

## WATER RESOURCES AND NARMADA VALLEY DEVELOPMENT DEPARTMENTS

### 3.4 CONSTRUCTION OF IRRIGATION PROJECTS WITH NABARD LOAN

#### Highlights

Money value-  
Rs.438.98  
crore  
Weighted  
Money value-  
Rs.241.58  
crore

*Six hundred twenty seven projects of Water Resources Department (WRD) and thirty-five projects of Narmada Valley Development Authority (NVDA) were sanctioned with National Bank for Agriculture and Rural Development (NABARD) loan at a total outlay of Rs.1418.17 crore and Rs.1163.25 crore to create additional irrigation potential of 2.98 lakh hectare (ha) and 2.51 lakh ha respectively till March 2006. Rs.161.26 crore and Rs.86.70 crore was unauthorisely spent in excess of the sanctioned cost by WRD and NVDA respectively due to incorrect estimation. Thirteen projects of WRD on which Rs.2.07 crore was spent were abandoned due to infeasibility and other constraints. Possibility of completion of 12 projects is remote due to uncertain position of forest clearances. The implementation of much needed programme was tardy because 232 projects of WRD and 32 projects of NVDA were still in pipeline. Work of 51 projects of WRD was not started. Rupees 249.70 crore and Rs.83.91 crore spent by WRD and NVDA respectively on unapproved items of works was disallowed by NABARD. Investment of Rs.79.22 crore on constructions of 13 projects was nugatory/ill conceived, as they did not yield envisaged benefits. The utilization of irrigation potential created was 0.53 lakh ha and 0.04 lakh ha against projected potential 1.69 lakh ha and 0.51 lakh ha for schemes undertaken by WRD and NVDA respectively. Some important findings of the performance audit are given below:*

**Rupees 249.70 crore and Rs.83.91 crore of WRD and NVDA respectively spent on unapproved items were disallowed by NABARD till June 2006.**

*(Paragraph 3.4.6.2)*

**Substantial shortfall in utilization of the irrigation potential was there from 49 Lift Irrigation Schemes completed at an expenditure of Rs.57.29 crore.**

*(Paragraph 3.4.7.6)*

**The investment of Rs.65.78 crore has been blocked due to uneven physical progress of 38 projects till these are completed.**

*(Paragraph 3.4.8.6)*

**The investment of Rs.51.64 crore and Rs.27.58 crore on completion of 7 projects and 6 projects respectively was nugatory or ill conceived, as they did not yield projected benefits.**

*(Paragraph 3.4.8.1 and 3.4.8.2)*

**Purchase of articles worth Rs.3.05 crore from Dewas Udyog, Dewas was in violation of store purchase rules. Purchase of survey instruments of Rs.59.56 lakh with NABARD loan was irregular.**

*(Paragraph 3.4.8.4)*

**Debitable cost of Rs.4.32 crore not recoverable from contractors due to deviation from clause of the agreements.**

*(Paragraph 3.4.8.5)*

### **3.4.1 Introduction**

The Government of India (GOI) has set up a Rural Infrastructure Development Fund (RIDF) in 1995-1996 to be operationalised by National Bank for Agriculture and Rural Development (NABARD) for financing as well as motivating the State Governments to take up implementation of the on going as also the new infrastructure projects in the rural area as a crash programme. The irrigation potential in the State was 39.6 per cent (1997-98) of the net sown area (NSA) as against the national average of 65.2 per cent for the same base year. With a view to create additional irrigation potential, the State Government decided (April 1995) to complete 855 incomplete irrigation projects of WRD with NABARD loan for unlocking of sunken investments of Rs.3377.04 crore already made in order to realize their full benefits. Subsequently in 1996-97 NVDA also decided to avail NABARD loan facility for creation of additional irrigation potential.

### **3.4.2 Organisational set up**

The WRD is headed by the Principal Secretary (PS) at Government level. Seven Chief Engineers (CE)<sup>1</sup> of the basin working under the Engineer-in-Chief (E-in-C) are responsible for implementation of projects. NVDA is a high power body with a Chairman and six Members for Engineering, Finance, Power, Planning, Environment & Forest and Rehabilitation. In case of NVDA three CEs<sup>2</sup> working under Member Engineering were responsible for implementation of projects. The Water Resources (WR) Divisions and Narmada Development (ND) Divisions of the WRD and NVDA headed by the Executive Engineers (EE) are executing the projects respectively under the direction and control of Superintending Engineers (SE) of circles.

### **3.4.3 Objectives of Audit**

The performance audit of construction of irrigation projects with NABARD loan was conducted with a view to assessing whether:

- the funds were utilized efficiently and economically.
- the systematic planning was done in fixation of the targets and their achievement
- the execution of projects was managed efficiently and effectively with due adherence to quality standards.
- the monitoring, control and evaluation was effective.

### **3.4.4 Scope of Audit**

The records in the Office of the E-in-C WRD, 7 CEs and 10 divisions out of 43 divisions and 3 CEs of NVDA and 4 divisions out of 10 divisions were test checked in audit from

<sup>1</sup> Narmada Tapti Basin, Indore, Chambal Betwa Basin, Bhopal, Operation & Maintenance, Bhopal, Wain Ganga Basin, Seoni, Dhasan Ken Basin, Sagar, Yamuna Basin, Gwalior and Ganga Basin, Rewa.

<sup>2</sup> CE, RABLS Jabalpur, CE Lower Narmada Basin, Indore and CE (Power), Bhopal.

May 2006 to September 2006. Of the 662 projects (WRD 627 projects and NVDA 35 projects) 335 projects were test checked. Rs.758.51 crore was spent as of June 2006 on the test checked projects, which was 40.45 per cent of the total expenditure that was incurred on these irrigation projects that were financed by NABARD. Further for these test-checked projects NABARD loan of Rs.877.97 crore was availed which was 38.86 percent of the total sanctioned NABARD loan.

### 3.4.5 Funding pattern

#### 3.4.5.1 Utilisation of Funds

For execution of projects allotment was made in budget and expenditure incurred there against was claimed on monthly basis from NABARD. Financing by NABARD up to 90 per cent of the project cost incurred on the sanctioned projects by the Government was on reimbursement basis, which was repayable in 7 years in 5 equal installments commencing from 3<sup>rd</sup> year of the sanction of loan. The interest on loan was payable from date of release on quarterly basis and the rate of interest depended upon the agreement entered in for specific tranche ranging from 13 per cent to 6.5 per cent.

**The implementation of the programme was tardy. Work in 51 projects has not started. In 113 projects proposal to acquire land was under process.**

Loan of Rs.843.76 crore and Rs.664.66 crore were released by NABARD till June 2006 against cumulative sanction of Rs.1246.36 crore and Rs.1012.78 crore leaving a gap of Rs.402.60 crore and Rs.348.12 crore for WRD and NVDA respectively. Financing of projects of tranche I to V has ended on June 2006 and unavailed loan of Rs.60.94 crore also lapsed. FD and NABARD had also expressed their concern on poor monitoring of the programme.

Two hundred thirty two projects of WRD were incomplete as of June 2006 that included 7 and 11 projects of tranche III (1997-98) and IV (1998-99) respectively. In 113 schemes out of 232, the proposals for land acquisition have not been submitted, whereas in 108 schemes the process of land acquisition was in progress. The work on 51 schemes has not started for want of land acquisition or various other constraints. The work of Mini hydel power project of 15 MW in Khandwa sanctioned (2001-02 tranche VIII) at an outlay of Rs.62.01 crore has not started and mobilization advance of Rs.7.02 crore obtained (2002-03) has also remained unutilized.

**Money value-Rs. 333.61 crore  
Weighted Money value- Rs. 183.49 crore**

#### 3.4.5.2 Expenditure on unapproved items of works

Appropriate administrative and financial control was not in place to secure optimum utilization of funds. Funds were also not released by State as per sanctioned cost of the projects. NABARD had reimbursed the amount spent in accordance with terms and conditions agreed upon. Rs.249.70 crore by WRD and Rs.83.91 crore by NVDA spent on unapproved items of works, excess over sanctioned cost, wages of work charged/daily wage staff and petty purchase during 1995-96 to 2005-06, was disallowed by NABARD. Tranche wise amount disallowed is given in *Appendix 3.6*. It has disturbed the entire economics of the projects. The FD had expressed (May 2005) their concern on this matter. Facts remains close monitoring, adherence to schedule, approval of deviations by competent authority could only prevent

**Rs. 249.70 crore by WRD and Rs. 83.91 crore by NVDA spent on un approved items of work was disallowed by NABARD**

such cases of non reimbursement by NABARD and these steps were however, not found to have been adequately taken.

### **3.4.5.3 Non accountal of interest element**

**Interest paid on loan was neither debited to the cost of the project nor considered for evaluating the economics of the projects.**

The project wise amount of interest paid on the loan was not available. The element of interest was neither debited to cost of projects nor was it considered for evaluating benefit cost (BC) ratio and economic rate of return (ERR) of the projects. Further, rate of interest for earlier tranches (tranche – 1 1995-96 13%, tranche-II & III 1996-98 12%) was higher as compared to subsequent tranches (tranches IV to VII 1998-2002 7%, tranches VIII to XI 2002-2006 6.5%). The extensions of implementation period of the projects, therefore, attracted additional interest liability at higher rates besides denial of envisaged benefits due to non-completion. The E-in-C admitted (July 2005) the fact and assured that element of interest would be considered in future.

