the time of preparation of 27 estimates in 10 divisions (**Appendix 3.4**). The works were awarded without ensuring availability of land. The Department belatedly initiated proposal for obtaining the permission from Forest Department and the process for land acquisition. As a result, only one road work was completed on time, 11 road works were completed with delays ranging from 2 months to 79 months. Further, 15 road works on which ₹ 66.86 crore had already been incurred, remained incomplete (June 2016) even after lapse of 21 months to 68 months

⁴ These are important roads within a district serving areas of production and markets and connecting these with each other or with the main highways.

due to delay in obtaining forest clearance and acquisition of land. Out of these 27 cases, an amount of ₹ 9.16 crore was incurred in acquisition of private land and settlement for forest land in five works, which was not provisioned in the estimate. Instances are given below:-

- Construction of Rewa Sirmour road to Gargin Tola-Tiwariyan Tola to Rajgarh road of Rewa district on new alignment was awarded (February 2013) at an estimated cost of ₹ 4.95 crore with stipulation to complete the work by October 2013. Provision for acquisition of 1.8 hectare (ha) of land for ₹ 10.56 lakh was made in the estimate on tentative basis. During execution, the Department noticed that actual land required was 2.726 ha for which the Revenue Department demanded ₹ 81.03 lakh.

The Department deposited the amount of ₹ 81.03 lakh in two installments (August 2015 and March 2016) for acquisition of land. The land was not transferred (March 2016) to the Department. Meanwhile, the EE intimated that the contractor was not willing to continue as land was not acquired. The Chief Engineer (CE) foreclosed (January 2016) the incomplete work.



A view of incomplete segment at km 6/6 and 6/4 of Rewa Sirmour road to Gargin Tola- Rajgarh road of Rewa district as on December 2016 due to non-acquisition of private land

Audit scrutiny of records revealed that the delay in the road work was due to failure of Department in timely acquisition of land for 1,768 m of road length consisting of four segments⁵ ranging from 150 metre to 1,260 metre. Since these road lengths were not terminating reaches of the road and they lie in between the different segments of the road, the very purpose of providing connectivity to the villagers had been defeated. Thus, due to tentative provision of land acquisition in the estimate, the construction of road was delayed by more than 25 months even after incurring expenditure of ₹ 2.68 crore.

The EE accepted (April 2016) the fact and stated that part of road length was not constructed due to non-acquisition of land.

⁵ Road work on Ch 1,768 m (Ch 825 m to Ch 975 m = Ch 150 m, Ch 1,325 m to Ch 1,475 m = Ch 150 m, Ch 5,200 m to Ch 6,460 m = Ch 1,260 m and Ch 9,142 m to Ch 9,350 m = Ch 208 m i.e. total Ch 1,768 m)

- Construction of 45.40 km long Anarad to Nihal Devi road of Guna district on new alignment was awarded in February 2010 at an estimated cost of ₹ 23.52 crore. Audit scrutiny revealed that 21 km road length was passing through forest area. Land for construction of road was required in the width of 11.70 metre. However, the EE incorrectly proposed (November 2008) for permission of forest clearance for the road specifying the width of 4.5 meter.

The Forest Department granted (January 2009) permission to construct the road specifying the width 4.5 m. However, CE accorded (November 2009) technical sanction of the estimate considering formation width of 11.70 metre by ignoring the fact that Forest Department granted permission for road width of 4.5 metre. The work was awarded (February 2010) to complete within 22 months. While the work was being executed, the Forest Department cancelled (June 2010) the permission on the ground of utilising forest land in excess of that was sanctioned.

Consequently, the Superintendent Engineer (SE), Guna requested (July 2010) to Conservator of Forests (CF), Guna for granting supplementary permission for construction of road with width of 12 metre. The CF, Guna conveyed (May 2012) to EE about the permission for construction of road granted by Ministry of Environment and Forest (MoEF) with the condition to deposit a sum of ₹ 6.16 crore on account of compensatory afforestation which was paid by the Department in September 2013. Besides, the contractor was paid (December 2011) for the up to date value of work amounting to ₹ 4.29 crore. The contract was terminated (November 2014) by the CE on the plea that there was delay in getting permission from Forest Department.



A view of incomplete work at km chainage 1,200 and 2,100 of Anarad to Nihaldevi road as on January 2017 due to delay in proposal for acquisition of forest land

Thus, the work remained incomplete for more than five years due to incorrect estimation of width for forest clearance resulting in unfruitful expenditure of ₹ 10.45 crore. Besides, partial constructed layers of road were prone to damage being unprotected.

The EE, Guna stated (March 2016) in its reply that initially permission was granted by Forest Department for width of 4.5 m before preparation of

estimate. He further, stated that the Department again applied permission for construction of road in 11.75 m width which was later permitted by Forest Department hence delay was not on the part of Department. The reply of the Government was awaited (January 2017).

The reply of EE Guna is not acceptable, as Forest Department initially granted permission for construction of road in 4.5 m width but the estimate was sanctioned for 11.75 m width. Further, the permission for 11.75 m width should have been obtained prior to award of work, which was not done.

3.1.2.5 *Inadequate provision of utility shifting in the estimate*

Inadequate provisions of utility shifting resulted in delay and increase the cost of road works.

As per para 17.3.2 of the IRC-19, the general abstract of cost should also include the cost of shifting utilities like electric lines, telephone poles, underground cables, gas lines, sewers, water pipes and cost of removal of trees. The cost of utility shifting should be included in the estimate after obtaining TS from the concerned Department.

Audit scrutiny revealed that, in 10 estimates of six divisions (**Appendix 3.4**), the provision of utility shifting viz., shifting of electric poles and water pipe lines, rising of electric lines, etc. was either not provisioned in the estimate or provisioned on assumption basis without detailed analysis of cost to be incurred on these utility shifting. Consequently, four road works were completed with delays up to 10 months. Other four road works on which ₹ 28.96 crore was already incurred were incomplete (June 2016) even after lapse of 11 months to 27 months. Reason behind the delay in road works was processing of utility shifting commenced during the execution of road works which should have been started before award of work. Besides, cost of work increased by ₹ 7.14 crore. Instances are given below:

- Widening work of NH-7 from km 229/8 to km 231/6 and km 239/4 to km 243/2 of Rewa district estimated to cost ₹ 11.46 crore was awarded in September 2013. Audit scrutiny of estimate revealed that a lump sum provision of ₹ 15.74 lakh for utility shifting of water pipe lines and hand pumps was made in original estimate. During execution, it was increased to ₹ 49.95 lakh in the revised estimate. Further, electric pole shifting with street light arrangement amounting to ₹ 4.12 crore was not provisioned in the original estimate, which was included in the revised estimate. Thus, insufficient provision of utility shifting in the original estimate resulted in increase in the cost of work amounting to ₹ 4.46 crore, besides the work was yet to be completed even after delay of 24 months.
- Strengthening and widening of Nipaniya Tamara road of Rewa district costing ₹ 8.44 crore was awarded in September 2013. Audit scrutiny revealed that provision of utility shifting amounting to ₹ 80 lakh was made in the original estimate in lump sum without any details of utility shifting. During execution, the cost of utility shifting was revised again in the revised estimate in lump sum to ₹ 2.48 crore. Audit scrutiny revealed that the provision for utility shifting were made in the original as well as revised estimate without obtaining TS from Madhya Pradesh State Electricity Board (MPSEB) for pole shifting and from Nagar Nigam for shifting of water pipelines. The inadequate provision of utility shifting in the estimate resulted increase in the cost of works by ₹ 1.68 crore.

In the exit conference, the Principal Secretary stated (November 2016) that estimate for shifting of poles, water pipe lines etc. are made in lump sum for obtaining TS to avoid delay in construction of road works, as it may take time to approve it through concerned Department.

The fact remains that the works were delayed due to insufficient provision for utility shifting in the estimate. Besides, the cost of work was increased due to inadequate provision for utility shifting without the technical sanction of concerned Departments.

3.1.2.6 *Items of road furniture not included in the estimate*

Items of road furniture amounting to ₹ 65.71 lakh were provisioned in the 29 estimates but they were not executed which affects safe driving.

As per annexure of IRC-67 and SOR, road furniture items viz. kilo metre stones, retro-reflectorised and direction and place identification sign boards are to be placed on the roads. IRC-67 stipulated for fixing of traffic signs that have the backing of law in India and incorporated in section 116 of Indian Motor Vehicles Act, 1988.

Audit scrutiny of records revealed that, in eight estimates of six divisions⁶, provision for road furniture items (kilo metre stones, retro-reflectorised and direction and place identification sign boards) was not made in the original estimates and were included in the revised estimates. This resulted in increase in the cost of work amounting to ₹ 1.39 crore (**Appendix 3.5**).

Audit scrutiny of 29 estimates of eight divisions (**Appendix 3.5**) revealed that though items of road furniture amounting to ₹ 65.71 lakh were provisioned in the estimates but they were not executed. The failure to place the road furniture was in violation of the related codal provisions, which may also adversely affect safe driving.

In the exit conference (November 2016), the Principal Secretary agreed with audit observation and stated that signage was essential for safe driving and necessary instructions would be issued in this regard.

3.1.3 Preparation of estimates

3.1.3.1 *Crust design of flexible pavement*

According to the IRC-37⁷ specifications for design of flexible pavements, the crust (thickness) as well as type of bituminous course is designed on the basis of California Bearing Ratio (CBR)⁸ of sub-grade⁹ and design traffic in terms of million standard axle (msa)¹⁰, which in turn is determined on the basis of commercial vehicles per day (CVPD), vehicle damage factor (VDF¹¹), design life and lane distribution factor (LDF). The IRC specifications further provides that wherever the designed traffic is one msa and the CBR of sub-grade is up to 10 *per cent*, provision of only 20 mm open graded premix carpet (OGPC) with seal coat should be provided as a bituminous wearing course. Provision of Bituminous Macadam (BM) and Semi Dense Bituminous Concrete (SDBC)

⁶ Indore, Neemuch, Rewa, Sagar, Satna and Vidisha

⁷ Guidelines for the design of flexible pavements

⁸ CBR denotes strength of soil.

⁹ Sub-grade is top 30 cm to 50 cm layer of earthwork in roads

¹⁰ MSA denotes load of traffic on road.

¹¹ VDF is a multiplier to convert the number of commercial vehicles of different axle loads to the number of standard axle load repetitions.

is required when the cumulative traffic arrives to 5 msa on the basis of traffic survey.

Audit scrutiny revealed the cases of irregularities in crust design, the instances are given below:

(i) Provision of richer specification in the estimate without ensuring its necessity

Audit scrutiny of records revealed that, in 29 estimates of 12 divisions, traffic census essential for design traffic were not conducted and design of crust were not computed. In 15 estimates¹² where traffic census was not carried out and crust was also not designed, the Department adopted OGPC and seal coat. However, in 14 estimates¹³, the Department granted the TS adopting richer specifications of bituminous course consisting of BM/dense bituminous macadam (DBM) and SDBC. Audit could not vouch as to whether richer specifications was essential for these works in the absence of traffic census. Thus, due to provision and execution of richer specification without a proper justification to ensure its necessity, cost of work increased by ₹ 10.91 crore (**Appendix 3.6**).

In the exit conference (November 2016), the Principal Secretary agreed with audit observation about provision of richer specifications and stated that specifications should be followed and necessary instructions in this regard would be issued shortly.

(ii) Incorrect computation of design traffic for crust

As per para 3.3.4.4 of IRC-37, the indicative value of VDF for determination of design traffic should be 1.5 for 0-150 CVPD and 3.5 for 150-1500 CVPD. The CVPD should be taken as per actual traffic census.

Audit scrutiny in 11 out of 13 estimates of eight divisions revealed that the Department incorrectly computed the design traffic of the roads due to wrong considerations of the CVPD and VDF as detailed in **Appendix 3.7**. In other two estimates¹⁴, value of all the parameters required for computation of design traffic were taken correctly but provision for crust was incorrectly adopted due to erroneous arithmetic calculation. Consequently, Department adopted richer specifications of bituminous course of BM and SDBC in three estimates¹⁵ resulting in extra cost of ₹ 2.98 crore. In remaining 10 estimates¹⁶, the substandard specification of bituminous and wearing courses (**Appendix 3.7**) were adopted, which may lead to requirement of restoration of pavement in future at considerable extra cost.

In the exit conference (November 2016), the Principal Secretary agreed with audit observation regarding incorrect computation of crust design and stated

Provision and execution of richer specifications in 14 cases without conducting traffic survey resulted in extra cost of ₹ 10.91 crore.

Incorrect computation of design traffic for crust in three cases resulted in extra cost of ₹ 2.98 crore besides execution of below standard work in 10 cases.

¹² All are village roads.

¹³ Seven MDR and seven village roads

¹⁴ Beka-Raskundiya-Kulthana Road (Indore division) and Karariya – Shamshabad road (Vidisha)

¹⁵ One MDR and two village roads. Cost was increased in one estimate due to incorrect mathematical calculation and in other two cases due to adoption of incorrect parameters of traffic design.

¹⁶ Two MDR and eight village roads

that specification should be followed and necessary instructions in this regard would be issued shortly.

(iii) Incorrect adoption of crust composition

Due to incorrect adoption of crust composition, cost of work in 20 cases increased by ₹ 21.30 crore.

Audit scrutiny of 36 estimates in 11 divisions revealed that the design traffics were worked out correctly in terms of msa, but the Department had not adopted bituminous course as well as wearing course as prescribed in IRC-37 for respective msa and CBR of sub-soil. Contrary to the provision of IRC-37, in 20 estimates¹⁷ of nine divisions, the Department adopted richer specifications of base course of DBM/BM and wearing course of BC/SDBC in place of BM, OGPC and seal coat. Adoption of richer specifications in estimates resulted in avoidable extra expenditure of ₹ 21.30 crore, as detailed in **Appendix 3.8.**

In 16 estimates¹⁸ of six divisions, the Department adopted substandard specifications of bituminous base and wearing course of BM, OGPC plus seal coat instead of DBM, SDBC/BC due to incorrect adoption of crust composition (**Appendix 3.9**) which increased the possibility of premature failure of the crust.

In the exit conference (November 2016), the Principal Secretary agreed with audit observation regarding incorrect adoption of specification and stated that specifications should be followed and necessary instructions in this regard would be issued shortly.

3.1.3.2 Provision and execution of excess thickness of granular sub-base in crust

GSB executed in excess thickness in 12 road works resulted in extra cost of ₹ 1.86 crore.

According to the IRC-37 specifications, thickness of granular sub-base (GSB) in the crust of road is determined on the basis of design traffic in terms of msa and CBR of sub-grade. For five *per cent* CBR of sub-grade and design traffic of one, two, three, and five msa, GSB should be provided in the thickness of 205 mm, 215mm, 230 mm and 250 mm respectively.

Audit scrutiny of 12 estimates of six divisions revealed that crust of the roads was designed for one msa and two msa and five *per cent* CBR of sub-grade. However, contrary to the provisions of IRC-37, the Department provisioned and executed GSB in the thickness of 250 mm to 300 mm for one msa in six works and 250 mm for two msa in another six cases. Adoption of excess thickness of GSB resulted in extra expenditure of ₹ 1.86 crore as detailed in **Appendix 3.10.**

In the exit conference (November 2016), the Principal Secretary agreed with audit observation and stated that matter would be examined.

¹⁷ Six MDR and 14 village roads

¹⁸ Three MDR and 13 village roads

3.1.3.3 Provision and execution of hard shoulder in lesser thickness

In 39 estimates, expenditure of ₹ 16.79 crore became unfruitful as drainage layer was covered with embankment soil.

Para 407.1 of MORT&H specification and SOR stipulates that shoulder¹⁹ should be constructed on either side of the pavement over the drainage layer. Para 5.3 of IRC-34 stipulated that a capillary cut-off (drainage layer) could be provided to arrest the capillary rise of sub-soil water. Further, as per para 5.3 of IRC-37, care should be exercised to ensure that expose ends of drainage layer do not get covered by the embankment soil.

Audit scrutiny in 39 estimates of six divisions revealed that the Department provided 100 mm to 150 mm drainage layer having CBR more than 20 per cent over the embankment soil (CBR > 5 per cent) on the entire formation width²⁰ of road in order to arrest the capillary rise and drain-off sub-soil water. The crust (pavement) was further constructed over the drainage layer in the thickness of 300 mm to 525 mm. As per requirement of specifications, the Department should have provisioned hard shoulders (soil having CBR >12 per cent) on either side of the pavement in full thickness of crust over drainage layer. In contravention of this, hard shoulder was only provided in the thickness of 100 mm to 325 mm and embankment soil (having CBR > 5 per cent) was provided in between the hard shoulder and drainage layer.

Besides, audit scrutiny also revealed in two estimates that though the drainage layer was provided in the entire formation width of road, shoulders were constructed with embankment soil having CBR of five per cent instead of hard shoulder having CBR > 12 per cent in the entire thickness of the crust.

Thus, the objective of provision and execution of drainage layer in 39 road works was not fulfilled as embankment soil over drainage layer was susceptible to choke the drainage layer and resulted in unfruitful expenditure on drainage layer of ₹ 16.79 crore as detailed in **Appendix 3.11**.

In the exit conference (November 2016), the Principal Secretary agreed that embankment soil should not be provided over drainage layer and further stated that instructions had been issued for construction of hard shoulder in full thickness.

3.1.4 Execution of road works

3.1.4.1 Provision of cross drainage on inadequate data

Due to provision of CDs without survey and investigation in 96 road works, number, type and location of CDs deviated from estimates.

Para 16.1 of IRC-19 stipulated that surveys and investigations was to be essentially carried out for selection of site and collection of data for design of cross drainage (CD) structures. Hydrological, physical and foundation data published by various authorities were required to be collected. In addition, site inspection with local enquiry and a study of nearby road structures on the same stream in the vicinity was to be conducted for collecting information about high flood level (HFL), tendency to scour and the maximum discharge.

¹⁹ The SOR includes two type of shoulders, namely earthen shoulder/embankment soil with soil having >5 per cent CBR and hard shoulder with soil having >12 per cent CBR.

²⁰ For pavement 3.75 formation width should be 9.3 m.

Audit scrutiny of 196 estimates of 12 divisions revealed that hydrological, physical and foundation data was not collected from Irrigation, Hydro-metrology and Geological Department. Further, local enquiry and study of nearby road structures on the same stream in the vicinity were also not conducted. Consequently, in 96 estimates of 12 divisions, data used for estimation of CDs, like catchment area, discharge of water and HFL, were not accurate, which resulted in deviation in type, location and number of CDs.

The number of CDs proposed in the estimate increased from 1 to 26 in 27 estimates and decreased by 1 to 32 in 62 estimates. In seven estimates, the number of CDs executed was same as estimated, but type and location of CDs were changed. Due to these deviations in the number and type of CDs, the cost of work increased by ₹ 8.84 crore in 29 works and decreased by ₹ 23.72 crore in 65 works.

The EE, Balaghat and Damoh stated in its reply that estimates were prepared in very short time, so it was not possible to conduct detailed survey. After sanction of the estimates of roads and before starting of the works, detailed survey was conducted and catchment area was calculated. So there was a difference in location of CDs. The other EEs stated that the work of CDs had been executed as per site condition.

In the exit conference (November 2016), the Principal Secretary stated that reasons for wide deviation in the number and type of CDs should be recorded in the revised estimate and necessary instructions would be issued shortly.

The reply is not acceptable, as technical sanctions were granted without ensuring essential survey and investigation for collection of requisite data to ascertain requirement of CD works.

3.1.4.2 Deviation in road length

The survey and investigation of the road works should be carried out in such a manner that all aspects of items for execution may be identified. The quantity and adequacy should be decided at the time of survey and investigation to avoid any major deviation at the time of the execution. During preparation of estimate, it should be ensured that land was available without any encroachment and also it was not under the jurisdiction of any other agency/authority.

Scrutiny of estimates of 30 bituminous road works in 10 divisions (**Appendix 3.12**) revealed that there was wide variation in total length of road executed with reference to road length proposed in estimates. Length of roads increased up to three km in six roads and decreased up to 10.5 km in 24 roads in comparison to estimated length. Deviation in road lengths was due to various reasons, viz. change in alignment, permission not granted by Forest Department, road transferred to Panchayats and Madhya Pradesh Rural Roads Development Authority (MPRRDA), etc.

Thus, road length was taken in estimates without assessing availability of land and adequate consultation with *Panchayat* and MPRRDA. As a result, cost of work increased by ₹ 2.72 crore in six cases and decreased by ₹ 29.01 crore in 24 cases.

Road lengths were included in estimates without assessing actual site requirements leading to increase in the cost by ₹ 2.72 crore in six roads and decrease by ₹ 29.01 crore in 24 roads.

The length of cement concrete (CC) road in 20 works was increased from 100 m to 2,130 m and decreased in 10 works from 100 m to 1,700 m in comparison to length proposed in approved estimates. The cost of road works were consequently increased by ₹ 8.91 crore in 20 works and decreased by ₹ 4.91 crore in 10 works (**Appendix 3.13**). Length of CC roads were increased on the ground of water logged area in village portion and decreased due to road length found already constructed.

In the exit conference (November 2016), the Principal Secretary stated that deviation in road length was due to roads transferred to MPRRDA, Panchayat and public demand during execution.

The reply was not acceptable as the information regarding roads under other organisation/Department was required to be obtained during preparation of estimate.

3.1.5 Conclusions

- The Department did not adhere to MPWD manual and IRC codes in preparation of road estimates. The estimates were prepared without pre-requisite activities, such as feasibility study, detailed survey and investigation, traffic survey. As a result, there were large deviations from estimates at the time of execution.
- Quantities of earthwork were provisioned in the estimates by taking average thickness without taking actual ground levels. Due to failure in taking levels and erroneous consideration of levels, quantities of earthwork were not provisioned correctly in the estimates resulting in variation (more than 10 per cent) of ₹ 25.71 crore in 68 road works.
- Road works were awarded without ensuring adequate provision in the estimates for acquisition of forest and private lands. Cost of utility shifting was provisioned on assumption basis without obtaining technical sanction from concerned Departments. These resulted in subsequent increase in cost of road works, delays in completion of works and incomplete roads awaiting land acquisition and utility shifting.
- Provision of richer specifications was made without ensuring its necessity, design traffic of road crust was incorrectly computed and crust composition was also erroneously adopted resulting in extra cost and possibility of premature failure of crust.
- Cross drainage and length of road was provisioned without detailed survey resulting in wide variation in type, number and location of cross drainage and deviation in length of road during execution.

3.1.6 Recommendations

- The Government should ensure that technical sanctions are granted after conducting surveys and investigation in accordance with the codal provisions.
- The Government should ensure that actual costs of utility shifting and acquisition of private and forest lands are obtained from concerned Departments while preparing estimates.

- The Government should ensure that accountability is fixed for computation mistakes and erroneous adoption of specification for designing of road crust with richer as well as substandard specifications.
- The Government should ensure adequate consultation with Panchayat, MPRRDA and other Government agencies before preparation of estimates for assessing the required length of road and type, number and location of cross drainage.

Farmer Welfare and Agriculture Development Department

3.2 Audit on Crop Insurance Scheme

Executive summary

National Agricultural Insurance Scheme (NAIS) was launched by Government of India (GoI) from Rabi 1999-2000 season to mitigate the financial loss suffered by farmers due to crop failure on account of natural calamities, pests and diseases. Agriculture Insurance Company of India Limited (AIC) was the implementing agency of the scheme. Government of Madhya Pradesh (GoMP) had opted for the NAIS since 1999-2000.

State Government was responsible to issue notification annually for crops and areas (*Patwari Halkas*) covered for insurance benefits. The farmers availing Seasonal Agriculture Operations (SAO) loans (i.e., loanee farmers) from Financial Institutions (FIs) for notified crops under notified areas had to mandatorily join NAIS. The scheme was optional for the farmers not availing SAO loans (i.e., non-loanee farmers). The claims were automatically calculated on shortfall in the current season yield obtained from crop cutting experiments conducted by State Government as compared to threshold yield and settled through FIs.

The audit of implementation of NAIS in the State during the period from *Rabi* season 2010-11 to *Kharif* season 2015 revealed the followings: -

- The coverage of farmers under NAIS during *Rabi* 2010-11 to *Kharif* 2015 ranged between 14.58 *per cent* and 33.80 *per cent* of the total number of 88.72 lakh farmers in the State. The coverage of area under NAIS ranged between 17.84 *per cent* and 40.93 *per cent* of cultivated area in the State. The increase of coverage was only due to compulsory insurance of loanee farmers, as only 2,841 non-loanee farmers were covered under the scheme during *Rabi* 2010-11 to *Kharif* 2015. The inadequate coverage of farmers under the scheme adversely affected the objectives of NAIS to help stabilise farm income, particular in disaster years.

(Paragraph 3.2.2.1)

- State Government failed to timely notify crop-wise area to be covered under the scheme and the delays in notification ranged up to eight months. Farmers of 120 *Patwari Halkas* were deprived of the benefits under the scheme due to delay in issuing notifications for these areas after cut off dates for receipt of declaration by insurance agency.

(Paragraph 3.2.2.2)

- As a result of failure of Superintendent Land Records and Deputy Directors of Agriculture in providing the results of crop cutting experiments, AIC could not calculate the insurance claim of farmers in 6,702 *Patwari Halkas*.

(Paragraph 3.2.2.3)

- In Actuarial regime, Agriculture Insurance Company would bear insurance claims of the farmers by increasing the insurance charges ascertained by its statistical experts. However, it was not implemented even after five years of introduction of NAIS in the State. This resulted in extra financial burden of ₹ 692.92 crore to the State Government during *Rabi*

2010-11 to *Kharif* 2015.

(Paragraph 3.2.2.4)

- AIC did not utilise corpus fund of ₹ 18.03 crore set up for financing during the conditions of catastrophe. The fund was yet to be refunded to State Government in view of no provision for corpus fund under the new scheme '*Pradhan Mantri Fasal Bima Yojna*'.

(Paragraph 3.2.2.5)

- There were delays in disbursement of insurance claims to farmers ranging from one month to over two years during *Rabi* 2010-11 to *Kharif* 2015. During beneficiary survey of 256 farmers in five districts, 16 per cent of the farmers stated that they could not repay their loans in due time due to delay in receipt of claims and hence, were debarred for loans in next season. Thus, delay in disbursement of claims resulted in hardship to claimants.

(Paragraph 3.2.2.9)

- Due to failure of financial institutions to adhere to the limits specified for providing finances to the farmers, insurance claim submitted by farmers was increased by ₹ 101.07 crore. This caused extra financial burden to the Government.

(Paragraph 3.2.2.10)

- During *Kharif* 2013, insured areas were more than the sown areas of notified crops by 9.06 lakh hectare in 3,362 *Patwari Halkas* of 42 districts. The Department attributed it to obtaining more than one *Kisan Credit Card* by farmers.

(Paragraph 3.2.2.12)

3.2.1 Introduction

Agriculture is a high risk venture due to natural disasters, pest attack and plant diseases which severely affects the farmers through loss in production and farm income. In order to mitigate the financial losses suffered by the farmers due to damage and destruction of their crops, Government of India (GoI) launched National Agricultural Insurance Scheme (NAIS) in 1999. Agriculture Insurance Company of India Limited (AIC) was appointed as implementing agency for the scheme.

Government of Madhya Pradesh (GoMP) had opted for the NAIS since 1999-2000. State Government was responsible to issue notification annually for crops and areas (*Patwari Halkas*) covered for insurance benefits. The farmers availing Seasonal Agriculture Operations (SAO) loans (i.e., loanee farmers) from Financial Institutions²¹ (FIs) for notified crops under notified areas had to mandatorily join NAIS. FIs send premium to AIC for loanee farmers by sanctioning additional loan for premium.

The scheme was optional for the farmers not availing SAO loans (i.e., non-loanee farmers). In respect of such farmers, the entire amount of premium would be deposited by the farmers with FI, which would consolidate the proposals and forward the same to AIC.

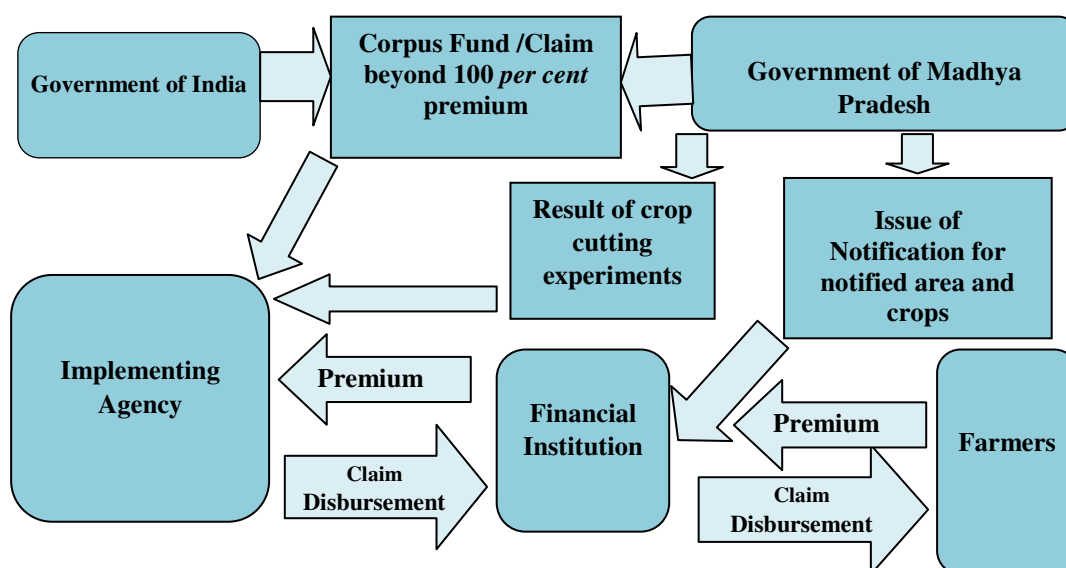
²¹ Primary Agricultural Cooperative Societies (PACS), Co-operative Banks, Nationalised Banks etc.

The claims were automatically calculated on shortfall in the current season yield obtained from crop cutting experiments conducted by State Government as compared to threshold yield and settled through FIs. In case, insurance claim was determined above 100 *per cent* of premium level, AIC demands for share of GoI and GoMP on 50:50 basis. To meet catastrophic losses, a corpus fund was also to be created by the equal contribution of GoI and GoMP.

The Farmer Welfare and Agriculture Development Department (FWADD), was the nodal Department to implement the scheme in the State. For monitoring the scheme, the Department had set up a State level co-ordination committee headed by Agriculture Production Commissioner and District level monitoring committees headed by the District Collector.

The role and responsibilities of various agencies i.e. GoI, GoMP, FIs and AIC are defined by flow chart.

Flow chart: The activity flow chart



3.2.1.1 Other Agricultural Insurance Schemes

GoI launched (September 2010) a Modified National Agricultural Insurance Scheme (MNAIS) in selected districts on pilot basis. The MNAIS was introduced in the three districts (Datia, Gwalior, Sheopur) of the State from Rabi 2010-11 and remaining 48 districts continued to be covered under NAIS.

The *Pradhan Mantri Fasal Bima Yojna* (PMFBY) replaced the existing two schemes (NAIS and MNAIS) from April 2016. Under this scheme, the farmers will have to pay a premium of two *per cent* of the sum insured for *Kharif* crops and one and a half *per cent* for *Rabi* crops in place of 2.5 *per cent* and 3.5 *per cent* for different *kharif* crops and 1.5 *per cent* and two *per cent* for different *Rabi* crops in the NAIS. PMFBY provides for coverage of post-harvest losses and sowing/planting risks due to adverse seasonal conditions, which were not covered in NAIS.

PMFBY and NAIS have many similar features like issuance of notifications by the State Government, roles of FIs, ascertaining yield data based on Crop

Cutting Experiments (CCEs), method of claim determination, publicity of the scheme by IA, monitoring of the scheme by State level and District level Committees, etc.

3.2.1.2 Scope of Audit

The activities/transactions relating to NAIS during the period from *Rabi* season 2010-11 to *Kharif* season 2015 were covered in the audit. The audit was conducted to assess whether duties and responsibilities entrusted to the GoMP under NAIS were fulfilled, claims for insurance were finalised accurately and disbursed timely to farmers.

Sixteen districts²² offices out of 48 NAIS covered districts (33 per cent) were selected for test check on the basis of Stratified Simple Random Selection (SSRS). Information were also collected from Directorate of Farmer Welfare and Agriculture Development, AIC, FIs and Revenue Department of districts. Beneficiaries Survey was conducted in five districts²³ to ascertain whether bonafide farmers were duly benefited under the scheme.

An entry conference was held with the Principal Secretary, FWADD on 24 February 2016 to discuss the audit objectives, audit criteria, scope and methodologies of audit. The audit findings were discussed in the exit conference held on 8 November 2016 with the Principal Secretary, FWADD. The replies of Government have been suitably incorporated in the report.

Audit findings

3.2.2.1 Inadequate coverage of farmers, areas and crops

As per agriculture census conducted in 2011, the State had cultivated area of 158.36 lakh hectare (ha) and the total number of farmers in the State was 88.72 lakh. The details regarding farmers covered, premium received and corresponding claims disbursed under the scheme during the period *Rabi* 2010-11 to *Rabi* 2014-15 and *Kharif* 2011 to *Kharif* 2015 are shown in **table 3.2.1(A)** and **3.2.1(B)** respectively.

Table 3.2.1 (A): Farmers covered, premium received by AIC and claims disbursed during *Rabi* 2010-11 to *Rabi* 2014-15

(₹ in crore)

Crop season	Number of farmers covered	Number of farmers compensated	Extent of farmers covered to farmers compensated (in per cent)	Amount of premium received by AIC	Amount of claims disbursed	Extent of claim to premium (in per cent)	Contributions in disbursed claims		
							AIC	GoMP	GoI
<i>Rabi</i> 2010-11	12,92,609	5,28,937	40.92	46.17	270.21	585.25	42.15	114.03	114.03
<i>Rabi</i> 2011-12	13,62,148	1,20,187	8.82	52.08	58.53	112.37	50.07	4.23	4.23
<i>Rabi</i> 2012-13	19,86,175	3,59,559	18.10	96.95	316.82	326.80	94.32	111.25	111.25
<i>Rabi</i> 2013-14	23,63,917	5,39,912	22.84	121.14	373.76	308.54	121.04	126.36	126.36
<i>Rabi</i> 2014-15	25,36,588	1,98,902	7.84	140.93	150.84	107.03	140.93	4.955	4.955
Total	95,41,437	17,47,497		457.27	1,170.16		448.51	360.825	360.825

(Source: Information provided by AIC through Director, FWADD)

²² Betul, Hoshangabad, Jhabua, Katni, Mandsaur, Morena, Narsinghpur, Neemuch, Raisen, Rajgarh, Sagar, Satna, Shahjapur, Shivpuri, Tikamgarh and Vidisha.

²³ Betul, Hoshangabad, Narsinghpur, Sagar and Tikamgarh

Table 3.2.1 (B): Farmers covered, area covered, premium received by AIC and claims paid during *Kharif* 2011 to *Kharif* 2014

(₹ in crore)

Crop season	Number of farmers covered	Number of farmers compensated	Extent of farmers covered to farmers compensated (in per cent)	Amount of premium received by AIC	Amount of claims disbursed	Extent of claim to premium (in per cent)	Contributions in disbursed claims		
							AIC	GoMP	GoI
<i>Kharif</i> 2011	15,29,272	1,43,892	9.41	130.38	250.56	192.18	121.03	64.766	64.766
<i>Kharif</i> 2012	20,32,541	74,358	3.66	207.79	75.08	36.13	75.08	0.000	0.000
<i>Kharif</i> 2013	23,37,003	14,20,662	60.79	277.75	2,187.43	787.55	263.00	962.216	962.216
<i>Kharif</i> 2014	24,54,306	4,25,136	17.32	319.05	541.99	169.88	306.77	117.610	117.610
<i>Kharif</i> 2015	29,98,497	20,46,638	68.26	400.14	4,416.85	1,103.83	360.95	2,027.95	2,027.95
Total	1,13,51,619	41,10,686		1,335.11	7,471.91		1,126.83	3,172.542	3,172.542

(Source: Information provided by AIC through Director, FWADD)

Thus, the coverage of farmers under NAIS during *Rabi* 2010-11 to *Kharif* 2015 ranged between 14.58 per cent and 33.80 per cent of total number of farmers in the State. Further scrutiny revealed that only 2,841 non-loanee farmers were covered under the scheme during *Rabi* 2010-11 to *Kharif* 2015, as detailed in **Appendix 3.14**.

The coverage of area under NAIS during this period was also low, which ranged between 17.84 per cent and 40.93 per cent, as detailed in **table 3.2.2**.

Table 3.2.2: Coverage of Areas

Crop Season	Total cultivated area (in ha)	Area covered (in ha)	Extent of area covered to total cultivated (in per cent)
<i>Rabi</i> 2010-11	1,58,35,877	28,24,721.00	17.84
<i>Kharif</i> 2011	1,58,35,877	34,24,053.00	21.62
<i>Rabi</i> 2011-12	1,58,35,877	29,40,873.00	18.57
<i>Kharif</i> 2012	1,58,35,877	47,06,529.00	29.72
<i>Rabi</i> 2012-13	1,58,35,877	43,03,983.00	27.18
<i>Kharif</i> 2013	1,58,35,877	52,86,356.00	33.38
<i>Rabi</i> 2013-14	1,58,35,877	49,33,145.96	31.15
<i>Kharif</i> 2014	1,58,35,877	54,69,982.29	34.54
<i>Rabi</i> 2014-15	1,58,35,877	52,40,951.61	33.10
<i>Kharif</i> 2015	1,58,35,877	64,81,955.43	40.93

(Source: Agriculture Census of Department of Agriculture and Co-operation, GoI)

The reasons for less coverage of farmers and area were mainly due to lack of publicity made by the Department and AIC and delay in notification as discussed in succeeding paragraphs. Further, major crops of some districts were not notified by the GoMP. During *Kharif* 2011 to *Kharif* 2015 the sown area of *urad*²⁴ and *moong*²⁵ were 35.37 lakh hectare and 7.42 lakh ha respectively and the sown area of *lentil*²⁶ during *Rabi* 2011 to *Rabi* 2014-15 was 20.69 lakh hectare. Audit scrutiny revealed that the sown area of *urad* was 27.15 per cent to 40.80 per cent of total sown area of the districts in

²⁴ 2011: 6,01,300 ha, 2012: 6,24,000 ha, 2013: 5,85,100 ha, 2014: 8,62,000 ha, 2015: 8,65,334 ha

²⁵ 2011: 80,600 ha, 2012: 73,000 ha, 2013: 89,500 ha, 2014: 1,55,300 ha, 2015: 3,44,554 ha

²⁶ 2011-12: 5,87,100 ha, 2012-13: 5,11,000 ha, 2013-14: 5,30,080 ha, 2014-15: 4,40,867 ha

Tikamgarh and Chhattarpur during *Kharif* 2013, *Kharif* 2014 and *Kharif* 2015. However, State Government did not notify *urad*, *moong* and lentil for insurance cover under NAIS. Thus, a significant area was left out to be covered under the scheme and the farmers growing these crops were deprived of scheme coverage.

In the exit conference (November 2016), the Department stated that the coverage of non-loanee farmers had increased since *Rabi* 2015-16. With reference to failure in covering lentil, *urad* and *moong* under the scheme, the Department stated that *urad*, *moong* and lentil could not be notified due to unavailability of crop cutting experiments (CCEs) data of last 10 years.

The reply is not acceptable, as the coverage of non-loanee farmers remained abysmally low despite operation of the scheme in Madhya Pradesh since 1999. Further, State Government failed to notify major crops *urad*, *moong* and lentil for the reasons of unavailable CCEs data for 10 years whereas the scheme was being implemented since more than 15 years. Thus, less coverage of farmers (loanee and non-loanee) adversely affected the objectives of NAIS to help stabilize farm income, particular in disaster years.

3.2.2.2 *Notifications for crop wise notified area*

As per para 9 of Operational Modalities under the scheme guidelines, the GoMP would notify crop wise, notified areas and premium rates as applicable well in advance of each crop season. AIC would accept the declaration forms regarding information of farmers and premium from FIs by the cut-off date of November and May for *Kharif* and *Rabi* crops respectively.

The scheme operates on the basis of unit area approach. The unit area of insurance in the State was *Patwari Halka* for most of the food crops/oilseeds²⁷ and *tehsil* for few crops²⁸. State Government had declared in its notifications that the sown area of a particular crop in a *Patwari Halka* should be 100 ha or above. GoMP notifications stipulated cut off dates for receipt of declarations forms for *Kharif* and *Rabi* as 31 October and 30 April respectively.

• **Delay in issue of notification for crop wise notified area**

Audit scrutiny revealed that the primary data of sown area were gathered by the *Patwari*. After verification, Revenue Inspectors compiled these data at district level for submission to Commissioner, Land Records. Due to delays in collection, verification and compilation of sown areas data of previous years, State Government could not issue notification before SAO loan seasons. The notified areas were also revised several times after issue of notification.

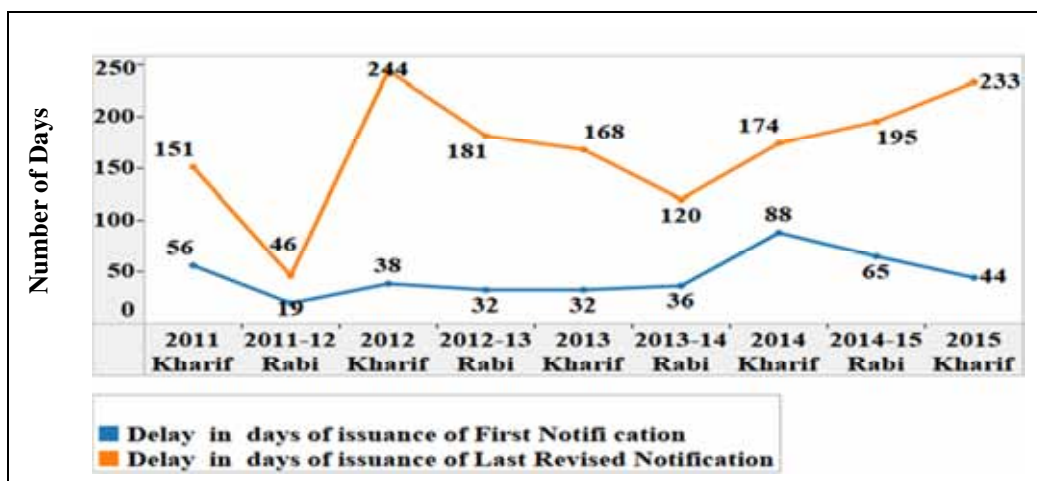
During *Kharif* 2011 to *Kharif* 2015 seasons, the notifications were delayed by 32 days to 88 days and the last revised notifications were delayed by 151 days to 244 days. In case of *Rabi* 2011-12 to *Rabi* 2014-15, the notifications were delayed by 19 days to 65 days and the last notification were issued with delays of 46 days to 195 days. The details of delay in issuance of the first notifications and the last revised notifications published by GoMP are shown in **chart 3.2.1**.

Notifications for crops and areas to be covered under the scheme were issued with delays ranging from 19 days to 244 days.

²⁷ Bajra, Gram, Maize, Paddy, Sarso, Soyabean, Tuar, Wheat.

²⁸ Alsi, Cotton, Groundnut, Jawar, Til.

Chart 3.2.1: Delays in issuance of notification for each crop season



The cut-off date for submission of declaration form by non-loanee farmers was July for *Kharif* and December for *Rabi* crops. As a result of delayed notification, non-loanee farmers were excluded from scope of crop insurance. This acts as a disincentive to the farmers as claims not entertained by AIC after cut-off date. Further, delays in issuance of notification left FIs with very short span of time to send the declaration form in respect of loanee farmers.

Audit scrutiny revealed that GoMP issued revised notifications after the cut-off dates for receipt of declaration form. AIC did not accept declaration forms and premiums for crop insurance after cut-off dates, as detailed in **table 3.2.3**.

Table 3.2.3: Instances where AIC did not accept declaration forms due to late receipt

(₹ in lakh)

Sl. No.	Crop Season	District	Name of FI	Number of Farmers	Submission declaration form		Premium Amount	Sum Insured
					Cut-off date for submission to AIC	Actual received date at AIC		
1	<i>Kharif</i> 2014	Betul	State Bank of India	611	31 October 2014	18-11-2014	10.44	298.42
2	<i>Kharif</i> 2014	Rajgarh	Bank of India	41	31 October 2014	22-11-2014	3.59	104.39
3	<i>Kharif</i> 2014	Rajgarh	Bank of India	100	31 October 2014	22-11-2014	1.68	47.90
4	<i>Kharif</i> 2014	Rajgarh	Punjab National Bank	320	31 October 2014	01-01-2015	9.96	290.69
Total				1072				

(Source: Information provided by FI's and DDA's of concerned districts)

Thus, the delays in issue of notification for notified areas deprived loanee as well as non-loanee farmers benefits under the scheme and an estimated²⁹ 47,640 farmers of 120 *Patwari Halkas* were deprived of insurance coverage, where notifications were issued after the cut-off date.

In the exit conference (November 2016), the Department assured that timely issuance of notifications in future and also uploading of these notification on insurance portal.

- **Discrepancy in inclusion of areas for insurance coverage**

Discrepancy in selection of units resulted in 1,059 *Patwari Halkas* being kept out of the coverage and benefits having been extended to farmers of ineligible 200 *Patwari Halkas*.

Audit scrutiny revealed that during *Kharif* 2013 to *Rabi* 2014-15, State Government did not notify 1,059 *Patwari Halkas* having total sown area of 2.49 lakh hectare in five districts³⁰, though the sown area of notified crop in these *Patwari Halkas* ranged between 100 ha and 1,238 ha, as detailed in **Appendix 3.15**. Further, there was damaged in notified corps in these five districts during the aforesaid period and insurance claim of ₹ 559.89 crore was disbursed. Thus, farmers of 1,059 *Patwari Halkas* were inexplicably kept out of the scheme coverage and did not get any scheme benefits during *Kharif* 2013 to *Rabi* 2014-15, despite reported damage of notified crops.

Further scrutiny revealed that during *Kharif* 2013 to *Rabi* 2014-15, State Government notified 200 *Patwari Halkas* in five districts³¹ though the sown area of *Patwari Halka* was less than 100 ha as shown in **Appendix 3.16**. Thus, insurance coverage were extended to ineligible *Patwari Halka* resulting in extra financial burden on GoI and GoMP.

In the exit conference (November 2016), the Department stated that the selection of insurance units was based on the data provided by Collector's proposal to CLR. Therefore, matter was brought to the notice of Commissioner, Land Records, Revenue Department for further corrective measures and compliance in future.

Facts remain that SLR did not carry out adequate verification of the accuracy of the list of areas to be notified. Further, adequate oversight was not exercised by the Department before issue of notification. As a result, farmers of eligible *Patwari Halka* were kept out of the scheme coverage and benefits were extended to farmers of ineligible *Patwari Halkas*.

