सत्यमेव जयते

Report of the Comptroller and Auditor General of India on Economic Sector for the year ended 31 March 2018



लोकहितार्थ सत्यनिष्ठा

Dedicated to Truth in Public Interest

Government of Rajasthan

Report No. 5 of the year 2019

Report of the Comptroller and Auditor General of India

on

Economic Sector

for the year ended 31 March 2018

Government of Rajasthan

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PREFACE

This Report for the year ended 31 March 2018 has been prepared for submission to the Governor of the State of Rajasthan under Article 151 of the Constitution of India.

The Report contains significant results of the performance audit and compliance audit of the departments of the Government of Rajasthan in the Economic Services carried out under the provisions of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 and the Regulations on Audit and Accounts, 2007 issued there under by the Comptroller and Auditor General of India.

The instances mentioned in this Report are those which came to notice in the course of test audit during the period 2017-18 as well as those which came to notice in earlier years but were not reported in the previous Audit Reports; instances relating to the period subsequent to 2017-18 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.

Chapter I
Introduction

Chapter I
Introduction

1.1 About this Report

This Report of the Comptroller and Auditor General of India (C&AG) relates to matters arising from performance audit of selected programmes and activities and compliance audit of economic sector departments.

Compliance audit refers to examination of the regularity and propriety of transactions relating to expenditure of the audited entities. This is to ascertain whether the provisions of the Constitution of India, applicable laws, rules and regulations, various orders and instructions issued by the competent authorities are being complied with. Performance audit examines whether the objectives of the programme or activity are achieved economically, efficiently and effectively.

The primary purpose of the Report is to bring important results of audit to the notice of the State Legislature. Auditing Standards require that the materiality level for reporting should be commensurate with the nature, volume and context of transactions. The findings of audit are expected to enable the Executive to take corrective measures. This would provide them inputs to frame policies and directives to improve financial management of the organisations for better governance.

This chapter, in addition to explaining the planning and extent of audit, provides a synopsis of the significant deficiencies noticed in Performance and Compliance Audit. Chapter II of this Report contains findings arising out of performance audit on Contract Management of Road Works in Public Works Department and performance audit on Protection of Forest and Wildlife in Rajasthan. Chapter III contains observations arising out of compliance audit of the Government Departments.

1.2 Profile of Audited Entities

The Accountant General (Economic and Revenue Sector Audit), Rajasthan, Jaipur conducts Audit of the expenditure of twelve economic sector departments[1]. These Departments are headed by Additional Chief Secretaries/Principal Secretaries/Secretaries, who are assisted by Commissioners/Deputy Secretaries and subordinate officers.

The summary of fiscal operations of Government of Rajasthan during the year 2016-17 and 2017-18 is given in table below:

[1] Public Works Department, Water Resources Department, Forest, Command Area Development, Indira Gandhi Nahar Project, Science & Technology, Information Technology & Communication, Ground Water Department, Environment Department, Tourism, Energy and Industries.

Summary of fiscal operations

(₹ in crore)

Receipts			Disbursements		
	2016-17	2017-18		2016-17	2017-18
Section-A: Revenue					
Tax Revenue	44,371.66	50,605.41	General Services	39,203.26	43,450.36
Non-Tax Revenue	11,615.57	15,733.72	Social Services	49,371.68	53,064.07
Share of Union Taxes/ Duties	33,555.86	37,028.01	Economic Services	38,565.14	49,326.98
Grants-in-aid from Government of India	19,482.91	23,940.04	Grants-in-aid and Contributions	0.06	0.11
Total Section-A Revenue Receipts	**1,09,026.00**	**1,27,307.18**	**Total Section-A Revenue Expenditure**	**1,27,140.14**	**1,45,841.52**
Section-B: Capital and others					
Miscellaneous Capital Receipts	27.84	16.61	Capital Outlay	16,979.72	20,623.28
Recoveries of Loans and Advances	1,713.53	15,133.41	Loans and Advances disbursed	12,965.45	1,334.02
Public Debt Receipts*	43,888.85	28,556.57	Repayment of Public Debt*	5,014.57	11,673.66
Contingency Fund	-	-	Contingency Fund	-	-
Public Account Receipts#	1,56,044.35	1,56,811.26	Public Account Disbursements#	1,48,885.50	1,47,088.02
Opening Cash Balance	8,397.27	8,112.46	Closing Cash Balance	8,112.46	9,376.99
Total Section-B Receipts	**2,10,071.84**	**2,08,630.31**	**Total Section-B Disbursements**	**1,91,957.70**	**1,90,095.97**
Grand Total (A +B)	**3,19,097.84**	**3,35,937.49**	**Grand Total (A + B)**	**3,19,097.84**	**3,35,937.49**

Source: Finance Accounts for the respective years

*Excluding net transaction under Ways and Means advances and overdraft
#The figures of Public Account Receipts/Disbursements are shown on gross basis.