**Money value-Rs. 7.40 crore  
Weighted Money value- Rs. 3.33 crore**

### **3.4.5.4 Unauthorised sanction of extra items**

**Work of additional quantities for Rs. 7.40 crore was executed without Government sanction.**

The agreement lays down that specific sanction of Government has to be obtained if quantities of any item exceeds by 30 per cent of the estimated quantity or Rs. 15 lakh. A test check in audit disclosed that in 10 cases<sup>3</sup> the quantities exceeded as high as 861 per cent but instead of obtaining Government sanction it was chosen to get the work of Rs.7.40 crore done on separate contracts. Commencement of work of extra quantity without obtaining sanction of Government was not only irregular but also had adverse implication on economic feasibility of projects.

### **3.4.5.5 Delay in submission of project completion certificate**

Audit scrutiny revealed that completion reports (Appendix 2.27 of the Manual) justifying and as also regularizing expenditure in excess of sanctioned estimates was not submitted through AG as laid down in Works Manual.

**PCRs were not submitted through AG duly regularising excess expenditure.**

The project completion certificates (PCRs) in respect of 63 projects<sup>4</sup> reported complete between June 2002 and March 2006 were awaited despite several reminders by the E-in-C / NABARD. The CE BODHI also reported (November 2005) that completion drawings and completion reports in proforma prescribed by CWC were awaited.

The E-in-C has assured (October 2005) in reply that instructions have been issued to all the CEs and EEs to submit the completion certificates of the projects to AG with in a month.

<sup>3</sup> Kaka Saheb Gadgil-Mandsaur Rs. 0.71cr, Junapani-Khargone Rs.0.35 cr, Satkinalla-ehindwara Rs. 0.31cr, Kevlari-Raisen Rs 0.16 cr, Shankarpura-Rajgarh Rs. 0.16 cr, Shahpura distributory-Narsighpur Rs. 1.80 cr and Rs. 0.47 cr, Andia Kandel-Narsighpur Rs. 2.25cr, Gawlan Khargone Rs.0.94 cr, Navalpura-Khargone Rs. 0.25 cr.

<sup>4</sup> CE N/T Basin, Indore (31), CE Dhasan Ken Basin, Sagar (4), CE Yamuna Basin, Gwalior (2), CE Wain Ganga Basin, Seoni (8), Chambal Betwa Basin Bhopal (16), Operation & Maintenance Bhopal (2).

### 3.4.6 Planning

#### 3.4.6.1 Non achievement of targets

Out of 627 projects of WRD and 35 projects of NVDA 382 projects of WRD and 3 projects of NVDA could only be completed.

There were 855 incomplete irrigation projects of WRD but construction of 627 projects including 349 new projects at a sanctioned cost of Rs.915.40 crore was taken up with NABARD loan under tranche I to XI at a total outlay of Rs.1418.17 crore (NABARD loan Rs.1246.36 crore and State share Rs.171.81 crore) during 1995-96 to 2005-06 to create additional irrigation potential of 2.98 lakh ha. Three hundred eighty two projects were reported complete and 232 projects were in progress as of June 2006. An expenditure of Rs.1087.75 crore has been incurred so far (June 2006).

Thirteen projects have been abandoned.

Construction of 35 projects including two mini hydel power projects of 10 and 15 MW of NVDA was taken up with NABARD loan under tranches II to X at a total outlay of Rs.1163.25 crore (NABARD loan Rs.1012.78 crore and State share Rs.150.47 crore) between 1996-97 and 2004-05 to create additional irrigation potential of 2.51 lakh ha. Three projects were reported complete at a cost of Rs.48.31 crore and irrigation potential of 0.51 lakh was created. Thirty-two projects were in progress on which Rs.738.92 crore was spent as of June 2006. The tranche wise position of projects sanctioned, loan sanctioned and released, amount spent, amount disallowed and projected irrigation is given in *Appendix 3.6*.

#### 3.4.6.2 Delay in availment of loan

According to terms and conditions of NABARD loan, each project was to be completed within 2 / 3 years. The position of NABARD loan sanctioned for 627 projects of WRD and amount of loan availed as well as targets fixed to complete the projects and actual achievement was as under:

(Rupees in crore)

Year	Sanctioned		Amount of Loan availed	Projects completed	Shortfall in loan	Shortfall in Project
	Loan	Projects				
Upto 2000-01	534.91	343	480.00	150	54.91	193
2001-02	73.70	25	64.72	61	8.98	157
2002-03	142.04	55	109.71	63	32.33	149
2003-04	175.97	73	104.32	37	71.65	185
2004-05	143.66	83	66.21	19	77.45	249
2005-06	176.08	48	18.80	52	157.28	245*
<b>Total</b>	<b>1246.36</b>	<b>627</b>	<b>843.76</b>	<b>382</b>	<b>402.60</b>	<b>232</b>

\* 13 projects have been abandoned, 28 and 48 projects are targeted to complete by March 2007 and March 2008 respectively.

As could be seen the progress in availment of loan was very tardy. Further there were delays in execution of the projects. As against 156 projects to be completed during 2005-06 only 52 projects were completed. The projects were not being implemented even within the extended tranche period due to abnormal delays in land acquisition and also delays in finalizing the executing agencies. The targets fixed were unrealistic to achieve the projected objectives. NABARD had also reiterated their concern on the slow pace of implementation of the projects.

The E-in-C admitted (October 2005) that delay in completion of projects resulted in increase of interest liability besides denial of irrigation benefits.

**Rupees 161.26 crore by WRD and Rs 86.70 crore by NVDA were spent in excess over the sanctioned cost due to infeasibility on which Rs.2.07 crore was already spent .**

### ***3.4.6.3 Inadequate survey and inaccurate estimation***

According to terms and conditions of NABARD loan the project should be technically feasible, financially viable, and economically beneficial with high priority. The State Government directed the department (December 2002 and June 2003) to submit technically sound and economically feasible schemes. It was observed in audit that there has been substantial increase in cost due to high cost of land compensation, increase in quantities, additional/extra items during the course of execution of projects due to inadequate survey or unrealistic estimation which contributed to delay in completion, and denial of irrigation facilities to the beneficiaries. NABARD also opined (December 2002 and June 2003) that the projects were proposed without adequate scrutiny. Scope of projects was also revised in implementation stages without obtaining approval of proper authority.

NABARD sanctioned loan of Rs.228.74 crore on 69 projects of WRD but Rs.390 crore was spent on these projects as of June 2006. Thus Rs.161.26 crore were spent in excess of the sanctioned cost due to inadequate estimation of land compensation, additional/extra items was unauthorized. The estimates were revised to Rs.408.95 crore but sanctions were awaited as of June 2006.

Similarly it was observed that even after obtaining sanction for revision in cost of 3 projects<sup>5</sup> of NVDA from Rs.179.26 crore to Rs.231.91 crore (March 2003), an amount of Rs.21.81 crore was incurred over and above the revised cost. It was irregular to provide allotment of fund and issue of LOCs in excess of the revised sanctions.

**Thirteen projects sanctioned with an outlay of Rs. 8.80 crore were abandoned due to infeasibility on which Rs. 2.07 crore was already spent.**

### ***3.4.6.4 Selection of unfeasible projects***

Thirteen projects<sup>6</sup> sanctioned between 1995-96 and 2003-04 at an outlay of Rs. 8.80 crore to create additional irrigation potential of 2336 ha were abandoned (February 2002 to May 2005) due to their infeasibility and other constraints when Rs. 2.07 crore had already been spent besides interest liability on loan. One more project<sup>7</sup> was also proposed to be abandoned.

The FD directed (October 2004) that WRD should fix the responsibility and take action for taking up of projects without planning and obtaining mobilization advance from NABARD. No action was however found to taken as of June 2006.

<sup>5</sup> Man Project (Dhar), Jobat Project (Jhabua). and RABLS (Jabalpur)

<sup>6</sup> Tranche I (Bagwaj LIS Morena, Bawli Mandla, Parheta Khandwa, Simaria No.2 Gwalior) Tranche II (Budhana Seoni), Tranche III (Mangora Betul), Tranche IV (Funga and Khodary Shahdol, Van LIS Vidisha, Sahastradhara Khargone and Talatali Seoni) Tranche IX (Birali and Julwani Khargone)

<sup>7</sup> Nimoni tank (tranche X) in Khargone

### 3.4.6.5 Construction of uneconomic project

The cost of construction exceeded the prescribed ceiling of Rs. 1.00 lakh per hectare in 41 cases.

Money value-Rs57.29 crore  
Weighted Money value-Rs.31.51 crore

Rs.57.29 crore spent on 49 LIS to irrigate 18470 hectare did not yield desired results.

Cost of construction was one of the important criteria for selection of projects. It was not to exceed Rs.0.75 lakh per ha (up to March 2002) and Rs.1.00 lakh per ha from May 2002 onwards. Audit scrutiny revealed that the cost of construction exceeded the prescribed ceiling in as many as 41 cases as detailed in *Appendix- 3.7* that disturbed the entire economics of the projects and many of them were incomplete as revised sanctions were awaited. The investment of Rs.128.06 crore has remained unfruitful. The escalation in cost was also not reimbursable. The E-in-C also assured (October 2005) that all the CEs have been reminded to obtain revised sanction of the Government.