3.2.2.3 *Inadequate crop cutting experiments*

In absence of data regarding CCEs, AIC could not calculate insurance claim for 6,702 *Patwari Halkas* and bonafide farmers of these *Patwari Halkas* were deprived of the scheme benefit.

As per para 11 of the scheme guidelines, the State Government would plan and conduct the requisite number of CCEs for all notified crops in the insurance units in order to assess crop yield. Crop yield was one of the most important factor to ascertain insurance claim without which AIC would not consider claim. Superintendent Land Record (SLR) and Deputy Director Agriculture (DDA) of each district were responsible to conduct minimum four crop cutting experiments (two each by SLR and DDA) in an area of 5m x 5m to ascertain crop yield in each *Patwari Halka*.

²⁹ As per census 2011, total number of farmers in the State were 88.72 lakh and total *Patwari Halkas* in 2012-13 were 22,371. Thus, average number of farmers per *Patwari Halka* are 397.

³⁰ Hoshangabad, Jhabua, Katni, Raisen, Tikamgarh

³¹ Hoshangabad, Jhabua, Katni, Raisen, Tikamgarh

Audit scrutiny revealed that during *Kharif* 2011, *Rabi* 2011-12, *Kharif* 2012, *Rabi* 2012-13 and *Kharif* 2014 no yield data (results of CCEs) of 5,128 *Patwari Halkas* and incomplete yield data (i.e. less than four CCEs) of 1,574 *Patwari Halkas* were sent to AIC by GoMP. Further scrutiny revealed that in *Kharif* 2014 season alone, no yield data of 774 *Patwari Halkas* and incomplete yield data of 25 *Patwari Halkas* in respect of 60,824 farmers were sent to AIC. In respect of these farmers, total insurance premium of ₹ 10.20 crore for insurance coverage (sum insured) of ₹ 311.26 crore was deposited to AIC. The major defaulter districts/tehsils, which did not send yield data or sent incomplete yield data to AIC was as shown in **table 3.2.4**.

Table 3.2.4: Major defaulter districts which did not send yield data or sent incomplete yield data of CCE during *Kharif* 2014

Name of District	Name of Tehsil	No. of <i>Patwari Halkas</i>
Raisen	Goharganj	81
	Raisen	35
	Bareli	34
	Udaipura	14
	Gairatganj	11
	Sultanpur	06
Narsinghpur	Gadarwara	148
	Gotegaon	41
	Kareli	22
	Narsinghpur	20
	Tendukheda	09
Shivpuri	Kolaras	13
	Pichore	13

As a result of failure of SLR and DDA in providing the results of CCEs to AIC, farmers of 6,702 *Patwari Halkas*³² were deprived of the benefit under the scheme.

In the exit conference (November 2016), the Department stated that the matter would be brought to the notice of Revenue Department and information would be sought from AIC for further corrective measures for its future compliance.

The matter was also discussed in a meeting (December 2016) with CLR, which intimated that CCEs were not conducted in time due to inadequate number of *Patwaris*. CLR further informed that there were also delays in providing results of CCE by DDAs.

Fact remains that lack of monitoring by FWADD in ensuring adequate CCEs resulted in denial of benefits of crop insurance to insured farmers.

3.2.2.4 Sharing of Risk between Government and Implementing Agency

Agriculture Insurance Company of India Limited was formed (October 2003) by GoI for the implementation of NAIS. The main shareholders of the company are General Insurance Corporation of India (35 per cent), National Bank for Agriculture and Rural Development (NABARD) (30 per cent), National Insurance Company Limited (8.75 per cent), New India Insurance Company Limited (8.75 per cent), Oriental Insurance Company Limited (8.75 per cent) and United India Insurance Company Limited (8.75 per cent).

³² Total no of *Patwari Halkas* = 5,128 + 1,574 = 6,702

As per para 8(a) of NAIS, claims beyond 100 *per cent* of premium will be borne by the GoI and GoMP till complete transition to actuarial regime³³ takes place in a period of five years. Thereafter, all normal claims i.e. claims up to 150 *per cent* of premium will be met by implementing agency and claims beyond 150 *per cent* shall be paid out of Corpus Fund³⁴ for a period of three years. After this period of three years, claims up to 200 *per cent* will be met by implementing agency and beyond this ceiling, out of the Corpus Fund.

NAIS was started in Madhya Pradesh from *Rabi* 1999. However, the actuarial regime was not implemented till date and insurance claims above premium level were borne by GoI and GoMP on 50:50 basis. The status of claims admitted during *Rabi* 2010-11 to *Kharif* 2015, was as shown in **table 3.2.5**.

Table 3.2.5: Statement showing extra burden on GoI and GoMP

(₹ in crore)

Year	Premium deposited with AIC by FIs	Claim admitted during the year	Claims to be paid by AIC (200 <i>per cent</i> of premium collected)	Claims actually paid by AIC	Extra Burden on GoI and GoMP
<i>Rabi</i> 2010-11	46.17	270.20	92.34	42.15	50.19
<i>Kharif</i> 2011	130.38	250.56	250.56	121.03	129.53
<i>Rabi</i> 2011-12	52.08	58.54	58.54	50.07	8.47
<i>Kharif</i> 2012	207.79	75.08	75.08	75.08	0
<i>Rabi</i> 2012-13	96.95	316.82	193.90	94.32	99.58
<i>Kharif</i> 2013	277.78	2,187.43	555.50	263.00	292.56
<i>Rabi</i> 2013-14	121.05	373.76	242.11	121.05	121.05
<i>Kharif</i> 2014	319.05	541.99	541.99	306.78	235.21
<i>Rabi</i> 2014-15	140.93	150.84	150.84	140.93	9.91
<i>Kharif</i> 2015	400.14	4,416.85	800.28	360.95	439.33
Total	1,792.32	8,642.07	2,961.14	1,575.36	1,385.83

(Source: Information provided by AIC through Director, FWADD)

As actuarial regime was not implemented, extra financial burden of ₹ 692.92 crore was borne equally by GoMP.

Thus, the extra financial burden of ₹ 1,385.83 crore on behalf of AIC was borne by GoI and GoMP (₹ 692.92 crore each) during *Rabi* 2010-11 to *Kharif* 2015 due to not shifting to actuarial regime, as shown in the **table 3.2.5**. Therefore, this amounted to largesse being shown to the Insurance Agency.

AIC stated (July 2015) that the administrative approval for each and every season was issued by GoI and the decision to switch to actuarial regime could only be taken by GoI.

In the exit conference (November 2016), the Department stated that in the new scheme (PMFBY) the actuarial regime was being implemented and that NAIS had no Actuarial Premium Rates (APR) regime in its guidelines.

Facts remain that actuarial regime was not implemented after five years of implementation of NAIS as envisaged in the scheme guidelines, which resulted to extra financial burden of ₹ 692.92 crore to the State Government during *Rabi* 2010-11 to *Kharif* 2015.

³³ It is a stage in when IA will bear claims by increasing the insurance charges (premium) ascertained by its statistical experts.

³⁴ To meet catastrophic losses, a Corpus Fund would be created with contributions from the GoI and GoMP on 50:50 basis.

3.2.2.5 *Corpus Fund*

Corpus fund of ₹ 18.03 crore remained idle with the AIC and not utilised during catastrophic losses.

Para 16 of NAIS guidelines stipulated that in order to meet catastrophic losses, a corpus fund shall be created with equal contribution from the GoI and GoMP. A portion of calamity Relief Fund shall be used for contribution to the corpus fund. The corpus fund shall be managed by the AIC.

Audit scrutiny and information provided by AIC revealed that GoMP provided (October 2000 and April 2002) ₹ 3.00 crore and ₹ 4.42 crore to GIC towards corpus fund, which implemented the scheme during *Rabi* 1999-2000 to *Rabi* 2002-03. This corpus fund of ₹ 7.42 crore was transferred to AIC after its formation. No further contribution to corpus fund were made by GoMP and GoI.

AIC had invested corpus fund along with its other investments under various instruments, such as, Government securities, Bonds, mutual funds, equities, etc. in accordance with the regulations of Insurance Regulatory and Development Authority (IRDA). After accruing the return on investment, the balance in corpus fund was ₹ 18.03 crore as of 31.03.2016.

Audit scrutiny revealed that AIC did not utilise the corpus fund for settlement of insurance during catastrophic situation like hailstorm in many parts of the State during 2013, 2014 and 2015. State Government, however, intimated during the exit conference (November 2016) that corpus fund was not created under NAIS. Thus, State Government was not aware of transactions under corpus fund and the balances of corpus fund remained idle with the AIC.

In reply, AIC stated (January 2017) that the corpus fund was not utilised since Government had made available funds to meet out claim payments. In the exit conference, the Department further (November 2016) stated that there was no provision for corpus fund in the existing crop insurance scheme, PMFBY.

The fact remains that ₹ 18.03 crore was kept unutilised in the account of AIC and the fund was yet (January 2017) to be refunded to State Government in view of no provision for corpus fund in PMFBY.

3.2.2.6 *Financial support towards Administrative and Operative Expenses*

Continuance of financial supports towards A&O expenses of AIC, State Government incurred extra expenditure of ₹ 1.49 crore.

As per para 15 of NAIS, the Administrative and Operative (A&O) expenses of AIC would be shared equally by the GoI and GoMP on sunset basis (i.e. 100 per cent in 1st year, 80 per cent in 2nd year, 60 per cent in 3rd year 40 per cent in 4th year, 20 per cent in 5th year and zero thereafter.)

AIC was established for implementation of NAIS with effect from 1 April 2003. Therefore, the assistance from the Central and State Government towards A&O expenses of AIC should have been discontinued from the *Kharif* season 2008.

Audit scrutiny, however, revealed that GoMP and GoI had given 100 per cent A&O expenses amounting to ₹ 2.99 crore³⁵ to AIC during *Rabi* 2011 to *Kharif*

³⁵ 2010-11 ₹ 26.40 lakh, 2011-12 ₹ 59.13 lakh, 2012-13 ₹ 40.90 lakh, 2013-14 ₹ 59.28 lakh, 2014-15 ₹ 113.32 lakh

2015. This resulted in extra financial burden of ₹ 2.99 crore on GoI and GoMP (₹ 149.51 lakh each) and also loss of interest amounting to ₹ 20.35 lakh³⁶.

AIC stated (July 2015) that initially 100 *per cent* A&O expenses were to be borne by Central and State Government, which had now been reduced (March 2015) to 20 *per cent*.

In the exit conference (November 2016), the Department stated that it was a policy matter and assured to take up the matter to the Government for further initiatives/corrective measures.

The reply was not tenable as A & O expenses had to be fully phased out from 2008 in view of the scheme guidelines.

3.2.2.7 *Payment of service charge by AIC*

As per para 16 of scheme guidelines, the implementing agency shall pay service charges to FI's at the rate of 2.5 *per cent* of the premium collected in respect of both loanee and non-loanee farmers at the end of the season. Service charges shall be borne equally by the GoI and GoMP.

Audit scrutiny revealed that FIs collected ₹ 1,355.96 crore³⁷ as insurance premium during the period from *Rabi* 2012-13 to *Kharif* 2015 and sent it to AIC. Thus, service charges of ₹ 33.90 crore (at the rate of 2.5 *per cent* of ₹ 1,355.96 crore) was payable to FIs. However, AIC did not pay the service charges to FIs as of July 2016.

AIC stated (July 2015) that from *Rabi* 2012-13 payment of bank service charge is due for want of share from GoI. In the exit conference, the Department assured (November 2016) to take necessary action.

3.2.2.8 *Publicity/Awareness*

As per Para 8 of Operational Modalities under the scheme guidelines, AIC and FWADD were responsible for creating awareness so as to make it acceptable to the larger segment of farmers. Besides audio-visual media, the services of Agriculture Extension Officers (AEO) of the State was to be utilised for the publicity. A separate action plan was to be prepared to bring in awareness to educate farmers and pamphlet was to be distributed to all villages. Training programmes, workshops and visit of AIC officers to the Banks was to be arranged to help in clarifying the doubts, redressal of grievances and clearing bottlenecks in smooth implementation of the scheme.

Audit scrutiny of records revealed that action plan for awareness of the scheme among farmers was not prepared by FWADD or AIC. State Government provided ₹ 7.09 lakh to AIC during 2010-15 for the publicity/awareness of the scheme. However, no action plan was submitted by AIC to the Government. On being enquired, test-checked DDAs informed that the representatives of AIC did not participate in any workshop or training programme. Audio-visual material, pamphlets, etc. were not provided to Agriculture Extension Officers in test-checked 16 districts. As a result of

³⁶ Average borrowing rate of interest of the State ranging from 6.48 *per cent* to 7.04 *per cent* during different years.

³⁷ *Rabi* 2012-13 ₹ 96.95 crore, *Kharif* 2013 ₹ 277.75 crore, *Rabi* 2013-14 ₹ 121.14 crore, *Kharif* 2014 ₹ 319.05 crore. *Rabi* 2014-15 ₹ 140.93 crore and *Kharif* 2015 ₹ 400.14 crore.

AIC did not pay ₹ 33.90 crore of service charges to FIs.

FWADD as well as AIC did not prepare any plan for publicity of the scheme and audio-visual material and pamphlets for awareness generation were not provided to Agriculture Extension Officers.

inadequate publicity/awareness, coverage of non-loanee farmers ranged from two (*Kharif 2014*) to 1,080 in (*Rabi 2010-11*) in the State.

The scheme was to be mandatorily implemented for loanee farmers. However, the beneficiary survey of 256 loanee farmers of five districts revealed lack of awareness about the scheme benefits, as detailed below:

- Seventy eight *per cent* farmers were not informed about the deduction of premium,
- Ninety two *per cent* farmers were not informed about notified area and notified crop, and
- Sixty five *per cent* farmers knew about the NAIS through other farmers and not through publicity and awareness made by AIC.

AIC stated (July 2016) that the increase in number of farmers under the scheme was due to publicising the scheme in fairs/*melas*, placement of advertisement in newspapers, imparting training to bankers etc. But as the scheme operates on area approach basis and voluntary for non-loanee farmers, the farmers were reluctant to get their crops insured as they want their fields/crops insured on individual basis.

The reply is not acceptable, as the coverage of only loanee farmers increased since the implementation of NAIS, which was mandatorily to be applied for them.

In the exit conference (November 2016), the Principal Secretary stated that the allotment for publicity had substantially increased in the new scheme due to which coverage of non-loanee farmers had increased.

The facts remain that publicity campaign were not organised during the operation of NAIS as envisaged in the scheme guidelines, which resulted in ignorance about the scheme benefits among loanee farmers and inadequate coverage of non-loanee farmers.

3.2.2.9 *Delay in disbursement of claims*

As per guidelines of the scheme, cut-off date for receipt of yield data for *Kharif* and *Rabi*, is January and July respectively, but no time schedule was prescribed for disbursement of insurance claims. Audit scrutiny revealed that AIC took one month to 17 months in ascertaining claims and raising the demand to GoMP from the cut-off date of receipt of yield data.

Further scrutiny revealed that GoMP had made 27 disbursements of its share for claims pertaining to the period *Rabi 2010-11* to *Kharif 2015*, of which 9 disbursements were released after delay of more than one month from the date of receiving demand from AIC. The period of delays in disbursement to farmers of claims ranged from one month to three months in four cases, 4 months to 11 months in 16 cases, one year to two years in five cases and 24 months to 31 months in two cases during *Rabi 2010-11* to *Kharif 2015*, as shown in the **Appendix 3.17**.

AIC paid the insurance claims to FIs in installments and sometimes after next SAO loan season. Co-operative Banks charge no interest for *Kharif* SAO loans up to 15 March and for *Rabi* SAO loans up to 15 June. If farmers fail to repay the SAO loans within stipulated period, Co-operative Banks charge interest at

Due to delay in disbursement of share of GoMP, the delay in disbursement of claims ranged from 1 month to 31 months.

commercial rate. During beneficiary survey of 256 farmers in five districts, 16 per cent farmers stated that they could not repay their loans in due time due to delay in receipt of claims and hence, were debarred for loans in next season. Thus, delay in disbursement of claims resulted in putting the claimants to hardship.

AIC stated (July 2016) that the delay in settlement of claim was due to the fact that after receipt of yield data the same was checked by it and in case of error/omissions, clarifications were sought from the GoMP. The claim was processed after receipt of clarification. The other reason for delay in claim settlement was delay in receipt of share from Government.

In the exit conference (November 2016), the Department accepted the fact and assured for timely disbursement of claims in future.

3.2.2.10 Scale of Finance

As per para 5 of NAIS, sum insured would be according to the Scale of Finance (SoF) of the district. The SAO loan limit was decided for each crop of the district through SoF, which was determined by a district level committee on the basis of production cost, productivity, price of the crop, repaying capacity of farmers etc. While notifying the crop and *Patwari Halkas*, GoMP mention in the notification that the sum insured would be up to the limit of SoF.

Scrutiny of records in seven test checked districts³⁸ revealed that SAO loans of ₹ 497.07 crore were disbursed for 2,30,207.8 ha during *Kharif* 2013, *Rabi* 2013-14 and *Kharif* 2014. However, as per SoF, SAO loans should have been ₹ 335.41 crore (**Appendix 3.18**). AIC failed to check the SoF and assessed inflated claims as per premiums received by it and paid accordingly. Thus, insurance claim was increased by ₹ 101.07 crore due to violation of SoF, which resulted in extra financial burden to the Government.

AIC stated (July 2016) that most of the bankers had been insuring according to SoF but some commercial bankers had been insuring over and above SoF. The decision to restrict the coverage to SoF was taken by the GoMP in *Kharif* 2015 season.

In the exit conference (November 2016), the Department accepted the audit observation and stated that this had been rectified in the new scheme i.e. PMFBY.

Fact remains that inadequate scrutiny of insurance premium *vis-à-vis* SoF by AIC resulted in increase in insurance claim by ₹ 101.07 crore.

3.2.2.11 Settlement of claims

Scrutiny of records revealed following irregularities of FIs in implementation of the Scheme:

(i) Insurance premium not deducted by FIs

During *Kharif* 2013, *Rabi* 2013-14, *Kharif* 2014 and *Rabi* 2014-15 in districts Betul, Katni and Rajgarh, FIs did not deduct the premiums for notified crops under notified areas, as shown in **table 3.2.6**.

³⁸ Betul, Hoshangabad, Katni, Raisen, Rajgarh, Sagar and Shajapur

Violation of Scale of Finance increased the insurance claim by ₹ 101.07 crore, resulting in extra financial burden to the Government.

Table 3.2.6: FIs did not deduct premium

Sl. No.	Crop Season	District	Name of FI	Number of farmers
1	Kharif 2013	Betul	Adim Jati Seva Sahkari Samiti, Sohagpur	167
2	Kharif 2013	Katni	Bank of Baroda	44
3	Rabi 2013-14	Katni	Bank of Baroda	49
4	Kharif 2014	Katni	Bank of Baroda	30
5	Rabi 2014-15	Katni	Bank of Baroda	43
6	Kharif 2015	Katni	Bank of Baroda	02
7	Kharif 2013	Sagar	Punjab & Sindh Bank	01
8	Kharif 2013	Sagar	Oriental Bank	04
9	Kharif 2013	Sagar	Union Bank of India	21
10	Kharif 2013	Sagar	Bank of India	03
11	Kharif 2013	Sagar	Indian Bank	01
12	Kharif 2013	Sagar	District Coop. Central Bank	15
13	Kharif 2013	Sagar	Central Bank of India, Badavelai	02
14	Kharif 2013	Sagar	Punjab National Bank	01
15	Kharif 2013	Sagar	ICICI Bank	01
16	Kharif 2013	Sagar	Mandhyachal Gramin Bank	11
Total				395

(Source: Information provided by FI's and DDA's of concerned districts)

Thus, 395 eligible loanee farmers were deprived of scheme benefits due to failure of FIs in deducting premiums.

(ii) **Insurance premium deducted but not sent to AIC**

Audit scrutiny revealed that during Kharif 2014 in districts Betul, Katni and Rajgarh, deducted premiums were not sent to AIC or sent to AIC after cut-off date, as shown in table 3.2.7.

Table 3.2.7: FIs did not send premium to AIC

(₹ in lakh)

Sl. No.	Crop Season	District	Name of FI	Number of Farmers	Declaration Form		Premium Amount	Sum Insured
					Cut-off date for submission to AIC	Actual received date at AIC		
1	Kharif 2014	Betul	Punjab National Bank, Dunava	565	31 October 2014	Not sent	9.72	277.78
3	Kharif 2014	Katni	DCCB, Jabalpur	129	31 October 2014	Not sent	0.47	19.71
4	Kharif 2014	Katni	DCCB, Branch Rithi	43	31 October 2014	Not sent	0.59	23.40
5	Kharif 2014	Katni	PACS Badgaon	34	31 October 2014	Not sent	0.13	26.01
Total				771				

(Source: Information provided by FI's and DDA's of concerned districts)

Thus, 771 eligible loanee farmers were deprived of scheme benefits due to failure of FIs in not sending insurance premium before cut-off dates. Further scrutiny revealed that Punjab National Bank (PNB), Ganjbasoda, Vidisha collected premium ₹ 11.86 lakh from 492 farmers for Rabi season 2012-13 and sent it to AIC on 26 March 2013 (before cut-off date). However, AIC did not consider it for claim ascertainment and disbursement. Thus, 492 farmers of these area were deprived of scheme benefits.

AIC did not offer any comments in respect of claims of farmers whose premium were collected by PNB, Ganjbasoda, Vidisha.

(iii) FIs recorded wrong Patwari Halkas in declaration form

During Rabi 2012-13, Rabi 2013-14 and Kharif 2014, 140 farmers in districts Rajgarh and Shajapur became ineligible for scheme benefits, as FIs recorded wrong Patwari Halkas in declaration form as shown in **table 3.2.8**.

Table 3.2.8: FIs recorded wrong Patwari Halkas

Sl. No.	Crop Season	District	Name of FIs	Number of Farmers	Premium Amount	Insured Amount
1	Kharif 2014	Rajgarh	PACS, Jami	54	45,052	13,01,084
2	Rabi 2012-13	Rajgarh	PACS, Bawrikheda	69	30,310	15,15,500
3	Rabi 2013-14	Shajapur	State Bank of India, Maksi	17	0	0
Total				140		

(Source: Information provided by FI's and DDA's of concerned districts)

Therefore, 140 farmers were deprived of scheme benefits due to lack of verification at FIs level.

In exit conference (November 2016), the Department assured that individual cases would be seen and settled accordingly.

3.2.2.12 Insured area exceeded sown area

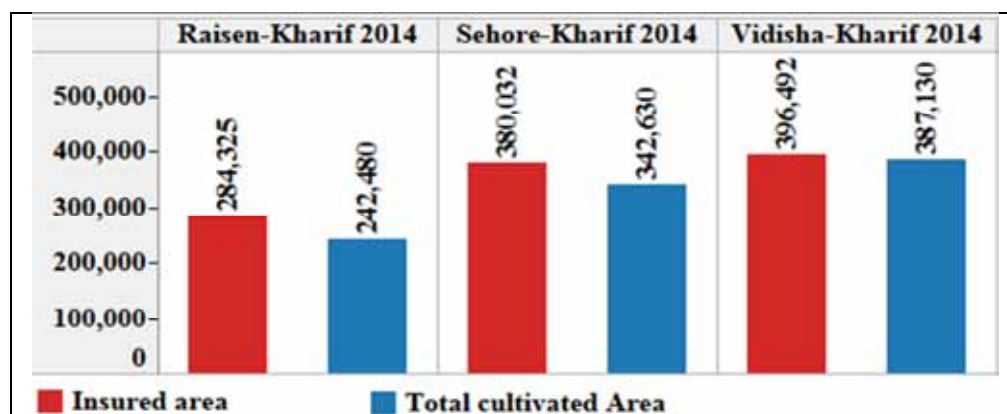
Unsown area of 9,05,896 ha was insured under NAIS.

As per para 4(1) of operational modalities of NAIS, loans given for unsown areas would not be covered by the scheme, because indemnity claims would arise under the scheme only after the crop was sown and in the event of crop failure. Mere disbursement of loans by the FIs would not entitle farmers for compensation under the scheme.

Audit scrutiny revealed that the insured areas were 22,64,195 hectare in 3,362 Patwari Halkas of 42 districts during Kharif 2013. However, as per revenue records, actually sown areas of notified crops in these Patwari Halkas were 13,58,299 hectare, as detailed in **Appendix 3.19**. Thus, 9,05,896 hectare unsown area was covered under NAIS and collected premium amounts sent to AIC. The Department informed (November 2016) that "Area Factor" formula was applied in calculating claims in such areas. Thus, farmers were not awarded admissible compensation because of the omission of FIs.

Audit scrutiny further revealed that the total insured area during Kharif 2014 was more than the total cultivated area of the districts Raisen, Sehore and Vidisha, as depicted in **chart 3.2.2**.

Chart 3.2.2: Insured area was more than the cultivated area



(Source: Information provided by FI's and DDA's of concerned districts)

In the exit conference (November 2016), the Department stated that this discrepancy was due to obtaining more than one *Kisan Credit Card (KCC)* account by the farmers. However, “Area factor” formula mentioned in NAIS guidelines is applied in calculating claims in such areas.

The reply is not acceptable as there was no “Area factor” formula mentioned in NAIS guidelines. Moreover, it was the responsibility of the Government to direct FIs for carrying out adequate verification of land holdings of farmers to ensure issue of single KCC to a farmer.

3.2.2.13 Adoption of defined area/insurable units

NAIS guidelines stipulated that the scheme would operate on the basis of unit area approach i.e. defined area for each notified crop for widespread calamities. The unit area of insurance might be a *Gram Panchayat, Mandal, Hobli, Phirka, Talluka* etc. to be decided by the State. However, each participating State would be required to reach the level of *Gram Panchayat* as the unit in a maximum period of three years. This would facilitate the assessment of crop loss accurately.

Audit scrutiny revealed in respect of crops viz. groundnut, cotton, *til* (sesamum), *alsi, jawar*, etc. that *tehsils* were continued as units of insurance. As a result crop losses were not determined accurately and compensation to farmers was not based on assessment as envisaged under the scheme.

In the exit conference (November 2016), the Department stated that *Patwari Halka* would be the insurance unit in place of tehsil wherever CCE data at *Patwari Halka* was available.

3.2.2.14 Deficiencies in monitoring

As per para 6 of the operational modalities (OM) of NAIS, State Government shall set up District Level Monitoring Committee (DLMC) headed by the District Magistrate. The members will be District Agriculture Officer, DCCB, District Lead Bank representative and AIC. The Committee will monitor implementation of scheme by providing fortnightly crop condition reports and periodical report on seasonal weather conditions, loans disbursed, extent of area cultivated etc. The DLMC shall also monitor conduct of CCEs in the district.

Audit scrutiny of records of 16 selected districts offices revealed that GoMP had issued an order to form DLMC at district levels in October 2010. However, DLMC was not formed in any of the selected districts. The lack of monitoring at district level resulted in the shortcomings in implementation of schemes, such as yield data not sent to AIC, significant area left out to be covered under the scheme, notified area exceeded the total sowing area, violation of SoF by FIs and inadequate publicity of the scheme.

In the exit conference (November 2016), the Department stated that DLMC meetings were conducted at most of the districts.

The reply was not acceptable, as DDAs of test checked districts had informed the audit that DLMC were not formed.

Tehsils were continued as units of insurance in respect of crops viz. groundnut, cotton, *til, alsi* and *jawar*.

Weak coordination among the Departments involved and lack of monitoring of the scheme contributed to irregularities like yield data not sent, notified area exceeded the total crop area, violation of SoF and claim settlement.

3.2.3 Conclusions

- The coverage of farmers under NAIS during *Rabi* 2010-11 to *Kharif* 2015 ranged between 14.58 *per cent* and 33.80 *per cent* of the total number of 88.72 lakh farmers in the State. The increase of coverage was only due to compulsory insurance of loanee farmers, as only 2,841 non-loanee farmers were covered under the scheme. Thus, less coverage of farmers (loanee and non-loanee) adversely affected the objectives of NAIS to help stabilise farm income, particular in disaster years.
- State Government failed to timely notify crop-wise area to be covered under the scheme. The delays in notification ranged up to 244 days. Farmers of 120 *Patwari Halkas* were deprived of the benefits under the scheme due to delay in issuing notifications for these areas after cut off dates for receipt of declaration by insurance agency.
- As a result of failure of Superintendent Land Records and Deputy Directors of Agriculture in providing the results of crop cutting experiments, AIC could not calculate the insurance claim of farmers in 6,702 *Patwari Halkas*.
- Actuarial regime was not implemented after five years of implementation of NAIS as envisaged in the scheme guidelines, which resulted in extra financial burden of ₹ 692.92 crore to the State Government during *Rabi* 2010-11 to *Kharif* 2015.
- There were delays in disbursement of insurance claims to farmers ranging from one month to 31 months during *Rabi* 2010-11 to *Kharif* 2015, depriving the farmers in getting timely benefits of insurance claim.

3.2.4 Recommendations

- The Government should take effective steps for timely issuance of notification of crops and area for crop insurance to provide sufficient time to non-loanee farmers to avail the benefits of insurance coverage under the scheme.
- The Government should ensure to provide results of Crop Cutting Experiments within stipulated time to insurance agency for timely calculation of insurance claims of farmers.
- The Government should ensure adequate publicity of the scheme to optimise the coverage of farmers.
- The Government should ensure timely disbursement of insurance claims in order to avoid hardship to the farmers.
- The Government should consider the coverage of major crops viz *urad*, *moong* and lentil.
- The Government should ensure holding of single KCC account for the individual farmer using unique identification instruments and coordination between Revenue Department and Financial institutions to avoid insurance of unsown area.
- The Government should strengthen monitoring mechanism to avoid lapses in coverage and settlement of claims.

3.3 Compliance Audit Paragraphs

Compliance audit of transactions of the Government Departments, their field formulation as well as that of the autonomous bodies brought out instances of lapses in management of resources and failures in the observance of the norms of propriety and economy. These have been presented in the succeeding paragraphs.

CO-OPERATION DEPARTMENT

3.3.1 Extra cost due to acceptance of higher rate of tenders for transportation

Acceptance of much higher rates of transportation as compared to previous year led to extra cost amounting to ₹ 1.30 crore in MARKFED.

According to para 9 (i) section II of Madhya Pradesh Financial Code, Vol-I, every Government Servant is expected to exercise the same vigilance in respect of expenditure incurred from public money as a person of ordinary prudence would exercise in respect of expenditure of his own money. Further, as per guidelines issued by the Central Vigilance Commission, Government of India, it is very important to establish the reasonableness of price on the basis of estimated rates, prevailing market rates, last purchase price, economic indices of the raw material/labour, other inputs costs and intrinsic value etc., before award of the work.

The Managing Director, MARKFED, Bhopal directed (January 2014) that the opening of tenders and acceptance would be done at Collector office by the District Level Committee (DLC)³⁹ constituted and headed by the Collector. After opening of tenders, comparative statement should be prepared by the committee and during recommendation of approved rates, the committee should also take cognizance of the rates of other Government institutions, viz. Civil Supplies Corporation, Food Corporation of India (FCI) etc. so that the comparative rates may be determined. The approval on transport rates may be obtained from the Collector after sending comparative statement along with recommendation.

Audit scrutiny of records (March 2016) revealed that the Managing Director MARKFED, Bhopal invited (January 2014) tenders for transportation of wheat, gunny bags etc. for the year 2014-15. For Betul district, the lowest rates quote for the year 2014-15 were at much higher in comparison to previous year 2013-14 (47 per cent to 128 per cent). However, the MARKFED did not provide rates of other Government institutions like FCI and approved rates by MARKFED for same district of previous year as well as prevailing rates of nearby districts of MARKFED for same year to DLC, though there was decreasing trend in transportation rates of FCI in Betul district. Due to acceptance of tenders at much higher rates as compared to previous year, MARKFED incurred extra cost of ₹ 1.30 crore on transportation during 2014-15.

³⁹ DLC consisted of District Collector, Zonal Manager, MARKFED, Deputy Director Agriculture, Deputy Assistant Commissioner, Manager District cooperative Society and officers of Treasury and District Marketing Offices of concerned districts.

The Managing Director stated (December 2016) that as per the approved rates by DLC rates for transportation had been finalised. On taking cognizance of rates from Food Corporation and Civil Supplies Corporation, it was intimated that rates for 2013-14 to 2015-16 was not finalised/approved by them therefore, DLC finalised the rates after negotiations. Since DLC had approved the rates for 2014-15, therefore MARKFED did not invite tenders.

The reply is not acceptable as MARKFED did not provide the rates of other Government institutions and nearby districts of MARKFED for enabling DLC to finalise the reasonable rates. Further, MARKFED did not provide the evidence regarding taking cognizance of prevailing market rates of other Government Institutions during tendering process. Moreover, second call for tenders were not considered even after receipt of abnormally higher rates.

The matter was referred to the Government (August 2016); their reply has not been received (January 2017).

FOREST DEPARTMENT

3.3.2 Short realisation of Net Present Value

Application of provisional/incorrect rates of Net Present Value has resulted into an amount of ₹ 5.89 crore being outstanding for recovery from the user agencies for use of diverted forest land.

Ministry of Environment and Forests, Government of India issued (September 2003) guidelines to all States/Union Territories for collection of Net Present Value (NPV) of the forest under Forest (Conservation) Act 1980. The amount of NPV collected from the user agency is deposited in Compensatory Afforestation Management and Planning Authority (CAMPA) fund and is utilised for getting back the forest cover in long run which is lost by such diversion. This amount is used in natural regeneration, security, infrastructure development, wild life protection and management, etc. These guidelines were issued in compliance of the orders (30.10.2002) of Hon'ble Supreme Court that the NPV of forest area diverted for non-forestry use should be collected from the user agency.

Till the finalisation of rates for collection of NPV, Forest Department, Government of Madhya Pradesh, (GoMP) decided (December 2003) to collect provisional NPV from user government departments/undertakings at the rate of ₹ 5.80 lakh per hectare. However, the user Government Departments had to submit an undertaking that they would pay NPV in accordance with the rates determined by the State Government.

GoMP re-fixed (September 2008) rates for collection of NPV according to the eco-value class of the forest and its canopy density, which varied from ₹ 4.38 lakh to ₹ 10.43 lakh per hectare of forest land. In compliance of this order, the Principal Chief Conservator of Forest issued instructions (January 2009) for review of all sanctioned cases of forest area diverted for non-forestry use so that the balance NPV could be realised in view of re-fixed NPV rates. Further, as per the GoMP order, the rates of NPV was 50% of the prescribed rate of NPV for underground excavation.

Audit scrutiny of Divisional Forest Office (General) Vidisha (March 2015) revealed that 75.597 hectare of forest land was diverted (October 2013) to

Water Resources Divisions for construction of tank. The NPV of diverted forest land was worked out to be ₹ 5.70 crore in accordance with the eco-value and density of forest land. The Department could obtain only provisional NPV of ₹ 1.15 crore from the user agency, as detailed in **Appendix 3.20**. The additional claims for ₹ 4.55 crore was made (October 2008 to November 2009) by the Department to user agency. However, the forest land was diverted to the user agency in October 2013 without receiving outstanding NPV. The outstanding amount could not be recovered as of September 2016. Thus, the diversion of forest land to non-forestry use without receiving the entire NPV resulted in short realisation of NPV amounting to ₹ 4.55 crore.

Audit scrutiny of the Divisional Forest Officer (General), Annuppur revealed (March 2016) that M/s South Eastern Coal Fields Limited, Bilaspur had been allowed to use 120.00 hectare forest land for underground mines, Haldiwadi (October 2006). An aggregate NPV of ₹ 3.52 crore at the provisional rates which were subject to revision, had been obtained (September 2008) from the user agency. After revision of rates on 12 September 2008, NPV was worked out to be ₹ 4.56 crore. However, the difference of rates amounting to ₹ 1.04 crore had not been recovered from the user agency as detailed in **Appendix 3.21**.

Further, scrutiny of two⁴⁰ Divisional Forest Offices (General) revealed (September 2016 and April 2016) that 19.93 hectare of Forest land was diverted to two user agencies⁴¹ for different purposes as detailed in **Appendix 3.22**. DFO (General), Alirajpur had applied the rate of tropical thorn forest in place of tropical dry deciduous forest and DFO (General), Betul (North) had applied the rate of forest with density 0.4 instead of 0.5 for calculation of NPV. This resulted in short realisation of NPV amounting to ₹ 30.19 lakh for forest land.

On this being pointed out the Divisional Forest Officers, Vidisha, Alirajpur and Annuppur replied that demands for the amount short realised had been raised and continuous efforts were being made for the recovery. Further, Divisional Forest Officer Betul (North) stated that during survey, the density of different places were taken and maximum density recorded was 0.4 in the said compartment.

The fact remains that the outstanding amount of ₹ 5.89 crore was yet to be recovered (December 2016). The reply of DFO (General), Betul (North) is not correct as density of forest as per compartment history is between 0.5 and 0.7.

The matter was referred to the Government (March 2016); their reply has not been received (January 2017).

⁴⁰ Alirajpur (total 8.06 ha land) and Betul (out of total forest land i.e 111.00 ha, 11.87 ha land belonged to forest density 0.5)

⁴¹ WRD and MP Power Generating Company Limited

3.3.3 Irrecoverable loss to the Government

Delay in implementation of revised rates of entry fees in the National Parks/Sanctuaries/Tiger Reserves of Madhya Pradesh led to irrecoverable loss of ₹ 62.68 lakh to the Government.

The Government of Madhya Pradesh, Forest Department vide Gazette Notification dated 16 October 2014 amended the rates of entry fees for visiting the National Parks and Sanctuaries in the State. Further, the circular issued (November 2005) by Forest Department, Government of Madhya Pradesh stipulates that the entry fees collected shall be deposited in the account of Drawing and Disbursing Officer of respective National Parks and Sanctuaries in nationalised banks and shall be used for the development of respective National Parks and Sanctuaries.

Audit scrutiny (March 2015 to April 2016) of four⁴² National Parks/Sanctuaries/Tiger Reserves of Madhya Pradesh revealed that the revised rate of entry fees were not implemented immediately after the issue of the Gazette Notification. The delay in collecting revised entry fees ranged between 34 to 110 days, however, three of the tiger reserves collected the entry fees without delay. This resulted in irrecoverable loss to the Government of entry fees amounting to ₹ 62.68 lakh as detailed in **Appendix 3.23**.

On this being pointed out (March 2015) respective National Parks/Sanctuaries/Tiger Reserves of Madhya Pradesh stated that revised entry fees were made effective as soon as it came to their notice.

The reply was not acceptable as the Department circulated the revised rates on 20 October 2014 and three of the Tiger Reserves at Seoni, Umariya and Mandla collected the entry fees at revised rates. Therefore, appropriate disciplinary action was required to be taken against negligent person/authorities.

The matter was referred to the Government (May 2016); their reply has not been received (January 2017).

NARMADA VALLEY DEVELOPMENT DEPARTMENT

3.3.4 Violation of procedure

In ND Division No. 32 Barwaha, clause for central excise exemption was not included in the Notice Inviting Tender for a tender on turnkey basis which led to undue benefit to the contractor amounting to ₹ 22.26 crore, which would have been otherwise extended to the Government, by way of reduced project cost.

The Department awarded (November 2012) the work of execution of Narmada-Kshipra-Simhastha Link Lift project to a contractor on turn-key basis at a cost of ₹ 396.38 crore i.e. 6.07 per cent below the Unified Schedule of Rates 2009. The work was scheduled to be completed within 364 days including rainy season i.e. November 2013. The work was completed (December 2014) and final bill amounting to ₹ 391.75 crore was paid

⁴² Madhav National Park, Shivpuri, Panna Tiger Reserve, Panna, Ralamandal Sanctuary, Indore, Van Vihar National Park, Bhopal.

(November 2015) to the contractor. The project was taken up for Simhastha 2016.

As per contract condition no. 112 of the tender document, the bid price quoted by the contractor shall be deemed to be inclusive of the sales tax, commercial tax, income tax, service tax, labour cess, duties royalties and other taxes whatsoever on all material that the contractor will have to purchase for performance of this contract. According to Clause 14.1 and condition no. 105 of NIT of the tender document, the contractor shall pay all duties and taxes whatsoever in consequence of his obligation under the contract and the contract price shall not be adjusted for such costs. Clause 14.6 stipulates that it is open to the contractor to make an application to the Income Tax Officer and *Vaniyakar* Officer concerned and obtain from him a certificate authorizing the payer to deduct tax at such lower rate or deduct no tax as may be appropriate for this contract. Such certificate will be valid for the period specified therein unless it is cancelled by the Income Tax/Commercial Tax Officers earlier.

Audit scrutiny of records of Executive Engineer (EE), ND Division No. 32 Barwaha (February 2016), revealed that quantity of steel consumed in work was 30,370 MT (cost of ₹ 128.38 crore) and 216 numbers of electromechanical parts (cost of ₹ 60.73 crore) were utilised in the work as per final bill submitted by the contractor. Further scrutiny of records revealed that NIT for the project declared it as a river linking project and not a drinking water project. Accordingly, there were no stipulation in NIT for grant of exemption from excise duty and clause 14.6 of NIT provided certain conditions of exemptions in respect of income tax and commercial tax. However, on the recommendations of EE (January 2013), exemption certificates under Central Excise notification No. 03/2004⁴³ were issued (February 2013) by the Collectors, Khargone and Indore. On the basis of these certificates, the contractor purchased material costing ₹ 189.11 crore⁴⁴ without paying excise duty.

Thus, the failure of Department to include pre-bid clause in the tender document on excise duty exemption for purchase of material led to undue benefit to the contractor amounting to ₹ 22.26 crore⁴⁵ on excise duty at the rate of 12.36 per cent.

On this being pointed out, the Government stated (July 2016) that the project was basically a drinking water supply scheme and it was taken up for Simhastha 2016 with the purpose of providing drinking water to *Ujjain Nagar Nigam* and *Dewas Nagar Palika*. The project being a drinking water scheme, the central excise exemption was given to the contractor and benefit of excise exemption for the project was within the domain knowledge of each bidder

⁴³ Department of Revenue, Ministry of Finance, Government of India, Central Board of Excise and Custom issued a notification No. 03/2004 dated 08-01-2004 to avail to exemption from excise/custom duty on goods procured for the purpose of water supply for agriculture and irrigation use.

⁴⁴ Quantity of steel consumed in work costing ₹ 128.38 crore + numbers of electromechanical parts used costing of ₹ 60.73 crore = ₹ 189.11 crore

⁴⁵ Value Added Tax (VAT) deducted at the rate of 4.76 per cent of ₹ 189.11 crore = ₹ 180.11 crore Excise Duty at the rate of 12.36 per cent of ₹ 180.11 crore = ₹ 22.26 crore

although it was not mentioned in the tender document. During discussion (November 2016) the Member Finance reiterated the above facts.

The reply was not acceptable as the project was advertised in NIT as a river linking project and no mention was made about it being a drinking water project. Further, in pre-bid meeting (September 2012) with participating bidders regarding payment of any variation of taxes and imposition of any other taxes subsequent to bidding process, the Department clarified that no change was acceptable and it would be as per prevailing tender clause.

Thus, the failure of the Department to include central excise exemption in clause 14.6 for purchase of material led to undue benefit to the contractor amounting to ₹ 22.26 crore⁴⁶ on excise duty at the rate of 12.36 *per cent* due to violation of procedure, which would have been otherwise available to the Government by way of reduced project cost.

3.3.5 Irregular grant of mobilisation advance and short recovery of penalty from the contractor

Irregular grant of mobilisation advance of ₹ 1.89 crore to the contractor in contravention to the provisions of the contract and short recovery of penalty of ₹ 6.78 crore.

The Department awarded (February 2012) the work of Nagod (Satna) branch canal (with distributory systems) from RD km 55.60 to RD km 83.00 under the Bargi Diversion Project on *turnkey* basis to a contractor (DSC Limited, New Delhi) at a cost of ₹ 126.00 crore (overall 33.124 *per cent* below Unified Schedule of Rates (USR) effective from 2009). The work order was issued (February 2012) to complete the work within 30 months including rainy season i.e., by August 2014. The contractor was paid ₹ 76.15 lakh (January 2014) for the value of work done. The Engineer-in-Charge granted time extension up to August 2015 under penal clause on the ground of (i) delay in land acquisition due to elections and rain, and (ii) retendering process requires excess time which would lead to extra expenditure. But, finally the work was terminated in August 2015 due to poor performance and slow progress by the contractor in the extended period.

According to clause 113.6 (A)(i) of contract, mobilisation advance not exceeding five *per cent* of the contract price shall be given to contractor during the first twelve months from the date of notice to proceed with the work. The first installment of mobilisation up to two *per cent* of contract price was to be given within seven days of the date of notice to proceed with the work, subsequent installments was to be payable on his furnishing proof of having incurred adequate expenditure towards mobilisation.

As per the clause 115.1 of the agreement, in the event of any shortfall in the financial progress of work by more than 10 *per cent* for the respective six month slab, penalty for delays was to be imposed on the contractor at the rate of 0.2 *per cent* per week of initial contract value, limiting the cumulative penalty to 10 *per cent* of the contract value. Total delay in excess of 25 *per cent* of initial contract period (reasons attributable to the contractor) may cause

⁴⁶ VAT deducted at the rate of 4.76 *per cent* of ₹ 189.11 crore = ₹ 180.11 crore
Excise Duty at the rate of 12.36 *per cent* of ₹ 180.11 crore = ₹ 22.26 crore

for termination of the contract and forfeiture of all security deposits and performance securities.

Audit scrutiny of records (December 2014) of EE, ND division No. 7, Satna, revealed that the contractor was paid first installment of mobilisation advance of ₹ 2.52 crore (two *per cent*) in March 2012 and the second instalment of ₹ 1.89 crore (1.5 *per cent*) in August 2012 against his claim (July 2012) of expenditure of ₹ 4.75 crore towards mobilisation. However, Audit noticed that the claim was neither supported by any document nor its veracity was verified by the divisional officer. Therefore, the second installment was released without any proof of expenditure incurred which was in contravention to the provision of the contract. Moreover, the advance was sanctioned despite the Department being aware of the fact that the contractor did not commence the work/mobilise the resources. Thus, it resulted in irregular financial aid of ₹ 1.89 crore on account of second installment of mobilisation advance.

The value of work done up to the intended date of completion (August 2014) was ₹ 76.15 lakh, which was below one *per cent* of the contractual value. The Engineer-in-charge granted irregular time extension up to August 2015 to the contractor to complete the work despite knowing the fact that negligible amount of work was executed by the contractor. Further scrutiny revealed that the Department levied maximum penalty of 10 *per cent* of the initial contract value for delay after termination of contract in August 2015. The total recoverable amount against the contractor was worked out to ₹ 19.38 crore⁴⁷, including ₹ 4.11 crore mobilisation advance, ₹ 2.64 crore⁴⁸ interest on mobilisation advance and ₹ 12.60 crore penalty for delay. Accordingly, an amount of ₹ 12.60 crore⁴⁹ was forfeited (September 2015) against the total recoverable amount of ₹ 19.38 crore resulting in short recovery of ₹ 6.78 crore (₹ 19.38 crore - ₹ 12.60 crore).

The Government in its reply stated (December 2016) that the bank guarantee for ₹ 3.78 crore, ₹ 2.52 crore and ₹ 6.30 crore were encashed by the Department and remitted to treasury (September 2015) and the remaining outstanding amount shall be recovered as per Government procedure. Further, Government stated that the Executive Engineer (EE) had justified the expenditure incurred by the contractor on first mobilisation advance and recommended to Superintending Engineer (SE) for sanction of second mobilisation advance and took double the amount of bank guarantee to safeguard the Department from financial losses occurred due to non-

⁴⁷ Penalty ₹ 12.60 crore (10 *per cent* of ₹ 126.00 crore)
 Penalty due to non-insurance of work as calculated by the Department = ₹ 0.07 crore
 Mobilisation advance ₹ 4.11 crore (₹ 4.41 crore *minus* ₹ 0.30 crore)
 Interest on mobilisation advance as calculated by the Department = ₹ 2.64 crore
 Recovery for deficit in earth-work quantity as calculated by the Department = ₹ 0.02 crore

Deducted amount of additional security deposit = ₹ 0.06 crore
 Total recoverable ₹ 19.38 crore [₹ 12.60 crore + ₹ 0.07 crore + ₹ 4.11 crore + ₹ 2.64 crore + ₹ 0.02 crore - ₹ 0.06 crore]

⁴⁸ Interest on mobilisation advance as calculated by the Department.

⁴⁹ Bank Guarantee for performance security ₹ 6.30 crore
 Bank Guarantee for mobilisation advance ₹ 2.52 crore and ₹ 3.78 crore
 Total available with the Department ₹ 12.60 crore [₹ 6.30 crore + ₹ 2.52 crore + ₹ 3.78 crore]

repayment of mobilisation advance. Accordingly the second mobilisation advance was sanctioned by SE on the basis of utilisation certificate submitted by the contractor of previous advance with respect to work done. During discussion (November 2016), the Member Finance accepted the fact and stated that RRC has been issued for balance recovery from the contractor.

The reply is not acceptable as penalty was required to be assessed and imposed by the CE on the basis of six monthly review of the progress and therefore it should have been recovered from the intermediate payment of the contractor. Moreover granting second mobilisation advance despite the unsatisfactory progress of the work was also irregular.

Thus, the inaction of the Department to watch progress of work on six monthly basis and largesse extended to contractor in granting mobilisation advance resulted in short recovery ₹ 6.78 crore of penalty and interest on mobilisation advance and irregular grant of ₹ 1.89 crore mobilisation advance. Besides, the delay in termination of contract also resulted in deferment of intended benefit of irrigation in 17,550 hectares to farmers.

3.3.6 Excess payment of price escalation

Adoption of incorrect prices of POL resulted in excess payment of ₹ 7.89 crore to the contractors. However, after being pointed out by audit, an amount ₹ 7.82 crore has been recovered.

The Department awarded (March 2011) two works for execution of the Omkareshwar Right Bank Lift Canal Phase-I including distribution network up to 40 ha *chak*, Phase-I for 28073 ha command area (CCA) and execution of Omkareshwar Right Bank Lift Canal Phase-IV including distribution network up to 40 ha *chak*, Phase-II for 29,947 ha command area (CCA) to a contractor on turn-key⁵⁰ basis at the cost of ₹ 519.93 crore (22.05 per cent below Unified Schedule of Rates, (USR) 2009) and ₹ 349.30 crore (34.71 per cent below USR 2009). Work orders were issued (March 2011) to the contractor to complete the works within 36 months including rainy season. The works were in progress and the contractor was paid ₹ 530.31 crore including ₹ 60.65 crore on account of escalation vide 69th running bill in Phase-I and ₹ 264.88 crore including ₹ 32.05 crore on account of escalation vide 62nd running bill in Phase-IV respectively.

According to clause 113.2 of the agreements, if the construction period is more than 12 months the amount paid to the contractor for work shall be adjusted for increase or decrease in the rate of labour, material (other than Petrol, Oil and Lubricant (POL) cement and steel) cement, steel and POL quarterly in accordance with prescribed formula⁵¹.

⁵⁰ Through National Competitive bidding

⁵¹ $V_p = 0.85 * P_p * R * (P - P_o) / 100 * P_o$

V_p = Increase or decrease in the cost of works due to POL during the quarter under consideration

R = The value of work done in rupee during the quarter

P_o = The price of HSD oil at Barwaha on the date on which tenders were opened.

P = The average price of HSD oil at Barwaha during the quarter under consideration.

P_p = Percentage of POL component shall be 90 per cent

Audit scrutiny (February 2016) of records of Executive Engineer (EE), Omkareshwar Project (OSP) Canal Division, Dhamnod (Dhar) revealed that initially the division adopted the retail price of HSD at Barwaha as base price and average price for the calculation of price escalation of POL for the quarters July 2011 to December 2012. But for the period from January 2013 to September 2014 (07 quarters), the division calculated escalation on the basis of bulk price of HSD instead of prevailing retail price at Barwaha. Further, for the remaining period⁵² (October 2014 to June 2015) price escalation was again calculated on the retail price of HSD as base and average price at Barwaha.

The contractor was paid price escalation of ₹ 20.93 crore for agreement number 15/2010-11 and ₹ 11.55 crore for agreement number 16/2010-11 for POL component instead of ₹ 16 crore and ₹ 8.59 crore payable to them respectively. Thus, adoption of different process in calculation of price escalation for the POL component for seven quarters (i.e., January 2013 to September 2014) resulted in excess payment of ₹ 7.89 crore as detailed in **Appendix 3.24 and 3.25.**

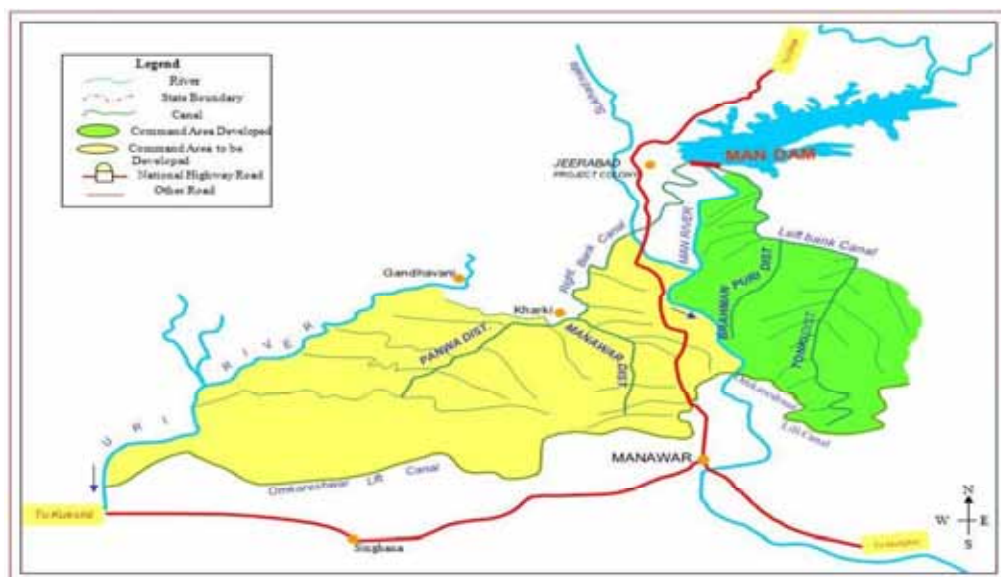
The Government in its reply stated (July 2016) that the price escalation on POL had now been revised and calculated based on retail rate of HSD for the entire period and accordingly recovery of ₹ 4.81 crore and ₹ 3.01 crore had been made from the running bills of contractor against ₹ 7.89 crore. During discussion (November 2016) the Member Finance reiterated the above facts.

3.3.7 Extra cost due to incorrect provision and execution of Cement Concrete lining

Incorrect provision and execution of excess thickness of cement concrete lining work against the irrigation specifications resulted in extra cost of ₹ 1.27 crore.

The Department awarded (December 2010) the work of construction of lining, inline structure and balance earth work of distributaries minors/sub-minors of left bank main canal of Man project under agreement number 04/ 2010-11 to a contractor at a cost of ₹ 7.87 crore. The work order was issued to complete the work within 24 months including rainy season, i.e., by December 2012. The final bill of ₹ 9.16 crore including price variation of ₹ 75.12 lakh was paid (March 2014) to the contractor.

⁵² In agreement no. 16/2010-11 and 15/2010-11 respectively.



According to specifications of irrigation project (December 1995), the thickness of lining should be fixed depending upon the nature of the canal requirement i.e., full supply depth and canal capacity. The thickness of canal lining should be 50-60 mm for the canal carrying discharge up to 5 cumecs and full supply depth up to 1 metre.

Audit scrutiny of records (October 2015) of Executive Engineer (EE), ND Division No. 16 Kukshi, District Dhar revealed that though the discharge of water in distributory and minor canal was between 0.05 cumecs to 0.51 cumecs and full supply depth (FSD) of water was between 0.2 m to 0.45 m, provision of cement concrete (CC) lining in thickness of 75 mm was made and executed instead of maximum 60 mm as required under the irrigation specification. The deviation from irrigation specifications, resulted in an extra cost of ₹ 1.27 crore due to incorrect provision and execution of excess thickness of CC lining as shown in the **table 3.3.1**.

Table 3.3.1: Extra cost due to incorrect provision and execution of CC lining

Sl. No.	Executed quantity of CC lining with 75 mm (cu m)	Required quantity of CC lining with 60 mm (cu m)	Difference in quantity (cu m)	Rate (in ₹)	Extra cost (in ₹)
1	2	3	4 = (2-3)	5	6 = (4*5)
1	16,479.159	13,183.327 (16,479.159×60/75)	3,295.832	3,850	1,26,88,953

On this being pointed out, the Government stated (July 2016) that the full supply depth of distributaries, minors and sub-minors of the canal is 0.2 m or more, hence the thickness of cement concrete lining was adopted 0.75 mm as per irrigation specifications. During discussion (November 2016), the Member Finance stated that the thickness of CC lining of canal was adopted as per nature of soil of the site and for better solution for seepage problem. He further added that 75 mm thickness of CC lining was provided in DPR as per table 5 of irrigation specifications, which was minimum thickness not the maximum thickness.

The reply is not tenable as irrigation specification (table 5) provided for a range of thickness of CC lining of 50-60 mm for capacity of canal between 0-5

cumecs with depth of water 0-1 m. The thickness can be increased only for deeper channels and when surface deterioration in freezing climate is expected. However, higher thickness for CC lining was adopted by the Department despite the fact that discharge of water was between 0.05 cumecs to 0.51 cumecs and full supply depth (FSD) of water was between 0.2 m to 0.45 m without any justification for such deviation. Thus, incorrect provision in the estimate against the irrigation specifications and execution of excess thickness in the canal lining resulted in extra cost of ₹ 1.27 crore.

PUBLIC WORKS DEPARTMENT

3.3.8 Unauthorised payment due to execution of excess thickness of Crusher Run Macadam

Execution of excess thickness of Crusher Run Macadam against the IRC-37 specification led to unauthorised payment of ₹ 98.25 lakh.

The Department awarded (March 2013) the work of upgradation of Ghosla-Ropkhedi road length 10.2 km to a contractor at a cost of ₹ 10.61 crore which was 8.69 *per cent* above the tender premium based on Schedule of Rate 2009. The work order was issued (March 2013) to complete the work within 12 months including rainy seasons i.e., by March 2014. The 16th running account bill of ₹ 10.78 crore was paid (September 2015) to the contractor.

According to the Indian Road Congress (IRC-37) specifications, the thickness of pavement as well as type of bituminous course is designed on the basis of projected number of commercial vehicles for the designed life using the figure of current commercial vehicles per day and its growth rate and california bearing ratio (CBR) value of sub-grade.

The design of bituminous road (total length 9.10 km) was prepared by the Department after detailed survey and technical sanction (TS) for the same was accorded (August 2012) by the Chief Engineer (CE), Ujjain as per provision of Indian Road Congress (IRC-37) specifications. Bituminous road was designed for a total crust thickness of 595 mm⁵³ in which Crusher Run Macadam (CRM) in 255 mm thickness was to be executed in the entire length of the bituminous road.

Audit scrutiny of records of the Executive Engineer (EE), Public Works Department (PWD) (B&R) Division, Ujjain (February 2016), measurement book (MB) revealed that total 390 mm⁵⁴ thickness of CRM layer was executed in place of 255 mm thickness which increased crust thickness to 730 mm and

⁵³ Crusher Run Macadam (CRM) – 255 mm (100 mm drain with full width), wet mix macadam 250 mm, dense graded bituminous macadam 60 mm and bituminous concrete 30 mm.

⁵⁴

Length of Road	Thickness of CRM executed
RD m 14 to RD m 7400 and RD m 7696 to RD m 9100 in 5 m width	90 mm
RD m 14 to RD m 7400 and RD m 7696 to RD m 9100 in 12.20 m width	150 mm
RD m 14 to RD m 7400 and RD m 7696 to RD m 9100 in 7 m width	150 mm
Total	390 mm

accordingly payment was made to the contractor. The execution of excess thickness of CRM than the approved TS, resulted in unauthorised payment of ₹ 98.25 lakh⁵⁵.

During discussion (November 2016), the Principal Secretary accepted the fact that the drainage layer of 150 mm of CRM should be restricted to 100 mm. Further, the Government in its reply stated (December 2016) that the thickness of CRM was increased from 250 mm to 300 mm by EE as per discussion with Superintending Engineer (SE) on the basis of quality of soil. It was further stated disciplinary action would be initiated against the concerned EE.

The reply of Department was, however, silent on execution of 390 mm thickness of CRM. Further, test result of soil was not provided by the Department to support the argument for execution 300 mm CRM in view of quality of soil.

3.3.9 Extra cost due to fixation of higher rate in Schedule of Rates

Injudicious fixation of higher rate for item “clearing and grubbing” in the Schedule of Rates led to extra cost of ₹ 4.76 crore.

Schedule of Rates (SOR) for Road and Bridge works prepared and published by the Engineer-in-Chief (E-in-C), Public Works Department (PWD) are applicable for construction and maintenance of roads executed by PWD in the State. The SOR is prepared keeping in view the specifications of Road and Bridge works and based on Standard Data Book of Ministry of Road Transport & Highways (MoRTH), Government of India issued by Indian Road Congress. Estimates for assessing cost of work are prepared on the basis of SOR. The SOR is revised from time to time by the Department due to increase or decrease in rates. Therefore, the accuracy of rates of items given in SOR has direct impact on expenditure on works where payment is made to contractor at the estimated rates. Rates adopted by the Department in the SOR, PWD enforced from 2014 for item no. 2.2 of clearing and grubbing was ₹ 48,602.

The Department awarded (July 2015) work of “Land development, levelling, rolling, pipe laying at Mela Area of Simhastha 2016 Ujjain” to a Contractor at the cost of ₹ 15.02 crore (29.88 per cent below the estimated cost based on Road SOR effective from November 2014). The work was scheduled to be completed in six months including rainy season. After inviting tender (April 2015) for above work, the Department issued (May 2015) an amendment regarding minimum requirement of plant and machineries⁵⁶ to be deployed by the contractor in order to complete the work within a revised stipulated time of eight months including rainy season. The 12th running account bill was paid (May 2016) for the value of work done amounting ₹ 18.24 crore to the contractor.

⁵⁵ Quantity to be executed $(8,790 * 12.20 * 0.10 + 8,790 * 7 * 0.155) = 20,260.95$ cu m
Quantity of measurement recorded and paid = 32,833.658 cu m
Excess quantity executed $(32,833.658 \text{ cu m} - 20,260.95 \text{ cu m}) = 12,572.71$ cu m
Excess payment $(₹ 12,572.71 \text{ cu m} * ₹ 719 \text{ per cu m} + 8.69 \text{ per cent above from the tender premium}) = ₹ 98,25,335$

⁵⁶ Tractor mounted grader or motor grader, Tipper, excavator and earth compactor

Audit scrutiny of records (June 2016) of EE Public Works Department (PWD) Simhastha revealed that the item of “clearing and grubbing” was included for 2000 hectare (ha) area of light jungle at the rate of ₹ 48,602 per ha. The item of clearing and grubbing in the light jungle area in 3,489.879 ha was executed by the contractor using mechanical means and the payment was made at the rate ₹ 48,602 per ha.

Further scrutiny revealed that specifications for Road and Bridge Works of MoRTH provides the rate of ₹ 29,161 per ha and ₹ 48,602 per ha for clearing and grubbing in the area of light jungle by mechanical means and manual means respectively. However, “clearing and grubbing” by mechanised means was not an SOR item in MP PWD. Although SOR does not specify the means (mechanically or manually) through which the work should be executed, but Chief Engineer (CE) in his technical report had clearly mentioned that MoRTH specifications should be implemented in the work. While preparing estimate, Department did not take the cognizance of this non-SOR item (“clearing and grubbing” by mechanised means) actually to be executed in the work. As a result, rates of mechanical cleaning and grubbing was injudiciously fixed at higher rate of ₹ 48,602 per ha, which was applicable for cleaning and grubbing by manual means. Thus, the incorrect provision of rate of clearing and grubbing in the estimate led to extra cost of ₹ 4.76 crore⁵⁷.

During discussion (November 2016) the Principal Secretary stated that rate of item was correctly determined on the basis of SOR item of clearing and grubbing, which did not define whether the work was to be executed through manual or mechanical means. He further, added that the price eventually quoted by the contractor did not flow from the estimate based on SOR, but took into consideration the prevailing market rate of the item. He also stated that the special condition of agreement also includes watering and other allied works which was executed by the contractor for which no extra payment was made to the contractor. The Government in its reply (December 2016) reiterated the above facts.

The reply is not acceptable, as the Department failed to include the mode (mechanical or manual) in “item no. 2.2 of clearing and grubbing” under SOR as included in specifications of MoRTH. Further, the estimate was to be prepared on the basis of rate of the clearing and grubbing of land through mechanical means, which was much lower as compared to clearing and grubbing of land through manual means. Thus, inclusion of higher benchmark rate of the item clearing and grubbing of land in the estimate resulted in extra cost of ₹ 4.76 crore to the Government.

⁵⁷ Quantity of clearing and grubbing 3,489.879 ha * ₹ 19,441 per ha (₹ 48,602 per ha – ₹ 29,161 per ha) – Tender premium (29.88 per cent) = ₹ 4,75,74,133

WATER RESOURCES DEPARTMENT

3.3.10 Financial Irregularities in execution of Khan River diversion project under Simhashta-2016

Audit noticed extra cost of ₹ 5.65 crore due to inclusion of higher rate for RCC pipe, royalty of ₹ 3.26 crore for hard rock not recovered, undue financial aid to contractor on account of payment of ₹ 40.82 lakh made to Railway authority and irregular payment of ₹ 48.85 lakh for temporary land acquisition.

Looking to the historical & pilgrimage importance of Kshipra river and Simashta Mela 2016, the public representatives had demanded to divert the Khan river, a tributary of Kshipra river, to avoid pollution of Kshipra by Khan river on its confluence at Ujjain. Khan Diversion project was sanctioned (September 2014) by the Government of Madhya Pradesh, Water Resources Department. The Water Resources Department awarded (November 2014) the work in Simashta-2016 Ujjain on turnkey basis to a contractor at a cost of ₹ 75 crore (12.407 per cent below estimated cost based on Unified Schedule of Rates effective from 2009). The work was scheduled to be completed in 12 months including rainy season, i.e. up to November 2015. The work was still in progress (June 2016) and the contractor was paid ₹ 72.76 crore up to 33rd RA bill in April 2016.

Audit scrutiny (June 2016) of records of Executive Engineer, WRD Ujjain, revealed the following deficiencies in the execution of the above work:

(i) Extra cost due to inclusion of higher rate of Reinforced Cement Concrete pipe

Audit scrutiny revealed that rate for the item Reinforced Cement Concrete (RCC) of 2,600 mm diameter pipes including transportation, laying and fixing had been incorporated in the estimate on the basis of lump sum rate ₹ 37,525 per running metre (RM) without enquiring the rates from pipe manufacturing firms as well as enquiry from local market. The payment for pipe was made at the rate of ₹ 30,494 per metre as per agreement.

Further, audit scrutiny revealed that the same contractor agreed (April 2016) to provide the 2,600 mm diameter RCC pipe at the rate of ₹ 27,445.41 per RM for another work⁵⁸ in Ujjain. Various firms/manufactures and suppliers were also available for the supply of RCC pipe of required specification at the rate ranging from ₹ 22,000 per RM to ₹ 24,000 per RM. Thus, inclusion of higher rate of Reinforced Cement Concrete pipe resulted in extra cost amounting ₹ 5.65 crore⁵⁹ to the project due to adoption of higher rate for supply of pipe.

During discussion the Additional Secretary stated (October 2016) that the facts would be verified and reply would be submitted in due course. Further, the Engineer-in-Chief (E-in-C) in his reply stated (November 2016) that in the estimate clubbed rate of RCC pipe was taken from the records of office of Executive Engineer (EE), Superintending Engineer (SE) and Chief Engineer (CE). SE, WRD Ujjain had made enquiry about the rate of RCC pipe from two

⁵⁸ Bhukimata to Datta Akhara Ghat Agreement no 21/2013-14 (Simhashta 2016)

⁵⁹ Per RM ₹ 3,049.49 (₹ 30,494.9 - ₹ 27,445.41) X 18,524 RM = ₹ 5,64,88,752.76

companies and accordingly lowest rate ₹ 27,500 per metre was adopted, which was only for procurement of pipe after which the clubbed rate was included in the G-schedule and the contract was awarded on the basis of lowest competitive bidding.

The reply is not tenable, as evidence for enquiry of rates from other pipe manufacturing firms as well as from local suppliers was not provided. Further, pipe of diameter 2600 mm was available in the market ranging from ₹ 22,000 per RM to ₹ 24,000 per RM.

(ii) Royalty for hard rock not recovered

As per clause 3 of special conditions of contract, the excavated hard rock shall be owned by the contractor and royalty charges at prevailing government rate will be recovered from contractor's running bills.

Audit scrutiny revealed that the provision of excavation of 18,017.63 cu m hard rock was made in the estimate. Contractor excavated 6,51,971 cu m hard rock, but royalty was not recovered from the contractor, this resulted in loss of revenue to the Government amounting to ₹ 3.26 crore⁶⁰.

During discussion the Additional Secretary stated (October 2016) that hard rock was used in refilling by the contractor, therefore recovery of royalty does not arise. Further the E-in-C in his reply reiterated (November 2016) the above facts and stated that no payment was made for excavated hard rock to the contractor.

The reply is not tenable, as royalty was recoverable from contractor as per special condition of the agreement. Further, in the turn-key contract the cost of material required for filling the trenches was already included in item no. 2 of the schedule.

(iii) Financial aid to contractor due to failure to recover payment made to Railway authority

General condition no 1.3.5 to bidder provides that wherever the pipe line system is crossing the railway line, the contractor has to prepare necessary proposal for seeking permission of Railway authority. The Engineer-in-Charge will process such proposals to the Railway authorities for taking up the work by them as a deposit work paying the amount demanded by the railway authorities which shall be recovered from the next running bill of the contractor. The contractor shall include such cost in the bid price.

Audit scrutiny revealed that the railway authority demanded the supervision, administrative and manpower charges amounting to ₹ 2.37 crore from EE WRD Ujjain in November 2015 against which payment of ₹ 40.82 lakh had been made (January 2016) by the division. But the payment made to the Railway authority was not deducted from the subsequent running bills of the contractor. This resulted in financial aid to the contractor amounting ₹ 40.82 lakh.

⁶⁰ 6,51,971 cu m * ₹ 50 per cu m royalty for hard rock = ₹ 3,25,98,550

During discussion (October 2016) the Department accepted the fact and assured for remedial action. Further, E-in-C in his reply stated (November 2016) that since the work was ongoing, the amount would be adjusted from the running bills.

(iv) Financial aid to contractor due to irregular payment of temporary land acquisition.

General condition no 1.3.2 instruction to bidder provides that cost of temporary land acquisition and crop compensation, if any shall be paid by the contractor. The cost of permanent land compensation, property and solatium charges shall be borne by the department.

Audit scrutiny revealed that the division deposited ₹ 2.08 crore to Land Acquisition Officer (LAO), which included ₹ 48.85 lakh for temporary land acquisition. This resulted in undue financial aid to the contractor on account of deposit of money for temporary land acquisition by the Department.

During discussion (October 2016), the Department accepted the fact and assured remedial action. Further, the E-in-C stated (November 2016) that ₹ 19.93 lakh was disbursed for temporary land acquisition out of which ₹ 8.85 lakh had been withheld from the 2nd running bill of the contractor. He also added that the payment for crop compensation was being sought from LAO which would not be payable by contractor and accordingly the recovery would be made from the next running bills.

The reply is not tenable as the payment for temporary land acquisition as well as crop compensation was required to be made by the contractor and not by the division.

3.3.11 Excavated hard rock not accounted for in Material at Site account

The value of the excavated hard rock was not included in the books (Material-at-Site) of the division which led to probable loss of ₹ 21.23 crore to the Government.

The Department awarded (October 2013) the work of remodelling of left bank canal of Mahi main dam to a contractor at the cost of ₹ 170.80 crore on turn-key basis which was 3.20 *per cent* above the estimated cost based on Unified Schedule of Rates (USR) February 2009. The work order was issued to complete the work within 36 months including rainy season. The work was still in progress and the 24th running account bill of ₹ 94.92 crore was paid (February 2016) to the contractor.

According to General Notes 1 D of USR, the excavated material (hard rock) shall be stacked properly and separate payment for stacking is not admissible. For accounting of the excavated hard rock (inclusive of 40 *per cent* voids), giving due consideration to unavoidable wastage, the quantity of utilisable rock to be recorded in the books shall be 1.3 times (inclusive of 16 *per cent* voids) of the quantity paid in excavation (solid rock cut). No further reduction wastage is permissible. Further, as per the contract, price of the total work is divided among different component of works as per the percentage specified in the Payment Schedule and payment is regulated accordingly.

Audit scrutiny of records of Executive Engineer, WR division-I, Jhabua, revealed (April 2016) that provision of excavation of 10,23,246 cu m hard rock was made in the estimates of the above work and as per the running bill, up to 95 *per cent* of the earthwork in canal has been completed. Therefore, 12,63,708.81 cu m⁶¹ hard rock valued at ₹ 21.23 crore⁶² was to be recorded in the books as Material-at-Site by the division during excavation of hard rock. Further, the Division was required to monitor issue and recovery of hard rock at specified rate as stipulated in clause 36 of the agreement. However, details regarding quantity of excavated hard rock was neither found in divisional records nor provided by the Department when enquired. Since 90 *per cent* of the structure already completed therefore issuance, use and recovery of hard rock beyond this stage is improbable. As a result, probable loss of ₹ 21.23 crore on this account cannot be ruled out and therefore requires investigation by the Government.

On this being pointed out, the EE stated (April 2016) that as the work was running the excavated rock was being used by the contractor, the balance hard rock would be stacked along the canal by the contractor and would be intimated to the mining Department. Further, the EE stated that the quantity of excavated hard rock would be finalised after completion of work and the cost of hard rock would be recovered.

The reply is not acceptable, since structure up to 99 *per cent*, aqueducts 69 *per cent* to 99 *per cent* and lining work 95 *per cent* have been completed and it is reasonable to expect that excavated hard rock should have been accounted as available in the material at site for the division/contract and value should have been adjusted in the running bill.

During discussion the Department accepted (October 2016) the fact that the hard rock should be taken in the Material-at-Site.

3.3.12 Inadequate estimation and poor planning led to infructuous expenditure

Due to inadequate estimation and poor planning, the seepage problem could not be resolved even after constructing RCC duct with less water way area and diversion channel. This led to infructuous expenditure of ₹ 3.00 crore.

According to para 2.028 of Works Department Manual, an officer according the technical sanction to an estimate is responsible for soundness of design and for incorporating all the items required for inclusion in the estimate with reference to the drawing.

As per the survey report of Geological Survey of India (GSI) (May 1998), a heavy seepage and failure of bank/slope was occurring between Ch 760 to Ch 782 of Sanjay Sarowar Bhingarh Right Bank Main canal under Tilwara left bank canal (TLBC), division-Keolari (Seoni). Therefore, the GSI

⁶¹ Quantity of excavated Hard rock on pro-rata basis, i.e. percentage specified of earthwork in Payment Schedule, to be mentioned in Material-at-Site book = Estimated excavated quantity 10,23,246 cu m * 95 *per cent* * 1.3 = 12,63,708.81 cu m

⁶² Total cost = Total quantity 12,63,708.81 cu m * ₹ 168 (Issue rate ₹110 + royalties charges ₹ 50) = ₹ 21,23,03,080.08

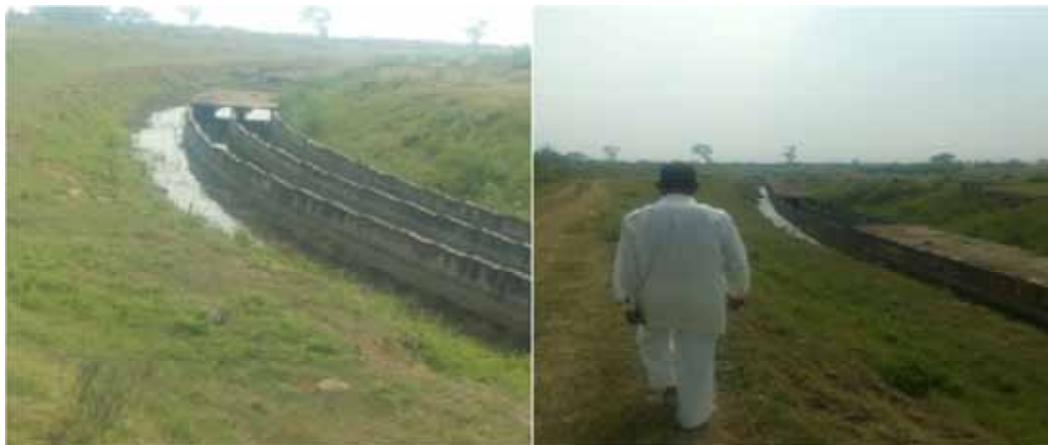
recommended the removal of red bole under the entire canal bed, preparation of the grade level of the canal with suitable graded material with rolling and compaction followed by lined section of the canal and bench the slope of banks for stability.

Audit scrutiny revealed (September 2015) that the Department, ignoring the recommendations of GSI, prepared an estimate (October 2005) for construction of two barrel Reinforced Cement Concrete (RCC) duct of 3 X 3 metre, having full supply level (FSL) 1.5 metre. The work was awarded (May 2006) to a contractor at an estimated cost of ₹ 3.42 crore (35.2 per cent above on USR 2003) for completing the work within three months i.e., by August 2006. The contractor failed to complete the work even after the grant of three time extensions up to June 2008 and only 70 per cent work was completed up to June 2008. The division paid 12th running account bill (May 2008) for ₹ 2.39 crore and prepared 13th final bill for 'NIL' payment for incomplete work in the month of December 2014.

Further, the division again prepared an estimate (June 2011) of ₹ 45.56 lakh and submitted a note to Chief Engineer (CE) for construction of diversion channel⁶³ along the duct chainage. As per technical justification, the canal was initially constructed with design for water way of 16.30 sq m in L-section, with supplied depth of 2.3 metre to 2.5 metre but due to construction of the RCC duct having 9.30 sq m water way and 1.5 metre FSL, the water way of main canal was reduced approximately 20 to 25 cusecs of water as capacity of full supply of water in RCC duct (at chainage 760) was only 1.5 metre. Since the water was supplied with the depth of 2.3 metre to 2.5 metre. Therefore, an afflux of water about two to three feet was developed prior to RCC duct due to which water was spreading in that area and could cause damage to the canal embankment/system.

Audit scrutiny of records of Executive Engineer (EE), TLBC Division Keolari, Seoni revealed that initially technical sanction for construction of diversion channel was accorded by CE for ₹ 45.56 lakh and Superintending Engineer was directed to start execution of new work after final disposal of initial work as per rules. CE further revised (October 2013) the sanction to ₹ 61 lakh as per orders of Principal Secretary, WRD and gave the work of diversion channel for execution to E&M division, Balaghat. Further audit scrutiny revealed that the division constructed a diversion channel to get rid of the afflux of water (about two to three feet) developed prior to RCC duct through which water was supplied with 2.3 metre to 2.5 metre instead of 1.5 metre capacity of RCC duct.

⁶³ Which included excavation in hard moorum, disintegrated, soft rock and hard rock, and transportation (disposal) of excavated material.



Spillage of water between Chainage 760 and Chainage 782 during Joint Physical Verification

Thus, the expenditure of ₹ 3.00 crore⁶⁴ incurred for construction of RCC duct resulted in carriage of less water on account of reduced water way. Further, construction of faulty RCC duct and diversion channel could not address seepage problem.

On this being pointed out, the CE stated (May 2016) that the duct was constructed as per discharge design and the bed width was reduced for intense flow of water and to avoid landslides. Since the contractor left the work incomplete and the flow of water was not proper, hence the work of diversion channel was executed by E/M division, Balaghat and now the discharge of water is uniform. Further, during discussion (October 2016) the Additional Secretary offered no specific comments however, it was assured to provide the necessary documents related to rectification of seepage.

On request of the Department, a joint physical verification (December 2016) of the site was done and it was noticed that the seepage and the failure of bank/slope was still persistent. Thus, the Department could not address the problem of seepage and failure of bank/slope, even after incurring expenditure of ₹ 3.00 crore on construction of RCC duct and diversion channel.

3.3.13 Excess payment of lead for sand in cement concrete work

Incorrect provision of lead for sand from 100 km clubbed in the cement concrete item resulted in excess payment of ₹ 1.58 crore to the contractor.

The Water Resources Department awarded (February 2013) the work of construction of Pancham Nagar Barrage to a contractor at the cost of ₹ 53.10 crore which was 4.05 per cent above the estimated cost of ₹ 51.03 crore based on Unified Schedule of Rates (USR) effective from February 2009. The work was scheduled to be completed within 24 months including rainy seasons i.e. February 2015. The work was completed in December 2015 with time extension up to December 2015 but final payment was not released by the Department as final approval of Chief Engineer awaited for excess/extra

⁶⁴ ₹ 3.00 crore (₹ 239 lakh expenditure on RCC Duct + ₹ 61 lakh expenditure on diversion channel)

quantity of work. The 42nd running bill for value of work done of ₹ 53.62 crore was paid (May 2016) to the contractor.

According to general note of the schedule of the agreement, the contractor is bound to utilise stone, earth and any useful material obtained from excavation or as directed by Engineer-in-charge or by the Department. Utilisation of excavated material within construction area include re-handling, dressing, finishing/shaping with all leads and lifts without extra payment to the contractors.

As per clause 3.11 (A) of the tender forming part of the agreement, the quoted rates of the contractor were inclusive of the leads and lifts for any material. The contractor would bring approved quality of materials and for that different quarries were indicated in Annexure “C” showing locations of the quarry on map. It further stipulated that details shown in Annexure “C” were only as guide to the contractor and the contractors before tendering should satisfy himself regarding quality and quantities available of mineral and the contractor should provide for any variation in lead, lifts and place etc. in his tendered rate.

Audit scrutiny of records (May 2015 and 2016) of Executive Engineer, Pancham Nagar Project Survey Division, Hatta, revealed that in clubbing statement of above work lead of sand from 100 km was included in the cement concrete item at the rate of ₹ 507.78 per cu m. Further, it was noticed that 65,068.563 cu m of excavated hard rock was issued to the contractor, which was used by the contractor for manufacturing sand in his own manufacturing plant near the work site and utilised for cement concrete



Sand crusher at site

work. Therefore payment of ₹ 1.58 crore⁶⁵ on procurement of sand (classified as lead of sand from 100 km) included in terms of the amounts in the clubbed rate of cement concrete item was unjustified.

On this being pointed out, the Engineer-in-Chief stated (November 2016) that the estimates and clubbed rate was not a part of agreement and there was no separate provision for payment of lead and payment was made as per the rate mentioned in the agreement. During manufacturing of sand, contractor incurred excess expenditure in comparison to the amount of lead. During discussion (October 2016), the Additional Secretary stated that lead chart was appended in the tender document only for general guidance and contractor had liberty to collect the material as per his convenience. During execution, hard rock was obtained and permission for manufacturing of sand at the site was

⁶⁵ ₹ 1,58,48,890 (Quantity of sand utilised in work 29,997.233 cu m * ₹ 507.78 per cu m rate of lead for sand + tender premium of 4.05 per cent above)

also given to the contractor and Department deducted issue rates and royalty charges. The Department has not paid any amount on account of lead to the contractor.

The reply is not acceptable as Division paid ₹ 1.58 crore to the contractor on the leads for transportation of sand from quarry, despite it being aware of the fact that the contractor was not bringing sand from the quarry and the sand manufactured near work site from excavated hard rock was being utilised in CC works. Since estimate and USR are eventual driver of the cost, any deviation/over estimation leads to extra cost in the work. The reply also indicated that the officials responsible for scrutiny of bill and approval of payments were either not familiar with the contract terms or were deliberately negligent. This matter needs further investigation by the Department.

3.3.14 Extra cost due to preparation of incorrect clubbed rate

Adoption of incorrect clubbed rate of earthwork instead of adoption of complete item for earthwork resulted in extra cost of ₹ 1.31 crore.

The Department awarded (November 2011 and September 2013) the works of construction of main canal, distributaries and minors including earthwork, structures and lining work of main canal of Indla Tank Project Manawar and construction of earthwork and lining of Right Bank Main Canal (RBMC), sub- minor, structures, etc. of Kachhal Tank Project Shajapur to contractors at the cost of ₹ 10.89 crore and ₹ 11.53 crore on percentage rate tender⁶⁶ to complete the works within 18 months and 15 months including rainy season respectively. The work orders were issued in May 2013 and August 2014 respectively. The canal work of Indla Tank project was completed in June 2014 (with time extension up to June 2014) and 28th final bill of ₹ 10.59 crore was paid (December 2015) to the contractor. The canal work of Kachhal Tank Project was completed in May 2015 (with time extension up to May 2015) and 24th final bill of ₹ 11.86 crore was paid (August 2015) to the contractor.

According to the general note 9 (b) of the chapter 4 of Unified schedule of Rate (USR) of WRD (February 2009), in canal excavation the earth excavated from surplus reaches should be utilised in adjoining deficit reaches so that the land acquisition for disposal of surplus earth and borrow areas in deficit reaches is reduced to a minimum. For this purpose on the basis of starting levels a shifting statement should be prepared which will form the basis for shifting of earth and computation of net payable quantity of earthwork and lead charges.

Further, the clubbed rate for excavation for earth work for bund, Cut off Trench (COT), canal and all other item by head load may be carried out up to a limit of estimated unit rates as contained in USR item no. 415 A (ii) and (iii) (₹ 43 per cu m and ₹ 54 per cu m respectively) as per amendment (January 2010) for bund and COT filling respectively.

⁶⁶ In case of Indla Tank Project Manawar at 2.08 per cent below the estimated cost of ₹ 11.12 crore and in case of Kachhal Tank Project Shajapur 17.71 per cent above the estimated cost of ₹ 9.79 crore respectively.

Audit scrutiny of records (February 2016⁶⁷ and April 2016⁶⁸) revealed that as per cost estimation of these works, the clubbed rate of earthwork was prepared by the division with provision of 0.5 km and 2 km lead as contained in USR item no. 2904 (5) (at ₹ 62.64 per cu m and ₹ 74.52 per cu m respectively). In the case of Manawar, item no. 415 (c) with free lead up to 50 m was included at the rate of ₹ 31 per cu m, additional lead up to 500 m was included at the rate of ₹ 62.64 per cu m as per item no 2902(5) and clubbed rate was worked out to ₹ 90.44 based on the quantitative calculations. Similarly, in the case of Shajapur, the item of excavation 401 (b) was taken for excavation of hard soil and lead of ₹ 74.52 per cu m was taken from item no. 2904 (5) (2) of chapter 29 transportation of material to work out clubbed rate of ₹ 89.18 on the basis of quantitative calculations. Thus, inclusion of additional rate for lead in clubbed rate of earthwork instead of adoption of complete item for earthwork 415 A (ii) and (iii) resulted in extra cost of ₹ 1.31 crore to the works as detailed in **Appendix 3.26 and 3.27**.

On this being pointed out, the Engineer-in-Chief (E-in-C) stated (August 2016) that the estimate gives the value of work on the date of enforcement of USR and was not up-to-date value of work. The estimate and clubbing statement are not part of the bid document and the bidders after considering the market rates, site conditions, ease of doing work, availability of material/labour/machinery and other factors prevailing at the area where work was to be executed, quotes the rate of item. Hence, the quoted rates were not based on the clubbed rate of item of estimates and the department did not pay separately any amount on the part of the lead. However, the E-in-C accepted that to avoid such incidents in future, the current USR enforced in department from April 2016 had incorporated the rates of all items in USR inclusive of all lead, lift transportation of materials. The Additional Secretary reiterated the same in the meeting held on October 2016.

The reply is not acceptable as the estimated rate based on the clubbing statement is the base of the quoted rate of the bidders. Further, item number 415 (c) of USR was deleted (January 2010) and replaced by item applicable for maintenance and repairs of bunds and canals (at ₹ 38 per cu m). Also, excavation for earthwork for bund, COT, canal and all other item was carried out within the limit of estimated unit rate of item 415 A (ii) and (iii) as per USR Chapter-4, hence, additional lead was not admissible. As the agreements were overall percentage rate, failure of the Department to take due diligence while preparing the clubbed rate resulted in extra cost of ₹ 1.31 crore.

⁶⁷ EE WRD Division Shajapur
⁶⁸ EE WRD Division Manawar

3.3.15 Extra cost due to incorrect adoption of rates for cohesive non-swelling soil

Adoption of higher rates for providing and placing of Cohesive non-swelling item resulted in extra cost of ₹ 1.09 crore.

The Department awarded (February 2013 to February 2015) 10 works⁶⁹ under six⁷⁰ divisions for construction and repair, remodeling and reconstruction of canal lining under different agreements at the cost of ₹ 94.13 crore. The contractors had executed (March 2016) 2,36,233.53 cu m Cohesive non-swelling soil (CNS) in canal works.

The Chief Engineer, Bureau of Design (BODHI), Water Resources Department, Madhya Pradesh (December 2012), amended the Unified schedule of rates⁷¹ (USR) and revised the rates for providing and placing of CNS soil including collection, spreading, watering and compaction, etc. from ₹ 94 per cu m to ₹ 52 per cu m.

Audit scrutiny of records (January 2016 to March 2016) revealed that the Department awarded 10 works in six divisions without incorporating the reduced rate in the estimates, which resulted in an extra cost of ₹ 1.09 crore to the work as detailed in **Appendix 3.28**.

The Government in its reply stated (August 2016) that the process of bidding was transparent and wide open to all participating agencies. The estimate and clubbing statement were not part of bid document. The bidders, after considering the market rates, site conditions, ease of doing work, availability of material/labour/machinery and other factors prevailing at the area where work was to be executed, quotes the rates of item. Thus, the quoted rates were not based on the rate of item of estimate. However, instructions to all field engineers for immediately incorporating the amended rates in the estimate have been issued to prevent occurrence of such incidents in future. During discussion (October 2016), the Additional Secretary reiterated the above facts.

The reply is not acceptable as the estimate and USR are important documents as they are the eventual driver of cost. Further, the agreements were based on overall percentage rate tender. Hence, any deviation in the clubbed rate would affect the rates quoted by the contractor. Also, the amendment in rates for CNS item were issued by the Department prior to issuance of Notice Inviting Tenders for all the works. However, the respective divisions did not comply with the amendment and prepared the estimates without incorporating the reduced rate for CNS. Thus, incorrect adoption of rates for CNS resulted in extra cost amounting to ₹ 1.09 crore on execution of the work.

⁶⁹ One in Deolond, three in Ganj Basoda, one in Katni, two in Narwar, two in Shajapur and one in Shivpuri Division

⁷⁰ Deolond, Ganj Basoda, Katni, Narwar, Shajapur and Shivpuri.

⁷¹ Vide amendment no. 09, (complete item No. 2503 (c) of USR)

3.3.16 Avoidable extra cost due to execution of tamping in canal

Incorrect provision and execution of tamping in canal work as a separate item resulted in extra cost of ₹ 77.36 lakh. However, after being pointed out by audit, an amount ₹ 12.56 lakh has been recovered.

According to clause 4.9.7.1.3 of chapter 4 volume-I of the Irrigation Specifications, tamping is to be provided in locations where compaction of the earth fill material by means of roller is impracticable or undesirable. The earth fill shall be specifically compacted in such locations.

The Department awarded (November 2011 to June 2015) 12 canal lining works for 11 schemes in seven⁷² divisions at a cost of ₹ 140.07 crore. The schedule of quantities, forming part of the agreements for the works of cement concrete lining of canal, *inter alia* envisaged two items, viz. (i) providing and placing approved Cohesive Non-Swelling (CNS) soils below lining in canal bed and side slopes including saturation in soil of canal up to 30 cm depth, breaking of clods, laying in layers of 15 cm thickness, cutting and finishing in required bed grade and side slopes including dressing, watering and compaction at optimum moisture content to dry density not below 90 per cent by light rollers, i.e. non-powered rollers or sheep foot earth-masters or hand rammers, or mechanical/vibratory compacters, and (ii) tamping in canal bed and sides including saturation up to 30 cm depth for preparation of earthen sub-grade before laying in-situ cement concrete lining.

Audit scrutiny of records (January 2016 to April 2016) revealed that in the 12 canal lining works, total 2,62,382.40 cu m CNS item was executed by the contractors and in the same reaches tamping in canal beds and side slopes was also provided and executed in total area of 6,61,756.61 sq m at a cost of ₹ 77.36 lakh. Since the item of providing and filling CNS included ramming⁷³, watering and compaction, separate provision and execution of tamping was unwarranted in the reaches where CNS was laid. Thus, unwarranted provision and execution of tamping resulted in avoidable extra cost of ₹ 77.36 lakh on the work as detailed in **Appendix 3.29**. However, after being pointed out by audit, an amount of ₹ 12.56 lakh has been recovered⁷⁴ on account of tamping from the contractor by WR division, Damoh.