### 3.4.6.6 Implementation of Lift Irrigation Schemes

Fifty two lift irrigation schemes (LIS) were taken up with NABARD loan tranche I to IV and forty nine of these were reported complete during 1996-97 to 2005-06 at a cost of Rs.57.29 crore including NABARD loan of Rs.45.85 crore. The irrigation potential created was 18470 ha but actual utilization of potential was as low as 55 ha in 2005-06 and as high as 1109 ha in 2000-01. There was no irrigation from 18 LIS\* Looking to abysmal performance and heavy recurring maintenance cost of LIS the WRD decided (May 1999) that all the LIS of the department be transferred to respective societies by June 2000 and no new LIS be sanctioned. It was also directed to submit a brief after detailed study before the cabinet. Even then six more LIS at an outlay of Rs.9.22 crore were taken up with NABARD loan under tranche VIII and X to create additional irrigation potential of 2982 ha. Rupees 4.25 crore was spent on these six LIS as of June 2006. In view of limited utility of LIS, investment in new schemes was not advisable.

### 3.4.6.7 Unrealistic sanction of projects

Sanction of 9 projects at an outlay of Rs.7.05 crore with high expectations from the cultivators to lift the water from dam at their own cost and bear the cost of maintenance was unrealistic.

The Government decided (March 2002) that in minor schemes with irrigation potential from 40 ha to 200 ha, construction of canals or lifting of water by pumps and their maintenance would be done by the cultivators at their own. Water rates applicable for LIS would also be recovered by WRD.

Nine projects<sup>8</sup> involving lifting of water by pumps with an outlay of Rs.7.05 crore were sanctioned with NABARD loan to provide irrigation in 1255 ha. Rupees 5.87 crore was spent as of March 2006. Four projects<sup>9</sup> were reported complete (March 2006) and Five<sup>10</sup> were in progress. The possibility of translation of expectations of the Govt. in to action is very remote looking to the poor performance of the LIS completed in the wake of high operation and maintenance cost. NABARD also had expressed doubts (June 2006) on their success.

\* CE Dhasan Ken Basin Sagar-6, CE Chambal Betwa Basin Bhopal-7, CE Yamuna Basin, Gwalior and CE Ganga Basin Rwa 2 each, CE N/T Basin, Indore-1

<sup>8</sup> Veda Barrage, Dedgaon, Roopkheda, Sattalai and Mejjampura in Khargone, Chotiyabardi and Khobaranala in Jhabua, Sejjwani in Indore and Shankarpura in Rajgarh.

<sup>9</sup> Veda Barrage, Dedgaon, Roopkheda, and Sattalai in Khargone.

<sup>10</sup> Mejjampura in Khargone, Chotiyabardi and Khobaranalla in Jhabua, Sejjwani in Indore and Shankarpura in Rajgarh.

Money value-Rs 23.72 crore  
Weighted Money value-Rs. 13.05 crore

### 3.4.6.8 Projects incomplete for want of forest clearance

Completion of 12 projects was a pipe dream in the wake of nebulous position of forest clearance Rs.23.72 crore spent remained blocked.

Twelve projects sanctioned with an outlay of Rs.32.06 crore to irrigate 4382 ha between September 1997 and March 2005, were incomplete in the wake of uncertain position of forest clearance as detailed in *Annexure 3.8*. The investment of Rs.23.72 crore made till June 2006 will not yield any fruits till the projects are completed. The CE has proposed (May 2005) to withdraw Kalmoda tank of Jhabua on which Rs.75.50 lakh was spent.

Amanall tank (Balaghat) was reported complete in May 2003 without transfer of 84.52 ha forestland. Case was still pending under Forest Conservation Act 1980. The execution of project was unauthorized and the E-in-C admitted (October 2005) that projects were taken up in anticipation of sanction of forest clearance from GOI.

Construction of part canal could not progress due to forest clearance.

The construction of the Left Bank Main Canal (LBMC) and its distribution system with structures of Rani Awanti Bai Lodhi Sagar (RABLS) at Narsinghpur from Km 111.00 to 117.50 and 119.50 to 130.67 has been awarded (August – November 2004) at a tendered cost of Rs. 42.66 crore.

Work from Km. 117.50 to 119.50 has not been awarded due to non-acquisition of 11.52 ha forestland. Though Collector, Narsinghpur has ordered (May 2005) to transfer 20 ha revenue land of adjoining forest area as desired by the Chief Conservator of Forest (Land Management), Bhopal but the work has not been tendered. The non-construction of missing link will result in denial of potential created and may involve extra cost in construction of missing link due to time gap.

## 3.4.7 Execution of works

### 3.4.7.1 Nugatory expenditure

Seven projects completed at an investment of Rs. 51.64 crore between March 2000 and September 2003 did not yield projected benefits and investment proved nugatory as discussed below:

Investment of Rs.51.64 crore on construction of 7 projects was nugatory, as they did not yield envisaged benefits.

➤ The remaining work of Matiyari medium project in Mandla district was sanctioned (September 1995) at an outlay of Rs.21.32 crore to utilize irrigation potential of 10120 ha already created. The work was reported (March 2000) complete after spending Rs.10.41 crore. The work executed did not match with sanctioned scope of works. Chute fall, widening of spill channel, watercourses, field channels and drainage works, were not executed. No additional irrigation was done as was envisaged. The maximum irrigation done was 4751 ha that was achieved even before obtaining NABARD funding. Liabilities of Rs.97.70 lakh of eight contracts executed during 1998-2000 were pending for want of allotment.

➤ Kaka Sahib Gadgil Sagar Project in Mandsaur was sanctioned (2001-02) with NABARD loan at an outlay of Rs. 27.36 crore to irrigate 3400 ha. Rupees 35.42 crore was spent till June 2006 but no irrigation could be done due to non-

construction of railway crossing across main canal at RD 3360 M. Rupees 75.85 lakh was deposited (May 2005) with Railway authority.

- Nimb tank project in Khandwa (1996-97) and Barelipar tank project in Seoni (1998-99) had been reported complete at an expenditure of Rs.2.10 crore and Rs.1.41 crore in December 2001 and June 2002 respectively. Rupees 40 lakh for Nimb tank and Rs.21.15 lakh for Barelipar tank was deposited with railway in February 2002 and September 2002 respectively. The irrigation potential of 270 ha out of 445 ha from Nimb tank and 150 ha from Barelipar tank remained unutilized due to non-construction of railway crossing across main canals of these tanks. The investment was thus nugatory. The CEs have assured (July 2006) for early completion of works.
- Utawad tank in district Khargone was constructed in 1992 to irrigate 513 ha. As its catchment area was inadequate Nimgulnala diversion project was sanctioned (1998-99) at an outlay of Rs.1.18 crore to feed Utawad tank by diverting water of 12.5 sq km catchment area. In light of cultivator's protest the widening of Nalla was executed in 960 metre length against sanctioned 150 metre for increasing discharge of water so that the fields of farmers will not be flooded during rains. The work was reported (March 2002) complete at an investment of Rs.1.72 crore. The widened Nalla was still insufficient to carry huge discharge of water during rains. So the fields of farmers continued to be flooded during rains and there was no increase in storage of water in or irrigation from Utawad tank as of March 2006. The EE WR Division assured (July 2006) that remaining work would be completed with State Plan Fund.
- Bagwanalla tank in Khargone was sanctioned (1997-98) with NABARD loan at an outlay of Rs.17.79 lakh to irrigate 50 ha. The work was reported (June 2000) complete at an investment of Rs.17.79 lakh. Created irrigation potential remained unutilized, as there was no flow of water in the river as of March 2006. The investment was nugatory due to incorrect survey of catchment areas.
- Singhantalai tank in Katni was sanctioned (1995-96) at an outlay of Rs.39.70 lakh to irrigate 172 ha. The tank was reported (June 1998) complete at an investment of Rs.33.85 lakh. Created irrigation potential remained unutilized, as of March 2006 due to damages in canals and its structures.

#### ***3.4.7.2 Ill conceived execution***

Execution of 6 projects sanctioned with an outlay of Rs.27.58 crore was ill conceived due to various constraints on which Rs.19.78 crore was spent till June 2006 as discussed below:

**Execution of 6 projects sanctioned with an outlay of Rs.27.58 crore was ill conceived due to various constraints.**

- Balance work of Bandianalla Medium Project in Guna district was sanctioned (1995-96) with NABARD loan at an outlay of Rs.7.98 crore. As the funding from NABARD loan was last extended to March 2000, the work was reported complete (March 2000) after

incurring an expenditure of Rs.13.71 crore, which includes the amount, spent prior to sanction of NABARD loan. However re-sectioning of canal and construction of two R-minors with structures was not completed. The sanction of canal work estimated to Rs.2.73 crore sent to CE (June 2005) was still awaited (June 2006). Due to non-execution of canal work to carry designed water flow, the irrigation in 430 ha was achieved as against envisaged potential of 2040 ha. The E-in-C had directed (July 2002) to fix the responsibility for non-revision of canal section but no action was taken against the delinquent officers (June 2006).