The Engineer-in-Chief in his reply stated (September 2016) that as per clause 25.3 of Irrigation Specification, a CNS material of required thickness, depending on the swelling pressure of expansive soil was to be sandwiched between the soil and the rigid lining material in order to counteract the swelling pressure and prevent deformation of the rigid lining material. In order to ensure proper density, provision of watering and compaction was made in the item of CNS. Further, as per Irrigation Specification, the provision of tamping for preparation of earthen sub-grade before laying CC lining was a must even though compaction has been done while laying CNS.

⁷² Sanjay Sagar Project division, Ganjbasoda, Sindh Project Right Bank Canal Division, Narwar, and WRD divisions Damoh, Dewas, Katni Manawar and Rajgarh.


⁷³ A form of heavy tamping or the like by means of blunt tool forcibly applied.

⁷⁴ In agreement number 25/2014-15 (₹ 5,09,433) and in agreement number 20/2014-15 (₹ 7,46,117).

During discussion (October 2016), the Department stated that execution of item of tamping was done only in the filling reaches of canals. Department further assured to verify the matter.

The reply is not acceptable as the compaction of the earth fill material was included in 'providing and placing approved CNS soils below lining in canal bed and side slopes'. Thus, separate provision and execution of tamping was unwarranted.

Bhopal
The 10 March 2017


(DEEPAK KAPOOR)
Accountant General
(Economic and Revenue Sector Audit)
Madhya Pradesh

Countersigned

New Delhi
The 10 March 2017


(SHASHI KANT SHARMA)
Comptroller and Auditor General of India



Appendices

Appendix 1.1 (A)

Statement showing year-wise break-up of outstanding Inspection Reports (IRs) as of 30th June 2016

(Reference: Paragraph 1.5, Page 3)

(Amount in ₹ crore)

Sl. No.	Department	Year upto 2005-06			2006-07			2007-08			2008-09			2009-10			2010-11		
		IRs	Paras	Amount	IRs	Paras	Amount	IRs	Paras	Amount	IRs	Paras	Amount	IRs	Paras	Amount	IRs	Paras	Amount
1	Public Works	554	2,019	739.11	74	317	626.52	76	388	142.52	75	345	1,666.48	71	428	1,521.66	64	363	334.43
2	Water Resources	485	1,180	1,312.71	80	256	180.76	102	294	288.39	105	275	543.66	110	362	1,497.74	93	285	1,380.39
3	Narmada Valley Development	128	281	271.48	16	33	22.70	29	67	105.22	28	55	215.22	23	61	27.55	29	70	128.80
4	Panchayat & Rural Development (MPRRDA)	28	91	83.33	17	53	58.04	30	86	158.25	36	101	382.58	50	152	1,058.14	29	128	181.46
5	Forest	61	82	114.56	12	13	36.71	23	30	81.59	17	23	26.17	40	97	72.71	146	746	213.96
6	Farmer Welfare & Agriculture Development	168	281	83.41	32	95	40.17	67	155	40.02	30	82	59.50	80	208	58.14	84	284	132.63
7	Co-operative	106	229	80.77	20	51	32.00	11	32	266.17	4	15	6.44	13	26	0.00	0	0	0.00
8	Animal Husbandary	107	208	42.67	14	55	0.22	17	44	18.10	19	46	13.77	49	136	0.01	18	75	27.93
9	Fisheries	35	62	2.80	0	0	0.00	0	0	0.00	2	3	0.26	15	32	0.51	5	6	0.06
10	Rural Industries	55	126	83.26	10	49	55.90	15	45	18.25	8	30	33.15	13	31	9.05	9	29	44.99
11	Commerce, Industries & Employment	14	79	122.65	16	37	148.25	1	2	3.37	1	2	4.21	1	2	6.73	10	38	102.54
12	New and Renewable Energy	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
13	Tourism	1	1	1.71	1	3	2.17	0	0	0.00	0	0	0.00	0	0	0.00	1	9	9.77
14	Aviation	5	31	30.81	0	0	0.00	0	0	0.00	1	4	3.37	1	4	2.98	0	0	0.00
15	Horticulture and Food Processing	26	124	104.58	1	2	1.45	5	5	9.61	1	1	0.83	10	10	24.98	9	9	29.67
	Total	1,773	4,794	3,073.85	293	964	1,204.89	376	1,148	1,131.49	327	982	2,955.64	476	1,549	4,280.20	497	2,042	2,586.63

Appendix 1.1 (B)

Statement showing year-wise break-up of outstanding Inspection Reports (IRs) as of 30th June 2016

(Reference: Paragraph 1.5, Page 3)

(Amount in ₹ crore)

Sl. No.	Department	2011-12			2012-13			2013-14			2014-15			2015-16			Total		
		IRs	Paras	Amount	IRs	Paras	Amount	IRs	Paras	Amount	IRs	Paras	Amount	IRs	Paras	Amount	IRs	Paras	Amount
1	Public Works	5	45	97.40	81	513	1,183.70	67	471	497.25	56	444	401.06	75	529	691.66	1,198	5,862	7,901.79
2	Water Resources	25	99	210.05	76	452	2,028.10	80	364	1,717.88	71	735	587.39	70	499	831.96	1,297	4,801	10,579.03
3	Narmada Valley Development	29	162	495.48	12	55	334.59	38	102	906.01	45	144	1,123.87	34	127	374.27	411	1,157	4,005.19
4	Panchayat & Rural Development (MPRRDA)	3	7	502.03	15	65	123.32	27	146	1,125.21	42	265	616.88	30	273	5,613.73	307	1,367	9,902.97
5	Forest	87	548	42.53	97	627	662.85	72	380	163.50	84	697	471.17	70	499	438.70	709	3,742	2,324.45
6	Farmer Welfare & Agriculture Development	14	51	202.85	62	248	273.16	76	275	64.14	83	371	129.54	86	486	245.54	782	2,536	1,329.10
7	Co-operative	0	0	0	5	18	0	33	197	278.14	16	60	716.71	22	121	1,019.22	230	749	2,399.45
8	Animal Husbandary	1	5	97.72	25	92	59.93	31	159	218.46	42	215	76.20	48	311	65.31	371	1,346	620.32
9	Fisheries	13	31	1.41	23	72	6.85	18	59	2.66	12	50	6.31	16	78	9.89	139	393	30.75
10	Rural Industries	10	34	59.97	4	12	20.11	16	35	11.54	19	55	68.01	19	102	418.77	178	548	823.00
11	Commerce, Industries & Employment	23	34	95.13	12	23	70.23	10	27	54.28	12	37	25.55	18	56	523.42	118	337	1,156.36
12	New and Renewable Energy	0	0	0	0	0	0	1	2	24.72	0	0	0	1	3	1.60	2	5	26.32
13	Tourism	0	0	0	1	7	10.11	1	3	4.10	1	4	5.17	1	3	1.44	7	30	34.47
14	Aviation	1	1	0.63	0	0	0	1	1	0.98	0	0	0	2	8	20.69	11	49	59.46
15	Horticulture and Food Processing	10	40	23.89	29	159	108.84	20	37	33.05	7	18	26.98	16	84	55.91	134	489	419.79
Total		221	1,057	1,829.09	442	2,343	4,881.79	491	2,258	5,101.92	490	3,095	4,254.84	508	3,179	10,312.11	5,894	23,411	41,612.45

Appendix 2.1

(Reference: Paragraph 2.1.5, Page 11)

Statement showing the test checked NFSM districts under different crops

Sl. No.	Rice	Wheat	Pulse	Coarse cereals	Commercial crop
1	Damoh	Chhattarpur	Bhind	Dhar	Harda
2	Dindori	Guna	Chhattarpur	Dindori	Hoshangabad
3	Mandla	Khargone	Damoh	Khargone	Khargone
4	Panna	Panna	Dhar	Mandla	
5	Sidhi	Seoni	Dindori	Shajapur	
6		Sidhi	Guna		
7		Vidisha	Harda		
8			Hoshangabad		
9			Indore		
10			Mandla		
11			Panna		
12			Seoni		
13			Shajapur		
14			Sidhi		
15			Ujjain		
16			Vidisha		
17			Khargone		

Appendix 2.2

Statement showing production yield of Rice in the State and NFSM District

(Reference: Paragraph 2.1.6.1, Page 14)

(Area in '000 ha, Production in 000 MT and Yield in kg/ha)

State				Non-NFSM Districts			NFSM Districts			
Year	Area	Production	Yield	Area	Production	Yield	Districts	Area	Production	Yield
2011-12	1,703	2,280	1,339	1,006	1,511	1,502	Anuppur	100	103	1,030
							Damoh	53	58	1,094
							Dindori	79	80	1,013
							Katni	94	120	1,277
							Mandla	126	132	1,048
							Panna	61	62	1,016
							Rewa	116	143	1,233
							Sidhi	68	71	1,044
Total	1,703	2,280	1,339	1,006	1,511	1,502		697	769	1,103
2012-13	1,801	3,113	1,728	1,073	2,243	2,090	Anuppur	106	119	1,122
							Damoh	56	56	993
							Dindori	82	126	1,543
							Katni	101	123	1,226
							Mandla	128	86	672
							Panna	64	65	1,020
							Rewa	123	200	1,626
							Sidhi	68	95	1,398
Total	1,801	3,113	1,728	1,073	2,243	2,090		728	870	1,195
2013-14	1,930	5,361	2,778	1,186	3,479	2,933	Anuppur	107	237	2,222
							Damoh	61	97	1,585
							Dindori	83	159	1,920
							Katni	111	414	3,729
							Mandla	129	340	2,634
							Panna	56	100	1,765
							Rewa	124	355	2,870
							Sidhi	73	180	2,464
Total	1,930	5,361	2,778	1,186	3,479	2,933		744	1,882	2,530
2014-15	2,153	5,438	2,526	1,418	3,836	2,705	Anuppur	107	310	2,897
							Damoh	66	104	1,576
							Dindori	83	223	2,687
							Katni	99	216	2,182
							Mandla	132	200	1,515
							Panna	56	113	2,018
							Rewa	136	367	2,699
							Sidhi	56	69	1,232
Total	2,153	5,438	2,526	1,418	3,836	2,705		735	1,602	2,180

Appendix 2.3

Statement showing Production yield of Wheat in the State and NFSM District

(Reference: Paragraph 2.1.6.1, Page 15)

(Area in '000 hect, Production in '000 MT and Yield in kg/ha)

Year	State			Non-NFSM Districts			NFSM Districts			
	Area	Production	Yield	Area	Production	Yield	Districts	Area	Production	Yield
2011-12	5,261	14,544	2,764	2,927	9,012	3,077	Ashok Nagar	123	291	2,366
							Chhattarpur	164	412	2,512
							Guna	106	329	3,104
							Katni	81	199	2,457
							Khandwa	90	231	2,567
							Khargone	89	261	2,932
							Panna	71	144	2,028
							Raisen	222	663	2,986
							Rajgarh	137	329	2,401
							Rewa	152	297	1,954
							Sagar	196	351	1,791
							Satna	149	320	2,142
							Shivpuri	195	533	2,733
							Sidhi	57	88	1,544
							Seoni	121	243	2,008
Tikamgarh	138	371	2,688							
Vidisha	243	470	1,934							
Total	5,261	14,544	2,764	2,927	9,012	3,077		2334	5532	2,370
2012-13	5,613	16,518	2,943	3,112	9,734	3,128	Ashok Nagar	126	326	2,591
							Chhattarpur	176	436	2,474
							Guna	114	425	3,728
							Katni	92	260	2,826
							Khandwa	105	363	3,457
							Khargone	102	291	2,852
							Panna	82	156	1,902
							Raisen	233	789	3,390
							Rajgarh	165	463	2,802
							Rewa	157	384	2,446
							Sagar	214	450	2,106
							Satna	143	448	3,133
							Shivpuri	202	664	3,289
							Sidhi	57	133	2,316
							Seoni	132	374	2,833
Tikamgarh	147	376	2,564							
Vidisha	254	446	1,754							
Total	5,613	16,518	2,942	3,112	9,734	3,128		2501	6784	2,713
2013-14	5,976	17,478	2,925	3,425	10,439	3,048	Ashok Nagar	150	405	2,700
							Chhattarpur	182	404	2,220
							Guna	114	394	3,467
							Katni	102	224	2,204
							Khandwa	118	276	2,350
							Khargone	44	125	2,841
							Panna	70	189	2,700
							Raisen	229	802	3,502
							Rajgarh	174	495	2,853
							Rewa	195	435	2,229
							Sagar	234	498	2,129
							Satna	156	523	3,356
Shivpuri	156	700	4,499							

Year	State			Non-NFSM Districts			NFSM Districts			
	Area	Production	Yield	Area	Production	Yield	Districts	Area	Production	Yield
							Sidhi	71	168	2,376
							Seoni	139	409	2,947
							Tikamgarh	157	412	2,624
							Vidisha	260	580	2,229
Total	5,976	17,478	2,925	3,425	10,439	3,048		2,551	7,039	2,759
2014-15	6,002	18,480	3,079	3,424	11,077	3,235	Ashok Nagar	136	387	2,846
							Chhattarpur	122	274	2,246
							Guna	129	437	3,388
							Katni	88	198	2,250
							Khandwa	131	409	3,122
							Khargone	120	381	3,175
							Panna	56	140	2,500
							Raisen	279	917	3,287
							Rajgarh	157	509	3,242
							Rewa	210	683	3,252
							Sagar	212	434	2,047
							Satna	165	593	3,594
							Shivpuri	149	417	2,799
							Sidhi	72	185	2,569
							Seoni	150	362	2,413
Tikamgarh	117	302	2,581							
Vidisha	285	775	2,719							
Total	6,002	18,480	3,079	3,424	11,077	3,235		2,578	7,403	2,872

Appendix 2.4

Statement showing details of samples sent for quality check and status of their results therein during 2014-15 and 2015-16

(Reference: Paragraph 2.1.8.3, Page 21)

Sl. No.	District	Year	Target (Nos.)	No. of sample taken (Nos.)	Percentage of achievement of target	Result of sample			Sub-standard Percentage	No. of sample taken after sowing period	No. of result received after sowing period
						Standard	Sub-standard	Not received			
1	Harda	2014-15	115	112	97.39	88	19	5	16.96	34	103
		2015-16	65	62	95.38	59	2	1	3.23	0	54
2	Panna	2014-15	165	100	60.61	72	28	0	28.00	0	0
		2015-16	150	52	34.67	52	0	0	0.00	0	0
3	Khargone	2014-15	160	172	107.50	149	23	0	13.37	0	17
		2015-16	220	189	85.91	180	9	0	4.76	0	5
4	Vidisha	2014-15	155	150	96.77	150	0	0	0.00	0	0
		2015-16	130	119	91.54	119	0	0	0.00	0	0
5	Guna	2014-15	110	64	58.18	42	22	0	34.38	21	57
		2015-16	100	46	46.00	41	5	0	10.87	9	21
6	Damoh	2014-15	140	126	90.00	99	27	0	21.43	42	41
		2015-16	130	123	94.62	115	8	0	6.50	33	56
7	Sidhi	2014-15	65	79	121.54	78	1	0	1.27	49	0
		2015-16	35	21	60.00	21	0	0	0.00	16	10
8	Chhattarpur	2014-15	195	132	67.69	105	27	0	20.45	22	89
		2015-16	170	182	107.06	174	8	0	4.40	32	97
9	Hoshangabad	2014-15	170	134	78.82	117	17	0	12.69	56	72
		2015-16	160	133	83.13	122	11	0	8.27	6	59
10	Dhar	2014-15	190	205	107.89	164	41	0	20.00	70	138
		2015-16	240	180	75.41	164	16	0	8.84	38	165
11	Indore	2015-16	140	137	97.86	117	10	10	7.30	0	45
12	Shajapur	2014-15	86	86	100.00	28	58	0	67.44	0	0
		2015-16	130	118	90.77	100	18	0	15.25	0	0
13	Dindori	2015-16	60	26	43.33	26	0	0	0.00	37	52
14	Mandla	2014-15	90	52	57.78	46	6	0	11.54	30	34
		2015-16	90	81	90.00	78	3	0	3.70	35	16
15	Ujjain	2015-16	240	185	77.08	178	7	0	3.78	28	48
16	Seoni	2015-16	65	60	92.31	57	3	0	5.00	24	39
17	Bhind	2015-16	NA	--	--	--	--	--	--	0	0
Total			3,766	3,126		2,741	369	16		582	1,218

Appendix 2.5

Statement showing targets and achievements of Rice, Wheat and Pulse Demonstration Center in the state as a whole and selected districts during 2012-13 to 2015-16

(Reference: Paragraph 2.1.9, Page 22)

(Physical in number and Financial in ₹ in lakh)

Intervention	State				Selected districts					
	Targets		Achievement		Districts	Targets		Per cent	Achievement	
	Phy	Fin	Phy	Fin		Phy	Fin		Phy	Fin
Coarse Cereals	46,580	2,329	29,434	852.55	Khargone	2,200	110.00	86.36	1,900	67.77
					Dhar	5,400	270.00	98.15	5,300	117.78
					Shajapur	800	40.00	12.50	100	1.55
					Mandla	2,100	105.00	80.95	1,700	81.67
					Dindori	1,300	65.00	15.38	200	2.93
Total	46,580	2,329	29,434	852.55		11,800	590.00	77.97	9,200	271.70
Rice	17,948	1,346.10	16,308	941.74	Panna	1,870	140.25	84.49	1,580	49.52
					Damoh	2,800	210.00	85.71	2,400	150.86
					Sidhi	1,400	115.00	52.14	730	25.61
					Dindori	2,195	174.63	60.32	1,324	73.55
					Mandla	3,180	253.50	90.57	2,880	214.25
Total	17,948	1,346.10	16,308	941.74		11,445	893.38	77.89	8,914	513.79
Wheat	71,761	6,955.13	73,306	5,207.68	Harda	250	31.25	88.00	220	22.84
					Panna	3,100	317.50	93.55	2,900	234.43
					Vidisha	4,400	370.00	100.00	4,400	290.38
					Chhattarpur	3,950	344.00	100.00	3,950	314.28
					Guna	2,700	190.00	100.00	2,700	178.97
					Damoh	1,780	222.50	79.78	1,420	126.77
					Sidhi	3,350	346.83	104.63	3,505	264.88
					Indore	500	25.00	120.00	600	25.00
					Dhar	600	28.50	100.00	600	28.50
					Ujjain	600	30.00	100.00	600	17.35
					Mandla	1,450	176.24	100.00	1,450	176.24
					Dindori	2,550	137.50	70.59	1,800	98.93
Total	71761	6955.13	73306	5,207.68		30,330	2726.32	96.42	29,245	2211.44
Pulse	489393	31689.73	504112	28,237.87	Harda	9,000	632.50	95.06	8,555	485.91
					Panna	8,700	568.45	94.25	8,200	452.56
					Khargone	7,500	445.00	100.00	7,500	392.55
					Vidisha	11,700	837.50	105.13	12,300	717.23
					Chhattarpur	17,300	1115.00	91.27	15,790	906.44
					Guna	11,800	782.50	98.31	11,600	749.41
					Damoh	13,486	881.45	88.14	11,886	777.44
					Sidhi	11,209	770.42	112.23	12,580	707.31
					Hoshangabad	76,200	3237.16	101.09	77,028	3179.05
					Indore	8,100	542.50	97.53	7,900	513.90
					Dhar	9,200	596.30	98.91	9,100	561.17
					Shajapur	10,100	589.40	99.50	10,050	528.49
					Ujjain	11,700	757.50	98.29	11,500	223.67
					Mandla	10,849	682.97	98.75	10,713	649.82
					Dindori	7,090	472.32	95.49	6,770	319.08
				Seoni	12,700	830.00	99.59	12,648	776.12	
				Bhind	5,600	430.00	126.48	7,083	400.25	
Total	4,89,393	31,689.73	5,04,112	28,237.87		2,42,234	14,170.97	99.57	2,41,203	12,340.40
Grand Total	6,25,682	42,319.96	6,23,160	35,239.84		2,95,809	18,380.67	97.55	2,88,562	15,337.33

Appendix 2.6

Statement showing the number of demonstrations held and the number of demonstrations held on cropping system in the test checked districts

(Reference: Paragraph 2.1.9.2, Page 23)

Sl. No.	Name of District	Total demonstrations conducted during 2012 to 2016 (in hectare)	Number of demonstrations held on cropping system (in hectare)	Percentage
1	Khargone	9,400	NIL	0
2	Dhar	15,000	NIL	0
3	Shajapur	10,150	NIL	0
4	Mandla	16,743	-	-
5	Dindori	10,094	NIL	0
6	Panna	12,680	1050	8.28
7	Damoh	15,706	1655	10.53
8	Sidhi	16,815	1950	11.59
9	Harda	8,775	200	2.27
10	Vidisha	16,700	1700	10.17
11	Chhattarpur	19,740	-	-
12	Guna	14,300	NIL	0
13	Indore	8,500	NIL	0
14	Ujjain	12,100	-	-
15	Seoni	17,748	NIL	0
16	Hoshangabad	77,028	NIL	0
17	Bhind	7,083	NIL	0
Total		2,88,562	6,555	2.27

(Source: Information provided by the District offices)

Appendix 2.7

Statement of targets & achievements of Distribution of Micronutrient in Rice intervention in the state as a whole and selected District during 2012-13 to 2015-16

(Reference: Paragraphs 2.1.10.1 and 2.1.10.2 Page 26)

(Physical in number and Financial in ₹ in lakh)

State															
Micronutrient					PP chemical & Bio agents					Weedicides					
Target		Achievement			Target		Achievement			Target		Achievement			
Physical	Financial	Physical	Per cent	Financial	Physical	Financial	Physical	Per cent	Financial	Physical	Financial	Physical	Per cent	Financial	
73,500	367.50	73,709	100.28	297.69	73,544	367.72	63,618	86.50	294.41	26,250	131.25	12,500	47.62	46.99	
Selected Districts															
District	Micronutrient					PP chemical & Bio agents					Weedicides				
	Target		Achievement			Target		Achievement			Target		Achievement		
	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin
Panna	7,100	35.50	4,000	56.34	18.40	5,400	27.00	3,900	72.22	19.40	2,430	12.15	0	0	0
Damoh	7,900	39.50	4,112	52.05	23.19	12,300	61.50	11,117	90.38	54.92	2,700	13.50	2,700	100	5.51
Sidhi	4,000	20.00	950	23.75	1.99	4,000	20.00	1,118	27.95	2.486	3,500	17.50	0	0	0
Dindori	8,800	44.00	5,540	62.95	23.30	7,700	38.50	4,760	61.82	15.861	4,000	20.00	0	0	0
Mandla	12,050	60.25	11,689	97.00	58.35	12,700	63.500	12,970	102.13	65.21	6,100	30.50	6,100	100	30.5
Total	39,850	199.25	26,291	65.97	125.23	42,100	210.50	33,865	80.44	157.88	18,730	93.65	8,800	46.98	36.01

(Source: Progress report of the State and Selected Districts)

Appendix 2.8

Statement of targets & achievements of Distribution of Micronutrient in wheat intervention in the state as a whole and selected District during 2012-13 to 2014-15

(Reference: Paragraphs 2.1.10.1 and 2.1.10.2, Page 26)

(Physical in number and Financial in ₹ in lakh)

Micronutrient					Lime Gypsum					PP chemical & Bio agents					Weedicides					
Target		Achievement			Target		Achievement			Target		Achievement			Target		Achievement			
Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	
4,20,000	2,100.00	3,30,439	78.68	1,505.19	1,23,000	793.12	55,672	45.26	230.28	1,63,930	819.65	1,50,895	92.05	672.08	11,000	55.00	6,639	60.35	15.19	
Selected Districts																				
District	Micronutrient					Lime Gypsum					PP chemical & Bio agents					Weedicides				
	Target		Achievement			Target		Achievement			Target		Achievement			Target		Achievement		
	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin
Harda	11,900	59.50	5,600	47.06	28.09	4,000	20.00	1,000	25.00	7.01	6,500	32.50	3,250	50.00	23.15	0	0	0	0	0
Panna	13,100	65.50	5,971	45.58	28.75	2,210	14.08	0	0.00	0	4,450	22.25	3,500	78.65	16.98	500	1.35	0	0	0.082
Vidisha	34,624	173.12	43,994	127.06	216.28	7,740	48.05	5,600	72.35	34.53	20,992	104.96	28,644	136.45	143.22	880	4.4	500	56.82	2.5
Chhattarpur	44,100	220.50	40,236	91.24	200.49	6,550	41.00	3,100	47.33	15.50	12,230	61.15	11,600	94.85	57.47	700	3.70	570	81.43	2.6
Guna	17,408	87.04	18,442	105.94	55.29	2,810	18.08	1,200	42.70	6.00	7,820	39.10	8,712	111.41	33.31	620	3.10	350	56.45	0.859
Damoh	4,000	20.00	2,068	51.70	15.27	1,500	7.50	0	0.00	0.00	4,500	22.50	3,248	72.18	24.67	0	0	0	0.00	0
Sidhi	9,600	48.00	5,838	60.81	10.97	4,850	28.13	1,475	30.41	1.19	950	4.75	0	0.00	0.00	270	1.35	0	0.00	0.00
Indore	8,000	40.00	8,000	100.00	40.01	3,500	17.50	2,000	57.14	10.00	4,500	22.50	4,500	100.00	22.50	0	0	0	0.00	0
Dhar	12,217	61.08	15,395	126.01	61.07	0	0.00	0	0.00	0	4,503	22.51	5,405	120.03	22.50	0	0	0	0.00	0
Ujjain	7,000	35.00	1,402	20.03	5.18	2,500	12.50	2,223	88.94	8.67	3,200	16.00	0	0.00	0	0	0	0	0.00	0
Mandla	7,610	38.05	10,586	139.11	52.93	2,000	10.00	1,144	57.20	5.74	5,500	27.50	6,710	122.00	33.55	0	0	0	0.00	0
Bhind	6,000	30.00	6,000	100.00	28.06	2,000	10.00	0	0.00	0.00	3,800	19.00	3,800	100.00	18.60	0	0	0	0.00	0
Dindori	5,500	27.50	4,689	85.25	23.44	1,600	8.00	178	11.13	0.89	3,000	15.00	2,763	92.10	13.81	0	0	0	0.00	0
Seoni	18,200	91.00	16,075	88.32	90.74	5,400	33.50	3,570	66.11	20.85	6,730	33.60	3,122	46.39	21.98	740	3.70	640	86.49	1.484
Total	1,99,259	996.29	1,84,296	92.49	856.57	46,660	268.34	21,490	46.06	110.38	88,675	443.32	85,254	96.14	431.74	3,710	17.60	2,060	55.53	7.53

(Source: Progress report of the State and Selected Districts)

Appendix 2.9

Statement of targets & achievements of Distribution of Micronutrient in Pulse intervention in the state as a whole and selected District during 2012-13 to 2015-16

(Reference: Paragraph 2.1.10.1, Page 26)

(Physical in number Financial in ₹ in lakh)

State															
Micronutrient						Lime/Gypsum					Assistance for Rizobium culture/Phosphate solubilizing bacteria/bio fertilizer				
Target		Achievement				Target		Achievement			Target		Achievement		
Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	
9,24,428	4,622.14	7,26,374	78.58	2,886.57	1,64,376	1,232.82	1,39,620	84.94	773.69	4,71,300	813.90	3,33,402	70.74	363.82	
Selected Districts															
District	Micronutrient					Lime/Gypsum					Assistance for Rizobium culture/Phosphate solubilizing bacteria/bio fertilizer				
	Target		Achievement			Target		Achievement			Target		Achievement		
	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin
Harda	8,300	43.5	7,418	89.37	25.27	3,020	26.95	2,480	82.12	15.36	9,400	17.80	5,437	57.84	4.17
Panna	8,300	41.5	4,500	54.22	21.28	3,100	23.25	900	29.03	3.75	11,750	24.15	5,550	47.23	5.76
Khargone	9,300	46.5	9,793	105.30	31.635	2,950	22.13	3,120	105.76	19.61	7,300	17.90	3,300	45.21	6.55
Vidisha	25,600	128	25,792	100.75	151.75	5,830	43.73	3,751	64.34	28.13	16,300	32.90	12,790	78.47	24.04
Chhattarpur	29,600	126.94	29,600	100.00	126.07	6,000	48.80	7,350	122.50	43.66	14,320	32.92	16,962	118.45	3.37
Guna	14,608	73.04	14,742	100.92	40.91	1,450	10.88	1,260	86.90	7.35	10,740	21.74	10,740	100.00	6.54
Damoh	16,664	83.32	10,370	62.23	9.12	5,800	43.51	2,147	37.02	7.12	23,100	39.70	20,671	89.48	13.68
Sidhi	11,200	56.00	7,180	64.11	23.073	3,550	26.64	1,025	28.87	6.75	11,350	28.05	4,646	40.93	1.098
Hoshangabad	16,550	152.75	16,250	98.19	138.84	4,950	52.13	4,850	97.98	22.75	12,400	36.80	7,200	58.06	15.37
Indore	11,000	55.00	14,100	128.18	69.4	3,300	24.76	2,800	84.85	21.01	5,900	13.90	1,900	32.20	1.97
Dhar	17,200	86.00	24,419	141.97	62.219	4,500	33.76	6,618	147.07	26.97	17,256	40.05	34,256	198.52	28.49
Shajapur	15,018	79.66	10,318	68.70	54.299	2,600	19.50	1,250	48.08	7.88	7,650	17.25	4,150	54.25	8.15
Ujjain	15,200	76.00	8,300	54.61	34.69	5,200	39.01	3,250	62.50	23.32	16,750	29.55	3,667	21.89	2.21
Mandla	17,400	87.00	16,046	92.22	83.83	5,130	38.48	4,404	85.85	26.83	12,950	30.95	7,862	60.71	17.57
Bhind	11,200	56.00	11,200	100.00	47.14	3,150	23.64	3,150	100.00	19.44	8,700	21.50	600	6.90	0
Dindori	9,650	48.25	6,230	64.56	23.549	3,300	24.75	2,302	69.76	12.77	10,700	24.90	3,955	36.96	4.158
Seoni	13,600	68.00	12,241	90.01	65.36	4,800	36.00	4,194	87.38	26.21	12,950	30.35	10,228	78.98	27.4
Total	2,50,390	1,307.46	2,28,499	91.26	1,008.44	68,630	537.92	54,851	79.92	318.91	2,09,516	460.41	1,53,914	73.46	170.53

(Source: Progress report of the State and Selected Districts)

Appendix 2.10

Statement showing year-wise name of Districts where Nutrient management/Soil Ameliorants and Plant Protection items were not distributed

(Reference: Paragraphs 2.1.10.1 (iii) and 2.1.10.2 (iii), Page 27)

Intervention	2012-13	2013-14	2014-15	2015-16
Micronutrients				
Pulse	-	Sidhi	Sidhi & Shajapur	Khargone
Additional Pulse	-	Guna	-	Damoh, Khargone Sidhi, & Hoshangabad
Wheat	-	-	-	Guna & Sidhi
Rice	-	-	Sidhi	-
Lime/Gypsum				
Pulse	Vidisha, Panna, Damoh, Indore & Hoshangabad		Sidhi & Shajapur	Vidisha, Sidhi, Hoshangabad & Panna
Additional Pulse			Guna, Sidhi	Guna, Damoh, Sidhi, Hoshangabad & Panna
Wheat	Sidhi, Indore, Panna	Sidhi	Chhattarpur, Panna & Guna	Vidisha, Chhattarpur, Sidhi, Panna & Guna
Rizobium culture/Phosphate solublizing bacteria				
Pulse			Shajapur	Indore
Additional Pulse				Shajapur, Indore & Hoshangabad
Weedicidies				
Pulse	Indore	-	Sidhi, Shajapur	Sidhi, Shajapur, Indore
Additional Pulse	-	-		Sidhi
Wheat	-	-	Panna	Sidhi, Guna
Rice	-	-	Sidhi	Sidhi
PP Chemical & Bio –agent				
Pulse	-	-	-	Sidhi
Additional Pulse	-	-	-	Sidhi
Wheat	-	-	Sidhi	Sidhi, Guna
Nuclear Polyhydril Virus (NPV)				
Pulse	Indore	-	-	-

(Source: Progress report of the District offices)

Appendix 2.11

Statement showing year-wise name of Districts where financial achievement shown as zero corresponding to physical achievement of Nutrient management / Soil Ameliorants and Plant Protection items

(Reference: Paragraphs 2.1.10.1 (iv) and 2.1.10.2 (ii), Page 27-28)

Intervention	2012-13	2013-14	2014-15	2015-16
Micronutrients				
Pulse	Damoh (1,002 ha)		Damoh (7,000 ha), Sidhi (2,000 ha)	Sidhi (350 ha)
Additional Pulse	-		Dhar (320 ha)	
Wheat	-	Sidhi (1,700 ha)		
Rice	-			Damoh (2,000 ha)
Lime/Gypsum				
Pulse				
Additional Pulse			Dhar (175 ha)	Chhattarpur (1,000 ha), Damoh (800 ha)
Wheat			Sidhi (700 ha)	
Rizobium culture/Phosphate solublizing bacteria/Bio fertilizer				
Pulse		Chhattarpur (3,020 ha)	Sidhi (1,200 ha)	Chhattarpur (8,100 ha), Sidhi (1,460 ha)
Additional Pulse				Chhattarpur (1,200 ha)
Weedicidies				
Wheat	-	-	Sidhi (150 ha)	
Rice	-	-		Damoh (1600 ha)
PP Chemical & Bio –agent				
Pulse	-		-	Hoshangabad (5,900 ha)
Wheat	-	Sidhi (1,150 ha)		

(Source: Progress report of the District offices)

Appendix 2.12

Statement showing targets and achievements of distribution of IPM in Pulse intervention in the state as a whole and selected District during 2012-13 to 2015-16

(Reference: Paragraph 2.1.10.2, Page 27)

(Physical in number Financial in ₹ in lakhs)

State																				
Plant protection chemical					Weedicides					Distribution of NPV					IPM package					
Target		Achievement			Target		Achievement			Target		Achievement			Target		Achievement			
Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	
7,19,261	3,596.31	6,14,187	85.39	2,703.96	85,064	425.32	49,656	58.37	199.68	27,000	67.50	12,946	47.95	28.40	2,00,000	1,500.00	2,13,715	106.86	1,576.76	
Selected Districts																				
District	Plant protection chemical					Weedicides					Distribution of NPV					IPM package				
	Target		Achievement			Target		Achievement			Target		Achievement			Target		Achievement		
	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin	Phy	Fin	Phy	Per cent	Fin
Harda	7,350	36.75	6,230	84.76	39.37	1250	6.25	850	68.00	0.00	170	0.43	50	29.41	0.13	3,000	22.50	1,964	65.47	14.80
Panna	12,300	57.48	8,800	71.54	28.38	2000	10.00	300	15.00	1.50	945	2.37	945	100.00	1.74	18,090	135.68	18,090	100.00	135.61
Khargone	12,500	62.50	12,855	102.84	48.47	700	3.50	466	66.57	2.39	256	0.64	234	91.41	0.47	3,500	26.25	3,500	100.00	25.40
Vidisha	45,800	229.00	55,400	120.96	285.68	3050	15.25	1,090	35.74	4.00	1,526	3.82	394	25.82	0.99	7,500	56.25	16,814	224.19	120.09
Chhattarpur	28,250	141.25	29,550	104.60	155.98	4800	22.50	5,300	110.42	20.25	200	5.00	0	0.00	0.00	12,000	90.05	12,000	100.00	118.78
Guna	14,500	72.50	15,483	106.78	67.83	1962	9.81	1,003	51.12	4.26	448	1.12	388	86.61	1.12	3,200	24.00	3,000	93.75	22.35
Damoh	17,400	91.00	8,000	45.98	46.42	3000	14.00	860	28.67	1.89	1,184	2.96	1,112	93.92	2.78	5,800	43.50	5,301	91.40	39.76
Sidhi	10,900	54.50	5,635	51.70	18.91	3290	16.75	1,400	42.55	6.65	298	0.75	248	83.22	0.51	2,846	21.35	2,900	101.90	19.03
Hoshangabad	26,050	165.25	24,800	95.20	129.66	2430	15.25	730	30.04	2.15	772	1.93	172	22.28	0.43	7,000	90.00	7,000	100.00	97.50
Indore	14,800	76.50	15,900	107.43	81.68	625	3.13	525	84.00	2.63	100	0.25	0	0.00	0.00	2,500	18.75	2,500	100.00	18.43
Dhar	18,310	91.55	27,255	148.85	83.50	4050	20.50	1,909	47.14	5.85	2,810	21.07	2,810	100.00	21.08	510	1.28	510	100.00	1.20
Shajapur	8,550	42.73	7,609	88.99	38.27	1550	7.75	1,100	70.97	0.00	0.00	0.00	0.00	0.00	0.00	3,525	26.00	3,579	101.53	26.00
Ujjain	13,200	66.00	9,000	68.18	26.10	2832	14.16	0	0.00	0.00	1,110	2.78	810	72.97	2.07	4,000	30.00	3,480	87.00	24.29
Mandla	17,140	85.70	16,834	98.21	74.92	3915	19.58	2,533	64.70	12.67	1,452	3.63	1,424	98.07	3.56	5,500	41.25	6,661	121.11	49.96
Bhind	10,750	57.75	11,550	107.44	56.63	1800	9.00	1,800	100.00	6.22	170	0.43	120	70.59	0.50	2,100	15.75	2,100	100.00	16.33
Dindori	9,812	48.99	4,008	40.85	28.029	2250	11.25	45	2.00	0.224	812	3.87	749	92.24	3.644	2,600	19.50	2,289	88.04	14.73
Seoni	13,900	69.50	11,518	82.86	56.90	3000	15.00	2,643	88.10	11.16	431	1.08	0	0.00	0.00	5,000	37.50	2,615	52.30	32.67
Total	281512	1448.95	2,70,427	96.06	1,266.729	42,504	213.68	22,554	53.06	81.84	12,684	52.13	9,456	74.55	39.02	88,671	699.61	94,303	106.35	776.93

Appendix 2.13

Statement showing excess payment of subsidy in sprinkler intervention in two districts during 2012-13 to 2014-15

(Reference: Paragraph 2.1.11.3, Page 30)

(Amount in ₹)

Sl. No.	Year	Name of the District	No. of farmers to whom subsidy paid excess	Applicable maximum subsidy to the Farmers as per hect. Norms	Subsidy paid	Excess
1	2013-14	Shajapur	436	20,62,013	32,70,000	12,07,987
2	2014-15	Shajapur	20	1,30,350	1,83,140	52,790
3	2014-15	Ujjain	14	1,04,600	1,32,339	27,739
Total			470	22,96,963	35,85,479	12,88,516

Appendix 2.14

Statement showing excess payment in pipe for carrying water from source to field during 2012-13 to 2013-14 in 14 Districts

(Reference: Paragraph 2.1.11.3, Page 31)

(Amount in ₹)

Sl. No.	District	Period	No. of beneficiaries	Admissible subsidy	Subsidy given	Excess Payment
1	Khargone	2012-14	1,953	1,94,38,950	2,92,95,000	98,56,050
2	Vidisha		401	21,05,250	47,97,016	26,91,766
3	Chhattarpur		187	13,92,900	27,92,363	13,99,463
4	Guna		489	42,76,050	73,24,821	30,48,771
5	Damoh		425	27,90,150	63,22,887	35,32,737
6	Hoshangabad		537	31,45,050	67,23,521	35,78,471
7	Bhind		143	8,14,850	21,45,000	13,30,150
8	Shajapur		1,327	1,13,88,000	1,99,20,000	85,32,000
9	Dhar		448	35,79,600	67,20,000	31,40,400
10	Indore		344	29,78,700	46,20,000	16,41,300
11	Ujjain		300	25,98,300	45,00,000	19,01,700
12	Mandla		218	14,15,400	33,79,365	19,63,965
13	Seoni		687	45,32,250	87,58,954	42,26,704
14	Dindori		408	30,73,350	60,47,484	29,74,134
Total			7,867	6,35,28,800	11,33,46,411	4,98,17,611

Appendix 2.15

Statement showing targets and achievements of Farmers Field School/Crop based training in the state as whole and selected districts during 2012-13 to 2015-16

(Reference: Paragraph 2.1.12, Page 31)

(Physical in number Financial in ₹ in lakhs)

Component	State				District	Selected Districts			
	Target		Achievement			Target		Achievement	
	Physical	Financial	Physical	Financial		Physical	Financial	Physical	Financial
Pulse	4,734	662.76	3,836	510.43	Harda	36	5.04	36	5.04
					Panna	131	18.34	131	12.53
					Khargone	93	13.02	91	12.74
					Vidisha	188	26.32	156	21.84
					Chhattarpur	156	21.84	156	21.84
					Guna	98	13.72	98	13.72
					Damoh	168	23.52	120	16.8
					Sidhi	72	10.08	47	6.58
					Hoshangabad	73	10.22	73	10.22
					Indore	68	9.52	47	6.58
					Dhar	108	15.12	108	14.56
					Shajapur	47	6.58	18	2.62
					Bhind	58	8.12	57	7.95
					Dindori	79	11.06	75	10.29
					Seoni	109	15.26	109	10.72
					Ujjain	154	21.56	109	14.14
Mandla	93	13.02	93	9.71					
Total	4,734	662.76	3,836	510.43		1,731	242.34	1,524	197.88
Wheat	1,865	261.10	1,689	212.80	Harda	53	7.42	44	3.36
					Panna	44	6.16	44	4.06
					Vidisha	145	20.3	145	16.45
					Chhattarpur	93	13.02	93	13.02
					Guna	61	8.54	61	8.54
					Damoh	22	3.08	22	3.08
					Sidhi	42	5.88	42	5.88
					Indore	39	5.46	39	5.46
					Dhar	57	7.98	57	5.04
					Dindori	19	2.66	19	1.33
					Seoni	76	10.64	76	6.15
					Ujjain	49	7	48	6.38
					Bhind	21	2.94	21	2.94
					Mandla	8	1.12	8	1.12
Total	1,865	261.10	1,689	212.80		729	102.2	719	82.81
Rice	385	53.9	371	50.16	Panna	32	4.48	32	4.06
					Damoh	29	4.06	38	5.32
					Sidhi	21	2.94	7	0.98
					Dindori	42	5.88	43	5.88
					Mandla	63	8.82	63	8.82
Total	385	53.9	371	50.16		187	26.18	183	25.06
Grand Total	6,984	977.76	5,896	773.39		2,647	370.72	2,426	305.75

(Source: Progress report of the State and Selected Districts)

Appendix 2.16

Statement showing targets & achievements of Intervention selected in Local initiative Paddy in the state as a whole and selected District during 2012-13 to 2015-16

(Reference: Paragraph 2.1.13, Page 32)

(Physical in number Financial in ₹ in lakh)

Name of Activity	State					District	Selected Districts				
	Target		Achievement				Target		Achievement		
	Phy	Fin	Phy	Per cent	Fin		Phy	Fin	Phy	Per cent	Fin
Pipe for carrying water from source to the field	2,400	360.00	2,432	101.33	338.57	Panna	280	42.00	353	126.07	52.52
						Damoh	210	31.5	212	100.95	31.5
						Dindori	411	61.65	373	90.75	54.99
						Mandla	355	53.25	371	104.51	49.04
						Total	2,400	360.00	2,432	101.33	338.57
Winover	6,680	166.50	1,826	27.34	35.73	Panna	605	15.13	0	0	0
						Damoh	663	16.5	0	0	0
						Sidhi	300	7.5	300	100	6.75
						Dindori	960	24.00	191	19.90	4.23
						Mandla	1495	37.38	701	46.89	16.35
Total	6,680	166.50	1,826	27.34	35.73	4,023	100.51	1192	29.63	27.33	
Demonstration by NGOs	250	18.75	0	0.00	0	Sidhi	56	4.2	0	0	0
Total	250	18.75	0	0.00	0	56	4.2	0	0	0	

(Source: Progress report of the State and Selected Districts)

Appendix 2.17

Statement showing targets & achievements of Intervention selected in Local initiative Wheat in the state as a whole and selected District during 2012-13 to 2015-16

(Reference: Paragraph 2.1.13, Page 32)

(Physical in number Financial in ₹ in lakh)

Name of Activity	State					District	Selected Districts				
	Target		Achievement				Target		Achievement		
	Phy	Fin	Phy	Per cent	Fin		Phy	Fin	Phy	Per cent	Fin
Pipe for carrying water from source to the field	735	110.25	745	101.36	110.25	Harda	20	3.00	26	130	3.90
						Panna	20	3.00	31	155	4.15
						Vidisha	40	6	198	495	6.02
						Chhattarpur	35	5.25	34	97.14	5.05
						Guna	20	3.00	20	100	3.00
						Damoh	30	4.50	0	0.00	8.70
						Sidhi	10	1.50	0	0.00	1.50
						Indore	20	3.00	20	100	3.00
						Dhar	60	9.00	60	100	9.00
						Dindori	10	1.50	15	150	2.25
						Mandla	27	3.947	28	103.70	4.016
Seoni	15	2.25	15	100	2.25						
Total	735	110.25	745	101.36	110.25	307	45.95	447	145.60	52.84	
Activity not specified		120.00	0	0.00	0.00						
Multi Crop Thresher	842	336.80	31	3.68	0.40	Vidisha	55	22.00	0	0	0.00
						Guna	40	16.00	11	27.5	0.00
						Seoni	58	23.20	0	0	0.00
Total	842	336.80	31	3.68	0.40	153	61.20	11	7.19	0.00	
Demonstration by NGOs	1,280	96.00	170	13.28	2.66	Panna	60	4.50	0	0	0.00
						Seoni	90	6.75	0	0	0.00
Total	1,280	96.00	170	13.28	2.66	150	11.25	0	0	0.00	

(Source: Progress report of the State and Selected Districts)

Appendix 2.18

Statement showing targets & achievements of Intervention selected in Local initiative pulse in the state as a whole and selected District during 2012-13 to 2015-16

(Reference: Paragraph 2.1.13, Page 32)

(Physical in number Financial in ₹ in lakh)