- Khedi tank in Khargone sanctioned (June 1997) at an outlay of Rs. 0.60 crore to irrigate 97 ha was abandoned in March 2000 due to subjudice case of land acquisition. The project was again taken up in July 2002 and Rs. 1.20 crore was spent till June 2006 when 100 per cent headwork was completed without canal work. The case to acquire land for canal was pending (July 2006) as it command areas may overlap by Indira Sagar Project. The expenditure of Rs. 1.20 crore on unviable project was thus unfruitful.
- Junapani tank in Khargone was sanctioned (2003-04) at an outlay of Rs.2.26 crore to irrigate 259 ha. Rupees 1.63 crore was spent till June 2006. The site and drawing of spill channel technically sanctioned (October 2002) on right flank was changed (January 2005) to left flank in the light of public protest. Inadequate survey and incorrect sanction entailed extra cost of Rs.55.64 lakh. The project was still incomplete as of June 2006. The CE N/T Basin, Indore admitted (July 2006) the facts and assured early completion of project.
- Bargoliya tank in Rajgarh was sanctioned (2002-03) at an outlay of Rs.8.69 crore to irrigate 1134 ha. Even after incurring an expenditure of Rs.6.38 crore on tank work and Rs.0.23 crore on canal work, the head work was not complete and the canal work not even started (June 2006). Though Nalla closure was done in September 2005, the proposal for acquisition of 48.00 ha land for canal work was moved only in June 2006. This resulted in denial of irrigation facility to farmers. The EE WR Division, Rajgarh admitted (August 2006) the facts.
- Maniyapura tank in Rajgarh was sanctioned (2004-05) at an outlay of Rs.3.14 crore to irrigate 315 ha. Thirty ha land acquired for the project at a cost of Rs.0.40 crore has been encroached (May 2006) by the cultivators and work could not go ahead. The EE, WRD Division, Rajgarh admitted (August 2006) the facts.

#### ***3.4.7.3 Excess payment due to non-deduction Shrinkage allowance***

The SE, RABLS Canal Circle, Jabalpur directed (February 2002) that while laying Cohesive Non Swelling (CNS) layer in lining work of canal ten per cent shrinkage from the gross quantity worked out by sectional measurements should be deducted. In construction of LBMC from Km 97 to 111 and construction of Andia, Kandeli and Surghi distributaries Rs.7.95 lakh and Rs.36.10 lakh respectively was excess paid due to non-deduction of shrinkage. The EE, Narsinghpur stated (June 2006) in reply that no

shrinkage was deducted due to execution of compacted work. The reply was not acceptable as it was not in conformity with the instructions of Superintending Engineer.

Money value-Rs.3.65 crore  
Weighted Money value- Rs. 2.00 crore

#### ***3.4.7.4 Unauthorised and irregular purchases***

Irregular purchase of Rs.3.05 crore from Dewas Udyog Dewas with out NOC from MPLUN

Purchase of MS pipes, steel aqueduct, columns and foot bridge etc. for Rs. 3.05 crore between November 2000 and July 2005 from Dewas Udyog, Dewas (a unit of the MP State Industries Corporation Limited) with the permission of CE was irregular because it was not registered with MPLUN under Store purchase rules. It was also clarified and confirmed (October 2004) by the Commerce and Industry (C&I) Department. Further, the divisions with the permission of CEs had also purchased survey instruments of Rs.59.56 lakh with NABARD loan. Provision was not made in the sanctioned estimates of the projects for these instruments. The CE, Chambal Betwa Basin, Bhopal stated (September 2005) in reply that purchase from Dewas Udyog was made as per directions of the Government WRD and when letter from C&I Department was received no purchases have been made thereafter from Dewas Udyog.

#### ***3.4.7.5 Irrecoverable debitible cost***

Money value-Rs. 4.48 crore  
Weighted Money value- Rs. 2.46 crore

Debitible cost of Rs.4.48 Crore was not recoverable from original contractors.

The construction of canal with mild steel siphon cum aqueduct of Bagedi tank in Dhar was awarded (November 2003) for Rs. 3.84 crore to be completed in 24 months. Rupees 91.83 lakh was paid (July 2005) to the contractor. The contractor stopped the work from July 2005 but also removed the machinery from work site. His contract was rescinded (January 2006) in the wake of slow progress of work with the condition that extra cost in completing the left over balance work will be recovered from the contractor. The balance work was splitted up. The construction of canal siphon cum aqueduct was awarded (February 2006) to one agency for Rs.5.46 crore. The construction of canal was awarded (June 2006) to another agency for Rs.2.09 crore to be completed in 12 months. The award of siphon cum aqueducts through other agency involved extra cost of Rs.4.32 crore as compared to tendered cost of Rs.1.14 crore of original contractor. The extra cost was irrecoverable from the original contractor as the balance work was split up and not awarded to other agency on same terms and conditions as in original contract.

#### ***3.4.7.6 Uneven physical progress of projects***

Dam and canal work of the project was required to be taken up simultaneously and nalla closure should not have been done unless 75 per cent canal work is completed. Audit scrutiny disclosed that in 22<sup>11</sup> projects test checked the canal work has not been started whereas dam works were completed due to canal alignment not being finalized, land not being acquired and agency not fixed. In 15 cases canal work was lagging much behind and in one case ( Gopal Das Tank, Sidhi)

Rs. 65.78 crore spent on 38 projects did not yield any fruits due to non-construction of canal simultaneously with dam work

11. Namada Tapti Basin, Indore-20, Chambal Betwa Basin, Bhopal-12, Wainganga Basin Seoni- 3, Dhasan Kan Basin Sagar, Ganga Basin, Rewa and Yamuna Basin, Gwalior 1 each.

that even though canal was completed but physical progress of dam was 30 per cent only. Consequently spending of interest-bearing loan of Rs.65.78 crore against the sanctioned cost of Rs. 84.63 crore did not yield any fruits to the beneficiaries due to unplanned execution of works and ineffective monitoring of the programme. The CE Narmada Tapti (N/T) Basin, Indore has assured (July 2006) early completion of these projects.

#### **3.4.7.7 Execution of sub standard work**

**Execution of substandard work resulted in heavy seepage and leakage in foundation of dam.**

The reservoir as per instruction is required to be filled up up to 1/3rd level in first year, 2/3rd in second year and full in 3<sup>rd</sup> year on technical grounds. It was however observed Salaiya tank in Katni district completed in June 2003 was first filled up to 0.36 M above FTL. During rains of 2003, heavy seepage and leakage below the foundation was noticed in September 2003 revealing execution of sub standard earthwork of the bund. Rupees 20 lakh spent on drilling percolation and permeability test of the dam as per sanctions accorded (March 2004) by the CE could not also solve the problem. No responsibility was fixed for execution of sub standard work and filling of reservoir above FTL during first rain in violation of the instructions.

<p><b>Money value-Rs.8.83 crore</b>  <b>Weighted Money value- Rs. 5.74 crore</b></p>
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#### **3.4.7.8 Loss due to non-recovery of royalty charges**

**Rates paid to contractors were inclusive of royalty charges. Loss of Rs.8.83 crore to Government due to non recovery of royalty charges.**

Scrutiny in audit disclosed that for construction of casing zone of earthen dams soil mixed with moorum, kankar or similar non-cohesive soil was used. However, royalty at Rs. 15/- per cum included in the rates was not recovered from the contractors and furnishing of royalty clearance certificate from Mining Department was also not insisted upon. As a result Government was put to a loss of Rs. 8.15 crore<sup>12</sup>. The CE N/T Basin stated in reply that soil available in the basin of the dam or borrow area of the department was used on which no royalty was levied. The reply was not tenable as the Collector (Mining) Dhar upheld the contention of audit.

Construction of LBMC from Km 97 to 111 and construction of Andia, Kandeli and Surghi distributories were awarded (2002-03) to two different agencies. Royalty at Rs. 15/- per cum for 454367.12 cum CNS material used in construction, was not recovered from contractors nor furnishing of clearance certificates from Mining Department was insisted upon. As a result Government was put to a loss of Rs.0.68 crore. The EE, RABLS Canal Division, Narsighpur stated (June 2006) in reply that contractor had produced no dues certificate from collector (Mining) Narsighpur. The reply was not acceptable because contractors did not furnish 'No dues certificate' for CNS material.

<sup>12</sup> CE N/T Basin, Indore (95 Projects) Rs. 4.97 crore, CE Dhasan Ken Basin, Sagar (15 Projects) Rs. 0.58 crore, CE Wainganga Basin, Seoni (27 Projects) Rs. 1.65 crore, CE Chambal Betwa Basin, Bhopal (24 Projects) Rs. 0.95 crore.

### 3.4.7.9 Water Users Associations not constituted

**Water user associations have not been constituted in 50 completed projects to have optimum utilization of the irrigation potential created.**

According to terms and conditions of NABARD loan Water Users Associations (WUAs) were to be formed before the commencement of the project in each case to have active participation of farmers in irrigation management to lessen the burden of operation and maintenance and also to increase irrigation efficiency.

Scrutiny in audit revealed that in 50<sup>13</sup> cases test checked the WUAs have not been constituted even after completion of the projects.