Name of Activity	State					District	Selected Districts				
	Target		Achievement				Target		Achievement		
	Phy	Fin	Phy	Per cent	Fin		Phy	Fin	Phy	Per cent	Fin
Pipe for carrying water from source to the field	1,290	193.50	1,290	100.00	193.50	Harda	30	4.50	30	100	4.5
						Panna	20	3.00	71	355	9.72
						Khargone	1,280	192	1,190	92.97	178.5
						Chhattarpur	120	18	170	141.67	31.01
						Guna	30	4.50	30	100	4.5
						Damoh	20	3.00	0	0	13
						Hoshangabad	740	111.00	740	100	111
						Indore	20	3.00	100	500	15
						Dhar	50	7.50	50	100	7.5
						Shajapur	50	7.50	50	100	7.5
						Ujjain	480	72.00	480	100	72.00
						Dindori	10	1.50	0	0	0
						Mandla	10	1.50	7	70	0.77
						Seoni	20	3.00	20	100	3.00
Bhind	10	1.50	5	50	0.75						
Total	1,290	193.50	1,290	100.00	193.50		2,890	433.50	2,943	101.83	458.75
Seed Treatment Drum	39,194	391.94	1,916	4.89	12.78	Panna	945	9.45	0	0	0
						Guna	94	0.94	94	100	0.87
						Khargone	1,319	13.19	0	0	0
						Dhar	1,482	14.82	0	0	0
						Shajapur	540	5.40	0	0	0
						Harda	420	4.20	0	0	0
						Indore	25	0.25	25	100	0.25
						Vidisha	1,363	13.60	0	0	0
						Chhattarpur	780	7.80	0	0	0
						Damoh	1,255	13.00	0	0	0
						Sidhi	350	3.50	0	0	0
						Hoshangabad	933	9.33	0	0	0
						Ujjain	843	8.43	0	0	0
						Mandla	1,100	11	0	0	0
Seoni	1,215	12.15	0	0	0						
Bhind	888	8.88	0	0	0						
Dindori	986	9.86	0	0	0						
Total	39,194	391.94	1,916	4.89	12.78		14,538	145.80	119	0.82	1.12
Spiral Grader	39,000	780.00	3,821	9.80	12.77	Harda	420	8.40	420	100	2.26
						Panna	945	18.90	0	0	0
						Khargone	1,423	28.46	0	0	0
						Vidisha	1,371	27.40	0	0	0
						Chhattarpur	794	15.88	0	0	0
						Guna	113	2.26	113	100	2.26
						Damoh	1,260	25.00	0	0	0
						Sidhi	350	3.50	0	0	0
						Hoshangabad	934	18.68	0	0	0
						Indore	20	0.40	0	0	0

Name of Activity	State					Selected Districts					
	Target		Achievement			Target		Achievement			
	Phy	Fin	Phy	Per cent	Fin	District	Phy	Fin	Phy	Per cent	Fin
						Dhar	1,585	31.70	0	0	0
						Shajapur	532	10.64	0	0	0
						Ujjain	840	16.83	27	3.21	0.54
						Dindori	986	19.72	0	0	0
						Mandla	1,200	24	0	0	0
						Seoni	1,215	24	0	0	0
						Bhind	890	17.8	0		0
Total	39,000	780.00	3,821	9.80	12.77		14,878	293.57	560	3.76	5.06
Demonstration by KVK	3,000	225.00	1,122	37.40	60.44	Panna	103	7.73	0	0	0
						Shajapur	63	4.73	0	0	0
						Harda	46	3.45	0	0	0
						Sidhi	115	8.93	0	0	0
						Hoshangabad	104	7.80	104	100	7.38
						Ujjain	94	7.05	0	0	0
						Mandla	138	10.35	138	100	9.34
						Seoni	140	10.51	190	135.71	7.349
Bhind	99	7.49	0	0	0						
Total	3,000	225.00	1,122	37.40	60.44		902	68.04	432	47.89	24.07

(Source: Progress report of the State and Selected District)

Appendix 2.19

Statement showing District-wise/Year-wise position of amount lapsed or surrendered

(Reference: Paragraph 2.1.15, Page 34)

(₹ in lakh)

Sl. No.	District	Year	Budget received	Expenditure	Amount lapsed or surrendered	Utilisation in percentage
1	Khargone	2014-15	553.93	349.25	204.68	63.05
2	Vidisha	2014-15	887.43	773.28	114.15	87.14
3	Guna	2015-16	751.09	285.83	465.26	38.06
4	Sidhi	2014-15	456.49	386.70	69.79	84.71
5		2015-16	475.63	210.30	265.33	44.22
6	Damoh	2014-15	752.67	559.51	193.16	74.33
7	Chhattarpur	2014-15	793.23	719.96	73.27	90.76
8	Hoshangabad	2014-15	1,018.46	1,016.46	2.00	99.80
9		2015-16	774.15	686.80	87.35	88.72
10	Indore	2015-16	371.75	324.85	46.89	87.38
11	Dhar	2014-15	629.83	333.97	295.86	53.02
12		2015-16	993.84	712.00	281.84	71.64
13	Ujjain	2015-16	439.21	290.36	148.85	66.10
14	Mandla	2014-15	759.82	503.02	256.80	66.20
15		2015-16	977.06	623.99	353.01	63.86
Total:			10,634.59	7,776.28	2,858.24	73.12

(Source: Budget and expenditure statements of the District offices)

Appendix 2.20

Statement showing difference in NFSM Account as per Pass book against Cash book

(Reference: Paragraph 2.1.15.2, Page 35)

(₹ in lakh)

Sl. No.	District	Balance as per Cash book	Balance as per pass book	Difference
1	Panna	0.00	3.69	3.69
2	Vidisha	16.96	18.97	2.01
3	Chhattarpur	2.47	2.81	0.34
4	Guna	0.00	3.01	3.01
5	Sidhi	2.16	326.58	324.42
6	Hoshangabad	92.98	167.77	74.79
7	Dhar	20.70	101.19	80.49
8	Shajapur	29.07	58.10	29.03
9	Mandla	2.26	10.79	8.53
10	Bhind	54.37	3.67	-50.7
11	Dindori	0.00	152.00	152
12	Seoni	9.12	19.03	9.91
Total		230.09	867.61	637.52

Appendix-2.21

Statement showing details of funds allotted and utilisation thereof by districts not identified under NFSM during the 12th FYP

(Reference: Paragraph 2.1.15.3, Page 36)

(₹ in lakh)

Crop	Districts	Status of district in the 12th FYP	Funds allotted and utilised			
			2012-13		2013-14	
			Allotment	Expenditure	Allotment	Expenditure
NFSM-Wheat	Harda	Not Selected	232.50	234.82	207.00	152.32
	Mandla	Not Selected	160.00	217.3	105.65	183.79
	Ujjain	Not Selected	97.00	96.83	111.06	111.06
	Dhar	Not Selected	350.69	350.07	231.17	227.73
	Bhind	Not Selected	80.00	82.22	75.00	59.95
	Indore	Not Selected	258.00	255.9	180.00	162.72
	Damoh	Not Selected	232.82	232.44	170.00	183.86
	Dindori	Not Selected	90.00	87.63	82.36	82.28
Total wheat			1,501.01	1,557.21	1,162.24	1,163.71
NFSM-Rice	Sidhi	Selected	Funds were not provided during the years 2012-13 to 2013-14 to these districts under respective crop			
NFSM-Coarse Cereals	Shajapur	Selected				
	Dhar	Selected				
	Khargone	Selected				
	Dindori	Selected				
	Mandla	Selected				

Appendix 2.22

Statement showing Scheme wise delay in start of work after clearance of Scheme Modernisation Plans (SMPs)

(Reference: Paragraph 2.2.7.2, Page 51)

No.	Project name	Scheme type	Command area in ha	WB clearance to SMP	Actual Start Date	Actual Completion Date	Delay in start of work in months	Months taken for completion	Type	Scheduled completion months	Delay in months
1	Amahi	Medium	2,200	04-07-2008	01-07-2009	30-04-2014	12	59	Type-4	24	35
2	Koncha	Medium	4,618	29-12-2007	14-08-2008	14-08-2010	8	24	Type-4	24	No Delay
3	Mola	Medium	3,563	05-01-2008	14-08-2008	14-08-2010	7	24	Type-4	24	No Delay
4	Sajanmau	Minor	1,098	20-07-2008	28-08-2010	27-08-2012	26	24	Type-3	24	No Delay
5	Umariya	Minor	302	01-11-2009	28-08-2010	27-08-2012	10	24	Type-2	12	12
6	Kadwaya	Minor	121	25-05-2010	25-05-2011	10-11-2013	12	30	Type-1	12	18
7	Munderi	Minor	121	16-06-2010	25-05-2011	10-11-2013	11	30	Type-1	12	18
8	Pachdikheda	Minor	350	07-07-2010	21-02-2011	10-02-2012	8	12	Type-2	12	No Delay
9	Tulsisarover	Minor	350	07-07-2010	21-02-2011	10-02-2012	8	12	Type-2	12	No Delay
10	Chanced Barrage	Minor	367	22-05-2006	10-08-2010	08-02-2012	51	18	Type-2	12	6
11	Intkhedi Tank	Minor	127	18-01-2006	10-08-2010	08-02-2012	56	18	Type-1	12	6
12	Kadampura Tank	Minor	48	22-05-2006	10-08-2010	08-02-2012	51	18	Type-1	12	6
13	Parwalia Barrage	Minor	121	18-01-2006	10-08-2010	08-02-2012	56	18	Type-1	12	6
14	Karondia	Minor	178	28-12-2010	24-08-2013	18-06-2015	32	22	Type-1	12	10
15	Langarpura	Minor	185	10-12-2007	01-03-2009	01-03-2010	15	12	Type-1	12	No Delay
16	Ratapani Tank	Medium	2,692	30-12-2007	19-02-2010	24-02-2013	26	37	Type-4	24	13
17	Dahod Tank	Medium	2,200	20-07-2008	08-02-2010	15-06-2012	19	29	Type-4	24	5
18	Dhamdusar	Minor	640	20-07-2008	08-02-2010	15-06-2012	19	29	Type-3	24	5

No.	Project name	Scheme type	Command area in ha	WB clearance to SMP	Actual Start Date	Actual Completion Date	Delay in start of work in months	Months taken for completion	Type	Scheduled completion months	Delay in months
	Tank										
19	Banchore Tank	Minor	1,985	08-11-2007	04-02-2010	30-06-2015	27	66	Type-3	24	42
20	Gulgaon Tank	Minor	281	20-07-2008	04-02-2010	30-09-2013	19	44	Type-2	12	32
21	Karmodia Tank	Minor	1,110	29-12-2007	04-02-2010	27-03-2014	26	50	Type-3	24	26
22	Makhani Tank	Minor	386	06-07-2010	13-05-2011	04-08-2012	10	15	Type-2	12	3
23	Chandana Tank	Minor	195	27-12-2010	04-05-2013	30-06-2015	29	26	Type-1	12	14
24	Bila Dam	Major	21,182	17-01-2009	28-06-2010	20-06-2015	18	61	Type-5	12	49
25	Ghuwara Tank	Minor	88	08-11-2007	28-05-2008	27-06-2009	7	13	Type-1	12	1
26	Paniya Tank	Minor	81	08-11-2007	28-05-2008	27-06-2009	7	13	Type-1	12	1
27	Nanhi Tehri Tank	Minor	128	22-05-2006	25-01-2007	24-01-2008	8	12	Type-1	12	No Delay
28	Prem Sagar Mabei Tank	Minor	95	22-05-2006	25-01-2007	24-01-2008	8	12	Type-1	12	No Delay
29	Atrar	Minor	70	10-12-2007	27-02-2009	19-03-2012	15	37	Type-1	12	25
30	Bairwar	Minor	60	29-12-2007	27-02-2009	19-03-2012	14	37	Type-1	12	25
31	Chaturkari	Minor	55	05-01-2008	27-02-2009	19-03-2012	14	37	Type-1	12	25
32	Dhanera Tank	Minor	93	31-12-2007	27-02-2009	19-03-2012	14	37	Type-1	12	25
33	Dikoli Tank	Minor	45	10-12-2007	27-02-2009	19-03-2012	15	37	Type-1	12	25
34	Jhinguwan	Minor	61	08-11-2007	27-02-2009	19-03-2012	16	37	Type-1	12	25
35	Para (Pureniya)	Minor	265	09-09-2007	27-02-2009	19-03-2012	18	37	Type-2	12	25
36	Ram Nagar Tank	Minor	110	10-12-2007	27-02-2009	19-03-2012	15	37	Type-1	12	25
37	Airora	Minor	93	28-08-2007	13-09-2008	30-06-2010	13	22	Type-1	12	10
38	Bhitarwar Tank	Minor	121	09-09-2007	13-09-2008	30-06-2010	12	22	Type-1	12	10
39	Bilwari	Minor	121	14-11-2007	13-09-2008	30-06-2010	10	22	Type-1	12	10
40	Bund ka	Minor	102	10-09-2007	13-09-2008	30-06-2010	12	22	Type-1	12	10

No.	Project name	Scheme type	Command area in ha	WB clearance to SMP	Actual Start Date	Actual Completion Date	Delay in start of work in months	Months taken for completion	Type	Scheduled completion months	Delay in months
	Murrah										
41	Chhutaki Tank	Minor	80	09-09-2007	13-09-2008	30-06-2010	12	22	Type-1	12	10
42	Gidwasan	Minor	118	09-09-2007	13-09-2008	30-06-2010	12	22	Type-1	12	10
43	Kandwa	Minor	121	14-11-2007	13-09-2008	30-06-2010	10	22	Type-1	12	10
44	Kharon	Minor	45	16-10-2007	13-09-2008	30-06-2010	11	22	Type-1	12	10
45	Kudiyala	Minor	61	09-09-2007	13-09-2008	30-06-2010	12	22	Type-1	12	10
46	Mamon Tank	Minor	70	09-09-2007	13-09-2008	30-06-2010	12	22	Type-1	12	10
47	Morpariya	Minor	64	12-07-2007	13-09-2008	30-06-2010	14	22	Type-1	12	10
48	Shahpur	Minor	81	14-11-2007	13-09-2008	30-06-2010	10	22	Type-1	12	10
49	SAS Project	Major	27,924	04-07-2008	15-02-2010	30-06-2015	20	65	Type-5	12	53
50	Kethan Medium Tank	Medium	3,187	01-08-2006	14-03-2007	30-06-2009	8	28	Type-4	24	4
51	Jajon Minor Tank	Minor	1,296	17-01-2008	27-08-2008	05-07-2010	7	23	Type-3	24	No Delay
52	Ghaterababaji	Minor	120	20-07-2008	03-03-2014	30-06-2015	68	16	Type-1	12	4
53	Ghosua Tank	Minor	292	19-08-2010	03-03-2014	30-06-2015	43	16	Type-2	12	4
54	Jawari Tank	Minor	243	15-06-2010	12-09-2014	30-06-2015	52	10	Type-2	12	No Delay
55	Phupher Minor Tank	Minor	364	26-06-2010	03-03-2014	30-06-2015	45	16	Type-2	12	4
56	Saklone Tank	Minor	297	26-09-2010	12-09-2014	30-06-2015	48	10	Type-2	12	No Delay
57	Bhawankhedhi Tank	Minor	385	09-04-2012	03-03-2014	30-06-2015	23	16	Type-2	12	4
58	Sindhani	Minor	90	03-11-2009	13-09-2012	20-06-2015	35	34	Type-1	12	22
59	Antrai Tank	Minor	50	20-07-2008	05-02-2010	30-06-2011	19	17	Type-1	12	5
60	Chillore Tank	Minor	55	20-07-2008	05-02-2010	30-06-2011	19	17	Type-1	12	5
61	Dholana Tank	Minor	56	05-10-2008	05-02-2010	30-06-2011	16	17	Type-1	12	5
62	Kankariya Tank	Minor	107	05-07-2008	29-04-2010	31-10-2012	22	31	Type-1	12	19
63	Khanpura Tank	Minor	344	05-07-2008	29-04-2010	31-10-2012	22	31	Type-2	12	19
64	Dedla Tank	Minor	231	05-07-2008	29-04-2010	30-04-2012	22	24	Type-2	12	12

No.	Project name	Scheme type	Command area in ha	WB clearance to SMP	Actual Start Date	Actual Completion Date	Delay in start of work in months	Months taken for completion	Type	Scheduled completion months	Delay in months
65	Dhabla Deval Tank	Minor	146	14-12-2010	20-05-2013	20-05-2015	30	24	Type-1	12	12
66	Daloda Sagra Tank	Minor	214	01-11-2007	29-12-2010	29-12-2011	38	12	Type-2	12	No Delay
67	Karoli Tank	Minor	298	14-10-2007	29-12-2010	29-12-2011	39	12	Type-2	12	No Delay
68	Morwan Tank	Medium	4,880	28-08-2007	01-10-2008	15-08-2010	13	23	Type-4	24	No Delay
69	Chhapi	Medium	2,104	21-09-2009	20-01-2011	10-07-2012	16	18	Type-4	24	No Delay
70	Shamsherpura	Minor	600	20-07-2008	16-12-2010	30-06-2015	29	55	Type-3	24	31
71	Doraha Tank	Medium	2,794	24-07-2008	01-02-2010	30-01-2012	19	24	Type-4	24	No Delay
72	Gyaraspura Tank	Minor	427	25-09-2010	18-02-2014	30-06-2015	41	17	Type-2	12	5
73	Siloda Tank	Minor	566	14-11-2007	04-06-2008	17-09-2010	7	28	Type-3	24	4
74	Bhaniyakhedi	Minor	192	25-07-2010	02-07-2013	30-06-2015	36	24	Type-1	12	12
75	Borsali	Minor	40	25-02-2010	04-10-2013	30-06-2015	44	21	Type-1	12	9
76	Silarkhedi	Minor	676	30-08-2006	13-04-2007	30-06-2010	8	39	Type-3	24	15
77	Kazikhedi	Minor	1,800	08-11-2007	19-02-2010	30-06-2015	28	65	Type-3	24	41
78	Sahibkhedi	Minor	1,792	01-11-2007	19-02-2010	30-06-2015	28	65	Type-3	24	41
79	Bharla Tank	Minor	131	09-12-2007	03-03-2010	30-06-2012	27	28	Type-1	12	16
80	Buranabad Tank	Minor	147	30-12-2007	03-03-2010	30-06-2012	26	28	Type-1	12	16
81	Rajla Tank	Minor	74	09-12-2007	03-03-2010	30-06-2012	27	28	Type-1	12	16
82	Sipara Tank	Minor	249	02-01-2008	03-03-2010	30-06-2012	26	28	Type-2	12	16
83	Narela	Minor	209	03-01-2008	26-02-2009	31-01-2011	14	23	Type-2	12	11
84	Unhel Tank	Minor	138	20-07-2008	18-04-2012	30-11-2013	46	20	Type-1	12	8
85	Nainawad Tank	Minor	48	04-05-2010	03-10-2013	30-06-2015	42	21	Type-1	12	9
86	Benisagar	Medium	4,170	02-01-2008	06-06-2010	30-06-2013	30	37	Type-4	24	13
87	Majhgawan-Hansraj	Minor	699	30-08-2006	14-09-2007	23-02-2014	13	78	Type-3	24	54
88	Chiraiyani	Minor	977	28-08-2007	29-01-2010	20-07-2013	30	42	Type-3	24	18

No.	Project name	Scheme type	Command area in ha	WB clearance to SMP	Actual Start Date	Actual Completion Date	Delay in start of work in months	Months taken for completion	Type	Scheduled completion months	Delay in months
89	Garaghat	Minor	751	10-12-2007	29-01-2010	20-07-2013	26	42	Type-3	24	18
90	Jabera	Minor	779	02-11-2007	29-01-2010	20-07-2013	27	42	Type-3	24	18
91	Bhat Kamaria	Minor	122	10-10-2005	21-01-2007	26-07-2007	16	6	Type-1	12	No Delay
92	Deori Regulator	Minor	81	21-11-2009	04-01-2011	31-03-2012	14	15	Type-1	12	3
93	Gorha Bandha	Minor	267	21-11-2009	04-01-2011	31-03-2012	14	15	Type-2	12	3
94	Bhartala Tank	Minor	253	02-11-2007	27-01-2010	30-11-2010	27	10	Type-2	12	No Delay
95	Borina Tank	Minor	531	31-05-2009	15-04-2010	14-04-2011	11	12	Type-3	24	No Delay
96	Dhorsri Regulator	Minor	123	21-07-2008	15-04-2010	14-04-2011	21	12	Type-1	12	No Delay
97	Pabra Tank	Minor	145	10-12-2007	15-09-2008	30-06-2009	9	10	Type-1	12	No Delay
98	Pali Tank	Minor	121	10-12-2007	15-09-2008	30-06-2009	9	10	Type-1	12	No Delay
99	Hardawara Tank	Minor	134	21-11-2009	05-05-2012	31-03-2013	30	11	Type-1	12	No Delay
100	Patonha Tank	Minor	138	26-02-2010	05-05-2012	31-03-2013	27	11	Type-1	12	No Delay
101	Machhariya	Medium	2,756	02-01-2008	09-07-2010	03-08-2012	31	25	Type-4	24	1
102	Masurwari Tank	Medium	Feeder of Machhariya	02-01-2008	09-07-2010	03-08-2012	31	25	Type-5	12	13
103	Mala Tank	Medium	2,600	06-07-2010	08-03-2011	03-08-2012	8	17	Type-4	24	No Delay
104	Bharoli	Minor	223	22-10-2010	29-06-2013	30-06-2015	33	24	Type-2	12	12
105	Sakarra	Minor	162	18-01-2007	28-04-2011	29-06-2013	52	26	Type-1	12	14
106	Kaketo	Medium	3,441	13-03-2008	31-08-2009	30-04-2012	18	32	Type-4	24	8
107	Udalpara	Minor	227	14-12-2010	17-05-2012	16-05-2013	17	12	Type-2	12	No Delay
108	Jalalpur Pick Up Weir	Minor	1,510	26-07-2008	04-09-2013	30-06-2015	62	22	Type-3	24	No Delay

No.	Project name	Scheme type	Command area in ha	WB clearance to SMP	Actual Start Date	Actual Completion Date	Delay in start of work in months	Months taken for completion	Type	Scheduled completion months	Delay in months
109	Jakha Simaria	Minor	1,465	06-07-2010	06-10-2011	15-10-2012	15	13	Type-3	24	No Delay
110	Khirawali	Minor	1,148	22-09-2009	25-02-2011	30-06-2013	17	29	Type-3	24	5
111	Chhapar	Minor	162	12-05-2009	25-02-2011	17-02-2012	22	12	Type-1	12	No Delay
112	Kota	Minor	688	19-08-2010	15-06-2011	05-06-2013	10	24	Type-3	24	No Delay
113	Paronch	Medium	2,614	13-07-2007	27-09-2008	25-09-2010	15	24	Type-4	24	No Delay
114	Gurma Tank	Medium	6,500	30-08-2006	01-06-2007	30-09-2009	9	28	Type-5	12	16
115	Chhuiya Tank	Minor	125	22-07-2008	24-02-2010	30-04-2012	19	27	Type-1	12	15
116	Mauganj Tank	Minor	729	21-07-2008	24-02-2010	30-04-2012	19	27	Type-3	24	3
117	Padar Tank	Minor	431	14-11-2007	24-02-2010	30-04-2012	28	27	Type-2	12	15
118	Atari Tank	Minor	510	14-11-2007	06-05-2013	30-06-2015	67	26	Type-3	24	2
119	Kanhaiya tank	Minor	375	10-12-2007	06-05-2013	30-06-2015	66	26	Type-2	12	14
120	Govindgarh	Minor	1,093	01-11-2009	02-05-2012	30-06-2015	30	38	Type-3	24	14
121	Loni Tank	Minor	1,880	01-01-2011	30-04-2012	05-12-2014	16	32	Type-3	24	8
122	Kulgarhi Tank	Medium	2,373	01-08-2006	15-07-2009	30-06-2012	36	36	Type-4	24	12
123	Amkoi Tank	Minor	518	01-08-2006	15-07-2009	30-06-2012	36	36	Type-3	24	12
124	Dubera Tank	Minor	164	01-08-2006	15-07-2009	30-06-2012	36	36	Type-1	12	24
125	Ramni Sagar Tank	Minor	126	30-08-2006	15-07-2009	30-06-2012	35	36	Type-1	12	24
126	Tumin Tank	Minor	89	18-01-2006	15-07-2009	30-06-2012	42	36	Type-1	12	24
127	Chakara Weir	Minor	80	10-12-2007	26-06-2009	30-06-2012	19	37	Type-1	12	25
128	Gaibar Diversion	Minor	170	17-01-2008	26-06-2009	30-06-2012	18	37	Type-1	12	25
129	Khajuriya Tank	Minor	135	29-12-2007	26-06-2009	30-06-2012	18	37	Type-1	12	25
130	Sehra Diversion	Minor	140	10-12-2007	26-06-2009	30-06-2012	19	37	Type-1	12	25
131	Amara Nalla	Minor	700	04-11-2009	15-06-2013	30-06-2015	44	25	Type-3	24	1

No.	Project name	Scheme type	Command area in ha	WB clearance to SMP	Actual Start Date	Actual Completion Date	Delay in start of work in months	Months taken for completion	Type	Scheduled completion months	Delay in months
	Wier										
132	Chamara Diversion	Minor	100	21-11-2009	01-12-2012	31-03-2014	37	16	Type-1	12	4
133	Jhura Nalla Wier	Minor	73	11-01-2010	01-12-2012	31-03-2014	35	16	Type-1	12	4
134	Kothi Wier	Minor	161	20-07-2008	01-10-2013	20-10-2014	63	13	Type-1	12	1
135	Nimi Wier	Minor	162	22-11-2009	01-12-2012	31-03-2014	37	16	Type-1	12	4
Total			142,135			Minimum Delay	7				1
						Maximum Delay	68				54
										Number of works completed with Delay	104

Appendix 2.23

Statement showing execution of CC lining in excess of provisions in Scheme Modernisation Plans (SMPs)

(Reference: Paragraph 2.2.8.3, Page 59)

(Amount in ₹)

Sl. No.	Name of division	Details of canal reach	Month/year of preparation of SMP	Quantity/length provided in SMP in cu m/metre	Quantity actually executed in cu m/metre	Difference of quantity in cu m/metre	Average Rate paid per cu m/metre	Expenditure beyond scope of SMPs
1	WRD Dn. Sheopur	km 0 to km 60 of CRMC	Sep 2010	2,22,409 cu m	2,74,907.57 cu m	52,498.57 cu m	3,662.50 cu m	19,22,76,013
2	WRD Dn. Sheopur	12 L distributary of CRMC		8,771 cu m	12,933.19 cu m	4,162.19 cu m	3,870.87 cu m	1,61,11,276
3	WRD Dn. Morena	ABC from RD km 0 to RD km 143	Apr 2011	1,47,396.31 cu m	3,48,631.95 cu m	2,01,235.64 cu m	4,510.6 cu m	90,76,93,478
4	WRD Dn. Sabalgarh	1 L to 4 RC and 6 L to 16 L Distributary of LMC	Dec 2010	12,228 metre	40,005 metre	27,777 metre	3,243 metre	9,00,80,811
5	WRD Dn. Sabalgarh	5 L distributary of LMC		16,509 metre	31,436 metre	14,927 metre	3,463 metre	5,16,92,201
6	WRD Dn. Sabalgarh	LMC main canal between km 0.00 to km 50.00		37,815 cu m	1,75,463.13 cu m	1,37,648.13 cu m	4,411.34 cu m	60,72,12,702
7	WRD Dn. Sabalgarh	CRMC km 93 to km 169	Sep 2010	88,806.54 cu m	2,79,368.97 cu m	1,90,562.43 cu m	4,010 cu m	76,41,55,344
8	WRD Dn. Sabalgarh	19 L to 27 L Distributary of CRMC and of 28 L to 33 L of CRMC		10,098 cu m	11,990.53 cu m	1,892.53 cu m	4,911.5 cu m	92,95,161
Total				5,15,295.85 cu m and 28,737 metre	11,03,295.34 cu m and 71,441 metre	5,87,999.50 cu m and 42,704 metre		2,63,85,16,986

Appendix 2.24

Statement showing irregular expenditure due to adoption of richer specifications

(Reference: Paragraph 2.2.9.1, Page 59)

(₹ in lakh)

Sl. No.	Name of scheme	Type of scheme	Name of Division	Rate of M 15 CC cast in situ lining	Rate of M 10 CC cast in situ	Difference of rate (5-6)	Quantity executed (cu m)	Amount		
1	2	3	4	5	6	7 = 5 - 6	8	9 = 7 * 8		
1	Chambal canal system	Major	WRD, Bhind	4,554	4,091	463	41,875.110	1,93,88,175.93		
2			WRD Sabalgarh	3,106	2,636	470	82,046.880	3,85,62,033.60		
3				2,485	2,109	376	94,672.970	3,55,97,036.72		
4				3,106	2,636	470	34,743.550	1,63,29,468.50		
5				3,106	2,636	470	8,417.480	39,56,215.60		
6				3,106	2,636	470	21,243.950	99,84,656.50		
7				3,106	2,636	470	24,194.780	1,13,71,546.60		
8				3,106	2,636	470	68,457.160	3,21,74,865.20		
9				3,106	2,636	470	6,585.670	30,95,264.90		
10				3,106	2,636	470	5,403.000	25,39,410.00		
11				WRD, Morena	3,106	2,636	470	46,933.810	2,20,58,890.70	
12			3,106		2,636	470	68,786.770	3,23,29,781.90		
13			3,106		2,636	470	18,745.000	88,10,150.00		
14			3,106		2,636	470	56,357.622	2,64,88,082.34		
15			3,106		2,636	470	16,395.360	77,05,819.20		
16			3,106		2,636	470	77,030.520	3,62,04,344.40		
17			3,106		2,636	470	1,45,115.984	5,45,63,609.98		
18			3,106		2,636	470	40,101.380	1,88,47,648.60		
19			WRD, Joura		3,106	2,636	470	16,213.490	76,20,340.30	
20					3,106	2,636	470	21,580.860	1,01,43,004.20	
21				3,106	2,636	470	24,511.590	1,15,20,447.30		
22			WRD, Sheopur	3,106	2,636	470	25,995.970	1,22,18,105.90		
23				3,106	2,636	470	9,602.220	45,13,043.40		
24				3,106	2,636	470	892.850	4,19,639.50		
25				3,106	2,636	470	7,253.520	34,09,154.40		
26			Wainganga canal	WRD, Wainganga, Balaghat	3,106	2,636	470	47,916.700	2,25,20,849.00	
27					3,106	2,636	470	31,827.292	1,49,58,827.24	
28					3,106	2,636	470	18,043.375	84,80,386.25	
29			Ganga Basin	Minor	WRD, Satna	3,106	2,636	470	1,927.160	9,05,765.20
30						3,106	2,636	470	568.334	2,67,116.98
Total							10,63,440.357	47,69,83,680.30		

Appendix 2.25

Statement showing excess payment to the contractors on account of trimming of earthwork

(Reference: Paragraph 2.2.9.2, Page 60)

(₹ in lakh)

Sl. No.	Name of scheme	Type of scheme	Name of Division	Name of work	Area in sq m	Rate per sq m	Amount
1	Chambal canal system	Major	WRD, Bhind	Modernisation of Bhind Main Canal Km 40.88 to 78.18 Km	8,88,773.80	12.60	111.99
2				The restructuring and modernisation of D3 distributory of Bhind Main Canal and 3 L of Bhind Main Canal RD 0 to 24841 M	2,61,903.87	12	31.42
3				The restructuring and modernisation of Bhind Main Canal from RD 27.5 Km to 40.88 Km with additional work of strengthening and additional work of modernization of 5 R distributory of Bhind Main Canal	3,17,592.63	10	31.76
4				The restructuring and mordenisation of left tail distributory of MOU branch canal Km 00. to 27.90 (Package BMC/8/BR)	5,59,984	11	61.59
5				The restructuring and mordenisation of Bhind Main Canal Km 0 to 12	3,83,775.30	12.47	47.86
6			WRD, Gohad	The restructuring and mordenisation of Bhind Main Canal Km 12 to 27.50	3,96,907.98	12.60	50.01
7				The restructuring and mordenisation of balance reaches of MOU branch canal between 00 km to 45.50 km (Package BMC/7/BR)	4,31,171.19	12	51.74
8				The restructuring of Maou Branch Canal Km 00. to 45.50	5,07,374.23	10	50.74
9				Execution of works in Lower Main Canal	7,92,360.37	12.60	99.84
10				The rehabilitation of CRMC between 93 km to 169 km slice 1(b)	9,09,146.82	7	63.64
11				The rehabilitation of CRMC between 133.50 km to 169 km	3,29,212.96	11.70	38.51
12			WRD, Sabalgarh	The rehabilitation of LMC between 0 km to 50 km (lining work) Pkg No. 01 AW	74,448.98	12.60	9.38
13				The rehabilitation of 5L distributory of LMC	4,16,088.92	12.60	52.42
14				The restructuring & modernisation of balance reaches of CRMC b/w km 140.70 to km 161.60 under package no CRMC/10 BR	6,56,616.87	9	59.10
15				Restructuring and modernisation of Balance reaches of Ambah branch canal from km 36.11 to 83.00	5,86,310.02	15	87.95
16			WRD, Morena	Rehabilitation of Ambah Branch Canal from RD 0.00 km to RD 71.500 km and construction of syphon at RD 1300 meter of ABC	8,78,165.10	12.60	110.65
17				Restructuring 22L, 30L, 31L distribution system of AmbahBranchCanal and construction of Barana escape and Revine protection and repair of HR (12 R to 29 R of ABC)	3,79,059.39	11	41.70
18				Restructuring & Modernisation of Ambah Branch Canal from RD Km	2,61,933.93	12.60	33

Sl. No.	Name of scheme	Type of scheme	Name of Division	Name of work	Area in sq m	Rate per sq m	Amount
19	Chambal canal system	Major		147.279 to 162.637 and 60 R and 61 R distributaries of ABC			
20				Restructuring of AmbahBranchCanal from RD 83.90 km to RD 143.40 km (Package ABC-03)	9,47,763	10	94.78
21				Restructuring and modernisation of 32R and 34 L to 58 Rdistributaries of Ambah Branch Canal Package ABC-4	28,897.34	3.35	0.97
22			WRD, Jaora	Rehabilitation of Ambah Branch Canal from km 0 to km 143.40 (Slice 2) under MPWSRP	14,75,181.04	10.80	159.32
23				Rehabilitation of Morena Branch Canal from km 0 to km 36.10 (Slice 4) under MPWSRP	5,22,000	1	5.22
24				Rehabilitation of 1R to 21R of 21L/MBC Distribution system of Morena Branch Canal (Package No.MBC-5)	56,000	11	6.16
25				Rehabilitation of 21L distributary of Morena Branch Canal	2,16,002.74	17.51	37.82
26			WRD, Sheopur	Rehabilitation of 17L distributaries of Morena Branch canal	1,63,321	12	19.60
27				Restructuring and modernisation of balance reaches of CRMC from km 0 to km 60	6,49,163.10	10	64.91
28				Rehabilitation of CRMC from km 0 to km 60	21,50,230	1	21.50
29				Rehabilitation of CRMC from km 60 to km 93,	3,93,594.59	7	27.55
30				Balance work of rehabilitation of CRMC km 60 to km 93	5,80,255.46	15.76	91.44
31				Restructuring of Aoda Dam and its canal system	85,794.78	10.62	9.11
32				Execution of works of restructuring of distributaries and minors 1L to 5L Distributaries of CRMC under MPWSRP	1,33,919.82	11.50	15.40
33				Restructuring and modernisation of 12 L distributary of CRMC	1,42,536.69	12.60	17.95
34				Rehabilitation of 11L A & 13 to 18 L distribution system of CRMC (Excluding 12L)	23,425.30	12	2.81
35	WRD, Wainganga, Balaghat	Rehabilitation of 6L-11L Distribution system Chambal Right Main Canal.(package YB/CRMC/D-2)		80,937.61	10	8.09	
36	Wainganga	WRD, Wainganga, Balaghat	Restructuring and modernisation of Wainganga Main Canal Ch 0 to 963 and four numbers of distributaries	5,71,054.27	12.46	71.15	
37			Restructuring and modernisation of Mendki Br canal Ch 0 to Ch 1181, Waraseoni Br Canal Ch 0 to Ch 330 alongwith Beni, Thanegaon and Nawegaon distributary	3,89,384.30	15	58.41	
			WRD, Wainganga, Balaghat	Restructuring and modernisation of Wainganga Main Canal Ch 963 to Ch 1356 (WG-6)	2,37,350.11	11.76	27.91
			Seven Divisions	Total	1,78,77,637.51		1,773.40

Appendix 2.26

Statement showing extra cost due to inclusion of excess lead for Black Trap (BT) metal

(Reference: Paragraph 2.2.9.3, Page 61)

(₹ in lakh)

Sl. No.	Name of scheme	Type of scheme	Name of Division	Cost of lead /Km involved	Cost of lead /Km to be involved	Difference of cost (5-6)	Extra cost for BT Metal	Total extra cost per cu m inclusive of item percentage	Quantity of BT metal Executed	Quantity of CC lining Executed	Amount
1	Chambal canal system	Major	WRD, Bhind	581.70/105	297.20/40	284.50	33.80	367.47	21,179.34	0	77.82
2			WRD, Gohad	546.60/96	316.00/44	230.60	33.80	310.22	43,229.83	0	134.11
3				454.20/75	298.54/32	155.66	33.80	211.47	33,803.41	0	71.48
4				463.00/77	214.59/18	248.41	33.80	322	35,593.84	0	114.61
5				414.60/60	244.90/29	169.70	33.80	237.81	29,380.98	0	69.87
6				388.20/60	244.90/29	143.30	33.80	200.85	34,007.10	0	68.30
7	Aoda Tank	Medium		WRD Sheopur	896.70/195	320.70/45	576	0	690.97	22,096.58	25,995.97
8	Chambal canal system	Major	WRD Sheopur	984.20/220	170.70/15	813.50	33.80	934.06	8,161.89	9,602.22	76.24
				984.20/220	170.70/15	813.50	33.80	934.06	331.10	389.33	3.09
10			WRD Sheopur	1,001.70/225	218.40/24	783.30	33.80	875.36	7,571.96	8,908.19	66.28
11			WRD Sheopur	1,001.70/225	218.20/24	783.50	33.80	885.33	758.92	892.85	6.72
				1,001.70/225	218.20/24	783.50	0	878.15	426.61	501.89	3.75
12			WRD Morena	564.20/100	489/83	75.20	0	86.31	58,071.77	68,319.73	50.12
13			WRD Morena	721.70/145	476.20/80	245.50	0	286.04	13,936.06	16,395.36	39.86
14			WRD Sabalgarh	599.20/110	165.83/10	433.37	0	508.13	69,739.85	82,046.88	354.37
15			WRD Sabalgarh	704.20/140	160.20/16	544	0	624.29	29,086.66	34,219.60	181.58
16			WRD Sabalgarh	711.20/142	144.20/10	567	67.60	744.83	5,599.50	6,587.67	41.71
17	WRD Sabalgarh	896.70/195	152.88/5	743.82	67.60	945.14	4,593.28	5,403.86	43.41		
18	WRD Jaura	313.90/90	196.50/46	117.40	0	192.77	44,964.31	52,899.18	86.68		
Total										1,642.68	

Appendix 2.27

Statement showing extra cost due to adoption of rates of earthwork for new works instead of rates for maintenance and repair

(Reference: Paragraph 2.2.9.5, Page 62)

(Amount in ₹)

Sl. No.	Name of scheme	Name of Division	Qty. Executed	Rate quoted by the Contractor	Rate to be taken considering the rate of ` 38	Difference of rate	Extra cost
1	2	3	4	5	6	7 = 5-6	8 = 4*7
1	Baorikheda Tank	WRD, Shajapur	1,092.65	99.99	70.37	29.62	32,374
2	Burlai Tank		20,522.97	50	36.91	13.09	2,68,645.68
3	Bhanya Khedi		12,672	64	38	26	3,29,472.00
4	Kheda New Tank		4,655.22	54	38	16	74,483.52
5	Palay Khurd Tank		8,603	43	38	5	43,015.00
6	Borsali Tank		12,508.40	43	38	5	62,542.00
7	Samli Chaka tank		2,919.99	54	38	16	46,719.84
8	Ranthabhawar Old tank		667.80	54	38	16	10,684.80
9	Bila Dam	WRD, Sagar	5,76,992.08	65	45.74	19.26	1,11,12,867.46
10	Chhapi	WRD, Rajgarh	10,528.06	70	49.26	20.74	2,18,351.96
11	Kasturipura, Kolukhedi & Sanwasara Tank		17,494.29	75	43.93	31.07	5,43,547.59
12	Chambal Canal System	WRD Sheopur	2,61,725.51	54	38	16	41,87,608.16
13	Chambal Canal System		1,67,839	54	38	16	26,85,424.00
14	Wainganga Canal System	WR Wain ganga, Balaghat	6,58,378.11	106.83	78.36	28.47	1,87,44,024.79
15	Wainganga Canal System		6,58,944.88	70	51.34	18.66	1,22,95,911.46
16	Wainganga Canal System		60,004.97	92.12	67.56	24.56	14,73,722.06
Total		Five Divisions	24,75,548.93				5,21,29,394.30

Appendix 2.28
Statement showing non-deduction of Additional Security Deposit
(Reference: Paragraph 2.2.9.9, Page 65)

(₹ in lakh)

S. No.	Name of scheme	Type of scheme	Name of Division	Name of work	PAC	Amount of unbalanced bid to be submitted	Amount submitted for unbalanced bid	Short submission	Date of Work Order	Date of completion	Total Days	Interest leviable
1	Baorikheda Tank	Minor	WRD, Shajapur	Reconstruction and Modernization of Head works and canals of Baodikheda tank	73.11	5.78	0	5.78	8/14/2013	6/21/2015	676	1.28
2	Burlai Tank	Minor		Reconstruction and Modernization of Head works and canals of Burlai tank	68.48	11.12	0	11.12	3/5/2014	6/26/2015	478	1.75
3	Bila Dam	Medium	WRD, Sagar	Restructuring and modernization of Bila Tank.	1947.1	234.11	11.71	222.4	8/16/2013	6/20/2015	673	49.21
4	Chhapi	Medium	WRD, Rajgarh	Restructuring of Head Works and canals structures of Chhapi Dam.	339.48	30.13	1.51	28.62	1/20/2011	7/10/2012	537	5.05
5	Chandna Tank	Minor	WRD, Raisen	Restructuring and modernization of head work and canal of Chandna tank	70.94	2.25	0	2.25	5/4/2013	5/5/2015	731	0.54
6	Chambal Canal System	Major	WRD, Morena	Restructuring and modernisation of Balance reaches of Ambah branch canal from km 36.11 to 83.00km under package no ABC 07BR	2062.09	186	0	186	2/24/2014	6/22/2015	483	29.54
7	Chambal Canal System	Major	WRD, Morena	Rehabilitation of Ambah Branch Canal from RD 0.00 km to RD 71.500 km and construction of syphon at RD 1300 meter of ABC	3000	162.75	0	162.75	7/16/2012	1/15/2015	913	48.85
8	Chambal Canal System	Major	WRD, Morena	Restructuring 22L, 30L, 31L distribution system of Ambah Branch Canal and construction of Barana escape and Revine protection and repair of HR (12 R to 29 R of ABC)	1283	49.5	0	49.5	10/26/2012	9/4/2015	1043	16.97
9	Chambal Canal System	Major	WRD, Morena	Restructuring & Modernisation of Ambah Branch Canal from RD Km 147.279 to 162.637 and 60 R and 61 R distributaries of ABC	1071.6	24.13	0	24.13	5/27/2013	5/26/2015	729	5.78

S. No.	Name of scheme	Type of scheme	Name of Division	Name of work	PAC	Amount of unbalanced bid to be submitted	Amount submitted for unbalanced bid	Short submission	Date of Work Order	Date of completion	Total Days	Interest leviable
10	Chambal Canal System	Major	WRD, Jaura	Rehabilitation of 1R to 21R of 21L/MBC Distribution system of Morena Branch Canal (Package No.MBC-5)	865.74	17.54	0	17.54	5/26/2012	12/9/2013	562	3.24
11	Chambal Canal System	Major	WRD, Jaura	Rehabilitation of 21L distributary of Morena Branch Canal	1426.42	118.72	0	118.72	7/27/2012	11/26/2014	852	33.25
12	Chambal Canal System	Major	WRD, Jaura	Restructuring of 2R to 20R & 22R/MBC Distribution system Morena Branch Canal (Package No. MBC -02)	1277.81	44.17	0	44.17	10/22/2012	4/20/2015	910	13.21
13	Chambal Canal System	Major	WRD, Sheopur	Rehabilitatioin of CRMC from km 0 to km 60	9170	1762	60.52	1701.48	11/15/2007	6/30/2013	2054	1148.99
14	Chambal Canal System	Major	WRD, Sheopur	Restructuring of Aoda Dam and its canal system	2748.81	163	0	163	11/1/2012	6/30/2015	971	52.03
15	Chambal Canal System	Major	WRD, Sheopur	Execution of works of restructuring of distributories and minors 1L to 5L Distributories of CRMC under MPWSRP	870.98	11.17	0	11.17	5/9/2012	5/30/2014	751	2.76
Seven divisions				Total				2748.63				1412.45

Appendix 2.29

Statement showing non/short levy of liquidated damages

(Reference: Paragraph 2.2.9.10, Page 66)

(₹ in lakh)

Sl. No.	Name of scheme	Type of scheme	Name of Division	Name of work	Delay in completion of work	LD leviable	Amount recovered on account of LD	Amount of LD to be recovered
1	Chambal canal system	Major	WRD, Bhind	The most essential work in Bhind Main Canal Ch. 902 to 2565 and its distributaries and minors with resectioning and repairing of structures	15 months	20.23	0.15	20.08
2	Karmodia Tank	Minor	WRD, Raisen	Restructuring and modernisation of Karmodia tank and their canal system.	25 months	27.54	0	27.54
3	Ratapani Tank	Minor		Construction of Ratapani Tank and canal system	48 months	67.49	0	67.49
4	Banchore Tank	Minor		Construction of Banchod Tank and canal system	48 months	43.87	0	43.87
5	Chambal canal system	Major	WRD, Sheopur	Rehabilitation of CRMC from km 0 to km 60	959 days	835	0	835
6	Chambal canal system	Major	WRD, Sheopur	Rehabilitation of 6L-15L Distribution system Chambal Right Main Canal	60 days	11.13	9.83	1.29
7	Chambal canal system	Major	WRD, Sheopur	Rehabilitation of CRMC from km 60 to km 93 (Slice 1A)	Contract terminated	529.99	89.92	440.07
8	Wainganga Canal System	Major	WRD, Wainganga, Balaghat	Restructuring and modernisation of Wainganga Main Canal Ch.963 to Ch 1356	630 days	153	0	153
9	Jamunihai and Bhaiswar tank	Minor /Medium	WRD, Satna	Restructuring and modernisation of head work and canals of Jamunihai and Bhaiswar tank	13 months (work is still incomplete)	22.17	0	22.17
Total						1,710.42	99.90	1,610.51

Appendix 2.30

Statement showing non-observance of royalty charges

(Reference: Paragraph 2.2.9.11, Page 67)

(₹ in lakh)

Sl. No.	Name of scheme	Type of scheme	Name of Division	Name of work	Amount of Royalty to be deducted	Amount of FDR obtained	Difference
1	Chambal canal system	Major	WRD, Bhind	Modernisation of Bhind Main Canal Km 40.88 to 78.18 Km	131.79	101.00	30.79
2				The restructuring and modernisation of D3 distributary of Bhind Main Canal and 3 L of Bhind Main Canal RD m 0 to RD m 24841	38.39	38.39	0.00
3				The restructuring and modernisation of Bhind Main Canal from RD km 27.5 to RD km 40.88 with additional work of strengthening and additional work of modernisation of 5 R distributary of BMC	30.15	30.15	0.00
4			WRD, Gohad	The restructuring and modernisation of left tail distributary of MOU branch canal km 00 to km 27.90 (Package BMC/8/BR)	187.34	93.00	94.34
5				The restructuring and modernisation of balance reaches of MOU branch canal between km 00 to km 45.50 (Package BMC/7/BR)	70.50	47.90	22.60
6				The restructuring of Maou Branch Canal Km 00 to km 45.50	22.29	22.29	0.00
7	Chambal canal system	Major	WRD, Sabalgarh	Rehabilitation of Chambal Right Main Canal (KM 93 to KM 169) slice 1(b)	83.12	83.12	0.00
8	Chambal canal system	Major	WRD, Morena	Restructuring and modernisation of Balance reaches of Ambah branch canal from km 36.11 to 83.00 km under package no ABC 07BR	59.65	0.00	59.65
Total					623.23	415.85	207.38

Appendix 2.31
Statement showing details of insurance of works
(Reference: Paragraph 2.2.9.12, Page 68)

(₹ in lakh)

Sl. No.	Name of scheme	Type of scheme	Name of Division	Name of work	Premium deductible	Insurance coverage provided	Non-coverage/short coverage
1	Chambal canal system	Major	WRD, Bhind	Modernisation of Bhind Main Canal Km. 40.88 to 78.18	79.59	0	79.59
2			WRD, Gohad	The restructuring and modernisation of Bhind Main Canal km 12 to 27.50 km	67.16	0	67.16
3				The restructuring of Maou Branch Canal Km 00. to 45.50	62.14	0	62.14
4	Nagda	Minor	WRD, Dewas	Restructuring and modernisation of Head work and canal system of Nagda Tank	3.27	0	3.27
5	Karmodia Tank		WRD, Raisen	Restructuring and modernisation of Karmodia tank and their canal system.	11.12	0	11.12
6	Banchore Tank			Construction of Banchod Tank and canal system	11.51	0	11.51
7	Ratapani Tank			Construction of Ratapani Tank and canal system	14.97	0	14.97
8	Chandna Tank			Restructuring and modernisation of head work and canal of Chandna tank	1.44	0	1.44
9	Baorikheda Tank		WRD, Shajapur	Restructuring and modernisation of head work and canals of Baodikheda tank.	1.61	0	1.61
10	Burlai Tank			Reconstruction and Modernisation of Head works and canals of Burlai tank	1.87	0	1.87
11	Chillar Tank		Medium	WRD, Shajapur	Restructuring and modernisation of Chillar Tank and its Canal system (NT-9)	14.26	0
12	Bila Dam	WRD, Sagar		Restructuring and modernisation of Bila Tank.	51.07	0	51.07
13	Chhapi			Restructuring of Head Works and canals structures of Chhapi Dam.	8.53	0	8.53
14	Amanpur, Deopur Tank	Minor	WRD, Rajgarh	Restructuring and modernisation of Head Works and canals Amanpur and Deopur Tank	2.69	0	2.69
15	Kasturipura, Kolukhedi & Sanwasara Tank			Restructuring and modernisation of head work and canals of Kasturipura Tank, Sanwasara Tank and Kolukhedi Tank.	2.46	0	2.46
16	Chambal canal system	Major	WRD, Sabalgarh	Rehabilitation of 19L to 27L Dy./CRMC Package 7	1.35	0.76	0.59

Sl. No.	Name of scheme	Type of scheme	Name of Division	Name of work	Premium deductible	Insurance coverage provided	Non-coverage/short coverage
17			WRD, Jaura	Rehabilitation of 1R to 21R of 21L/MBC Distribution system of MBC (Package No.MBC-5)	3.95	0	3.95
18			WRD, Morena	Restructuring & Modernisation of ABC from RD km 147.279 to RD km 162.637 and 60 R and 61 R distributaries of ABC	28.76	0	28.76
19			WRD, Morena	Restructuring and modernisation of 32R and 34 L to 58 R distributaries of ABC Package ABC-4	49.88	0	49.88
20			WRD Sheopur	Restructuring of Aoda Dam and its canal system.	9.01	6	3.01
21			WRD Sheopur	Execution of works of restructuring of distributaries and minors 1L to 5L Distributaries of CRMC under MPWSRP	1.72	1.15	0.57
22			WRD Sheopur	Rehabilitation of 6L-11L Distribution system Chambal Right Main Canal.(package YB/CRMC/D-2)	1.31	1.12	0.19
23			WRD Sheopur	Rehabilitation of 11L A & 13 to 18 L distribution system of CRMC (Excluding 12L)	0.94	0.47	0.47
24	Kulgarhi	Medium	WRD Satna	Restructuring & modernisation of Kulgarhi tank, Dubra tank, Amkoi Tank, RamniSagar, and Tumin tank	12.35	0	12.35
25	Sehra	Minor	WRD Satna	Restructuring & modernisation of Sehra diversion weir, Gaibar diversion weir, Chakra diversion tank, Khajuria tank and its canal GB-4,	3.38	0	3.38
26	Singhpur		WRD Satna	Restructuring & modernisation of Head work & canal of Singhpur & Chhidua Tank Package	6.94	0	6.94
27	Jamunihai & Bhaiswar	Medium	WRD Satna	Restructuring & modernisation of Jamunihai & Bhaiswar Tank	4.92	0	4.92
28	Liljee		WRD Satna	Restructuring & modernisation of liljee tank & canal system	3.17	0	3.17
29	Birhana	Minor	WRD Satna	Restructuring & modernisation of Birhana tank	4.38	0	4.38
Total					488.01	9.50	478.51

Appendix 2.32

Statement showing non-deduction of shrinkage allowance

(Reference: Paragraph 2.2.9.14, Page 68)

(₹ in lakh)

Sl. No.	Name of scheme	Type of scheme	Name of Division	Name of work	Executed quantity in cu m	Non-deduction of shrinkage allowance at the rate of 10 per cent of quantity of earthwork	Rate of earthwork	Total excess payment
1	Chambal canal system	Major	WRD, Gohad	The restructuring and mordenisation of D3 distributory of Bhind Main Canal and 3 L of Bhind Main Canal RD 0 to 24841 M	7,78,582.03	77,858.20	50	38.92
2				The restructuring and mordenisation of Bhind Main Canal km 0 to 12 and the feeder channel 0 to 1.7 km	4,19,909.17	41,991.00	69.50	29.18
					47,825.43	4,783.00	68.55	3.27
3				The restructuring and mordenisation of Bhind Main Canal km 12 to 27.50	3,95,767.28	39,576.73	70.20	27.78
4				The restructuring and mordenisation of balance reaches of MOU branch canal between 00 km to 45.50 km (Package BMC/7/BR)	3,05,466.29	30,546.62	45	13.74
5	The restructuring and mordenisation of balance reaches of MOU branch canal between 00 km to 45.50 km (Package BMC/7/BR)	6,46,728.57	64,672.86	60	38.80			
Total					25,94,278.77			151.69

Appendix 2.33

Statement showing undue financial aid to the contractors for core tests

(Reference: Paragraph 2.2.10.3, Page 70)

(Amount in ₹)

Sl. No.	Name of Division	Name of Work	Agreement No Period	Amount Paid	Full rate of lining per cu m	80 per cent rate of lining per cu m	Difference in rates per cu m	Quantity executed (in cu m)	Irregular payments
1	WRD Dewas	Restructuring and mordenisation of Head work and canal system of Nagda Tank Project	05/2013-14 24 months	180.77	4,206	3,364.80	841.20	182.86	1,53,821.83
2	WRD Dewas	Restructuring and modernisation of Head work and Canals of Momanpura tank	04/2013-14 24 months	117.98	2,800	2,240.00	560.00	362.64	2,03,078.40
		Side slopes			3,700	2,960.00	740.00	1122.34	8,30,531.60
3	WRD Raisen	Construction of Banchod Tank and canal system under MPWSRP	223/2009-10 24 months	315.48	3,741	2992.80	748.20	3556.72	26,61,137.90
4	WRD Shajapur	Restructuring and modernization of Chillar Tank and its Canal system (NT-9)	02/2014-15 15 months	861.10	5,500	4,400.00	1100.00	7374.9	81,12,390.00
5	WRD Rajgarh	Restructuring and modernization of Head Works and canals Amanpur and Deopur Tank	07/2013-14 24 months	95.34	3,680	2,944.00	736.00	60.29	44,373.44
		Side slopes			4,250	3,400.00	850.00	281.63	2,39,385.50
6	WRD Sabalgarh	Rehabilitation of Lower Main Canal between km 0 and km 50 (lining work) Package No LMC 01 AW	02/2012-13	405.14	4,545	3,636.00	909.00	8417.48	76,51,489.32
7	WRD Wainganga Balaghat	Restructuring and modernisation of Wainganga Main Canal Ch 0 to 963 and four numbers of distributaries	05/2013-14	2,278.00	4,754.10	3,803.00	951.10	47916.17	4,55,73,069.29
8	WRD Wainganga Balaghat	Restructuring and modernisation of Wainganga Main Canal Ch 963 to Ch 1356 (WG-6)	04/2013-14	884.00	4,900	3,920.00	980.00	18043.375	1,76,82,507.50
9	WRD, Satna	Restructuring and modernisation of head work and canals of Jamunihai and Bhaiswar tank	5A/2013-14	96.35	5,000	4,000.00	1,000.00	1927.16	19,27,160.00
10	WRD, Gohad	The restructuring and mordenisation of left tail distributory of MOU branch canal Km 00. to 27.90 (Package BMC/8/BR)	05/2013-14 20 months	246.09	5,500	4,400.00	1,100.00	44743.23	4,92,17,553.00
11	WRD, Gohad	The restructuring and mordenisation of Bhind Main Canal km 0 to 12 and the feeder channel		180.71	4,544.10	3,635.28	908.82	39,768.72	3,61,42,608.11

Sl. No.	Name of Division	Name of Work	Agreement No Period	Amount Paid	Full rate of lining per cu m	80 per cent rate of lining per cu m	Difference in rates per cu m	Quantity executed (in cu m)	Irregular payments
		0 to 1.7 km							
12	WRD, Gohad	The restructuring and mordenisation of balance reaches of MOU branch canal between 00 km to 45.50 km (Package BMC/7/BR)	04/2013-14 20	171.10	4,950.00	3,960.00	990.00	34,565.87	3,42,20,211.30
	Total							2,08,323.44	20,46,59,317.20

Appendix 2.34

Statement showing undue financial aid to the contractors for non-conforming core test results

(Reference: Paragraph 2.2.10.3, Page 70)

(Amount in ₹)

Sl. No.	Name of Division	Name of Work	Required compressive strength as per design mix (Kg/sq cm)	Compressive strength of cube test (Kg/sq cm)	compressive strength of core test(Kg/sq cm)	Full rate of lining per cu m	Quantity executed (in cu m)	Paid Amount	Irregular payment (20 per cent of paid amount)
1	WRD Gohad	The restructuring and mordenisation of Bhind Main Canal km 12 to 27.50 km	209.00	180.97-186.30	more than 200	4,554	41,875.11	19,06,99,251	3,81,39,850.19
2	WRD Sabalgarh	Execution of works in Lower Main Canal	207.75	163.7 - 191.94	116.70 - 153.0	5,175	82,046.88	42,45,92,604	8,49,18,520.80
3	WRD Sabalgarh	Rehabilitation of Chambal Right Main canal (km 93 to km 169) slice 1B	267.40	120.78 - 201.39	103.82 - 154.69	3,100	96,256.08	29,83,93,848.00	5,96,78,769.60
4	WRD Jaora	Rehabilitaion of Morena Branch Canal from Km 0 to Km 36.10	240.00	187.33 - 220.44	184.30 - 210.06	3,645	52,919.19	19,28,90,447.6	3,85,78,089.51
5	WRD Jaora	Rehabilitation of 21 L distributary of Morena Branch Canal	208.00	182.78 - 203.70	178 - 199	4,466.07	16,213.49	7,24,10,581.28	1,44,82,116.26
6	WRD Sheopur	Restructuring and modernisation of balance reaches of CRMC from km 0 to km 60	207.75	NA	120- 130	3,700	67,057.46	24,81,12,602	4,96,22,520.40

Sl. No.	Name of Division	Name of Work	Required compressive strength as per design mix (Kg/sq cm)	Compressive strength of cube test (Kg/sq cm)	compressive strength of core test (Kg/sq cm)	Full rate of lining per cu m	Quantity executed (in cu m)	Paid Amount	Irregular payment (20 per cent of paid amount)
7	WRD Sheopur	Execution of works in rehabilitation CRMC from km 60 to km 93	227.00	NA	114.5 - 135.6	3,819.24	59,738.23	22,81,54,637.50	4,56,30,927.51
8	WRD Sheopur	Restructuring and modernisation of 12 L distributary of CRMC	219.57	212.29 - 220.08	109.87 - 128.48	4,600	8,908.19	4,09,77,674	81,95,534.80
9	WRD Wainganga Balaghat	Restructuring and modernisation of Mendki Br canal Ch 0 to Ch 1181, Waraseoni Br Canal Ch 0 to Ch 330 alongwith Beni, Thanegaon and Nawegaon distributary	150.00	152.59 - 158.51	151.3 - 161.0	5,100	31,827.29	16,23,19,179	3,24,63,835.80
Total						38,159.31	4,56,841.92	1,85,85,50,824.38	37,17,10,164.87

Appendix 3.1

Statement showing details of survey and investigation in test checked estimates of road works

(Reference: Paragraphs 3.1.1.1, 3.1.2.1 and 3.1.2.2, Page 77)

Sl. No.	Division	Name of Road	PAC ¹ (in lakh)	Based on SOR	Length of road (in m)	Type of road ²	Traffic survey/ Abstract (Y/A) ³	Bench mark & Levels taken/not taken	Crust design made/not made
1	Neemuch	Construction of Singoli Tilsma road	696	Apr 09	9,600	ODR/N	Yes	Yes	Yes
2		Construction of Kukdeshwar- Hanumantiya- Bhatkhedi	558	Apr09	8,650	V/N	Yes	Yes	Yes
3		Construction of Athwakala to Tokara Via Sehna Talai	1,191	Feb13	16,620	V/N	Yes	Yes	Yes
4		Construction Work of Pirana to Jeeran road	134	Feb13	2,700	V/S	No	No	No
5		Construction of Bhadwamata Pipaliya Raoji road	123	Feb13	4,100	ODR/S	Yes	No	Yes
6		Construction of Sawan to Bhadwamata road	255	Apr09	4,420	V/N	Yes	No	Yes
7		Construction of Sarwaniyamaharaj to Mailankheda road	246	Apr09	5,540	V/N	Yes	No	Yes
8		Construction of Alhed to manasa Road	58	Feb13	2,300	V/S	Yes	No	Yes
9	Indore-1	Construction of Bagoda Memdi to Simrol road	234	Feb 13	4,200	V/U	Yes	No	Yes
10		Improvement of Janapav Approach road	231	Apr09	2,000	V/S	No	No	No
11		Construction of Beka-Raskundiya-Kulthana road	677	Apr09	9,500	V/N	Yes	No	Yes
12		Construction of Devguradiya Kampel Double Chouki road	5,085	Feb13	36,650	MDR	Yes	Yes	Yes
13		Construction of Bijalpur-Nihalpurmundi-Morod-Khandwa	987	Feb13	10,280	V/N	Yes	Yes	Yes
14		Construction of Khemna- Ankya- Gogakhedi road	519	Apr09	7,310	V/N	Yes	No	Yes
15		Construction of Old AB Road to Bye pass road	264	Feb13	2,500	ODR/N	Y/A	No	Yes
16		Construction of Mhow-Bhagora-Kalakund road	989	Apr09	15,200	V/N	Yes	Yes	Yes
17		Construction of Simrol to Udaynagar road	390	Apr09	9,300	MDR	No	No	No
18		Construction of Kampel Undel Semliya Karadiya Khandel	874	Apr09	12,000	V/N	Yes	Yes	Yes
19		Construction of Kodriya Chouradiya to Patalpani Ashapura	1,400	Feb13	15,900	V/N	Yes	No	Yes
20		Construction of Khajrana Dargah (Eliyas colony) to Bypass	258	Feb13	1,500	ODR/N	Yes	No	Yes
21	Vidisha	Construction of Jhirniya Sonther Hardiya Devrajpur road	891	Apr09	25,000	V/N	Y/A	No	Yes
22		Widening & Strengthening of Karariya – Shamshabad road	2,770	Apr09	37,800	MDR	Yes	No	Yes

¹ PAC – Probable Amount of Contract

² National Highway (NH), Major District Road (MDR), Other District road (ODR), Village road (V), New road (N) and Up-gradation of road (U)

³ Y/A - Count of traffic survey was not given in days wise instead only abstract of traffic counts was shown in estimates.

Sl. No.	Division	Name of Road	PAC ¹ (in lakh)	Based on SOR	Length of road (in m)	Type of road ²	Traffic survey/ Abstract (Y/A) ³	Bench mark & Levels taken/not taken	Crust design made/not made	
23		Construction of Davpur Mugalsarai road	1000	Feb13	11,000	V/U	Yes	No	Yes	
24		Construction of Noulas to Bawalia Kherua Berkhedha Gambhir road	369	Apr09	7,500	V/N	Y/A	No	Yes	
25	Vidisha	Widening and strengthening of Ganjbasoda Berath (Udaipur) road	1,435	Apr09	16,300	MDR	Yes	No	Yes	
26		Construction of Madipur Nadour Ambar Naulas road	446	Apr09	12,000	V/N	Yes	Yes	Yes	
27		Construction of Banti Nagar Vidisha to Russala, Tharr, Mundra road	612	Apr09	17,000	V/N	Y/A	No	Yes	
28		Construction of Mahavan Bhatoli Chanderi road	454	Apr07	18,000	V/N	Y/A	No	Yes	
29		Construction of Jawati Nisobarri Nainwas to Mohanpur	558	Apr09	12,400	V/N	Yes	Yes	Yes	
30		Construction of Dyanandpur road via Boriya Kachi kheda road	368	Apr09	9,600	V/N	Y/A	Yes	Yes	
31		Strengthening and widening work of Gurod-Pipaldhar road	1,283	Apr09	22,000	V/U	No	Yes	No	
32		Construction of Tharr, Nitarr, Bhadora, Tilak, Mudra Ahmadpur	552	Apr09	14,200	V/N	Yes	No	Yes	
33		Construction of Dehripama, Raipura to Barod road.	444	Apr09	11,500	V/N	Yes	Yes	Yes	
34		Phupher – Nichoran wardha- Maniya- Barkhedha road	1,983	Feb13	31,950	V/N	Yes	Yes	Yes	
35		Bagrod Chouraha to Maser road	691	Apr09	17,400	V/N	No	Yes	No	
36		Lashkarpur approach road and Pooranpura road to Ahmadpur road	455	Apr09	8,020	V/N	Yes	No	yes	
37		Imloada to Chiravta Sirsavali Sanai road	614	Apr09	19,000	V/N	Y/A	No	Yes	
38		Durganagar Sarasvati School to Bhauriya road	233	Apr08	9,000	V/N	Yes	No	yes	
39		Kurwai Baourasha Crossing to Berkhedha road	1,293	Apr09	30,200	V/N	Yes	Yes	yes	
40		Pathari to Kiraskhedha Batiyabada road	387	Apr07	17,800	V/N	Y/A	No	No	
41		Grant to Bala-Barkhedha-karela-Satdhara- Bhopal road	968	Apr08	26,000	V/N	Yes	No	yes	
42		Sehore	Strengthening of Ichchawar Ramnagar Road	363	Apr09	10,600	MDR/S	No	No	No
43			Construction of Dudlai Rupadeh to Rupdi road	113	Apr09	2,120	V/N	Yes	No	Yes
44			Construction of Dhupadiya to Chachakhedi	246	Apr09	3,600	V/N	Yes	No	Yes
45	Widening and strengthening of Sehore Narsingharh Road		1,127	Jun 09 CRF	28,400	MDR/U	Yes	Yes	Yes	
46	Construction of Bilkisganj (Pani ki tanki) to Bamalgarh via Gadiya Road		489	Apr09	8,900	V/N	Y/A	Yes	Yes	
47	Construction of Siddiquiganj to Illai Dehmat road		344	Feb13	6,300	V/N	Yes	Yes	Yes	
48	Construction of Rupadeh to Gadiya		282	Apr09	4,860	V/N	Yes	No	Yes	
49	Construction of Lasuldiya Parihar to Bijlon Road		243	Feb13	5,100	V/N	Yes	No	Yes	
50	Construction of Brakheda Hasan To Dehri Road		410	Apr09	3,560	V/U	Yes	Yes	Yes	
51	Construction of Brakheda Hasan To Naihedi Road				3,600	V/U	Yes	Yes	Yes	
52	Construction of Brakheda Hasan To Suhakhedi Road				2,600	V/U	Yes	Yes	Yes	
53	Construction of Jahangirpura to Devasthan Dargah Road	367			Apr09	3,700	V/U	Yes	Yes	Yes

Sl. No.	Division	Name of Road	PAC ¹ (in lakh)	Based on SOR	Length of road (in m)	Type of road ²	Traffic survey/ Abstract (Y/A) ³	Bench mark & Levels taken/not taken	Crust design made/not made
54	Sehore	Construction of Chapri Khurd to Chapari Kala Road	372	Apr09	2,310	V/U	Yes	No	Yes
55		Construction of Kharpa to Hedarganj Road			2,350	V/U	Yes	No	Yes
56		Construction of Tumda To Tajamrod Road			3,140	V/U	Yes	Yes	Yes
57		Construction of Kulash kala to Barbakhedi Road			4,200	V/U	Yes	Yes	Yes
58	Sehore	Construction of Ichhawar Kheri road	170	Apr09	9,000	V/N	Yes	No	Yes
59	Sagar	Upgradation of Banda Bara Kerbana road	1,386	Feb13	26,740	MDR/U	No	No	Yes
60		Construction of Devri Kesli (Sanjay Nikunj) road	294	Apr09	6,200	ODR/N	Yes/A	No	Yes
61		Construction of Bandri Bandabara Kerbana road	3,277	Apr09	38,740	MDR	No	Yes	Yes
62		Construction of Berkhedhi Mohali Tinsia road	301	Apr08	9,000	V/N	NO	Yes	NO
63		Construction of Silodha Chandpur Mudri road	350	Apr09	6,160	V/N	Yes	No	Yes
64		Construction of NH-26 to Devri road	402	Apr08	12,000	V/N	Y/A	NO	Yes
65		Construction of Semra-Bhojar-Persoria	297	Feb13	13,600	V/N	NO	No	No
66		Construction of Garhakota Bye Pass Road (Garhakota Town Road)	530	Feb13	4,000	ODR/N	Yes	No	Yes
67		Construction of Chanatoriya to Karrapur road	715	Feb13	7,200	V/N	Yes	No	Yes
68		Construction of Sihora-Lotna-Lotni-Ramchhayar-arayawali	621	Apr08	17,000	V/N	No	No	NO
69		Upgradation of Khurai Rajwans Road	661	Item rate	14,000	V/U	NO	Yes	NO
70		Construction of Padrai Basan Mahuakheda Karhad Road	492	Apr08	13,500	V/N	Yes	Yes	Yes
71		Construction of Nowgaon Barodiya Ghat, Mohasa, Kethni	559	Apr09	9,720	V/N	Yes	NO	Yes
72		Up-gradation/Construction of Semrabagh Jinda Fourlane Road	516	Feb13	6,600	V/N	Yes	No	Yes
73		Construction of Ghatampur-Khand-Piprai-Dudhonia Road	327	Apr09	9,000	V/N	Yes	Yes	Yes
74		Construction of Salaiya-Khaderabhan-Richawar-Saikheda Road	470	Apr09	12,000	V/N	Yes	No	NO
75		Construction of Bhainswahi-Chandrapura-Bailaimafi Road	406	Apr09	10,000	V/N	Yes	No	Yes
76		Construction of Mangarh-Shahpur-Murga-Dhura Road	419	Apr09	10,500	V/N	Y/A	No	Yes
77		Construction of Tundari-Dhultara Road	424	Apr09	8,500	V/N	Y/A	Yes	Yes
78		Construction of Bina-Barha-Reechhai Road	432	Apr09	8,000	V/N	Yes	Yes	Yes
79		Upgradation/Strengthening work of NH-26 in Sagar town	748	Feb 13	9,250	NH/U	Yes	No	Yes
80		Construction of Mokulpur-Udayapura-Versala-Bansiya Road	434	Apr09	9,000	V/N	Y/A	Yes	Yes
81		Construction of Deori-Saraiwan Road	1,427	Feb13	18,000	V/N	Yes	Yes	Yes
82		Construction of Baxwaha-Nainagir-Dalpatpur Road length	1,086	Feb13	13,200	V/N	Yes	Yes	Yes
83		Upgradation/Construction of Banda-Baraytha-Girar Road	2,663	Feb13	34,000	MDR	Y/A	Yes	Yes
84		Widening and Upgradation of Town road Rehli	554	Feb13	3,500	V/U	Yes	No	Yes
85		Construction of Ganeshganj-Sojnowar-Tarha Road	677	Feb13	9,500	V/N	Yes	No	Yes

Sl. No.	Division	Name of Road	PAC ¹ (in lakh)	Based on SOR	Length of road (in m)	Type of road ²	Traffic survey/ Abstract (Y/A) ³	Bench mark & Levels taken/not taken	Crust design made/not made
86		Construction of Dhana-Hilgan to Khaderabhan-PipariyaVaidh	466	Apr09	10,500	V/N	Y/A	No	Yes
87	Damoh	Construction of Rajpura Chouriya Shahgarh road	657	Apr08	22,000	V/N	Y/A	Yes	Yes
88		Construction of Hinoti Bhuri Badyau road	569	Feb13	8,200	V/N	Y/A	No	Yes
89		Construction of Mehguwan Kuwakhoh road	446	Apr09	7,640	V/N	Yes	Yes	Yes
90		Construction of Bandha-Imaliya-Maheba-Rashilpur (New) Road	591	Apr08	18,700	V/N	Y/A	Yes	Yes
91		Damoh	Construction of Gaisabad Adanwara Waleh Bhaisa Raneh	982	Apr09	20,400	V/N	Yes	Yes
92	Damoh	Strengthening/Widening of Damoh Town Jail to Rest House	1,012	Feb13	1,000	ODR/U	Yes	No	Yes
93		Strengthening/Widening of Damoh Circuit House approach road			1,500	ODR/U	Yes	No	Yes
94		Strengthening/Widening of Damoh Jamunia Balakot road			2,200	ODR/U	No	No	No
95		Strengthening/Widening of Damoh Teen Gulli to Imlai bye pass			4,000	ODR/U	Yes	No	Yes
96		Strengthening/Widening of Damoh Overbridge to Muktidham			1,400	ODR/U	Yes	No	Yes
97		Strengthening/Widening of Damoh Sagar to Batiyagarh bye pass			2,400	ODR/U	Yes	No	Yes
98		Construction of Hathni Imaliya Jhapan road			2,861	Apr09	35,400	MDR	Yes
99	Construction of Hatta(Chandiji Mandir) to Bhidari Approach	250	Feb13	2,500	V/N	Yes	No	Yes	
100	Construction of Hatta Manpura Kalkua Raneh Road	769	Feb13	13,600	V/N	No	No	No	
101	Construction of Batiyagarh Khaderi Kerbana road	1,386	Apr09	21,000	MDR	Yes	Yes	Yes	
102	Strengthening of Sakha – Patna road	258	Apr09	6,600	V/U	No	No	No	
103	Construction of Patahariya Kindroh Jerath Road	2,193	Feb13	21,000	V/N	Yes	No	Yes	
104	Construction of Patheriya Kerbana road	1,284	Apr09	15,000	MDR	Yes	Yes	Yes	
105	Balaghat	Construction of Birsa Mararitola Sakha Suktara road	696	Apr09	11,000	V/N	No	Yes	No
106		Up-gradation of Birsa to Damoh road	2,252	Feb13	20,000	MDR	Yes	Yes	Yes
107		Construction of Dahedi Bhalwa road	241	Apr09	6,200	V/N	Y/A	No	Yes
108		Construction of Batarmara Khara Chhindgaon	202	Apr09	6,000	V/N	Y/A	No	Yes
109		Upgradation of Birsola-Khamaria-Khursodi Road	220	Apr09	7,840	V/N	Y/A	No	Yes
110		Construction of Kope-Pujaritola-Nahartola-Katanghari-Sawangi	868	Apr09	17,775	V/N	No	Yes	No
111		Construction of Sihora-Sihoratola-Deogaon Road	270	Feb13	3,500	V/N	Y/A	NO	Yes
112		Construction of Khairlangi Ghubadgoni road	270	Apr09	4,520	V/N	Y/A	Yes	Yes
113		Construction of Khairi Gonditola Sawri road	417	Apr09	7,340	V/N	Y/A	Yes	yes
114		Construction of Bharveli Bagholi Ameda road	147	Apr09	4,200	V/U	Y/A	No	Yes
115		Upgradation of Balaghat-Beni(Rengatola-Changera-Beni)	420	Apr09	10,000	V/U	Y/A	No	Yes
116		Upgradation/Construction of Atri to Aarambha Road	215	Apr09	3,000	V/U	Y/A	Yes	Yes
117		Upgradation of Bothali Bahelaroad I	176	Apr09	5,800	V/U	Y/A	No	Yes

Sl. No.	Division	Name of Road	PAC ¹ (in lakh)	Based on SOR	Length of road (in m)	Type of road ²	Traffic survey/ Abstract (Y/A) ³	Bench mark & Levels taken/not taken	Crust design made/not made
118		Upgradation of Internal roads of Balaghat City	823	Apr09	10,200	ODR/U	Y/A	No	Yes
119		Construction of Katangi-Nandora road	1,111	Feb13	14,000	V/U	Y/A	Yes	Yes
120		Up-gradation of Kanhadgaon- Chichgaon road	237	Apr09	6,100	V/U	Yes	No	Yes
121		Upgradation of Birsa Bhatlai Dudhi Sakha road	178	Apr09	3,500	V/U	Yes	No	Yes
122		Construction of Karod to Persoda road	221	Apr09	5,340	VR/N	Yes	Yes	Yes
123		Construction of Khejara to Karod Via Nainsuhaya Road	331	Apr09	7,180	VR/N	Yes	No	Yes
124		Construction of Guna Umri Sirsi Sonkhara to Gadla Ujari	289	Apr09	5,900	VR/N	Y/A	Yes	Yes
125		Construction of Mudra to Khejra Guruji via kanera Veerakhedi	586	Feb13	9,300	VR/N	Yes	Yes	Yes
126		Construction of Sirsi to Musredi via Badera road	463	Apr 09	13,500	VR/N	Y/A	NO	Yes
127		Construction of Markimau to Chandera via Banskhedhi	606	Feb13	7,350	VR/N	Y/A	Yes	Yes
128	Guna	Construction of Sirsi to Saretha Road	854	Apr09	12,240	VR/N	Y/A	Yes	Yes
129		Construction of Lahrecha to Jateri Road	296	Feb13	4,000	VR	NO	NO	No
130		Construction of Bhurachak to Dhanoriya Via Ukwadhurd	227	Apr09	5,400	VR/N	Yes	No	Yes
131		Construction of Berkhedhi Muradpur Road to Dharnawada	577	Feb 13	10,200	VR/N	Yes	Yes	Yes
132		Construction of Bhoura Meenapura Bamori Bishanwada	824	Jun09 CRF	23,100	MDR	Yes	NO	Yes
133		Construction of Amrod to Nonera Road	274	Feb13	5,940	VR/N	Yes	Yes	Yes
134		Construction of Kumbhraj to Ramtekri Road	503	Apr09	11,500	VR/N	Yes	Yes	Yes
135		Construction of Anarad to Nihal Devi Road	2,095	Feb13	45,400	VR/N	yes/A	NO	Yes
136		Construction of Gangeo-Phool-Khaira-Keoti road	1,458	Feb13	27,200	ODR/N	Yes	Yes	Yes
137		Upgradation of Harrai Pratapsingh Approach road	386	Apr09	4,000	V/U	Yes	Yes	Yes
138		Construction of Lalgaon Sudarshan college and Chouri approach road	613	Feb13	8,800	V/N	Yes	Yes	Yes
139		Upgradation of Dihiya Main road to Shukulgawan Road	211	Apr09	3,500	V/U	Yes	No	Yes
140		Upgradation of Bicharhata Approach Road	344	Apr09	6,350	V/U	Yes	Yes	Yes
141		Construction of Dihiya Teekar (shivpurva) Road	609	Feb13	9,200	V/N	Yes	Yes	Yes
142	Rewa	Construction of Lour (N.H.-7) Aanty Bholara Road	263	Feb13	3,800	V/N	Yes	No	Yes
143		Upgradation of Majhiyar Pathri Padri Sirmour Road	287	Apr09	7,045	V/N	No	No	No
144		Widening of NH 7 from 229/8 to 231/6 and 239/4 to 242/2 Road	1,146	Feb13	6,262	NH/U	Yes	Yes	Yes
145		Construction of Chorhata Khaira Khokham Rausar road	445	Feb13	7,100	V/S	No	No	No
146		Strengthening & widening of Nipaniya Tamara Road	843	Feb13	14,700	V/U	Yes	Yes	Yes
147		Construction of Rewa Sirmour Road to Gargin to Rajgarh	494	Feb13	9,350	V/N	Yes	Yes	Yes
148		Special Repair of Padara Gadwa Road	131	Feb13	2,600	V/S	No	No	No
149	Ashok	Construction of Chanderi to Budhi Chanderi	107	Apr09	7,800	V/N	No	No	NO

Sl. No.	Division	Name of Road	PAC ¹ (in lakh)	Based on SOR	Length of road (in m)	Type of road ²	Traffic survey/ Abstract (Y/A) ³	Bench mark & Levels taken/not taken	Crust design made/not made	
150	Nagar	Strengthening of Shadora Wajidpura road	342	Apr09	7,300	MDR	No	No	NO	
151		Strengthening of Shadhora-Naisarai-Myanna Road	219	Feb13	4,260	MDR	No	No	NO	
152		Upgradation and widening of Wajidpur to Panwadi Hat	559	Apr09	14,500	V/N	Yes	Yes	Yes	
153		Construction of Pranpura (Muradpur) to Rajghat Road	1,605	Feb13	19,180	MDR	Yes	Yes	Yes	
154		Strengthening of Parsol-Sirni-Indar-Kadwaya road	459	Feb13	8,000	MDR	No	No	No	
155		Reconstruction/Strengthening of Esagarh-Kadwaya Road	132	Apr09	2,300	MDR	No	No	No	
156		Construction of Rijoda to Donger road	1,045	Feb13	13,900	V/N	Yes	Yes	Yes	
157		Upgradation & widening of Ashok Nagar Vidisha road to Bhadon Rajpur Chhipon road	2,156	Apr09	26,700	MDR	Yes	Yes	Yes	
158		Strengthening of Bharroli Approach road	156	Feb13	2,000	MDR	No	No	no	
159		Construction of Isagarh (denga Mochar) to Pipariya Nayagaon road	641	Apr09	8,460	V/N	Yes	Yes	Yes	
160		Construction of Esagarh-Kadwaya Road to Devkani Mata Mandir road	127	Feb13	3,800	V/N	Yes	Yes	Yes	
161		Construction of Kadwaya to Mamon road	480	Apr09	22,000	V/N	Yes	Yes	Yes	
162		Satna	Construction of Kotar Mahuti Majhgawan road	629	Apr09	16,200	ODR	Yes	Yes	Yes
163			Construction of Gorsari to Mirgauti Road	495	Feb13	8,400	V/N	Yes	Yes	Yes
164			Construction of Rampur Chormari Dewnow Dandi Tola Gajan road	446	Apr09	10,200	V/N	Yes	Yes	Yes
165	Construction of Konia to Pipri road		272	Feb13	4,900	V/N	Yes	No	Yes	
166	Upgradation of Lalchaha Mada Ujnehi Khamrehi to Hardua road		740	Apr09	16,220	V/N	Yes	Yes	Yes	
167	Construction of Kotar Tikri Rd. To Akauna road		366	Apr09	8,200	V/N	Yes	No	Yes	
168	Up-gradation of Madwar-Amiliya- Markandey Ashram road		962	Feb13	14,000	V/N	Yes	Yes	Yes	
169	Construction of Satna to Bharjuna via Tikuri shivpurwa road		449	Feb13	8,650	V/N	Yes	Yes	Yes	
170	Construction of Dhourhara to Round via Khamaria road		499	Feb13	10,400	V/N	Yes	Yes	Yes	
171	Construction of Jaso Badera Kalawal road		336	Feb13	6,000	V/N	Yes	No	Yes	
172	Construction of Satna Bardadih SidingDagdiha road		155	Apr09	19,600	V/U	Yes	No	Yes	
173	Karimati Bhakul Baba Road		85	Apr09	4,600	V/N	Yes	Yes	Yes	
174	Kordarnath Kulhariya Bhakul Baba road		119	Apr09	4,800	V/U	Yes	No	Yes	
175	Dureha Kapuri Lohadar Kota Bamurhiya Madatola Gangwariya Dharampura		4,177	Jun09 CRF	57,840	MDR	Yes	Yes	Yes	
176	Pakori Khadori Itma Bandhi Masanha Umarhat	835	Jun 09 CRF	17,580	V/U	Yes	Yes	Yes		
177	Bamhani Kothi road	85	Apr09	6,000	V/U	Yes	No	Yes		
178	Construction of Bahera to Karoundi Road	326	Apr09	6,320	V/N	No	No	Yes		
179	Construction of Patna Mahtain Barounda Myan Ki Ghati road	604	Apr08	26,400	ODR	No	No	No		

Sl. No.	Division	Name of Road	PAC ¹ (in lakh)	Based on SOR	Length of road (in m)	Type of road ²	Traffic survey/ Abstract (Y/A) ³	Bench mark & Levels taken/not taken	Crust design made/not made
180		Construction of Harduaa Bachbai Chhenda Rajarwara Umrahat road	495	Apr09	12,100	V/N	Yes	Yes	Yes
181		Up-gradation of Satna Semaria road	1,615	Apr09	20,500	MDR	Yes	Yes	Yes
182		Construction of Birsinghpur to Chakra road	446	Feb13	6,820	V/N	Yes	Yes	Yes
183		Strengthening of Pondi Garada to Konia Bharhut road	251	Apr09	6,000	V/N	Yes	Yes	Yes
184		Strengthening of Jhurkhul to Rangauli road	158	Feb13	2,800	V/S	Yes	No	Yes
185		Construction of Badera Ajmine road	308	Apr09	5,000	V/U	Yes	Yes	Yes
186		Construction of Raiwada-Jevanara-Ghateri-Pondi road	342	Feb13	7,000	V/N	Yes	Yes	Yes
187		Construction of Bamhni Dhenko road	248	Feb13	4,500	V/N	Yes	Yes	Yes
188		Improvement of Nainpur Sarra Pathasihora Dhurwada road	1,033	Feb13	18,400	MDR	Yes	No	Yes
189		Construction of Mali Mohgaon to Khapa Kala road	133	Feb 13	2,000	V/N	No	No	No
190		Construction of Mehgaon approach road	206	Nov13	2,700	V/U	Yes	No	Yes
191		Improvement of Seoni road to Pipardon road	245	Feb13	4,900	V/N	Yes	Yes	Yes
192	Mandla	Const of Mohgaon Basgadhi road	254	Apr 09	7,100	V/N	Yes	No	Yes
193		Improvement of Ghugri Chabi road	1,324	Feb13	21,420	MDR	Yes	Yes	Yes
194		Improvement of Karegaon Patadah Kohkatola Chichgaon Jamgaon Ghateri road	562	Apr 09	15,500	V/N	Yes	No	Yes
195		Improvement of Khamaria Ramnagar road	353	Feb13	3,500	V/U	Yes	Yes	Yes
196		Improvement of Narayananj Dewri Mukas road	1,681	Apr 09	21,500	MDR	Yes	Yes	Yes
Total			1,25,074						

Appendix 3.2

Statement showing cost impact due to increase or decrease in quantities of earth work (E/W) and excavation

(Reference: Paragraph 3.1.2.2, Page 79)

(Amount in ₹)

Sl. No.	Division	Name of road	Provision of E/W (in cu m)	Execution of E/W (in cu m)	Provision of excavation (in cu m)	Execution of excavation (in cu m)	E/W change in per cent	Excavation change in per cent	E/W rate	Excavation rate	Increased/decreased E/W Cost	Increased/decreased excavation Cost	Levels taken or not
1	Indore-I	Bagoda Memdi to Simrol road	18,745	11,857	0	0	-37	0	154		-10,60,752	0	No
2		Janapav Approach Road	0	0	4,210	18,773	0	346		54	0	7,86,402	No
3		Beka-Raskundiya-Kulthana Road	3,381	33,030	0	0	877	0	54		16,01,046	0	No
4		Old AB Road to Bye pass Road	20,527	12,915	0	0	-37	0	154		-11,72,248	0	No
5		Mhow-Bhagora-Kalakund Road	1,64,214	67,811	0	0	-59	0	136.44	0	-1,31,53,225	0	Yes
6		Simrol to Udaynagar Road.	63,728	93,712	3,839	2,896	47	-25	120	69	35,98,080	-65,067	No
7		Kampel Undel radiya Khandel	69,576	59,652			-14		143		-14,19,132		Yes
8		Kodriya to Patalpani Ashapura	0	0	1	8,576	0	8,57,500		73	0	6,25,975	No
9	Sehore	Sehore Narsingharh Road	23,156	8,313	0	0	-64	0	132		-19,59,276	0	Yes
10		Rupadeh to Gadiya	22,119	27,451	0	0	24	0	143		7,62,476	0	No
11		Lasuldiya Parihar to Bijlon Road	35,249	40,314	0	0	14	0	154		7,80,010	0	No
12		Brakheda Hasan To Dehri Road	51,728	59,309	0	0	15	0	143		10,84,083	0	Yes
13		Jahangirpura to Devasthan Dargah	40,615	50,272	0	0	24	0	143		13,80,951	0	Yes
14	Vidisha	Karariya – Shamshabad road	0	0	49,394	0	0	-100		69	0	-34,08,186	No
15		Noulas to Berkheda Gambhir	51,245	36,652	0	0	-28	0	140	0	-20,43,020	0	No
16		Ganjbasoda Berath Road.	1,00,028	1,86,127	39,485	8,485	86	-79	143	69	1,23,12,157	-21,39,000	NO
17		Madipur Nadour Ambar Naulas	54,932	89,563	0	0	63	0	143		49,52,233	0	Yes
18		Banti Nagar Vidisha to Russala,	49,850	90,804	0	0	82	0	143		58,56,422	0	No
19		Mahavan Bhatoli Chanderi road	78,260	5,220	0	0	-93	0	124		-90,56,960	0	No
20	Gurod-Pipaldhar road	1,05,093	1,50,057	0	0	43	0	143		64,29,852	0	yes	
21	Neemuch	Bhadwamata Pipaliya Raoji road	3,102	4,541	0	0	46	0	154		2,21,606	0	NO
22		Alhed to manasa Road	4,400	5,340	0	0	21	0	154		1,44,760	0	NO
23	Sagar	Bandri Banda Bara Kerbana road	3,01,892	3,74,440	0	0	24	0	143		1,03,74,364	0	NO
24		NH-26 to Devri road	73,080	92,839	10,800	15,660	27	45	124	55	24,50,116	2,67,300	No
25		Ghatam pur Khand-Piprai road	55,100	96,959	0	0	76	0	143		59,85,837	0	Yes
26		Khurai Rajwans Road	52,853	85,486	0	0	62	0	127		41,44,391	0	Yes
27	Sagar	Salaiya-Khaderabhan-Richawar-Saikheda Road	64,890	1,10,955	0	0	71	0	143		65,87,295	0	No

Sl. No.	Division	Name of road	Provision of E/W (in cu m)	Execution of E/W (in cu m)	Provision of excavation (in cu m)	Execution of excavation (in cu m)	E/W change in per cent	Excavation change in per cent	E/W rate	Excavation rate	Increased/decreased E/W Cost	Increased/decreased excavation Cost	Levels taken or not
28		Bhainswahi-Chandrapura-Bailaimafi Road	55,080	74,844	0	0	36	0	143		28,26,252	0	No
29		Mangarh-Shahpur-Murga-Dhura Road	64,260	80,286	0	0	25	0	143		22,91,718	0	No
30		Baxwaha-Nainagir-Dalpatpur Road	45,265	62,204	0	0	37	0	154		26,08,606	0	Yes
31		Banda-Baraytha-Girar Road	70,825	85,687	0	0	21	0	154		22,88,748	0	Yes
32		Town road Rehli	25,661	30,241	0	0	18	0	154		7,05,320	0	No
33		Dhana-Hilgan to Khaderabhan-PipariyaVaidh Road	49,411	92,649	0	0	88	0	143		61,83,034	0	No
34	Damoh	Rajpura Chouriya Shahgarh road	45,357	72,395	0	0	60	0	124		33,52,712	0	Yes
35		Hathni Imaliya Jhapan road	84,666	1,36,665	0	0	61	0	143		74,35,857	0	Yes
36	Balaghat	Batarmara Khara Chhindgaon	21,239	24,878	0	0	17	0	143		5,20,377	0	No
37		Balaghat-Beni(Rengatola-Changera-Beni) Road	1,11,593	83,190	0	0	-25	0	23		-6,53,269	0	No
38		Katangi-Nandora road	77,622	56,799	0	0	-27	0	154		-32,06,742	0	Yes
39	Guna	Karod to Persoda road	39,746	47,399	0	0	19	0	143		10,94,379	0	No
40		Khejara to Karod Via Nainsuhaya Road	57,031	73,483	0	0	29	0	143		23,52,636	0	No
41		Sirsi Musredi via Badera road	83,268	94,566	0	0	14	0	134.69	0	15,21,728	0	No
42		Markimau to Chandera via Banskhedhi	45,410	52,717	7,736	11,410	16	47	154	122	11,25,278	4,48,228	Yes
43		Sirsi to Saretha Road	89,434	42,926	80,532	7,829	-52	-90	143	140	-66,50,644	-1,01,78,420	Yes
44		Lahrcha to Jateri Road	33,081	39,399	2,700	0	19	-100	143	69	9,03,474	-1,86,300	No
45		Berkhedhi Muradpur Road to Dharnawada	52,069	44,493	0	0	-15	0	154		-11,66,704	0	Yes
46		Kumbhraj to Ramtekri Road	62,316	79,841	0	0	28	0	143		25,06,075	0	Yes
47	Rewa	NH 7 to 242/2 Road	94,558	74,841			-21	0	154		-30,36,418	0	Yes
48		Chorhata Khaira Khokham Rausar	18,850	23,352	0	0	24	0	154		6,93,308	0	No
49	Rewa	Nipaniya Tamara Road	2,01,092	12,698	9,130	17,324	-94	90	154	122	-2,90,12,676	9,99,668	Yes
50		Padara Gadwa Road	2,940	11,211	0	0	281	0	154		12,73,734	0	No
51	Ashok Nagar	Strengthening of Shadora Wajidpura	38,825	46,473	0	0	20	0	143		10,93,664	0	No