### 3.4.8 Monitoring control and evaluation

**Monitoring, control and evaluation of the programme was not effective.**

Progress of the programme was not being reviewed regularly at each quarter by the HPC. Monthly meeting to review the physical and financial progress of projects was conducted by the E-in-C/CEs. Result oriented remedial measures were not taken to ensure timely completion of the projects. There was no proper coordination amongst the different agencies for realization of desired objectives. Monitoring, control and evaluation of the programme was not adequate and effective. Performance indicators and benchmarks were not prescribed to assess the effectiveness and evaluation of the much ambitious and much needed programme.

**Though additional irrigation potential of 1.69 lakh ha and 0.51 lakh ha. by WRD and NVDA was created but utilization was only 0.53 lakh and 0.04 lakh ha by WRD and NVDA respectively.**

#### 3.4.8.1 Dismal performance of projects completed with NABARD loan

Completion of 382 projects of WRD and 3 projects of NVDA between 1996-97 and 2005-06 registered additional irrigation potential of 1.69 lakh ha and 0.51 lakh ha but the utilization was only 0.53 lakh ha and 0.04 lakh ha respectively. Performance growth was minimal in creation of irrigation facility. Thus creation-utilisation gap continued to persist. Though shortfall in utilization of irrigation potential created was attributed to (i) filling of reservoirs up to 1/3rd in first year, 2/3rd in second year and full in 3<sup>rd</sup> year on technical grounds. (ii) Protective irrigation only in Kharif (iii) Non filling of reservoirs due to scanty or no rains in many areas, (iv) To keep reserve the water for drinking/nistar purpose by the district administration during draught conditions, and (v) cultivation of high breed crops requiring more waters in command areas but the justifications are not fully acceptable because the construction of distributaries, field channels and on farm development etc. were neither provided in the estimates as also advised by NABARD nor executed so as to harness the irrigation potential created. Inadequate allotment of funds was noticed for the work of maintenance Heavy recurring expenditure on petty purchase and improper attention on maintenance work as well were other reasons for shortfall in utilization of created irrigation potential. Consequently conditions of canal were deteriorating. A special repair in many cases was carried out from other programmes (MP/MLA, local area development funds or Special central

<sup>13</sup> Khargone (24 project) Mandsour (9 project) Dhar (7 project) Barwani (3 project) Khandwa ( 3 project), Jhabua (2 project) Indore and Ratlam (1 each project)

assistance). Effective performance appraisal was not ensured consequently objectives of the programme remained unachieved.

### **3.4.9 Conclusion**

Financial management was deficient as large amount of sanctioned loans could not be availed due to slow progress and poor monitoring. Expenditure was incurred on unapproved items of works resulting in amounts being disallowed by NABARD. Due to delay interest element had adverse impact and feasibility of projects, but the element of interest was not computed in evaluation of benefit cost ratio. Extra items were sanctioned without authorisation and there were delays in submission of project completion certificates. The projects were taken up without proper survey and on the basis of inaccurate estimates. Despite poor performance of irrigation schemes, further such schemes were sanctioned and large number of projects could not progress for want of forest clearance. Large number of projects yielded nil benefits due to various constraints in execution as the works were commenced without proper planning. Cases of unauthorised and irregular purchases were noticed and physical progress of the projects were not synchronised resulting in non-achievement of objectives. There were cases of execution of substandard work and due to non-recovery of royalty charges, state exchequer was put to a loss. Water users Associations were not found to have been constituted and the overall irrigation potential created despite huge investments were very low.

### **3.4.10 Recommendations**

- The State Government may establish a meaningful communication between the implementing departments and revenue department and other departments for early land acquisition and obtaining of expeditious forest clearances.
- In light of huge amount being disallowed by NABARD, a system should be evolved for proper vetting of estimates and strict instructions should be issued for execution of works in line with sanctions and estimates.
- The State Government should provide sufficient budgetary allocation for repair and maintenance of the completed projects based on the norms prescribed to ensure sustained availability of benefits.
- Water users association should be formed expeditiously so as to share the burden towards operation and maintenance and to ensure active participation of farmers in irrigation.
- The progress of works should be monitored at various level on periodic and regular basis so as to identify impediments and remove bottlenecks with an aim to complete these works in a time bound framework.

The matter was reported (October 2006) to the Government of Madhya Pradesh but reply was not received (December 2006).

### **3.7 Widening, Strengthening and Up gradation of roads from Central Road Fund (CRF), Rural Infrastructure Development Fund (RIDF) and Fast Track Scheme.**

Money Value: Rs.78.57 crore  
Weighted Money Value: Rs.66.78 crore

#### ***Highlights***

*Govt of India, Ministry of Surface Transport (Department of Roads and Transport) approved 102 works of state highway and Major District road in Madhya Pradesh, between 2001-06 for widening, strengthening and upgradation at a cost of Rs. 437.60 crore. During the same period, the Govt. of Madhya Pradesh approved 167 works of village roads for construction and improvement at cost of Rs.309.97 crore from NABARD loan assistance. The Govt. had also taken up (2003-04 and 2004-05) renewal and strengthening 7751 Kms of state highway and Major District roads under Fast Track at cost of Rs.309.86 crore. As of March 2006, 59 works under CRF, 42 works under NABARD and 3014 km road under fast track were actually completed after spending Rs.286.55 crore Rs.119.94 crore and Rs.275.56 crore respectively. The fast track scheme was to be completed by March 2005, and the achievement as on date was 39 per cent only, the scheme was not successful. CRF funds Rs.21.54 crore were misutilised on improvement of village roads and other district roads. Premature selection of roads led to wasteful expenditure of Rs.66.54 lakh. Proportionate recovery of Rs.1.58 crore was not made from the contractors for below specification work and Rs.1.98 crore were also paid for rejected work. Management Information System (MIS) had been operationalised though Rs.2.17 crore was spent on purchase of computers. Major deficiencies noticed during audit, are as under:-*

**Contrary to MORT&H specifications, extra cost of Rs.7.50 crore incurred in designing of embankment, with granular sub base providing excessive thickness in crust of the road and bituminous surfacing.**

*(Paragraphs 3.7.8.2 and 3.7.8.3)*

**Despite instructions from MORT&H, Rs.9.72 crore were spent in excess of Administrative Approval. There was excess of Rs.4.36 crore due to payment of work not sanctioned & inadmissible price variation. Rs.2.27 crore diverted for other works.**

*(Paragraphs 3.7.6.1 and 3.7.6.2)*

**Lack of proper work management led to extra expenditure of Rs.5.18 crore on change of specification of earth brought from outside and the excess quantities of surface dressing layer provided without requirement of crust design.**

*(Paragraphs 3.7.8.1 and 3.7.8.4)*

**Additional work of Rs.2.41 crore was awarded at higher rates without inviting tenders and disregarding the codal provisions.**

*(Paragraph 3.7.8.7)*

**Bituminous Macadam worth Rs.3.73 crore and semi dense bituminous concrete worth Rs.7.40 crore was executed below specification. Thickness of granular sub base on weak soil was reduced; work valuing Rs.1.07 crore was substandard and liable to premature damage.**

*(Paragraphs 3.7.9.7, 3.7.9.2 and 3.7.9.3)*

**Besides above excess payment due to non recovery of liquidated damages incorrect application of rates, extra bitumen and price variation and non renewal of bank guarantee Rs.9.87 crore were also noticed.**

*(Paragraphs 3.7.8.8 to 3.7.8.12)*

### **3.7.1 Introduction**

The Government of India, Ministry of Surface Transport (Department of Road Transport and Highways) decided (October 2000) to revamp the central road fund by crediting in to it cess of Rs.1 per litre on diesel and petrol and also to utilise 15 percent of cess on diesel and 30 percent of cess on petrol for development and maintenance of State Highways (SH), and Major District Roads (MDR) carrying heavy traffic with emphasis on construction of missing link, cross drainage, widening of 2 lanes to 4 lanes, strengthening of weak pavement sections; research and development and data base and training of Highway Engineers.

The Government of India approved between January 2001 and December 2005 for strengthening and widening of 2150 kms of road (102 works) out of 72,462 km in Madhya Pradesh at a cost of Rs.437.60 crore. The Govt. of M.P. also got (2001-06) approval of the National Agricultural Bank for Rural Development (NABARD), for improvement of 2420.87 kms of village roads (167 works) at a cost of Rs.309.97 crore under phase VII to Phase XI. The Government of MP also decided (February 2002) for renewal/improvement of 7751 km of SHs and MDRs not taken up under any of the above programme at a cost of Rs.309.86 crore during the period of 2003-04 and 2004-05. The funds were provided from State plan and the scheme was named as "FAST TRACK".

### **3.7.2 Organisational set up**

The implementing agency for all the three schemes was the Public Works Department headed by the Principal Secretary (PS) at Government level. At apex level Engineer-in-Chief (E-in-C) Public Works Department and seven Chief Engineers (CE) of the zone are responsible for implementation of projects. The work is being executed through the 66 divisions of Public Works Department (PWD) out of 48 Districts, headed by the Executive Engineer (EE).

### **3.7.3 Audit objective**

The objectives of audit were to assess whether

- fund management was efficient and was as per rules and regulations,
- methodology for selections of roads was as per guidelines of the programme and proper planning was done for execution of works,
- execution of project was carried out economically and efficiently,

- system of quality control and monitoring was in existence and was effective.