Sl. No.	Division	Name of road	Provision of E/W (in cu m)	Execution of E/W (in cu m)	Provision of excavation (in cu m)	Execution of excavation (in cu m)	E/W change in per cent	Excavation change in per cent	E/W rate	Excavation rate	Increased/decreased E/W Cost	Increased/decreased excavation Cost	Levels taken or not
52		Strengthening of Shadhora-Naisarai-Myanna Road	16,780	20,512	0	0	22	0	154		5,74,728	0	No
53		Widening of Wajidpur to Panwadi Hat road	69,009	90,789	0	0	32	0	143		31,14,540	0	Yes
54		Construction of Pranpura (Muradpur) to Rajghat Road	0	0	9,617	2,300	0	-76		50	0	-3,65,850	Yes
55		Strengthening of Parsol-Sirni-Indar-Kadwaya road	32,159	59,250	0	0	84	0	154		41,72,014	0	No
56		Construction of Rijoda to Donger road	1,05,788	1,29,538	3,321	0	22	-100	154	122	36,57,500	-4,05,162	Yes
57		Upgradation & widening of Ashok Nagar Vidisha road to Bhadon Rajpur Chhipon road	2,54,732	1,12,707	0	0	-56	0	157		-2,22,97,925	0	Yes
58		Kotar Mahuti Majhgawan road	13,761	16,896	12,006	0	23	-100	143	54	4,48,305	-6,48,324	Yes
59		Rampur Chormari Dewnow Dandi Tola Gajan road	57,091	74,212	1,696	0	30	-100	143	54	24,48,303	-91,584	No
60		Satna Bardadih SidingDagdiha road	9,472	27,862	13,088	9,911	194	-24	134	69	24,64,260	-2,19,213	No
61		Bahera to Karoundi Road	38,073	50,089	0	0	32	0	143	0	17,18,288	0	No
62	Satna	Patna Mahtain Barounda Myan Ki Ghati road	68,819	86,040	0	0	25	0	124	0	21,35,404	0	No
63		Harduaa Bachbai Chhenda Rajarwara Umrahat road	75,084	50,137	0	0	-33	0	143	0	-35,67,421	0	Yes
64		Birsinghpur to Chakra road	36,780	51,070	0	0	39	0	143	0	20,43,470	0	Yes
65		Pondi Garada to Konia Bharhut road	39,654	33,785	0	0	-15	0	143	0	-8,39,267	0	Yes
66	Mandla	Nainpur Sarra Pathasihora Dhurwada road	91,668	1,09,918	0	0	20	0	154	1	28,10,500	0	No
67	Mandla	Mali Mohgaon to Khapa Kala road	14,007	16,138	0	0	15	0	154	1	3,28,174	0	No
68		Narayanganj Dewri Mukas road	11,053	5,231	0	0	-53		54		-3,14,388	-3,14,388	Yes
Decreases E/W			- 10,06,10,067	Decreases Excavation			- 1,80,21,494						
Increased E/W			13,53,58,065	Increased Excavation			31,27,573						
Total			23,59,68,132	Total			2,11,49,067						

Appendix 3.3

Statement showing extra cost due to adoption of costlier item of Wet Mix Macadam (WMM) in place of Water Bound Macadam (WBM)

(Reference: Paragraph 3.1.2.3, Page 80)

(Amount in ₹ and Quantity in cu m)

Sl. No.	Name of Road	Division	WMM quantity	WMM rate	WBM rate	Rate difference	Extra cost
1	Singoli Tilsma road	Neemuch	11,292	867	778	89	10,04,988
2	Kukdeshwar- Hanumantiya- Bhatkhedi road		7,272	867	778	89	6,47,208
3	Athwakala to Tokara Via Sehna Talai Road		11,074	1,330	1,072	258	28,57,092
4	Sarwaniyamaharaj to Mailankheda road.		3,108	867	778	89	2,76,612
5	Janapav Approach Road	Indore 1	1,458	867	778	89	1,29,762
6	Bijalpur-Nihalpurmudi-Morod-Khandwa road		6,591	1,330	1,072	258	17,00,478
7	Khemna- Anky- Gogakhedi Road		4,285	867	778	89	3,81,365
8	Old AB Road to Bye pass Road		3,308	1,330	1,072	258	8,53,464
9	Mhow-Bhagora-Kalakund Road		1,865	867	778	89	1,65,985
10	Kampel Undel Semliya Karadiya Khandel road		9,475	867	778	89	8,43,275
11	Kodriya Chouradiya to Patalpani Ashapura road	Vidisha	15,837	1,330	1,072	258	40,85,946
12	Davpur Mugalsarai road		13,755	1,261	1,072	189	25,99,695
13	Jawati Nisobarri Nainwas to Mohanpur road		6,173	867	778	89	5,49,397
14	Phupher – Nichoran wardha- Maniya- Barkheda		21,152	1,330	1,072	258	54,57,216
15	Lashkarpur approach road and Pooranpura road to Ahmadpur road	Sehore	6,041	1,330	1,072	258	15,58,578
16	Siddiquiganj to Illai Dehmat road		3,800	1,330	1,072	258	9,80,400
17	Lasuldiya Parihar to Bijlon Road	Sagar	3,846	1,330	1,072	258	9,92,268
18	Silodha Chandpur Mudri road		4,219	867	778	89	3,75,491
19	Garhakota Bye Pass Road (Garhakota Town		2,082	1,330	1,072	258	5,37,156
20	Construction of Chanatoriya to Karrapur road		7,800	1,330	1,072	258	20,12,400
21	Khurai Rajwans Road (Item rate)		19,463	750	715	35	6,81,205
22	Bina-Barha-Reechhai Road		6,253	867	778	89	5,56,517
23	NH-26 in Sagar town Road		2,622	1,330	1,072	258	6,76,476
24	Deori-Saraiwan Road		1,533	1,330	1,072	258	3,95,514
25	Baxwaha-Nainagir-Dalpatpur Road		15,422	1,330	1,072	258	39,78,876
26	Town road Rehli		7,783	1,330	1,072	258	20,08,014
27	Hinoti Bhuri Badyau road	Damoh	5,760	1,330	1,072	258	14,86,080
28	Damoh Town Jail to Rest House		1,174	1,330	1,072	258	3,02,892
29	Damoh Jamunia Balakot road		2,412	1,330	1,072	258	6,22,296
30	Damoh Teen Gulli to Imlai bye pass		6,286	1,330	1,072	258	16,21,788
31	Damoh Overbridge to Muktidham		3,688	1,330	1,072	258	9,51,504
32	Hatta(Chandiji Mandir) to Bhidari Approach		2,975	1,330	1,072	258	7,67,550
33	Hatta Manpura Kalkua Raneh Raneh Road		6,580	1,330	1,072	258	16,97,640
34	Sakha – Patna road		4,400	867	778	89	3,91,600
35	Patahariya Kindroh Jerath Road		27,537	1,330	1,072	258	71,04,546
36	Patheriya Kerbana road		20,581	867	778	89	18,31,709
37	Khairi Gonditola Sawri road	Balaghat	4,899	867	778	89	4,36,011
38	Internal roads of Balaghat City		5,808	867	778	89	5,16,912
39	Karod to Persoda road	Guna	5,071	867	778	89	4,51,319
40	Khejara to Karod Via Nainsuhaya Road		6,385	867	778	89	5,68,265
41	Guna Umri Sirsi Sonkhara to Gadla Ujari		4,968	823	778	45	2,23,560
42	Mudra to Khejra Guruji via kanera Veerakhedi		7,170	1,330	1,072	258	18,49,860
43	Markimau to Chandera via Banskhedi		5,634	1,330	1,072	258	14,53,572
44	Sirsi to Saretha Road		9,449	867	778	89	8,40,961
45	Lahrcha to Jateri Road		3,137	1,330	1,072	258	8,09,346
46	Bhurachak to Dhanoriya Via Ukwadkhurd Road		4,031	867	778	89	3,58,759
47	Berkhedi Muradpur Road to Dharnawada		4,565	1,330	1,072	258	11,77,770
48	Amrod to Nonera Road		5,352	1,330	1,072	258	13,80,816

Sl. No.	Name of Road	Division	WMM quantity	WMM rate	WBM rate	Rate difference	Extra cost
49	Kumbhraj to Ramtekri Road	Guna	8,221	867	778	89	7,31,669
50	Gangeo-Phool-Khaira-Keoti road	Rewa	24,890	1,330	1,072	258	64,21,620
51	Harrai Pratapsingh Approach road		2,180	867	778	89	1,94,020
52	Darshan college and Chouri approach road		7,803	1,330	1,072	258	20,13,174
53	Dihiya Main road to Shukulgawan Road		3,009	867	778	89	2,67,801
54	Bicharhata Approach Road		1,126	867	778	89	1,00,214
55	Dihiya Teekar(shivpurva) Road		3,866	1,330	1,072	258	9,97,428
56	Lour (N.H.-7) Aanty Bholara Road		3,540	1,330	1,072	258	9,13,320
57	Majhiyar Pathri Padri SirmourRoad		5,857	867	778	89	5,21,273
58	Chorhata Khaira Khokham Rausar road		5,382	1,330	1,072	258	13,88,556
59	Nipaniya Tamara Road		8,919	1,330	1,072	258	23,01,102
60	Rewa Sirmour Road to Gargin to Rajgarh Road		6,304	867	778	89	5,61,056
61	Padara Gadwa Road		1,473	1,330	1,072	258	3,80,034
62	Rijoda to Donger road		Ashok	9,045	1,330	1,072	258
63	Wajidpur to Panwadi Hat road	Nagar	11,897	867	778	89	10,58,833
64	Gorsari to Mirgauti Road	Satna	9,187	1,330	1,072	258	23,70,246
65	Rampur Chormari Dewnow Dandi Tola Gajan		10,137	867	778	89	9,02,193
66	Konia to Pipri road		3,929	1,330	1,072	258	10,13,682
67	Lalchaha Mada Ujnehi Khamrehi to Hardua road		11,513	867	778	89	10,24,657
68	Kotar Tikri Rd. To Akauna road		6,592	867	778	89	5,86,688
69	Madwar-Amiliya- Markandey Ashram road		8,331	1,330	1,072	258	21,49,398
70	Satna to Bharjuna via Tikuri shivpurwa road		6,347	1,330	1,072	258	16,37,526
71	Jaso Badera Kalawal Road		3,827	1,330	1,072	258	9,87,366
72	Bahera to Karoundi Road		5,294	867	778	89	4,71,166
73	Harduaa Bachbai Chhenda Rajarwara Umrahat		7,810	867	778	89	6,95,090
74	Pondi Garada to Konia Bharhut road		4,869	867	778	89	4,33,341
75	Jhurkhul to Rangauli road	2,123	1,330	1,072	258	5,47,734	
76	Raiwada-Jevanara-Ghateri-Pondi road	Mandla	5,103	1,330	1,072	258	13,16,574
77	Bamhni Dhenko Road		3,616	1,330	1,072	258	9,32,928
78	Mali Mohgaon to Khapa Kala raod		2,090	1,330	1,072	258	5,39,220
79	Mehgaon approach road		791	1,557	1,253	304	2,40,464
80	Seoni road to Pipardon road		4,017	1,330	1,072	258	10,36,386
81	Karegaon Patadah Kohkatola Chichgaon Jamgaon Ghateri road		11,163	867	778	89	9,93,507
Total							10,12,12,010

Appendix 3.4

Statement showing delay and extra cost due to inadequate provision of forest clearance and land acquisition in estimates
(Reference: Paragraph 3.1.2.4, 3.1.2.5, Page 83)

(₹ in lakh)									
Sl. No.	Division	Name of works	Stipulated date of completion	Status of work as on June 16	Delay (in months)	Reason for delay	Extra cost	PAC of work	Up to date payment
1	Indore-1	Mhow-Bhagora-Kalakund Road	10.08.14	31.03.16 (Ongoing)	23	Forest clearane		988.37	558.20
2	Sehore	Bilkisganj (Pani ki tanki) to Bamalgarh via Gadiya Road	29.04.13	30.12.14. (Completed)	8	Forest clearance		488.94	
3	Sagar	Banda Bara Kerbana road	18.10.14	17.06.15 (Completed)	8	Forest clearance		1,386.44	
4		Berkhedi Mohali Tinsia road	12.09.10	31.03.16 (Ongoing)	68	Forest clearance		301.61	180.20
5		Baxwaha-Nainagir-Dalpatpur Road	18.01.15	31.03.15 (Completed)	2	Forest clearance		1,086.77	
6		Banda-Baraytha-Girar Road	18.01.15	30.06.15 (Completed)	5	Forest clearance		2,663.13	
7		NH-26 to Devri road	28.02.10	30.06.14 (Completed)	18	Land dispute		402.37	
8		Semra-Bhohari-Persoria	27.12.07	27.06.14 (Completed)	79	Land dispute		297.61	
9		Dmoh	Rajpura Chouriya Shahgarh road	15.06.10	02.02.13 (Completed)	6	Forest clearance		657.89
10	Mehguwan Kuwakhoh road		08.12.12	15.06.13 (Completed)	2	Forest clearance		446.09	
11	Hatta(Chandiji Mandir) to Bhidari Approach Road		14.09.14	31.03.16 (Ongoing)	21	Forest clearance		250.22	161.23
12	Bandha-Imaliya-Maheba-Rashilpur road		27.05.10	31.03.14 (Completed)	17	Private land	13.11	591.42	
13	Hathni Imaliya Jhapan road		17.06.14	31.05.14 (Completed)	No delay	Private land	35.20	2,861.98	
14	Balaghat	Internal roads of Balaghat City	29.03.14	31.03.16 (Ongoing)	27	Land acuisition	200	956.52	596.27
15	Guna	Berkhedi Muradpur Road to Dharnawada Road	02.05.14	31.03.16 (Ongoing)	26	Land acuisition		577.54	293.46

Sl. No.	Division	Name of works	Stipulated date of completion	Status of work as on June 16	Delay (in months)	Reason for delay	Extra cost	PAC of work	Up to date payment
16		Anarad to Nihal Devi Road	08.12.11	31.03.16 (Ongoing)	54	Forest clearance	612.61	2,095.40	429.63
17	Rewa	Harrai Pratapsingh Approach road	03.06.13	31.03.16 (Ongoing)	27	Forest clearance		386.68	266.65
18		Padara Gadwa Road	29.01.14	31.03.16 (Ongoing)	29	Land dispute		131.6	114.76
19		Rewa Sirmour Road to Gargin Tola to Rajgarh Road	22.10.13	31.03.16 (Ongoing)	30	Land acquisition	54.97	494.81	268.24
20	Ashok Nagar	Chanderi to Budhi Chanderi road	29.07.13	29.07.14	8	Forest clearance		107.94	
21	Satna	Dhourhara to Round via Khamaria road	11.11.13	31.03.16 (Ongoing)	32	Private land		499.71	166.57
22		Dureha Kapuri Lohadar Kota Bamurhiya Madatola Gangwariya Dharampura	23.10.13	31.03.16 (Ongoing)	33	Private land		4,177.40	2,935.78
23		Pakori Khadori Itma Bandhi Masanha Umarhat	23.10.13	31.03.16 (Ongoing)	33	Private land		835.76	577.09
24		Karimati Bhakul Baba Road	28.07.11	31.03.16 (Ongoing)	59	Forest land		85.85	28.12
25		Kordarnath Kulhariya Bhakul Baba Road	28.07.11	31.03.16 (Ongoing)	59	Forest land		119.62	41.65
26		Bamhani Kothi road	20.12.10	31.03.16 (Ongoing)	66	Forest land		85.8	67.87
27	Mandla	Ghugri Chabi road	15.01.15	30.06.15	5	Forest land		1,324.97	
Total							915.89		6,685.72
Statement showing delay and extra cost due to inadequate provision of utility shifting in the estimates									
1	Indore-1	Khemna- Anky- Gogakhedi Road	05.04.14	31.03.16 (Ongoing)	11	Pole shifting		518.57	488.99
2		Kampel Undel Semliya Karadiya Khandel road	05.07.14	30.06.15 (Completed)	6	Pole shifting		837.99	
3	Sagar	Chanatoriya to Karrapur road	12.09.16	17.08.15 (Completed)	No delay	Pole shifting	13.65	715.27	
4		Town road Rehli	11.12.14	10.07.14 (Completed)	No delay	Pole shifting	48.49	554.77	
5		Bandri Bandabara Kerbana road	08.04.14	30.06.15 (Completed)	10	Pole shifting		3,277.60	

Sl. No.	Division	Name of works	Stipulated date of completion	Status of work as on June 16	Delay (in months)	Reason for delay	Extra cost	PAC of work	Up to date payment
6	Balaghat	Internal roads of Balaghat City	29.03.14	31.03.16 (Ongoing)	27	pole shifting,	18.24	956.52	596.27
7	Rewa	Widening of NH 7 from km 229/8 to 231/6 and 239/4 to 242/2 Road	10.01.15	31.03.16 (Ongoing)	18	Elctric pole, electrification, shifting of water pipe line	446.08	1,146.47	1,166.37
8		Nipaniya Tamara Road							
9	Ashok Nagar	Shadora Wajidpura road	29.07.13	10.03.15 (Completed)	6	Pole shifting	17.19	342.46	
10	Mandla	Ghugri Chabi road	15.01.15	30.06.15 (Completed)	5	Pole shifting	2.3	1,324.97	
Total							713.65		2,895.83

Appendix 3.5

Statement showing item of road furniture not included in original estimate

(Reference: Paragraph 3.1.2.6, Page 84)

(Amount in ₹)

Sl. No.	Division	Name of road	Kilometer(km) stone	Amount	Retro Reflectory sign board	Amount	Direction & place identification board	Amount
1	Neemuch	Pirana to Jeeran	Ordinary km stone 03 nos.	5,376	60cm equilateral triangle 4 no.	11,088	No provision & no execution	
			Hectometer 11 nos	5,830	80 X 60 cm square 02 no.	8,012		
2	Indore-I	Bagoda Memdi to Simrol	Ordinary km stone 5 nos.	8,945	60cm equilateral triangle 2 no.	5,544	4.32 sqm	60,856
			Hectometer 16 nos	8,480	60cm circular 2 no.	7,080		
3	Vidisha	Madipur Nadour Ambar Naulas	5 th kilometer stone 2 nos	4,054	80X60 cm Rectangular 2 no.	9,464	4 no.	29,348
					60 cm equ. Triangle 15 no.	32,790		
					60 cm circle 15 no.	44,115		
					60 X 45 cm Rectangular 18 no.	51,552		
					60 X 60 cm square 20 no.	67,960		
90 cm high octagon	3,15,060							
4	Sagar	Banda Bara Kerbana	5 th km stone 6 nos	17,784	80 X 60 cm Rectangular 3 no.	16,632	4.5 sqm 5 no.	40,370
			Ordinary km stone 23 nos	41,147	80 cm triangle	14,196		
			Hectometer 108 nos.	57,240				

5		Upgradation of Majhiyar Pathri Padri Sirmour Road	5 th km stone 1 nos	2,027				
			Ordinary km stone 6 nos	7,350				
			Hectometer 59 nos.	20532				
6	Rewa	Widening of NH 7 from km 229/8 to 231/6 and 239/4 to 242/2			80 X 60 cm Rectangular 30 no.	1,41,960		
					60 X 45 cm Rectangular 20 no.	69,240		
					Over head information board	42,00,000		
					Road marking	24,00,264		
					Road and drum delinatoe	1,06,800		
7		Madwar-Amiliya-Markandey Ashram road					Metal Beam barrier	60,52,000
8	Satna	Patna Mahtain Barounda Myan Ki Ghati road	5 th km stone 4 nos	7,392			No provision & no execution	
			Ordinary km stone 20 nos	22,100				
			Hectometer 100 nos.	34,400				
Total				2,42,657		75,01,757		61,82,574
Grand Total								1,39,26,968

Statement showing items of road furniture not executed even provisioned in original estimate

(Amount in ₹)

Sl. No.	Division	Name of road	Kilometer (km) stone	Amount	Retro Reflectory (RR) sign board	Amount	Direction & place identification board	Amount
1	Indore-I	Kodriya Chouradiya to Patalpani Ashapura	5 th km stone 3 no.	8,892	60cm equilateral triangle 12 no.	33,264	12.96 sqm	1,82,568
			Ordinary km stone 13 nos.	23,257	60cm circular 11 no.	38,940		
			Hectometer 64 nos	33,920	80 X 60 cm Rectangular 9 no.	42,588		
2	Sehore	Sehore Narsingharh			90 cm equ. Triangle 15 no.	51,240	13.5 sqm	1,01,115
					80X60 cm Rectangular 15 no.	33,630		
3	Sehore	Lasuldiya Parihar to Bijlon	5 th km stone 1 no.	2,964	60cm equilateral triangle 6 no.	13,116		
			Hectometer 5 nos	3,250	80 X 60 cm Rectangular 4 no.	16,444		
4		Bilkisganj (Pani ki tanki) to Bamalgarh			60cm equilateral triangle 6 no.	19,674		
					80 X 60 cm Rectangular 4 no.	12,333		
5	Sagar	Garhakota Bye Pass road	Ordinary km stone 2 nos	3,578	80 X 60 cm Rectangular 4 no.	18,928	5.4 no.	76,070
			Hectometer 3 nos.	1,590	60cm equilateral triangle 5 no.	13,860	Metal Beam barrier	21,61,500
6	Sagar	Mangarh-Shahpur-Murga-Dhura	5 th km stone 6 nos	4,054				
			Ordinary km stone 23 nos	11,250				
			Hectometer 108 nos.	14,616				

7		Sihora-Lotna-Lotni-Ramchhayari-Heerapur-Narayawali	5 th km stone 4 nos	7,392	80 X 60 cm Rectangular 15 no.	63,840		
			Hectometer 68 nos.	23,392				
8	Indore-I	Kampel Undel Semliya Karadiya Khandel			60cm equilateral triangle 6 no.	13,116		
					60cm circular 4 no.	11,764		
9		Ganjbasoda Berath			90cm equilateral triangle 2 no.	6,678		
					60cm equilateral triangle 2 no.	2,186		
					60cm circular 2 no.	2,941		
					80 X 60 cm Rectangular 2 no.	8,222		
					90 cm high octagon	10,502		
10	Vidisha	Gurod-Pipaldhar	5 th km stone 4 nos	8,108	90cm equilateral triangle 84 no.	2,80,476		
			Ordinary km stone 17 nos	20,825	60cm equilateral triangle 38 no.	83,068		
			Hectometer 88 nos.	30,624	60cm circular 20 no.	58,820		
					80 X 60 cm Rectangular 138 no.	5,67,318		
					80 X 45 cm Rectangular 2 no.	5,728		
					60 X 60 cm square 01 no.	3,398		
				90 cm high octagon	5,251			
11		Khurai Rajwans					4 x 0.9 x 0.6 = 2.16 sqm	16,178
							2 x 1.2 x 0.9 = 2.16 sqm	27,940
12	Sagar	Ghatampur-Khand-Piprai-Dudhonia	5 th km stone 1 nos	2,027	Not provision & not execution		No provision & no execution	
			Hectometer 25 nos.	8,700				
13		Bhainswahi-Chandrapura-Bailaimafi	5 th km stone 2 nos	4,045	Not provision & not execution		No provision & no execution	
			Hectometer 10 nos.	3,480				
14	Balaghat	Batamara Khara Chhindgaon	5 th km stone 1 nos	2,027	90cm equilateral triangle 20 no.	66,780	No provision & no execution	
			Hectometer 02 nos.	696	60cm equilateral triangle 01 no.	2,186		
					60 cm circular 10 no.	29,410		
					80 X 60 cm Rectangular 4 no.	16,444		
					90 cm high octagon	10,502		
15	Ashok Nagar	Pranpura (Muradpur) to Rajghat Road	5 th km stone 5 nos	14,820	Not provision & not execution		No provision & no execution	
			Ordinary kk stone 14 nos	25,058	60cm equilateral triangle 70no.	1,94,040	20.52 sqm 38 no.	1,65,678
			Hectometer 77 nos.	40,810	80 X 60 cm rectangular 38 no.	1,79,816	17.28 sqm 8 no.	2,43,423
16		Esagarh-Kadwaya Road to Devkani Mata Mandir road			60cm equilateral triangle 06 no.	13,116	2.16 sqm 4 no.	15,848
					80X60 cm Rectangular 12 no.	49,332	4.32 sqm 02 no.	54,726

17	Kotar Mahuti Majhgawan road	5 th km stone 1 nos	2,027	60cm equilateral triangle 08 no.	17,488	4.32 sqm 02 no.	54,725
		Ordinary km stone 1 nos	1,225	60cm circular 08 no.	23,528		
		Hectometer 1 nos.	348	80X60 cm Rectangular 08 no.	32,888		
18	Gorsari to Mirgauti Road			60cm equilateral triangle 2 no.	5,544	4.32 sqm 02 no.	60,855
				60cm circular 02 no.	7,280		
19	Rampur Chormari Dewnaw Dandi Tola Gajan road	5 th km stone 2 nos	4,054	60 cm equilateral triangle 15 no.	32,790	8.64 sqm 4 no.	1,09,452
		Ordinary km stone 10 nos	12,250	60 cm Circular 15 no.	44,115		
		Hectometer 41 nos.	14,268				
20	Lalchaha Mada Ujnehi Khamrehi to Hardua road	5 th km stone 3 nos	6,081	90 cm equilateral triangle 02 no.	6,678	3.6 sqm 04 no.	26,413
				60 cm equilateral triangle 02 no.	5,544		
				60 cm Circular 01 no.	2,941		
				90 cm high octagon 01 no.	5,251		
21	Kotar Tikri Rd. To Akauna road			60 cm equilateral triangle 04 no.	8,744	4.32 sqm 02 no.	54,725
				60 cm Circular 04 no.	11,764		
22	Jaso Badera Kalawal Road			80 mm X 60 mm rectangular 02. no.	9,464	2.2 sqm 02 no.	30,428
23	Bahera to Karoundi Road			90cm equilateral triangle 03 no.	10,017	1.8 sqm 02 no.	13,207
				60cm equilateral triangle 02 no.	4,372	1.5 sqm 01 no.	19,002
				60cm circular 04 no.	11,764		
				80 cm X 60 cm rectangular 05 no.	20,555		
				80 cmX45cm rectangular 03 no.	8,592		
24	Harduaa Bachbai Chhenda Rajarwara Umrahat road	5 th km stone 2 nos	4,054	60cm equilateral triangle 4 no.	8,744	4.32 sqm 02 no.	54,725
		Ordinary km stone 10 nos	12,250	60cm circular 4 no.	11,764		
		Hectometer 48 nos.	16,704				
25	Birsinghpur to Chakra road			60cm equilateral triangle 02 no.	4,372	2.16	27,363
				60cm circular 02 no.	5,882		
26	Badera Ajmine	5 th km 01 no.	2,027	60cm equilateral triangle 02 no.	4,372	4.32 sqm	54,725
		Hectometer stone 02 no.	696	60cm circular 02 no.	5,882		
27	Raiwada-Jevanara-Ghateri-Pondi road	5 th km 01 no.	2,964	60cm equilateral triangle 02 no.	28,320	4 no.	56,348
		Hectometer stone 03 no.	1,590	60cm circular 08 no.	28,320		
				80 cm X 60 cm rectangular 28 no.	1,32,496		
28	Bamhni Dhenko road					6 no.	84,520
29	Khamaria Ramnagar road	Not provision & not execution		80 cm X 60 cm rectangular 3 no.	12,333	No provision & no execution	
				60 cm X 45cm rectangular 03 no.	8,592		
Total			3,79,913		24,99,347		36,91,534
Grand Total							65,70,794

Appendix 3.6

Statement showing provision and execution of richer specifications without ensuring its necessity

(Reference: Paragraph 3.1.3.1 (i), Page 85)

(Amount in ₹)

Sl. No.	Division	Name of road	Adopted by the Department					To be adopted			Extra cost
			Quantity of BM /DBM (in cu m)	Rate of BM /DBM	Quantity of SDBC (in cu m)	Rate of SDBC/ BC	Cost of BM & SDBC/BC	Quantity of OGPC + Seal coat (in sqm)	Rate of OGPC + Seal coat	Cost of OGPC & Seal coat	
1	2	3	5	6	7	8	9=(5*6+7*8)	10	11	12=10*11	13
1	Indore-1	Janapav Approach Road (VR)	526.34	4,628	263.19	6,500	41,46,637	10,527	108	1136916	30,09,721
2		Simrol to Udaynagar Road (MDR)	1,617.10	3,702	808.96	5,200	1,01,93,096	32,242	108	3482136	67,10,960
3	Sehore	Ichchawar Ramnagar Road (MDR)	1,959.68	4,628	979.84	6,500	1,54,38,359	39,194	108	4232952	1,12,05,407
4	Vidisha	Gurod-Pipaldhar road (MDR)	5,850.75	4,540	2,856.62	6,500	4,51,30,435	1,17,015	108	12637620	3,24,92,815
5	Sagar	Khurai Rajwans Road (MDR)	3,840.21	4,000	1,925.38	4,900	2,47,95,217	76,804	96	7373184	1,74,22,033
6	Damoh	Damoh Jamunia Balakot (MDR)	330	6,800	165.00	7,799	35,30,835	6,600	165	1089000	24,41,835
7		Hatta Manpura Kalkua Raneh Road (VR)	399.70	5,291	199.85	7,799	36,73,443	7,994	165	1319010	23,54,433
8	Rewa	Majhiyar Pathri Padri Sirmour Road (VR)	1,171.41	5,818	585.70	6,500	1,06,22,313	23,428	135	3162780	74,59,533
9		Chorhata Khaira Khokham Rausar (VR)	1,020.81	5,291	510.41	7,799	93,81,793	40,782	165	6729030	26,52,763
10	Ashok Nagar	Strengthening of Shadora Wajidpura road (VR)	1,358.58	4,628	679.29	6,500	1,07,02,893	27,171	135	3668085	70,34,808
11		Shadhora-Naisarai-Myanna Road (MDR)	731.25	5,291	365.62	7,799	67,20,514	14,625	165	2413125	43,07,389
12		Parsol-Sirni-Indar-Kadwaya road (VR)	1,446.14	5,291	723.05	7,799	1,32,90,594	28,923	165	4772295	85,18,299
13		Esagarh-Kadwaya Road (MDR)	467.8	5,291	233.88	7,799	42,99,160	9,356	165	1543740	27,55,420
14		Bharroli Approach road (VR)	127.5	5,291	63.75	7,799	11,71,789	2,550	165	420750	7,51,039
Total										10,91,16,468	

Statement showing provision and execution of OGPC and seal coat where traffic survey was not conducted

Sl. No.	Division	Name of work where OGPC and seal coat was done
1	Vidisha	Bagrod Chouraha to Maser road (VR)
2		Pathari to Kiraskhedi Batiyabada road (VR)
3	Sagar	Berkhedi Mohali Tinsia road (VR)
4		Semra-Bhohari-Persoria (VR)
5		Sihora-Lotna-Lotni-Ramchhayar-arayawali Road (VR)

6		Salaiya-Khaderabhan-Richawar-Saikheda Road (VR)
7	Damoh	Strengthening of Sakha – Patna road (VR)
8	Balaghat	Construction of Birsa Mararitola Sakha Suktara road (VR)
9		Kope-Pujari toal Nahar tola road (VR)
10	Guna	Construction of Lahrecha to Jateri Road (VR)
11	Rewa	Padara Gadwa Road (VR)
12	Mandla	Mali Mohgaon to Khapa Kala road (VR)
13	Satna	Patna Mahtain Barounda Myan Ki Ghati road (VR)
14	Ashok Nagar	Chanderi to Budhi Chanderi road (VR)
15	Neemuch	Pirana to jeeran road (VR)

Appendix 3.7

Statement showing adoption of richer/below specifications due to incorrect computation of crust

(Reference: Paragraph 3.1.3.1 (ii), Page 85)

Sl. No.	Division	Name of works	Component of crust taken by Department	Component of crust as per specification	Crust Design by Department (in msa) /CBR	Crust Design to be taken as per IRC (in msa)/CBR	Executed item	Quantity (cu m)	Rate (in ₹)	To be executed	Quantity (sqm)	Rate (in ₹)	Extra cost (₹ in lakh)
1	Indore-I	Beka-Raskundiya-Kulthana Road (VR)	CVPD 164 VDF 3.5	CVPD 164 VDF 3.5	3(5)	6(5)	BM			DBM			
							OGPC+ seal coat			SDBC			
2	Indore-I	Mhow-Bhagora-Kalakund Road (VR)	CVPD 208 VDF 1.5	CVPD 208 VDF 3.5	3(5)	7(5)	BM			DBM			
							OGPC+ seal coat			BC			
3	Vidisha	Karariya – Shamshabad road (MDR)	CVPD 176 VDF 1.5	CVPD 176 VDF 1.5	5(5)	2(5)	BM			BM			53.16
							SDBC	4832.6	6500	OGPC + seal coat	193305.20	135	
4	Vidisha	Ganjbasoda Berath (Udaipur) Road (VR)	CVPD 111 VDF 3.5	CVPD 111 VDF 1.5	4(5)	2(5)	BM			BM			26.69
							SDBC	2426	6500	OGPC + seal coat	97040.48	135	
5	Damoh	Patheriya Kerbana road (MDR)	CVPD 185 VDF 1.5	CVPD 185 VDF 3.5	3(5)	7(5)	BM			DBM			
							SDBC			BC			

Sl. No.	Division	Name of works	Component of crust taken by Department	Component of crust as per specification	Crust Design by Department (in msa) /CBR	Crust Design to be taken as per IRC (in msa)/CBR	Executed item	Quantity (cu m)	Rate (in ₹)	To be executed	Quantity (sqm)	Rate (in ₹)	Extra cost (₹ in lakh)
6	Balaghat	Khairlangi Ghubadgondi road (VR)	CVPD 100 VDF 2.5	CVPD 176 VDF 3.5	1(5)	3(5)	OGPC + seal coat			BM OGPC + seal coat			
7		Khairi Gonditola Sawri road (VR)	CVPD 100 VDF 2.5	CVPD 165 VDF 3.5	1(5)	3(5)	OGPC + seal coat			BM OGPC + seal coat			
8		Bharveli Bagholi Ameda road (VR)	CVPD 100 VDF 2.5	CVPD 159 VDF 3.5	1(5)	3(5)	OGPC + seal coat			BM OGPC + seal coat			
9	Guna	Markimau to Chandra via Banskhedhi (VR)	CVPD 258 VDF 2.5	CVPD 258 VDF 3.5	2(6)	3(6)	OGPC + seal coat			BM OGPC + seal coat			
10		Sirsi to Saretha Road (VR)	CVPD 258 VDF 2.5	CVPD 258 VDF 3.5	2(6)	3(6)	OGPC + seal coat			BM OGPC + seal coat			
11	Rewa	Nipaniya Tamara Road (VR)	CVPD 221 VDF 1.5	CVPD 221 VDF 3.5	3(5)	8(5)	BM SDBC			DBM BC			
12	Satna	Rampur Chormari Dewnow Dandi Tola Gajan road (VR)	CVPD 159 VDF 1.5	CVPD 159 VDF 3.5	3(5)	6(5)	OGPC + seal coat			DBM BC			
13	Mandla	Nainpur Sarra Pathasihora Dhurwada road (MDR)	CVPD 151 VDF 1.5	CVPD 53 VDF 1.5	2(5)	1(5)	BM SDBC	3417.1 1710.7	5654 8099	OGPC + seal coat OGPC + seal coat	69033.12 69033.12	118 47	217.84
Total												297.69	

Appendix 3.8

Statement showing provision and execution of richer specifications due to incorrect adoption of crust composition

(Reference: Paragraph 3.1.3.1 (iii), Page 86)

(Amount in ₹)

Sl. No.	Division	Name of road	Traffic computed in msa & (CBR)	Adopted by the Department					To be adopted					Extra cost
				Quantity of BM /DBM (in cu m)	Rate of BM /DBM	Quantity of SDBC (in cu m)	Rate of SDBC	Cost of BM & SDBC	Quantity of BM (in cu m)	Rate of BM	Quantity of OGPC + Seal coat (in sq m)	Rate of OGPC + Seal coat	Cost of OGPC & Seal coat	
1	2	3	4	5	6	7	8	9=(5*6+7*8)	10	11	12	13	14=(10*11+12*13)	15=9-14
1	Neemuch	Singoli Tilsma road (MDR)	2(5)	0	0	1,493.75	6,500	97,09,375			59,750	108	64,53,000	32,56,375
2		Kukdeshwar- Hanumantiya-Bhatkhedi road (VR)	1(5)	199.12	4,628	103.43	6,500	15,93,822.40			3,982	135	5,37,570	10,56,252
3	Indore-1	Khemna- Ankya-Gogakhedi Road (VR)	3(5)	0	0	564.38	6,500	36,68,470	0	0	22,575	135	30,47,625	6,20,845
4		Old AB Road to Bye pass Road (VR)	3(5)			437.50	7,799	34,12,062.50			17,500	165	28,87,500	5,24,563
5		Kampel Undel Semliya Karadiya Khandel road (VR)	3(5)			947.58	6,500	61,59,257			37,903	135	51,16,905	10,42,352
6	Vidisha	Davpur Mugalsarai road (MDR)	1(5)	3,056.75	5,343	1,528.35	7,935	2,84,59,673			61,134	165	1,00,87,110	1,83,72,563
7	Sagar	Chanatoriya to Karrapur road (VR)	3(5)			869.90	8,099	70,45,320.10			3,47,97.3	165	57,41,554.5	13,03,766
8		Banda-Baraytha-Girar Road (VR)	1(5)	8,921.58	5,654	4,476.16	8,099	8,66,95,033			1,78,432	165	2,94,41,280	5,72,53,753
9	Damoh	Patahariya Kindroh Jerath Road (VR)	3(5)			2,751.91	7,799	2,14,62,146			1,10,076	165	1,81,62,540	32,99,606
10	Balghat	Birsa to Damoh road (VR)	2(5)	7,633.66	6,951	4,900.00	7,788	9,12,22,771	7,633.66	5291	1,52,673	165	6,55,80,740	2,56,42,031
11		Balaghat-Beni(Rengatola-Changera-Beni) Road (VR)	2(5)	1,887.29	4,628	943.65	6,500	1,48,68,103	1,875.00	3598	37,746	118	1,12,00,278	36,67,825
12	Balghat	Internal roads of Balaghat City (ODR)	1(7)	582.18	4,628	291.09	6,500	45,86,414			11,643	135	15,71,805	30,14,609.04

Sl. No.	Division	Name of road	Traffic computed in msa & (CBR)	Adopted by the Department					To be adopted					Extra cost
				Quantity of BM /DBM (in cu m)	Rate of BM /DBM	Quantity of SDBC (in cu m)	Rate of SDBC	Cost of BM & SDBC	Quantity of BM (in cu m)	Rate of BM	Quantity of OGPC + Seal coat (in sq m)	Rate of OGPC + Seal coat	Cost of OGPC & Seal coat	
1	2	3	4	5	6	7	8	9=(5*6+7*8)	10	11	12	13	14=(10*11+12*13)	15=9-14
13		Katangi-Nandora road (MDR)	1(5)	768.79	5,291	384.40	7,799	70,65,564.50			15,375	165	25,36,875	45,28,689
14	Guna	Bhoura Meenapura Bamori Bishanwada (MDR)	1(5)	4,472.90	3,860	2,227.68	5,513	2,95,46,594			89,458.7	96	85,88,035	2,09,58,558.80
15	Sagar	Banda Bara Kerbana (MDR)	1(5)	7,284.64	5,955			4,33,80,013	0	0			0	4,33,80,013
16		Bandri Bandabara Kerbana (VR)	1(5)	2,441.29	4,629			1,13,00,731	0	0			0	1,13,00,731
17	Ashok Nagar	Pranpura (Muradpur) to Rajghat Road (MDR)	3(5)			2,224.75	7,935	1,76,53,391			98,740	165	1,62,92,100	13,61,291
18		Ashok Nagar Vidisha road to Bhadon Rajpur Chhipon road (VR)	2(5)			3,223.95	8,529	2,74,97,070			1,33,940	135	1,80,81,900	94,15,170
19		Kadwaya to Mamon road (VR)	2(5)			1,881.04	5,651	1,06,29,757			75,241	108	81,26,028	25,03,729
20	Mandla	Khamaria Ramnagar road (VR)	2(5)			324.57	8,099	26,28,700.50			12,983	165	21,42,195	4,86,506
Total													21,29,89,227.84	

Appendix 3.9

Statement showing provision and execution of below specifications due to incorrect adoption of crust composition

(Reference: Paragraph 3.1.3.1 (iii), Page 86)

Sl. No.	Division	Name of road	Traffic computed (in msa)	CBR of sub-soil	Adopted by the Department	To be adopted
					Bituminous course adopted by the Department	Bituminous course to be adopted as per specification
1	Indore-1	Kodriya Chouradiya to Patalpani Ashapura road (VR)	5	5	BM/SDBC	DBM/SDBC
2	Sehore	Sehore Narsingharh road (MDR)	6	5	BM/SDBC	DBM/BC
3	Balaghat	Kanhadgaon- Chichgaon road (VR)	2	4	OGPC with seal coat	BM/OGPC
4	Guna	Berkhedi Muradpur Road to Dharnawada via Papawan-Amkheda Road (VR)	2	6	OGPC with seal coat	BM/OGPC
5		Khejara to Karod Via Nainsuhaya Road (VR)	2	6	OGPC with seal coat	BM/OGPC
6		Guna Umri Sirsi Sonkhara to Gadla Ujari (VR)	3	6	OGPC with seal coat	BM/OGPC
7		Bhurachak to Dhanoriyavia Ukwadhurd (VR)	2	6	OGPC with seal coat	BM/OGPC
8		Amrod to Nonera Road (VR)	2	6	OGPC with seal coat	BM/OGPC
9	Rewa	Gangeo-Phool-Khaira-Keoti road	2	5	OGPC with seal coat	BM/OGPC
10		Lalgaon Sudarshan college road and Chouri approach road	2	5	OGPC with seal coat	BM/OGPC
11		Dihya Main road to Shukulgawan Road (VR)	2	5	OGPC with seal coat	BM/OGPC
12		Upgradation of Bicharhata Approach Road (MDR)	2	5	OGPC with seal coat	BM/OGPC
13		Dihya Teekar(shivpurva) Road (VR)	2	5	OGPC with seal coat	BM/OGPC
14		Lour (N.H.-7) Aanty Bholara Road (VR)	2	5	OGPC with seal coat	BM/OGPC
15	Mandla	NH 7 from km 229/8 to 231/6 and 239/4 to 242/2 Road (NH)	7	5	BM/SDBC	DBM/BC
16		Ghugri Chabi road (MDR)	2	5	OGPC with seal coat	BM/OGPC

Appendix 3.10

Statement showing extra cost due to provision and execution of Granular Sub-Base (GSB) in excess thickness

(Reference: Paragraph 3.1.3.2, Page 86)

(Amount in ₹)

Sl. No.	Division	Name of road works	Crust Design by Department (msa)/CBR (in per cent)	Crust to be Designed (msa)	Thickness of GSB/CRM taken by Department (in mm)	Thickness of GSB/CRM to be taken (in mm)	Extra thickness (in mm)	Length of road (in m)	Width of road (in m)	Rate	Extra cost
1	Neemuch	Bhadwamata Pipaliya Raoji	1/5	1	265	205	60	3,171.50	3.75	599	4,27,439
2		Alhed to manasa	1/5	1	265	205	60	2,260	3.00	599	2,43,673
3	Sagar	Semrabagh Jinda Fourlane	3/5	2	250	215	35	4,850	5.50	1293	12,07,177
4		Banda Bara Kerbana	1/5	1	250	205	45	27,000	5.5	599	40,02,818
5		Silodha Chandpur Mudri	2/5	2	250	215	35	6,160	3.75	685	5,53,823
6		Baxwaha-Nainagir-Dalpatpur	2/5	2	250	215	35	13,200	5.5	931	23,65,671
7	Damoh	Gaisabad Adanwara Waleh Bhaisa Ranch	1/5	1	300	205	95	21,530	3.75	519	39,80,762
8	Balaghat	Internal roads of Balaghat City	1/5	1	300	205	95	2,800	5.00	819	10,89,270
			1/5	1	300	205	95	3,185	5.5	819	13,62,949
9	Rewa	Lalgaon to Sudrshan college	2/5	2	250	215	35	8,400	3.75	903	9,95,558
10		Dihya to Teekar (Sheopurva)	2/5	2	250	215	35	9,162	3.75	903	10,85,869
11		Lour (NH 7) Aanty Bholara	2/5	2	250	215	35	3,776	3.75	903	4,47,527
12	Satna	Bahera to Karoundi Road	1/5	1	255	205	50	5,800	4.05	685	8,04,533
Total											1,85,67,069

Appendix 3.11

Statement showing unfruitful expenditure on drainage layer below shoulder due to hard shoulder not executed or executed in lesser thickness

(Reference: Paragraph 3.1.3.3, Page 87)

(Amount in ₹)

Sl. No.	Division	Name of road	Thickness of drainage layer (in mm)	Thickness of crust above drainage layer (in mm)	Thickness of hard shoulder over drainage layer (in mm)	Length of road (in m)	Width of drainage layer below shoulder (in m)	Thickness of drainage layer (in m)	Rate of drainage layer	Unfruitful expenditure on drainage layer
1	2	3	4	5	6	7	8	9	10	11= 7*8*9*10
1	Rewa	Dihya Main road to Shukulgawan Road	150	370	150	3,000	5.55	0.15	685	17,10,788
2		Majhiyar Pathri Padri Sirmour Road	150	325	200	5,796	5.35	0.15	685	31,86,134
3		Chorhata Khaira Khokham Rausar road	100	425	175	5,360	5.65	0.1	903	27,34,645
4	Guna	Karod to Persoda road	100	370	0	5,340	5.35	0.1	719	20,54,111
5		Khejara to Karod Via Nainsuhaya Road	100	320	0	7,180	5.3	0.1	719	27,36,083
6		Mudra to Khejra Guruji via kanera Veerakhedi	100	370	150	7,760	5.25	0.1	903	36,78,822
7		Markimau to Chandera via Banskhedhi	100	370	150	5,845	5.43	0.1	931	29,54,840
8		Sirsi to Saretha Road	100	370	150	10,048	5.43	0.1	719	39,22,910
9		Lahrcha to Jateri Road	100	370	150	3,245	5.25	0.1	931	15,86,075
10		Kumbhraj to Ramtekri Road	100	370	150	8,310	5.3	0.1	719	31,66,692
11	Balaghat	Birsa Mararitola Sakha Suktara road	100	345	200	9,500	4.95	1	719	3,38,10,975
12		Dahedi Bhalwa road	100	345	150	6,200	5.25	0.1	819	26,65,845
13		Birsola-Khamaria-Khursodi Road	100	345	200	7,840	5.15	0.1	510	20,59,176
14		Kope-Kairtola-Pujaritola-Nahartola-Katanghari-Sawang Road	100	345	200	15,884	4.95	0.1	719	56,53,195
15		Sihora-Sihoratola-Deogaon Road	100	345	200	3,500	4.75	0.1	931	15,47,788
16		Khairlangi Ghubadgondi road	105	345	100 & 150	4,520	5.45	0.105	505	13,06,218
17		Khairi Gonditola Sawri road	105	345	200	7,340	5.45	0.105	783	32,88,847
18		Bharveli Bagholi Ameda	100	345	225 & 300	3,890	5	0.1	505	9,82,225
19		Atri to Aarambha	105	345	200	3,000	5.45	0.1	783	12,80,205
20		Bothali Bahela road	100	345	200	5,800	5.45	0.1	505	15,96,305
21		Internal roads of Balaghat City	100	525	200	4,200	6.1	0.1	819	20,98,278
22	Katangi-Nandora	100	450	150	11,500	5.85	0.1	931	62,63,303	

Sl. No.	Division	Name of road	Thickness of drainage layer (in mm)	Thickness of crust above drainage layer (in mm)	Thickness of hard shoulder over drainage layer (in mm)	Length of road (in m)	Width of drainage layer below shoulder (in m)	Thickness of drainage layer (in m)	Rate of drainage layer	Unfruitful expenditure on drainage layer
1	2	3	4	5	6	7	8	9	10	11= 7*8*9*10
23	Ashok Nagar	Kanhadgaon- Chichgaon road	100	345	200	6,100	5.25	0.1	685	21,93,713
24		Birsa Bhatlai Dudhi Sakha road	100	345	200	2,896	5.25	0.1	719	10,93,168
25		Shadora Wajidpura road	100	525	150	7,300	5.64	0.1	719	29,60,267
26		Wajidpur to Panwadi Hat road	100	345	150	14,150	5.33	0.1	719	54,22,662
27		Parsol-Sirni-Indar-Kadwaya road	100	525	150	7,900	5.65	0.1	931	41,55,519
28		Ashok Nagar Vidisha road to Bhadon Rajpur Chhipon road	100	415	100	24,100	5	0.1	695	83,74,750
29		Pranpura (Muradpur) to Rajghat Road	100	415	150	15,780	6.36	0.1	903	90,62,580
30	Satna	Rampur Chormari Dewnow Dandi Tola Gajan road	100	370	150-250	10,200	5.35	0.1	819	44,69,283
31		Lalchaha Mada Ujnehi Khamrehi to Hardua road	100	355	200	13,900	5.35	0.1	819	60,90,494
32		Satna to Bharjuna via Tikuri shivpurwa	100	350	225	7,489	5.35	0.1	1,261	50,52,342
33		Pondi Garada to Konia Bharhut road	100	350	225	5,600	4.35	0.1	783	19,07,388
34		Jhurkhul to Rangauli road	150	300	225	2,600	5.35	0.15	1,261	26,31,077
35	Mandla	Nainpur Sarra Pathasihora Dhurwada road	100	415	225	18,400	5.05	0.1	903	83,90,676
36		Mali Mohgaon to Khapa Kala road	100	350	250	2,500	4.75	0.1	931	11,05,563
37		Karegaon Patadah Kohkatola Chichgaon Jamgaon Ghateri road	100	345	100-225	15,450	5.3	0.1	505	41,35,193
38		Khamaria Ramnagar road	100	400	150	3,500	5.25	0.1	931	17,10,713
39		Narayanganj Dewri Mukas road	100	425	200-325	19,274	5.9	0.1	783	89,04,010
Total									16,79,42,858	

Appendix 3.12

Statement showing deviation in road length in comparison to estimated length

(Reference: Paragraph 3.1.4.2, Page 88)

(₹ in lakh) and (Length in metre)

Sl. No.	Division	Name of road	PAC	Road length as per estimate	Actual length of road	Change in the road length	Extra cost	Reason for deviation
1	Neemuch	Alhed to manasa Road	58	1,600	2,260	660	23.93	Reason of increase in the road length was instruction given by higher authority during execution.
2	Indore-I	Bagoda Memdi to Simrol road	234	5,000	4,200	-800	-37.44	Reason for decrease in road length was due to road transferred to Panchayat.
3		Beka-Raskundiya-Kulthana Road	677	9,500	7,700	-1,800	-128.27	1.8 km road length was transferred to PMGSY
4	Sagar	Sihora-Lotna-Lotni-Ramchhayar-arayawali Road	621.64	17,000	14,000	-3,000	-109.70	3 km portion came under PMGSY
5		Padrai Basan Mahuakheda Karhad Road	492.24	13,500	11,420	-2,080	-75.84	2.13 km transferred to PMGSY.
6		Construction of Mangarh-Shahpur-Murga-Dhura Road	419.24	10,500	11,250	750	29.95	Reason for increase in road length was change in alignment in ghat portion.
7	Damoh	Rajpura Chouriya Shahgarh road	657.89	22,000	14,900	-7,100	-212.32	The road from Jatashankar Badagaon to Chouraiya for a length of 7.10 km was transferred to PMGSY
8		Gaisabad Adanwara Waleh Bhaisa Raneh road	982.84	20,240	23,500	3,260	158.30	Reason for increase in road length was not found recorded in the file.
9		Hatta Manpura Kalkua Raneh Raneh Road	769.52	13,600	7,400	-6,200	-350.81	6.2 km portion came under PMGSY
10		Sakha – Patna road	258.71	6,600	5,257	-1,343	-52.64	Estimate was prepared with length of 6.6 km but found actual 5.3 km during execution.
11		Patahariya Kindroh Jerath Road	2,193.86	21,000	19,300	-1,700	-177.60	1.3 km road transferred to PMGSY and 600 m could not be executed due to non acquisition of private land.
12	Balaghat	Internal roads of Balaghat City	823.17	10,200	7,475	-2,725	-219.92	Road length decreased due to non-acquisition of forest land
13	Guna	Mudra to Khejra Guruji via kanera Veerakhedi	586.82	9,300	8,800	-500	-31.55	Due to already constucted CC road.
14		Markimau to Chandera via Banskhedhi	606.5	7,350	6,660	-690	-56.94	Due to already constucted CC road.