### 3.7.4 Audit criteria

The audit findings are based on the following criteria:

- Guidelines issued by the MORT&H, NABARD and Govt. of M.P. for upgradation of roads.
- Specifications for Road & Bridge works issued by the MORT&H
- Practices, recommendations published by the Indian Road Congress for Road works.
- Rules and orders contained in the agreements for execution of work.

### 3.7.5 Scope of audit

Performance audit is based on test check of works executed/under execution in 14 Districts out of 48 Districts selected for the period 2001-05 conducted between February 2006 covering the expenditure of Rs.177.27 crore (40.50 per cent) of the expenditure incurred for 62 works under CRF out of 102 works, Rs.49.56 crore (15.99 per cent) for 53 works under NABARD out of 167 works and Rs.58.58 crore (18.91 per cent) for 97 works under Fast Track Scheme out of 192 works.

### 3.7.6 Fund Management

Under CRF the Central Government has to provide funds to State Government. The NABARD releases loan to State Government on monthly basis to be reimbursed against claims by State Government, under fast track the funds made available by the State Government from own budget. Table given below indicates that there were no financial constraints. There was firm commitment of funds from the Government for implementation of the works. The funds were under utilised due to delay in execution of works by the contractors.

(Rupees in crore)

Year	CRF		NABARD		FAST TRACK*	
Total project cost	437.60		309.97		309.86	
	BP	Exp.	BP	Exp.	BP	Exp.
2001-02	100.00	36.32	179.30	100.07	-	-
2002-03	110.65	83.41	138.75	94.33	-	-
2003-04	100.00	56.98	73.75	50.06	200.00	118.17
2004-05	60.00	42.89	111.60	50.43	156.82	104.98
2005-06	52.01	66.95	95.77	107.57	40.00	52.41
<b>Total</b>	<b>422.66</b>	<b>286.55</b>	<b>598.67</b>	<b>402.46</b>	<b>396.82</b>	<b>275.56</b>

BP = Budget Provision, Exp. = Expenditure,

\*The works under Fast Track were projected for 2003-04 & 2004-05 only.

Money Value: Rs.2.27 crore  
Weighted Money Value: Rs.1.93 crore

#### 3.7.6.1 Diversion of funds

Rupees 2.27 crore out of the funds provided under CRF (Rs.0.97 crore), NABARD (Rs.0.26 crore) and Fast Tract (Rs.1.07 crore) were diverted (2005) for construction of other item of works like construction of guard wall, road marking and construction of hard shoulders and purchase of sign

**Funds Rs. 2.27 crore from CRF/NABARD and Fast Track diverted for other works.**

boards. These items were not provided in the original estimate and the saving from negative<sup>♥</sup> tender premium was utilized for it.

Incurring expenditure out of saving of the sanctioned estimate was irregular in view of the MORT & H guidelines (October 2000) and NABARD stipulations.

Money Value: Rs.9.72 crore
Weighted Money Value: Rs.8.26 crore

### 3.7.6.2 *Unauthorised expenditure*

MORT&H instructed (2000) that estimates should be approved within 10 per cent of Administrative Approval (AA) and no expenditure should be incurred in excess of the approved cost. It was noticed that in Jabalpur and Rewa Districts the expenditure incurred exceeded by Rs.1.87 crore in three works, but Revised Administrative Approval (RAA) was not obtained.

**No RAA obtained from MORT & H unauthorised expenditure Rs. 9.72 crore incurred.**

The EE stated (January 2006), that due to site condition the quantities of WBM increased and the revised estimate was submitted to the CE. The facts remained that the RAA was not obtained.

Similarly against the approved cost of Rs.17.33 crore (2001-02) under CRF for Sleemnabad Umariyapan Vilayatkala road and Bandhi Jhirri Road (District Katni), Rs.25.18 crore were actually spent. The excess over AA Rs.7.85 crore was not regularized through RAA. Excess of Rs.4.36 crore was noticed due to providing extra BM in 40.10 Kms and SDBC in 28 Kms not sanctioned in the estimate. To match the excess, the stretches were prematurely re approved (February 2004), for Rs.6.69 crore towards laying of SDBC though 5 years period had not lapsed.

The EE stated (August 2006), that the sanctioned amount was insufficient to complete the work, therefore revised AA was obtained. The reply is not tenable because the amounts exceeded due to execution of work which was not sanctioned and to cover the excess stretch was also reselected prematurely.

## 3.7.7 **Planning**

### 3.7.7.1 *Physical Target and Achievement*

Year-wise target for completion of works were not fixed. Actual progress of work was only maintained at the office of the E-in-C. As against 167 works, 42 works sanctioned under NABARD were only completed by March 2006. Under RIDF IX (2003-04), 3 works and RIDF-XI (2005-06), 21 works were not started as of March 2006 because the tenders have still not been finalized.

**Though, there was no financial constraint, yet there is shot fall in progress of construction.**

Under CRF 59 works<sup>^</sup> out of 102 works had been completed by the end of March 2006. The time allowed for completion of individual work under Central Road Fund, ranged between 8 months to 24 months. Therefore 82 works taken-up from 2000-01 to 2004-05 should have been completed by

♥ Tendered rates below then estimated rates.

<sup>^</sup> Year-	No. of works
2002-03	11
2003-04	22
2004-05	4
2005-06	22
<b>Total</b>	<b>59</b>

March 2006, while only 59 works were actually completed. Thus there was a short fall of 28 per cent.

The Govt. has also not reviewed the position to find out the cause for short fall in achievement of targets.

The Fast Track scheme was to be completed by March 2005. Despite no financial constraints 3014 kms of road out of 7751 kms, (39 per cent) was only completed. The

M. V. Rs.21.54 crore  
W.V. Rs.18.31 crore

works were mainly not completed due to slow progress in works by the contractors.

### ***3.7.7.2 Incorrect Selection of the roads***

**Incorrect selection of roads led to misutilisation of funds.**

According to guideline issued (May 2000) by the MORT&H, only State Highways (SH) and Major District Roads (MDR) had to be renewed from CRF. Audit observed that 8 works of Village roads (VRs) and 7 works of Other District Roads (ODRs) with a length of 262.6 kms were incorrectly selected under CRF and therefore Rs.21.54 crore spent on these roads were misutilised.

The EE stated (September 2006) that due to heavy traffic; the road was taken up under CRF. The reply is not tenable as per Government instructions were disregarded in making selection of the roads.

Money Value: Rs.30.21 lakh  
Weighted Money Value: Rs.25.68 lakh

**3.7.7.3** Under NABARD, the work was to be taken up after its approval. It was observed that in Shajapur District two works were taken up (2003) in anticipation of their approval and subsequently were closed as approval was not given in that year. The WBM works done in 2003 worth Rs.30.21 lakh

was rendered wasteful, as this had to be redone at a cost of Rs.26.23 lakh upon receiving approvals in 2005.

On being pointed out the EE admitted (March 2006) that the WBM work was redone.

**3.7.7.4** Under Fast Track Scheme 24.80 kms of Agar Barod road of Shajapur District, renewed (July 2003) was under performance security up to July 2006, but was prematurely reselected (2004-05) for strengthening and widening at a cost Rs.2.49 crore under CRF; and the work of BT executed earlier amounting Rs.35.93 lakh had to be redone.

MV - Rs.35.93 lakh  
W.M.- Rs.30.54 lakh

On this being pointed out in audit, the EE stated ( March 2006) in reply that under Fast Track the road was renewed in 3.75 m, while under CRF, the road was widened to 7 m. The reply is not tenable because if the widening was considered essential, the road should have been selected originally under CRF to avoid the loss of BT renewal that had to be carried out on account of subsequent widening.

Money Value: Rs.3.12 crore  
Weighted Money Value: Rs.2.65 crore

**Use of soil from outside in earthen embankment led to extra cost of Rs.3.12 crore.**

## **3.7.8 Execution**

### ***3.7.8.1 Extra cost in designing of the embankment***

According to MORT&H specifications, the granular sub base (GSB) to be provided in crust portion of the road, could be extended to full formation width where the CBR of sub grade was less than 2 percent, permeability was low and box type drains had to be constructed. Contrary to these

specifications GSB was provided in full formation width of the road in three works under CRF and six works under NABARD, resulting in extra cost of Rs.3.12 crore<sup>♦</sup>.

On this being pointed out in audit, the EE stated (March 2006) in reply that the road passes through the black cotton soil reach and as per MORT&H specification, the GSB should be on entire width of formation. The reply is not tenable because the CBR of soil was more than 2 percent and its permeability also was not tested.

Money Value: Rs.4.61 crore  
Weighted Money Value: Rs.3.92 crore

### ***3.7.8.2 Extra cost due to providing excessive crust***

The specification required that while strengthening of the road, the existing crust of the road should be utilised and deducted from the total requirement of the crust. In 5 works under CRF (176 kms) and 2 works under NABARD (235 kms) the existing road crust (WBM Grade-I and Grade-II) was not considered while designing and executing the total crust which resulted in extra cost of Rs.4.61<sup>\*</sup> crore.

**Providing excess crust on pavement resulted in extra cost of Rs. 4.61 crore**

On being pointed out in audit the EE stated (Jan. 2006) in reply that the work was executed as per approved estimate. The reply is not acceptable as works were executed in disregard to specifications

Money Value: Rs.2.89 crore  
Weighted Money Value: Rs.2.46 crore

### ***3.7.8.3 Extra cost due to unwanted bituminous courses***

According to MORT&H instructions, the strengthening of road having traffic density 2500 commercial vehicles per day (CVD) or more was to be done with 50 mm thick Bituminous Macadam (BM) or 75 mm thick Built up spray grout (BUSG).

**Extra cost of Rs. 2.89 crore incurred on extra course.**

Contrary to these instructions in two works under CRF in Raisen & Indore District where the traffic density was less than 2500 commercial vehicles per day both BM & BUSG both were provided in strengthening whereas only one bituminous base course was required which resulted in extra cost of Rs.2.89 crore.

On being pointed out the EE replied (April 2006) that the work was done as per estimate technically sanctioned by the CE. The reply is not correct because the estimate approved by the CE was proposed by the EE and these estimates were not prepared as per MORTH stipulations.

Money Value: Rs.2.06 crore  
Weighted Money Value: Rs.1.75 crore

### ***3.7.8.4 Extra cost and undue advantage to the contractors***

The surface dressing (SD) was recommended to protect the freshly laid Water Bound Macadam (WBM) but it neither enhances structural strength nor improves the riding quality of the pavement. The Surface Dressing was provided and executed in between WBM & Bituminous Macadam surfaces (BM) in 4 works under CRF and one work each under NABARD and Fast

**SD was paid between WBM and BM contractors were given undue advantage<sup>♦</sup> of Rs.2.06 crore**

CRF (Bhopal 75.81 lakh, Shajapur 15.60 lakh, Indore 24.78 lakh = 116.19 lakh)

NABARD ( Shajapur 25.89 lakh, Indore - I, 31.12 lakh, Rewa 55.38 lakh, Katni 21.78 lakh, Vidisha 61.51 lakh = 195.68 lakh ) **Total: 3.12 crore.**

<sup>\*</sup> CRF ( Sehore 59.68 lakh, Jabalpur 42.78 lakh, Dewas Rs.44.97 lakh, Rewa Rs.17.54 lakh and Katni Rs.191.98 lakh = 356.95 lakh)

NABARD ( Shajapur 57.76 lakh, Dewas 45.80 lakh, = 103.56 lakh) **Total Rs.460.51 lakh, Say 4.61 crore.**

Track, where the same contractor after executing the WBM had to provide Bituminous Macadam over it, and was also responsible for maintenance and protection of Water Bound Macadam, during construction. Therefore, the provision and execution of Surface Dressing was unwarranted and resulted in extra cost to the tune of Rs.2.06 <sup>♥</sup> crore.

On this being pointed out in audit, the EE stated (August 2006) that the SD over WBM layer had been provided/sanctioned in the estimate. The reply is not tenable in view of the specification.

### **3.7.8.5 Deficiencies in management of works**

According to the guidelines, each proposal should include broad features of the project and shall include, index map (showing the location of project) scope for proposal (showing brief discussion and need for improvement), existing position and improvement (designed preliminary survey and traffic), cost estimate and basis of rates (showing the basis of rates adopted) and report of utility (indicating how existing infrastructure was useful and the land was available for it).

It was however noticed that in the following works, either projects were prepared without proper survey/traffic census or the items of work were uneconomically revised.

M.V.- Rs.2.69 crore  
W.M.- Rs.2.29 crore

As per project report and estimate the earth available from borrow area was to be used but in 3 works under CRF and one work under NABARD it was bought from out side incurring extra cost of Rs.2.69<sup>\*</sup> crore.

The EE replied (February 2006), that the CE had sanctioned the rates after careful consideration. The reply is not tenable because no such mention has been made in the sanctions by the CE.

M.V.- Rs.75.75 lakh  
W.M.- Rs.64.39 lakh

**3.7.8.6** Govt. instructed not to include construction of hard shoulders and berm filling from the funds made available under fast track, and it was to be done departmentally. Accordingly in the estimate and agreement for renewal of 38.8 kms of Chambal Ingoriya Unhel Nagda road (Ujjain District) no such provision was made. The CE however approved (February 2005) supplementary schedule for item of work for berm filling and Rs.32.88 lakh were also spent on berm filling. As a result of this change only 21.60 km of road had been renewed as the funds were also diverted and spent on incorrect items.

As Sagar District on Rahat Khurai road and Ashok Nagar Distt. Deharda Rajghat road hard shoulders were not provided in the estimate, yet Rs.25.19 lakh & Rs.17.48 lakh respectively were paid without sanction of CE.

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<sup>♥</sup> CRF (Bhopal 17.98 lakh, Raisen 107.38 lakh, Dewas 9.23 lakh, Sagar 51.08 lakh)

NABARD ( Sagar 10.90 lakh), FAST TRACK ( Dewas 9.76 lakh), Total Rs. 2.06 crore

♣CRF : Bhopal 10.25 lakh, Katni Rs.123.18 lakh, Sagar Rs.70.59 lakh, NABARD: Dewas Rs.64.56 lakh., Total : Rs.2.69 crore

On this being pointed out EEs replied (August 2006) that the shoulders work was taken up as previous shoulders had deteriorated and representations in this regard were received. The reply is not acceptable as the Government instructions were disregarded.

M.V.- Rs.2.41 crore  
WV.-Rs.2.04 crore

### ***3.7.8.7 Awarding of work without inviting tenders***

Pending approval of estimate, construction of Katangi Pola Majholi road Probable amount of contract Rs.2.60 crore was awarded (August 2004) at 19.80 percent above schedule of rates. TS for Rs.4.10 crore including provision for Cement Concrete road was accorded as late as in May 2005. The Schedule for Rs.2.60 crore attached in NIT was not available in the division. Rules required that the work valuing Rs.2 lakh or more should be awarded after inviting open tender, however this instruction was disregarded in awarding of this contract.

**Works of Rs.3.61 crore were awarded without inviting tender at higher rates.**

At Bhopal District the CE, awarded additional work Rs.2.41 crore to 2 contractors without inviting tenders at the rates of their previously accepted tenders under CRF works.

On being pointed out, the EEs stated in reply (February 2006) that the work was awarded as per supplementary schedule approved by the CE. The reply is not tenable because the additional work was awarded disregarding the codal provisions.

M.V.- Rs.4.55 crore  
W.M.- Rs.3.87 crore

### ***3.7.8.8 Short recovery of liquidated damages***

The agreements required that liquidated damages at the rate 1/16 percent of value of works per week limited to 6 percent of contract price for delay in works should mandatory be recovered from the contractor. Though the works were delayed for 14 weeks to 144 weeks yet Liquidated Damage amounting to Rs.4.90 crore recoverable was not recovered as per agreement. In few cases the CE had accorded the extension of time with nominal penalty of Rs.0.35 crore, in violation of provisions of agreement resulting in undue advantage to the contractors Rs.4.55 crore shown on ***Appendix 3.12***.

**Liquidated damages to the tune of Rs.4.55 crore were not recovered from the contractor.**

On being pointed out in the EEs replied (August 2006) that the penalty decided by the CE was only leviable. The reply is not tenable as the liquidated damage had to be recovered as per agreement.

M.V.- Rs.1.84 crore  
W.M.- Rs.1.56 crore

### ***3.7.8.9 Overpayment to the contractors due to incorrect application of rates***

According to Schedule of Rates (SOR) forming part of the agreement, the item for excavation in embankment for widening at Rs.86/- per cum (rounded off) included, (i) excavation for widening at Rs.43/- per cum and (ii) construction of embankment from the excavated soil at Rs.43.20 per cum. Though the contractors were separately paid for construction of

**Incorrect application of rates for excavation in widening led to overpayment of Rs.1.84 crore.**

embankment at Rs.43.20 per cum (or at Rs.133/-per cum for soil brought from outside) even then the contractors were also incorrectly paid full rates for excavation and for construction at the rate of Rs.86 per cum. As the construction work was separately paid only payment of excavation was to be paid which however had not been done.

Incorrect application of rates resulted in over payment of Rs.1.84<sup>^</sup> crore (CRF Rs.1.31 crore and NABARD Rs.0.53 crore) to the contractors.

On being pointed out the EE stated (February 2006), that the payment was made as per approval of the CE. The reply was not correct because for excavation only the rate of Rs.43/- per cum was payable.

M.V.- Rs.1.09 crore  
W.M.- Rs.0.93 crore

### ***3.7.8.10 Excess payment towards bitumen in SDBC***

**Excess payment of 1 percent extra bitumen Rs. 1.09 crore made in violation of job mix and quality tests.**

The agreements for CRF works (2000-2001) included an item of Semi Dense Bituminous Concrete (SDBC), to be provided with 4 percent bitumen contents by weight of total mix, including preparation of job mix formula (JMF) and the contractor should provide at his own cost the weigh bridge receipt in support of the quantity of mix material laid. The contractors during execution submitted the JMF showing use of bitumen contents 4 and 5 percent, which was neither approved nor disapproved by the Engineer. As per specifications the work was to be tested for its density (1 test /200 sqm), marshal stability (3 tests/400 tonnes) and binder contents (2 test/400 tonnes)

of mix and the cost of bitumen adjusted accordingly. On the basis of job mix formula, as amount of Rs.1.09 crore was paid extra in Raisen and Katni District towards extra bitumen. The payment was not admissible because the contractor did not submit the weigh bridge receipt of mix material laid. Further detailed tests were carried out only at Raisen District according to which actual bitumen used was only 4 percent and ; in Katni District, in one case out of six the actual work was done with 4 percent bitumen while in all other cases grading used was not confirming to SDBC as given vide ***Appendix 3.13***.