Sl. No.	Division	Name of road	PAC	Road length as per estimate	Actual length of road	Change in the road length	Extra cost	Reason for deviation
15		Lahrcha to Jateri Road	296.48	4,000	3,300	-700	-51.88	Transfer to PMGSY.
16		Amrod to Nonera Road	274.51	5,940	6,360	420	19.41	To avoid land acquisition the department changed the alignment and thus, length of road increased by 420 m.
17		Anarad to Nihal Devi Road	2,,352.83	48,000	37,500	-10,500	-514.68	10.50 km of road from Barahkambha to Rehpura (chainage 0 to 10500) transferred to PMGSY.
18	Rewa	Chorhata Khaira Khokham Rausar road	445.64	7,100	5,900	-1,200	-75.32	Looking to the possibility of collapse of the the bank of the unlined canal, road was not constructed in 1.2 km
19		Pranpura (Muradpur) to Rajghat Road	1,605.67	17,880	16,322	-1,558	-139.91	Change in alignment.
20	Ashok Nagar	Rijoda to Donger road	1,045.42	13,900	12,200	-1,700	-127.86	Due to change in alignment and non-availability of private land
21		Kadwaya to Mamon road	480.00	22,000	20,793	-1,207	-26.33	Due to non-construction of approaches of bridge.
22		Satna Bardadih SidingDagdiha road	370.00	19,600	20,250	650	12.27	No place for diversion in village portion
23		Rampur Chormari Dewnow Dandi Tola Gajan road	446.54	10,200	10,837	637	27.89	Due to change in alignment.
24	Satna	Lalchaha Mada Ujnehi Khamrehi to Hardua road	740.57	16,220	15,230	-990	-45.20	Due to change in alignment.
25		Jaso Badera Kalawal Road	336.63	6,000	4,507	-1,493	-83.76	Due to change in alignment.
26		Harduaa Bachbai Chhenda Rajarwara Umrahat road	495.13	12,100	8,900	-3,200	-130.94	2.9 km transfered to PMGSY and land dispute was in 0.3 km
27		Raiwada-Jevanara-Ghateri-Pondi road	342.9	7,000	6,280	-720	-35.27	720 m road constructed by panchayat.
28		Bamhni Dhenko road	248.42	4,500	4,140	-360	-19.87	360 m length of road was already constructed under PMGSY.
29	Mandla	Mohgaon Basgadhi	254.25	7,100	6,270	-830	-29.72	Due to forest land, 830 m length of road was not constructed.
30		Ghugri Chabi road	1,324.97	21,420	18,720	-2,700	-167.01	2.7 km of road was already constructed under PMGSY.
Increased in 06 cases							2.72 crore	
Decreased in 24 cases							29.01 crore	

Appendix 3.13

Statement showing extra cost due to non-inclusion/inclusion in lesser length of cement concrete road in the estimates

(Reference: Paragraph 3.1.4.2, Page 89)

(₹ in lakh and Length in metre)

Sl. No.	Division	Name of Road	Provision of CC road in the estimates	CC road actually executed	Difference of road length	Extra cost	Reason for deviation
1	Neemuch	Athwakala to Tokara Via Sehna Talai Road	1,420	3,550	2,130	82.61	Due to water logging area.
2		Pirana to Jeeran road.	0	142.99	142.99	6.2	Village portion and water logged area.
3	Indore,1	Devguradiya Kampel Double Chouki road	8,185	9,954.65	1,769.65	226.34	Reason was not specified.
4		Bijalpur-Nihalpurmundi-Morod-Khandwa road	3,080	1,972.82	-1,107.18	-96.71	Water logged area in bridge portion.
5		Kodriya Chouradiya to Patalpani Ashapura road	1,600	1,765.50	165.50	14.6	As per instruction of higher authority, CC road was constructed in village portion.
6	Vidisha	Gurod-Pipaldhar road	0	675	675	31.86	Due to water logged area, CC road was constructed.
7	Sehore	Sehore NarsingharhRoad	5,000	3,300	-1,700	-17.25	Reason was not specified.
8		Ichhawar Kheri road	600	811	211	35.59	Reason was not specified.
9	Sagar	Silodha Chandpur Mudri road	0	1,000	1,000	34.46	Construction of CC road in place of BT road.
10		Garhakota Bye Pass Road (Garhakota Town Road)	2,000	1,554.80	-445.20	-28.3	As per site condition.
11		Semrabagh Jinda Fourlane Road	0	300	300	32.43	Reason was not specified.
12		Ghatampur-Khand-Piprai-Dudhonia Road	400	992.20	592.20	19.47	Construction of CC road in place of BT road.
13	Damoh	Hinoti Bhuri Badyau road	0	1,116.50	1,116.50	57.64	Construction of CC road in place of BT road.
14		Hathni Imaliya Jhapan road	2,500	4,137	1,637	101.04	Due to possibility of submerge of approaches of culverts.
15	Balaghat	Birsola-Khamaria-Khursodi Road	0	600	600	21.81	CC road was constructed due to road passes through side of canal.
16		Bharveli Bagholi Ameda road	0	300	300	12.27	As per site condition.
17		Internal roads of Balaghat City	0	100	100	8.01	Reason was not specified.
18	Guna	Sirsi to Musredi via Badera road	0	350	350	11.75	Due to water logged area, CC road was constructed.
19	Rewa	Nipaniya Tamara Road	1,237	2,632	1,395	36.39	BT road replaced by CC road.

Sl. No.	Division	Name of Road	Provision of CC road in the estimates	CC road actually executed	Difference of road length	Extra cost	Reason for deviation
20	Ashok Nagar	Parsol-Sirni-Indar-Kadwaya road	50	333	283	19.39	Slab culvert change into VCW and length increased due to approaches of VCW.
21		Rijoda to Donger road	0	1,913	1,913	86.63	Change in alignment and CC road was constructed in water logged village portion.
22		Shadhora-Naisarai-Myanna Road	100	0	-100	-9.74	Junction of road was badly damaged. Hence, CC road was constructed due to required extra financial burden.
23		Ashok Nagar Vidisha road to Bhadon Rajpur Chhipon road	2,600	1,108	-1,492	-92.46	Reason was not specified.
24		Bharroli Approach road	605	1,181	576	39.53	Due to village portion and water logged area
25		Kadwaya to Mamon road	0	728	728	12.72	CC road was constructed due to water logged area in village portion.
26	Satna	Satna Bardadih SidingDagdiha road	3,226	2,941.78	-284.22	-78.82	Land for diversion was not available hence BT road was constructed.
27		Kotar Mahuti Majhgawan road	1,500	337	-1,163	-55.69	BT road was constructed in place of CC road.
28		Bahera to Karoundi Road	545	100	-445	-24.05	BT road was constructed in place of CC road.
29	Mandla	Karegaon Patadah Kohkatola Chichgaon Jamgaon Ghateri	2,500	1,005.70	-1,494.3	-61.83	Road already constructed by panchayat.
30		Narayanganj Dewri Mukas road	1,900	1,570	-330	-26.07	Actual length of road was found 1570 m.
Increased in 20 cases						8.91 crore	
Decreased in 10 cases						4.91 crore	

Appendix 3.14

Statement showing coverage of non-loanee farmers

(Reference: Paragraph 3.2.2.1, Page 95)

(Amount in ₹)

Sl. No.	Crop Season	Number of loanee farmers covered	Farmers compensated	Amounts of claims	Number of non loanee farmers covered	Farmers compensated	Amount of claims	Extent of Coverage of non-loanee farmers to Loanee Farmers (In per cent)
1	Rabi 2010-11	12,91,529	5,28,493	2,69,80,38,310	1,080	444	37,70,881	0.08
2	Kharif 2011	15,28,399	1,43,889	2,50,56,12,165	872	3	36,203	0.06
3	Rabi 2011-12	13,62,118	1,20,186	58,52,44,242	21	1	1,467	0
4	Kharif 2012	20,32,280	74,356	75,07,75,814	261	2	902	0.01
5	Rabi 2012-13	19,86,137	3,59,555	3,16,80,61,193	38	4	1,02,026	0
6	Kharif 2013	23,36,820	14,22,514	23,50,82,39,360	282	265	39,53,786	0.01
7	Rabi 2013-14	23,62,123	5,91,195	4,37,17,01,570	6	6	4,33,088	0
8	Kharif 2014	24,54,332	4,34,413	5,41,99,04,567	2	0	0	0
9	Rabi 2014-15	25,36,562	1,98,902	1,50,84,45,128	11	0		0
10	Kharif 2015	29,98,497	20,46,638	44,16,67,52,676	268	197	21,56,315	0.01
Total		2,08,88,797	59,20,141	88,68,27,75,025	2,841	922	1,04,54,668	

Appendix 3.15

Statement showing *Patwari Halkas* of more than 100 ha crop area were not notified

(Reference: Paragraph 3.2.2.2, Page 98)

(Area in ha)

Sl. No.	Districts	Kharif 2013			Rabi 2013-2014			Kharif 2014			Rabi 2014-2015		
		Crop name	Total number of Patwari Halka	Total Area	Crop name	Total number of Patwari Halka	Total Area	Crop name	Total number of Patwari Halka	Total Area	Crop name	Total number of Patwari Halka	Total Area
1	Katni	Paddy	2	201	Wheat	1	207	Paddy	2	421	Wheat		
					Gram	84	14,060				Gram		
2	Jhabua	Urad	8	985	Wheat	13	1,804	Urad			Wheat		
		Paddy			Gram			Paddy			Gram		
		Soyabean	10	1,279				Soyabean					
		Maize	32	5,353				Maize					
3	Tikamgarh	Urad	286	64,871	Sarso			Urad	359	82,430	Sarso		
		Paddy			Wheat	4	574	Paddy			Wheat		
		Soyabean	25	4,166	Gram	4	626	Soyabean			Gram		
4	Hoshangabad	Paddy	21	4,673	Wheat			Paddy	4	669	Moong	32	7,408
		Soyabean	3	1,334	Gram	2	267	Soyabean	1	236	Gram		
		Tuar			Moong	39	18,179	Tuar					
		Moong	12	3,438				Moong	115	35,469			
5	Raisen	Moong			Wheat								
		Paddy			Sarso								
		Soyabean			Gram								
		Maize											
Total		399	86,300		147	35,717		481	1,19,225		32	7,408	

Crop Season	Total number of Patwari Halkas	Total area
Kharif 2013	399	86,300
Rabi 2013-2014	147	35,717
Kharif 2014	481	1,19,225
Rabi 2014-2015	32	7,408
Grand Total	1,059	2,48,650

Appendix 3.16

Statement showing sown area of notified crop was less than 100 ha

(Reference: Paragraph 3.2.2.2, Page 98)

(Area in ha)

Sl. No.	Districts	Kharif 2013			Rabi 2013-2014			Kharif 2014		
		Crop name	Total number of Patwari Halka	Total Area	Crop name	Total number of Patwari Halka	Total Area	Crop name	Total number of Patwari Halka	Total Area
1	Katni	Paddy	9	751	Wheat	29	2,059	Paddy	5	331
					Gram	30	1,941			
2	Jhabua				Wheat	19	1,219			
					Gram	2	104			
3	Tikamgarh	Paddy	1	63	Sarso			Paddy	6	452
		Soyabean	8	380	Wheat	1	52	Soyabean	12	356
					Gram					
4	Hoshangabad	Paddy	11	543	Wheat	10	732	Soyabean		
		Soyabean	47	2,940	Gram	10	414	Paddy		
		Tuar								
5	Raisen	Paddy			Wheat					
		Soyabean			Gram					
		Maize								
Total			76	4,677		101	6,521		23	1,139

Appendix 3.17

Statement showing delay in disbursement of claims

(Reference: Paragraph 3.2.2.9, Page 103)

Sl. No.	Season	Cut off date for receipt of yield data	Demand Ascertain/ sent to Government by AIC	Delay in Demand raised	GoMP share received on	Delay more than one month in respect to receipt of demand	Disbursement of Claim by AIC	Delay in disbursement in respect of cut-off date for receipt of yield data
1	Rabi 2010-11	31st July 2011	Nov 11	Three months	Dec 11	-	Nov 11 to Mar 14	Three months to 31 months
			Sep 12	13 months	Nov 12 Mar 14	- 17 months		
2	Kharif 2011	31st January 2012	Mar 12	One month	Mar 13	11 months	Mar 12 to Mar 14	One month to 25 months
			Jun 12	Five months	Sep 12 Mar 14	Two months 20 months		
3	Rabi 2011-12	31st July 2012	Sep 12	One month	Nov 12	-	Nov 12 to Jul 13	Three months to 11 months
			Jun 13	11 months	Jun 13	-		
4	Kharif 2012	31st January 2013	AIC liability	-	-	-	Apr 13	Two months
5	Rabi 2012-13	31st July 2013	Jan 14	Five months	Jan 14	-	Jan 14 to Mar 14	Five months to seven months
					Feb 14	-		
6	Kharif 2013	31st January 2014	Jul 14	Five months	Aug 14	-	Jul 14 to Sep 14	Five months to seven months
			Jul 15	17 months	Oct 15	Two months		
7	Rabi 2013-14	31st July 2014	Mar 15	Seven months	Jun 15	Two months	Mar 15 to May 15	Seven months to nine months
			Jan 16	17 months	Feb 16	-		
8	Kharif 2014	31st January 2015	Jul 15	Five months	Oct 15	Two months	Oct 15 to Feb 16	Eight months to 12 months
			Jan 16	11 months	Feb 16	-		
9	Rabi 2014-15	31st July 2015	Oct 15	Two months	Jan 16	Two months	Jan 16	Five months
10	Kharif 2015	31st January 2016	Jun 16	Four months	Nov 16	Four months	Nov 16	Nine months

(Source: Information provided by Director/Dy. Director of FWADD)

Appendix 3.18

Statement showing excess payment of Seasonal Agriculture Operations (SAO) loan over Scale of Finance

(Reference: Paragraph 3.2.2.10, Page 104)

(Amount in ₹)

Sl. No.	District	Crop Season	Crop Name	Area insured (ha)	Scale of Finance (per ha)	Sum Insured	SAO Loan as per Scale of Finance	Excess Finance	Claim Paid	Claim as per Scale of Finance limit.	Excess claim due to Excess loan over Scale of Finance
1	Sagar	Kharif 2013	Soyabean	109.74	17,000	35,66,900	18,65,580	17,01,320	19,45,566	10,17,581	9,27,985
2	Hoshangabad	Kharif 2013	Soyabean	1,54,063.02	15,000	3,56,56,05,926	2,31,09,45,255	1,25,46,60,671	2,62,89,79,278	1,70,04,67,352	92,85,11,926
3	Hoshangabad	Kharif 2014	Soyabean	6,076.60	18,000	12,64,20,315	10,93,78,710	1,70,41,605	2,15,74,344	1,91,45,866	24,28,478
4	Betul	Kharif 2013	Soyabean	7,026.00	18,000	14,66,04,956	12,64,68,000	2,01,36,956	6,85,55,918	6,06,51,640	79,04,279
5	Katni	Kharif 2014	Paddy Unirrigated	539.71	20,000	1,29,81,119	1,07,94,200	21,86,919	69,48,712	58,63,267	10,85,445
6	Raisen	Kharif 2013	Soyabean	2,227.00	16,800	5,58,10,852	3,74,13,600	1,83,97,252	4,90,45,219	3,28,70,748	1,61,74,470
7	Rajgarh	Kharif 2014	Soyabean	14,428.00	23,000	38,53,62,432	33,18,44,506	5,35,17,926	7,71,19,325	6,64,91,600	1,06,27,725
8	Shajapur	Rabi 2013-14	Gram	45,737.70	9,300	67,43,35,100	42,53,60,610	24,89,74,490	10,87,94,624	6,57,50,798	4,30,43,826
Total				2,30,207.80		4,97,06,87,600	3,35,40,70,461	8,32,47,58,061	2,96,29,62,986	1,95,22,58,852	1,01,07,04,134

(Source: Information provided by Director/Dy. Director of FWADD)

Appendix 3.19

**Statement showing financial institutions insured unsown area
(Reference: Paragraph 3.2.2.12, Page 106)**

(Area in ha)

Sl. No.	District	Patwari Halka	Area Insured	Area Sown (as per revenue)	Difference
1	Alirajpur	3	162	0	162
2	Ashoknagar	69	32,941	18,854	-14,087
3	Balaghat	13	4,892	2,963	-1,929
4	Barwani	7	1,705	1,144	-561
5	Betul	147	71,454	44,698	-26,756
6	Bhind	1	166	112	-54
7	Bhopal	57	38,023	25,935	-12,088
8	Chhattarpur	73	20,888	7,461	-13,427
9	Chhindwara	51	10,125	7,003	-3,122
10	Damoh	59	21,821	13,447	-8,374
11	Dewas	200	1,72,269	1,24,243	-48,026
12	Dhar	19	11,049	7,088	-3,961
13	Dindori	4	295	0	-295
14	Guna	24	9,246	5,963	-3,283
15	Harda	104	1,15,657	88,457	-27,200
16	Hoshangabad	193	1,54,155	95,182	-58,973
17	Indore	59	53,529	38,069	-15,460
18	Jhabua	5	1,093	458	-635
19	Katni	9	269	0	-269
20	Khandwa	39	18,410	11,631	-6,779
21	Khargone	6	1,072	405	-667
22	Mandla	6	923	220	-703
23	Mandsaur	42	20,735	13,156	-7,579
24	Morena	13	96	0	-96
25	Narsinghpur	118	19,638	9,550	-10,088
26	Neemuch	9	5,313	3,137	-2,176
27	Panna	12	3,365	1,373	-1,992
28	Raisen	406	2,83,210	86,251	-1,96,959
29	Rajgarh	318	2,32,139	1,59,686	-72,453
30	Ratlam	118	54,100	26,955	-27,145
31	Rewa	35	5,907	1,771	-4,136
32	Sagar	212	1,03,461	67,341	-36,120
33	Satna	24	4,991	3,033	-1,958
34	Sehore	325	3,00,932	1,83,376	-1,17,556
35	Seoni	48	20,779	11,187	-9,592
36	Shajapur	106	1,66,279	1,00,512	-65,767
37	Shivpuri	40	11,455	8,345	-3,110
38	Sidhi	5	64	0	-64
39	Singroli	1	8	0	-8
40	Tikamgarh	18	3,470	2,175	-1,295
41	Ujjain	97	79,185	58,309	-20,876
42	Vidisha	267	2,08,924	1,28,809	-80,115
Total		3,362	22,64,192	13,58,299	-9,05,893

(Source: Information provided by Director, FWADD)

Appendix 3.20

Statement showing NPV from user agencies short/not realised

(Reference: Paragraph 3.3.2, Page 111)

(Amount in ₹)

Name of Forest Office	User agency	Purpose	When allowed	Forest land involved (in ha)	NPV to be obtained as per eco-value and density	Actually obtained	Balance amount
Divisional Forest Officer (General), Vidisha	Initially Sanjay Sagar Project, Bah River Division, Ganjbasoda Later Water Resources Department Division Vidisha	Construction of Danmarhi Tank	June 2006	75.597	5,69,60,841	1,14,69,000	4,54,91,841
Total				75.597	5,69,60,841	1,14,69,000	4,54,91,841

Appendix 3.21

Statement showing short realisation of NPV due to application of incorrect rates

(Reference: Paragraph 3.3.2, Page 111)

(₹ in lakh)

Sl. No.	Name of Forest Office	User agency	Sites	Density	Forest land involved (in ha)	NPV recoverable at rate per ha	NPV recovered at rate per ha	Balance NPV to be obtained
1	2	3	4	5	6	7	8	9=6*(7-8)/2
1	Divisional Forest Officer (General), Annuppur	South Eastern Coal fields Ltd.	Halদিwadi	0.5 ¹	91	8.03 ²	5.90	96.915
			Halদিwadi	0.4 ³	29	6.26 ⁴	5.80	6.670
Total					120			103.585

¹ Land belongs to class IV open and vacant forest having density 0.4

² Land belongs to class III Tropical dry deciduous forest having density 0.5 to 0.7

³ Land belongs to class under stock open and vacant forest having density 0.4

⁴ Land belongs to class III Tropical dry deciduous forest having density 0.4

Appendix 3.22

Statement showing short realization of NPV due to application of incorrect rates
(Reference: Paragraph 3.3.2, Page 111)

(₹ in lakh)

Sl. No.	Name of Forest Office	Name of the entity	Area (ha)	Class of forest as per GoMP re-fixed order	NPV recoverable at the rate of per ha	NPV recovered at the rate of per ha	Balance amount of NPV
1	2	3	4	5	6 ⁵	7 ⁶	8=5*(6-7)
1	Divisional Forest Office (General) Alirajpur	WRD	8.06	IV	6.26	4.38	9.19 ⁷
2	Divisional Forest Office (General) Betul (North)	M/S M.P Power Generating Company Limited, Madhya Pradesh	11.87	III	8.03 ⁸	6.26	21.00
Total			19.93				30.19

Appendix 3.23

Statement showing irrecoverable loss to the Government
(Reference: Paragraph 3.3.3, Page 112)

(Amount in ₹)

Sl. No.	National Park	Gazette notification date	Implementation Date	Actual date of implementation	Delay in days	Revenue Loss
1	Vanvihar National Park, Bhopal	16-10-2014	16-10-2014	03-02-2015	110	55,19,900
2	Madhav National Park, Shivpuri			January 2015	77	1,34,230
3	Ralamandal Sanctuary, Indore			21-11-2014	36	2,55,885
4	Panna Tiger Reserve, Panna			19-11-2014	34	2,51,730
	(i) Pandav Fall			21-11-2014	36	1,05,970
	(ii) Ranch Fall					
Total						62,67,715

⁵ Land belonged to Class III Open and Vacant Tropical Dry Deciduous Forest Land having density of 0.4 (Alirajpur)

⁶ Land belonged to Class IV Tropical Thorn Forest Land having density of 0.4 (Alirajpur)

⁷ The total NPV amount was ₹ 64.66 lakh, out of which the division has recovered an amount of ₹ 55.47 lakh after being pointed out by audit.

⁸ Land belonged to Class III Tropical Dry Deciduous Forests having density 0.5 (Betul)

Appendix 3.24

Statement showing calculation of price escalation for POL at Barwaha (Agreement No.15/2010-11)

(Reference: Paragraph 3.3.6, Page 117)

(Amount in ₹)

Sl. No.	Work done during the Quarter (R)	Base retail price/litre of HSD (Po)	Quarters considered for calculation of price Escalation	Percentage of all component (0.85%)	Percentage of POL component (in per cent) (Pp)	Average price/litre taken by division (P)	Price Escalation paid to contractors as per formula $V_p = \frac{0.85 * P_p * R * (P - P_o)}{100 * P_o}$	Average price/litre to be taken as per retail price of HSD at Barwaha (P)	Price Escalation payable to contractor as per formula $V_p = \frac{0.85 * P_p * \text{col. 2} * (\text{col. 9} - \text{col. 3})}{\text{col. 3}}$	Excess payment to contractors (col.8-col.10)
1	2	3	4	5	6	7	8	9	10	11
1	1,12,25,809	41.68	07/2011 to 09/2011	0.85	0.19	43.635	85,037	45.584	1,69,814	-84,777
2	1,04,32,28,288		01/2012 to 03/2012			45.6	1,58,45,657	45.590	1,58,05,234	40,423
3	55,42,26,873		04/2012 to 06/2012			45.6	84,18,185	45.798	88,43,389	-4,25,204
4	43,33,73,994		07/2012 to 09/2012			47.88	1,04,11,166	46.975	88,91,471	15,19,695
5	25,88,20,060		10/2012 to 12/2012			52.24	1,05,90,261	52.248	1,05,98,284	-8,023
6	60,48,45,635		01/2013 to 03/2013			60.55	4,42,24,331	53.062	2,66,75,216	1,75,49,115
7	58,74,60,271		04/2013 to 06/2013			60.113	4,19,58,441	54.589	2,93,84,339	1,25,74,102
8	18,05,80,742		07/2013 to 09/2013			68.97	1,90,95,005	57.056	1,07,58,696	83,36,309
9	10,85,43,512		10/2013 to 12/2013			70.166	1,19,80,643	58.916	72,49,118	47,31,525
10	3,42,05,516		01/2014 to 03/2014			74.03	42,87,609	60.915	25,49,372	17,38,237
11	1,78,99,092		04/2014 to 06/2014			77.01	24,50,301	62.515	14,45,005	10,05,296
12	3,81,58,891		07/2014 to 09/2014			79.83	56,40,727	64.800	34,18,443	22,22,284
13	16,29,95,514		10/2014 to 12/2014			60.32	1,17,72,437	60.092	1,16,28,439	1,43,998
14	15,31,57,060		01/2015 to 03/2015			55.69	83,14,191	55.772	83,62,853	-48,662
15	23,19,80,632		04/2015 to 06/2015			57.52	1,42,38,090	57.538	1,42,54,269	-16,179
Total (A)							20,93,12,089		16,00,33,942	4,92,78,150

Appendix 3.25

Statement showing calculation of price escalation for POL at Barwaha (Agreement No. 16/2010-11)

(Reference: Paragraph 3.3.6, Page 117)

(Amount in ₹)

Sl. No	Work done during the Quarter (R)	Base retail price/litre of HSD ⁹ Po	Quarters considered for calculation of price Escalation	Percentage of all component (0.85%)	Percentage of POL component (in per cent) (Pp)	Average price/litre taken by division P ¹⁰	Price Escalation paid to contractors as per formula $Vp = 0.85 * Pp * R * (P - Po) / 100 * Po$	Average price/litre to be taken as per retail price of HSD at Barwaha (P)	Price Escalation payable to contractor as per formula $Vp = 0.85 * Pp * col. 2 * (col. 9 - col. 3) / col. 3$	Excess payment to contractors (col.8-col.10)
1	2	3	4	5	6	7	8	9	10	11
1	50,07,216	41.68	07/2011 to 09/2011	0.85	0.21	45.596	83,846	45.584	83,718	128
2	46,21,00,814		01/2012 to 03/2012			45.6	77,57,706	45.9	83,51,408	-5,93,702
3	4,50,50,226		04/2012 to 06/2012			45.82	7,98,744	45.798	7,94,500	4,244
4	5,44,36,374		07/2012 to 09/2012			47.01	12,42,587	46.975	12,34,428	8,159
5	4,73,09,211		10/2012 to 12/2012			52.23	21,37,512	52.248	21,41,159	-3,647
6	74,05,36,366		01/2013 to 03/2013			60.55	5,98,45,128	53.062	3,60,97,363	2,37,47,765
7	14,33,97,963		04/2013 to 06/2013			60.11	1,13,18,238	54.589	79,27,680	33,90,558
8	1,69,54,431		07/2013 to 09/2013			69.00	19,83,693	57.056	11,16,444	8,67,249
9	2,35,42,440		10/2013 to 12/2013			70.17	28,72,463	58.916	17,37,795	11,34,668
10	96,23,589		01/2014 to 03/2014			74.76	13,32,869	60.915	7,92,756	5,40,113
11	83,75,072		07/2014 to 09/2014			79.83	13,68,339	64.800	8,29,253	5,39,086
12	6,47,56,075		10/2014 to 12/2014			60.32	51,69,362	60.092	51,06,131	63,231
13	18,58,04,111		01/2015 to 03/2015			55.69	1,11,48,180	55.772	1,12,13,430	-65,250
14	12,45,25,419		04/2015 to 06/2015			57.52	84,47,412	57.538	84,57,012	-9,600
Total (B)							11,55,06,087		8,58,83,077	2,96,23,013
Total (A+B)							32,48,18,176		24,59,17,019	7,89,01,163

⁹ Note: taken by division for price escalation (February 2011 at Barwaha) (Po)

¹⁰ Note: as per bulk price of HSD at Barwaha (P) (January 2013 to September 2014)

Appendix 3.26

Statement showing details of clubbed rate prepared by the Department and clubbed rate payable in WRD Shajapur

(Reference: Paragraph 3.3.14, Page 130)

(Amount in ₹)

Sl. No.	UCSR No.	Item	Clubbed rate calculated by Department				Clubbed rate payable			
			Quantity	Rate	Unit	Amount	Quantity	Rate	Unit	Amount
1	401 (b), 2501	Excavation in hard soil including 50 m lead and 1.5 m lift with dressing								
2		Main canal earthwork	43,875.56	26.00	cu m	11,40,765	43,875.56	26	cu m	0*
3		Minor canal earthwork	85,747.57	26.00	cu m	22,29,437	85,747.57	26	cu m	0*
4		Main Canal Structure	3,785.93	26.00	cu m	98,434	3,785.93	26	cu m	98,434
5		Minor canal structure	7,269.22	26.00	cu m	1,89,000	7,269.22	26	cu m	1,89,000
6		Main canal lining	19,673.43	28.60	cu m	5,62,660	19,673.43	28.6	cu m	5,62,660
7	410	Extra rate beyond 1.5 depth (main canal structure)	661.56	2.60	cu m	1,720	661.56	2.6	cu m	1,720
8	402, 2501	Excavation in hard moorum and moorum mixed with boulders including 50 m lead and 1.5 m lift with dressing, including separation of boulders of size 0.004 cu m (1/250 cu m) and more from the earthwork								
9		Main canal earthwork	18,281.48	36.00	cu m	6,58,133	18,281.48	36	cu m	6,58,133
10		Minor canal earthwork	35,728.16	36.00	cu m	12,86,214	35,728.16	36	cu m	12,86,214
11		Main Canal Structure	1,991.65	36.00	cu m	71,699	1,991.65	36	cu m	71,699
12		Minor canal structure	3,472.57	36.00	cu m	1,25,013	3,472.57	36	cu m	1,25,013
13		Main canal lining	8,197.26	39.60	cu m	3,24,611	8,197.26	39.6	cu m	3,24,611
14	410	Extra rate beyond 1.5 depth (Main canal structure)	330.78	3.60		1,191	330.78	3.6		1,191
15	418	Watering of earthwork for compaction at optimum moistures content with lead of water up to 100 m								
16		Main canal earthwork	39,568.68	13.00	cu m	5,14,393	39,568.68	13	cu m	5,14,393
17		Minor canal earthwork	1,23,708.20	13.00	cu m	16,08,206	1,23,708.20	13	cu m	16,08,206
18	417(a)	Compaction of earthwork at optimum moisture content to dry density not below 90 per cent by light roller i.e. non-powered rollers or sheep foot earth masters or hand rammers (excluding watering)								
19		Main canal earthwork	39,568.68	8.00	cu m	3,16,549	39,568.68	8	cu m	3,16,549
20		Minor canal earthwork	1,23,708.20	8.00	cu m	9,89,665	1,23,708.20	8	cu m	9,89,665
21	2902	lead of earth for filling reach								
22		Main canal	21,035.88	74.52	cu m	15,67,594	21,035.88	54	cu m	11,35,938
23		Minor canal	1,16,086.80	74.52	cu m	86,50,788	1,16,086.80	54	cu m	62,68,687
Total			2,28,022.80			2,03,36,073	2,28,022.80			1,41,52,114
Clubbing rate			2,03,36,073/2,28,022.80 = 89.18				1,41,52,114/2,28,022.80 = 62.06			
Difference in rate			89.18 – 62.06 = 27.12							
Quantity of earthwork item executed by contractor			2,29,439.60 cu m							
Total extra cost (A)		73,24,389.34	(2,29,439.60 cu m * 27.12 per cu m + 17.71 per cent above of USR 2009)							

* The rate of ₹ 54 per cu m is applicable for earthwork including all lifts and leads beyond 0.5 km up to 2 km and all other charges excluding watering and compaction and was to be paid being higher than the quantity of excavation.

Appendix 3.27

Statement showing details of clubbed rate prepared by the Department and clubbed rate payable in WRD Manawar

(Reference: Paragraph 3.3.14, Page 130)

(Amount in ₹)

Sl. No.	UCSR No.	Item	Clubbed rate calculated by Department				Clubbed rate payable			
			Quantity	Rate	Unit	Amount	Quantity	Rate	Unit	Amount
1	415(c)	Earth work with 50 m lead	2,11,822.60	31.00	cu m	65,66,501	54,794.60	31.00	cu m	16,98,633
2	415(a)	Lead charges 500 m,	1,57,029.00	62.64	cu m	98,36,296	1,57,029.00	43.00	cu m	67,52,247
3	418(a)	Watering E/W	2,11,822.60	13.00	cu m	27,53,694	2,11,822.60	13.00	cu m	27,53,694
Total			211822.60			19156491	2,11,822.60			1,12,04,574
Clubbing rate			19156491/211822.60 = 90.44				11204574/211822.60 = 52.90			
Difference in rate			90.44 – 52.90 = 37.54							
Quantity of earthwork item executed by contractor			156119.30 cu m							
Total extra cost (B)		57,38,815.57	(156119.30 cu m * 37.54 per cu m- 2.08 per cent below of USR 2009)							
Grand Total (A + B)			1,30,63,204.91							

Appendix 3.28

Statement showing the details of extra cost due to incorrect application of rates of CNS soil

(Reference: Paragraph 3.3.15, Page 131)

(Amount in ₹)

Sl. No.	Name of Division	Name of work	Actual cost of work	Date of issue of NIT	Tender premium (in per cent plus or minus)	Quantity of CNS executed (in cu m)	Rate of CNS adopted (per cu m)	Rate to be adopted as per amendment per cu m)	Extra cost with tender premium [8*(9-10)* (100+6)/100]
1	2	3	4	5	6	7	8	9	10
1	WRD Dn. Shajapur	Construction Of LBC of Kachhal tank	527.00	01-04-2013	9.95	18,833.43	94	52	8,69,709
2	WRD Dn. Shajapur	Construction Of RBC of Kachhal tank	1,150.00	21-05-2013	17.71	24,648.56	94	52	12,18,580
3	Sanjay Sagar Project Bah River Division Ganjbasoda	CC lining in main canal, 4 No. dy. And tail aminor of Sagar Project	2,748.22	10-01-2014	9.88	84,730.14	94	52	39,10,262
4		CC lining in main canal, 2 No. dy. and tail aminor of Sanjay Sagar project	2,528.84	10-01-2014	9.88	46,170.78	94	52	21,30,763
5		Earthwork structures and CC lining of main canal and minor canal of Nipaniya canal project	561.09	01-09-2014	14.99	2,697.03	94	52	1,30,255
6	WRD Dn. Katni	RRR work of Sarra tank	169.33	18-01-2013	8.5	9,268.71	170.2	52	11,88,684
7	Rock fill Dam Dn. Deolond	CC lining of Magaradaha high level canal	824.13	12-08-2013	7.99	5,047.92	94	52	2,28,952
8	Sindh Project RBC Dn. Narwar	CC lining and WBM road on service bank km 12 to 21.12 of D4 of RBC	311.33	14-02-2013	7.86	21,648.77	77	52	5,83,759
9	Sindh Project RBC Dn. Narwar	CC lining and WBM road on service bank km 00 to 12 of D4 of RBC	426.09	14-02-2013	8.86	19,443.89	77	52	5,29,165
10	WRD Dn. Shivpuri	Remodeling of canal and construction of outletsat Bhagora, Sateria, Imalia and Piploda tank	166.97	28-02-2014	(-) 5.05	3,744.30	94	52	1,49,319
Total			9,413.00			2,36,233.53			1,09,39,448

Appendix 3.29

Statement showing the details of extra cost due to execution of irregular item of tamping in canal works

(Reference: Paragraph 3.3.16, Page 132)

(Amount in ₹)

Sl. No.	Name of unit	Name of work	Quantity of CNS in cu m	Tender Percentage	Quantity of Tamping (sq m)	Rate of tamping (₹ 10.5 per sqm ± Tender Percentage)	Total extra cost
1	EE WRD Manawar, Dhar	Indla Tank Project, Manawar	3,341.03	2.08 below	12,671.90	10.28	1,30,267.13
2	EE WRD Katni	Repair, renovation and restoration of Sarra Tank Project	9,268.71	8.5 above	25,284.86	11.39	2,88,057.77
3	EE, WRD Damoh	RRR work of Left Bank Dam RBC and its minor of Mala Tank	8,555.06	19.94 above	39,220.11	12.59	4,93,781.18
4	EE, WRD Damoh	RRR work of Left Bank Dam LBC and its minor of Mala Tank	6,009.43	11.86 above	26,367.27	11.75	3,09,815.42
5	EE, SP RBC dn Narwar	Construction of CC lining work and WBM road on service bank Km 12 to 21.12 Km of D-4 distributary of RBC	21,533.81	7.86 above	45,792.80	11.33	5,18,832.42
6	EE, SP RBC dn Narwar	Const. of CC lining 0 to 12 Km of D-4 Dy	16,746.57	8.86 above	28,166.67	11.43	3,21,945.04
7	EE, WRD Dewas	Construction of Minor canal work of Datuni Tank project phase 2	10,933.58	14.23 above	39,228.00	11.99	4,70,343.72
8	EE, WRD Dewas	Construction of Datuni Tank (Canal)	26,597.64	18.89 above	63,494.07	12.48	7,92,625.05
9	EE, WRD Rajgarh	Construction of CC lining work in RBC and LBC main canal of Kushalpur medium Multipurpose Project	5,318.21	16.11 above	8,970.51	12.19	1,09,350.52
10	EE Sanjay Sagar Project, Ganjbasoda	Construction of cast-in-situ paver and non-paver CC lining in main canal and 4 no. Distributary of Sagad MIP	1,03,744.38	9.88 above	2,40,967.18	11.54	27,80,134.74
11	EE Sanjay Sagar Project, Ganjbasoda	Construction of cast-in-situ paver and non-paver CC lining in main canal and 02 no. disty of Sanjay Sagar (Bah) Project	47,636.95	9.88 above	1,26,334.74	11.54	14,57,574.43
12	EE Sanjay Sagar Project, Ganjbasoda	Construction of earth work and CC lining of main canal and minor of Nipaniya canal project	2,697.03	14.99 above	5,258.5	12.07	63,490.87
Total			2,62,382.40		6,61,756.61		77,36,218.29

Appendix 3.29

Statement showing the details of extra cost due to execution of irregular item of tamping in canal works

(Reference: Paragraph 3.3.16, Page 132)

(Amount in ₹)

Sl. No.	Name of unit	Name of work	Quantity of CNS in cu m	Tender Percentage	Quantity of Tamping (sq m)	Rate of tamping (₹ 10.5 per sqm ± Tender Percentage)	Total extra cost
1	EE WRD Manawar, Dhar	Indla Tank Project, Manawar	3,341.03	2.08 below	12,671.90	10.28	1,30,267.13
2	EE WRD Katni	Repair, renovation and restoration of Sarra Tank Project	9,268.71	8.5 above	25,284.86	11.39	2,88,057.77
3	EE, WRD Damoh	RRR work of Left Bank Dam RBC and its minor of Mala Tank	8,555.06	19.94 above	39,220.11	12.59	4,93,781.18
4	EE, WRD Damoh	RRR work of Left Bank Dam LBC and its minor of Mala Tank	6,009.43	11.86 above	26,367.27	11.75	3,09,815.42
5	EE, SP RBC dn Narwar	Construction of CC lining work and WBM road on service bank Km 12 to 21.12 Km of D-4 distributary of RBC	21,533.81	7.86 above	45,792.80	11.33	5,18,832.42
6	EE, SP RBC dn Narwar	Const. of CC lining 0 to 12 Km of D-4 Dy	16,746.57	8.86 above	28,166.67	11.43	3,21,945.04
7	EE, WRD Dewas	Construction of Minor canal work of Datuni Tank project phase 2	10,933.58	14.23 above	39,228.00	11.99	4,70,343.72
8	EE, WRD Dewas	Construction of Datuni Tank (Canal)	26,597.64	18.89 above	63,494.07	12.48	7,92,625.05
9	EE, WRD Rajgarh	Construction of CC lining work in RBC and LBC main canal of Kushalpura medium Multipurpose Project	5,318.21	16.11 above	8,970.51	12.19	1,09,350.52
10	EE Sanjay Sagar Project, Ganjbasoda	Construction of cast-in-situ paver and non-paver CC lining in main canal and 4 no. Distributary of Sagad MIP	1,03,744.38	9.88 above	2,40,967.18	11.54	27,80,134.74
11	EE Sanjay Sagar Project, Ganjbasoda	Construction of cast-in-situ paver and non-paver CC lining in main canal and 02 no. disty of Sanjay Sagar (Bah) Project	47,636.95	9.88 above	1,26,334.74	11.54	14,57,574.43
12	EE Sanjay Sagar Project, Ganjbasoda	Construction of earth work and CC lining of main canal and minor of Nipaniya canal project	2,697.03	14.99 above	5,258.5	12.07	63,490.87
Total			2,62,382.40		6,61,756.61		77,36,218.29

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