The EE PWD Division Raisen stated (April 2006) that the amount will be recovered from the final bill, while the EE PWD division Katni did not offer any comment.

M.V.- Rs.1.33 crore  
W.M.- Rs.1.13 crore

### ***3.7.8.11 Excess payment towards price variation***

**Contrary to the agreement provisions excess payment of Rs. 1.33 crore for price variations was made to the contractors.**

As per agreement, the price variation due to rise / fall in the price of Material/Labour and POL was payable provided contract period was exceeding 12 months and the contractor had brought and used the material as per the agreement. Contrary to these provisions, excess payment of Rs.1.33 crore was made in Raisen and Sagar District. Details are shown in ***Appendix 3.13***.

The EE stated (August 2006), that the price variation was paid on bulk bitumen which is the same to packed bitumen. The reply is not tenable

<sup>^</sup> CRF (Sehore 15.75 lakh, Bhopal 33.53 lakh, Indore 29.72 lakh, Katni 42.62 lakh, Shajapur 8.97 lakh) NABARD (Bhopal 42.40 lakh, Indore 11.28 lakh; **Total Rs. 1.84 crore**)

because as per agreement the price variation had to be paid only for material given in the agreement and for packed bitumen was only specified in the agreement.

M.V.- Rs.1.06 crore  
W.M.- Rs.0.90 crore

### ***3.7.8.12 Non-renewal of performance guarantees***

**Bank Guarantee taken in lieu of performance of work were not renewed.**

According to the agreements, the contractors had to perform and maintain the works for a period of 3 years from the date of completion. Performance security at 5/10 percent had to be recovered from each bill and during performance period could be refunded against the bank guarantee. The contractors had to carry out all necessary repairs within 15 days of receipt of communication from the Engineer-in-Charge, failing which the repairs will be carried out by the Department at the risk and cost of the contractor and cost recovered from the performance security.

In 3 districts<sup>@</sup>, it was noticed that works completed between July 2003 and October 2005, were under performance guarantee between July 2006 and October 2008, yet the bank Guarantee Rs.1.06 crore taken in lieu of security were not renewed and had lapsed.

The EE stated (July 2006), that for the renewal of bank guarantees was under correspondences have been made.

M.V.- Rs.4.75 crore  
W.M.- Rs.4.04 crore

## **3.7.9 Quality Assurance and monitoring mechanism**

### ***3.7.9.1 Execution of work below specifications and payments made for rejected works***

**BM works worth Rs.3.73 crore was substandard, Rs.48.74 lakh were not recovered for not providing seal coat. BM worth Rs.1.98 crore though rejected by CE, yet full payment was made.**

The specifications required that, the work of Bituminous Macadam (BM) shall be covered with the wearing course of Semi Dense Bituminous Concrete (SDBC) within 48 hours. If there was a delay, the BM shall be covered with a seal coat, to be treated as incidental part and not to be paid to the contractors separately. It was noticed that the Bituminous Macadam executed on 159917.18 sqm at cost of Rs.1.98 crore on Sleemnabad-Vilayat kala road up-to April 2003, was not covered with the Semi Dense Bituminous Concrete or seal coat up-to October 2004 even after passing of two rainy seasons. Similarly the BM executed on 59362.265 sqm at cost of Rs.70.11 lakh up to April 2004, on Bandhi Jhiri road was not covered with SDBC or seal coat up-to November 2004. BM on 65319.88 sqm executed up to June 2005 at cost of Rs.54.46 lakh on Chanderi Mungawali Vidisha road of Ashok Nagar District was also not covered with SDBC up-to October 2006. Thus the work executed worth Rs.3.73 crore was below specification.

It was also noticed that the CE rejected (April 2003) the below specification work on Sleemnabad-Vilayat kala road, yet full payment was made to the contractor and in all cases listed above the cost of seal coat amounting to Rs.48.74 lakh was also not recovered from the contractors.

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<sup>@</sup> Indore, Raisen, Rewa.

The EEs stated (August 2006), the BM could not be covered timely because the amounts of in agreement was exceeding.

The specifications required that the SDBC should be provided on firm bituminous course. Contrary to these specifications, the SDBC on 13.60 kms of Sironj Berasiya road (district Vidisha), was provided on WBM surface resulting in below specification work valuing Rs.52.51 lakh.

The EE stated (October 2006), that the work was done as per estimate. The reply is not tenable as of specifications were disregarded.

M.V.- Rs.1.07 crore  
W.M.- Rs.0.91 crore

### ***3.7.9.2 Non execution of work as per design***

**Design approved was altered.**

Widening, strengthening of Kishanpura Mugaryau road (District Sagar), length 15.80 kms was taken up (2005) under NABARD at a cost of Rs.2.09 crore. The crust of the road was designed 70 cm for 10 years life. As the sub grade soil was weak, in addition to 15 cm layer of Granular Sub Base (GSB), one capping layer of 15cm thick GSB was also provided to the requirement of IRC -37. It was noticed that during execution, only layer of GSB was provided. In view of weaker soil, it was incorrect to reduce the capping layer thickness of GSB. Execution of work worth Rs.1.07 crore, contrary to approved design is not only below specifications but also likely to get damage.

On being pointed out the EE stated (September 2006) in reply that during excavation, hard soil was found and as per revised crust design, the revised treatment was done. The reply is not tenable because CBR of sub grade was less than 2 percent and as per IRC, one capping layer of 15 cm GSB was must.

M.V.- Rs.7.98 crore  
W.M.- Rs.6.78 crore

### ***3.7.9.3 Execution of sub-standard work without proportionate recovery***

**SDBC worth Rs.7.98 crore was sub standard and no proportionate recovery was made also.**

MORT&H specifications required that wearing course of Semi Dense Bituminous Concrete should be provided on the basis of job mix formula duly approved by the Engineer. The contractors were to submit the job mix formula either from Engineering College or private laboratory. Against the requirement of job density 2.30 gm/cc to 2.34 gm/cc and bitumen content in the mix being 5 percent to 5.17 percent by weight of total mix, the density of mix was recorded as low as 2.0 gm/cc to 2.10 gm/cc and bitumen contents 2.17 percent to 5 percent. Therefore the execution of work worth Rs.7.98 crore, (CRF Rs.1.10 crore, Fast Track Rs.6.87 crore) was sub standard and accepted without proportionate recovery of Rs.1.09 crore.

On being pointed out, the EEs stated (June 2006) in reply that the density achieved was within 90 percent of designed density. The reply is not tenable because no such deviation was also permissible as per MORT&H specifications.

### 3.7.9.4 Monitoring

As per instructions the implementation of the programme was required to be monitored by the E-in-C and the CE's of the zone for achieving the targets within time and realisation of full economic benefits. Financial and physical status of the works was prepared by the E-in-C, but year wise targets were not fixed for effective monitoring of the programme and timely completion of project. Therefore the works were delayed. Uniform specifications and instructions were neither prepared nor issued for successful execution and quality assurance. Lack of effective monitoring has hampered the progress and quality assurance of the works.

M.V.- Rs.2.17 crore  
W.M.- Rs.1.84 crore

### 3.7.9.5 Management information system (MIS)

Govt. of M.P. decided (November 2004) to purchase computers for PWD from CRF and connect all PWD divisions. Accordingly the CE (planning) purchased 171 computers through the State Electronic Development Corporation (SEDC) at a cost of Rs.2.17 crore. The computers were installed (May 2005) at E-in-C office and the PWD divisions.

As the computers have not been connected to Headquarter and the division are not having trained data entry operator (DEO), MIS has not been developed (March 2006). The expenditure incurred thus has remained unfruitful.

### 3.7.10 Conclusion

The fund management under these programmes was deficient, as funds were diverted and also unauthorised expenditure was incurred. Planning and monitoring was weak, as there were delays in completion of works due to slow progress by the contractors. Village and ODRs were also incorrectly selected and in some of the cases the work was commenced without stipulated sanction. Execution of work was deficient as in large number of cases MORT&H specifications were disregarded during preparation and approval of estimates. Works were awarded without invitation of tenders and liquidated damages were not recovered. There were over payment due to incorrect application of rates and stipulated performance bank guarantees were not found to have been renewed in time. Execution of substandard works was indicative of deficient quality control mechanism. Monitoring was weak.

### 3.7.11 Recommendations

- The technical estimates should be made strictly according to MORT&H specifications and during approval of estimates, appropriate checks should be ensured for adherence to these specifications.
- A system of monitoring over timely receipt and renewal of performance bank guarantee should be evolved.
- The progress of the various work should be reviewed at periodic and regular basis at various levels so as to identify bottleneck and ensure speedier completion.

The matter was referred to the Government in September 2006; reply had not received (December 2006).