1.3 Authority for Audit

The authority for audit by the CAG is derived from Articles 149 and 151 of the Constitution of India and the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971.



The Accountant General (Economic and Revenue Sector Audit), Rajasthan, Jaipur conducts audit of expenditure of Economic Sector Departments, including Public Sector Undertakings and Autonomous Bodies of the Government of Rajasthan under the provisions of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 and the Regulations on Audit and Accounts,

2007 issued there under by the Comptroller and Auditor General of India. The principles and methodology for the performance and compliance audit are prescribed in the guidelines and manual issued by the CAG. The office also conducts audit of six revenue earning departments of the State.

1.4 Planning and conduct of audit

Audit process starts with the assessment of risk of various Government departments/organisations/autonomous bodies and schemes/ projects, *etc.* Risk assessments are based on quantum of expenditure, criticality of activities, position of overall internal control systems and the concerns of stakeholders. Previous audit findings are also considered in this exercise. During 2017-18, in Economic Sector -II Audit Wing, 1855 party-days were utilised to carry out audit of 255 units. Further, 1234 party-days were utilised for conducting two performance audits and one thematic audit.

After completion of audit of each unit, an Inspection Report containing audit findings is issued to the head of the unit. The units are requested to furnish replies to the audit findings within one month of receipt of the Inspection Report. Whenever replies are received, audit findings are either settled or further compliance is advised. The important audit observations arising out of these Inspection Reports are processed for inclusion in the Audit Reports.

1.5 Significant audit observations

This report contains two Performance Audits i.e. performance audit on Contract Management of Road Works in Public Works Department and performance audit on Protection of Forest and Wildlife in Rajasthan, a compliance audit on Rajasthan Farmers Participation in Management of Irrigation Systems Act, 2000 and six individual paragraphs. The highlights are given in the following paragraphs.

1.5.1 Performance Audit of programmes/activities

Chapter II of this Report contains two Performance Audits *i.e.* performance audit on Contract Management of Road Works in Public Works Department and performance audit on Protection of Forest and Wildlife in Rajasthan. The salient findings of the performance audits are discussed below:

Contract Management of Road Works in Public Works Department

Rajasthan has 2,36,572 kilometers (km) of various categories of roads such as National Highways (NH), State Highways (SH), Major District Roads (MDR), Other District Roads (ODR) and Village Roads (VR).

Contract Management is a critical component for the Public Works Department. Given the volume of transactions involved it is desirable that the Department should have a robust system for ensuring proper implementation of the contracts. We audited the system of contract management to assess whether:

- planning of road works was comprehensive and sanctions of works were compliant with prescribed technical and financial norms/standards;

- tendering and contract management was fair, transparent and competitive and consistent with sectors' best practices and contract variations and payments were managed efficiently as per provisions of agreements and financial rules;
- sound management information system existed for effective planning, monitoring and decision making at all levels in the Department with effective disputes redressal system and the prescribed quality control norms and timelines were adhered to.

During Performance Audit we observed certain deficiencies at different stages of contract management system. The existing framework of rules has gaps and is not consistent with best practices. The Department lacks a comprehensive implementation plan incorporating suitable provisions for prioritization of road works. There were instances where basic norms for cost estimation were not adhered to, tenders were invited before issue of technical sanctions, contractors not meeting the minimum technical requirements were allowed to participate in tenders, *etc.* Cases of violations of Indian Road Congress (IRC) specifications and norms were noticed in designing of roads and their construction such as non-conducting traffic census, wrong calculation of Million Standard Axle, non-testing of California Bearing Ratio of soil, *etc.* Policy objective of ensuring environmental protection through extensive plantation along the roads was not achieved. Many road projects were delayed, however, liquidated damages from the contractors in most of the cases were not recovered attributing the reasons for delay on the part of the Department without justified grounds. Price Variation claims were not calculated correctly, thereby, undue benefit was extended to contractors. Quality testing in road works was not being carried out properly in many divisions. Payments to contractors were being made without ensuring receipt of quality test reports.

- Based on these findings we recommend that the State Government may prepare a comprehensive Road Development Policy for the state. The Department may consider preparation of comprehensive Five Year and Annual Plans for road development to achieve desired objective of providing complete habitation connectivity, improved maintenance and up gradation of all roads. The Department may consider to improve efficiency and competitiveness of the tendering process by issuing guidelines for signing of integrity pact, adoption of proper parameters for assessment of bid capacity of contractors, adoption of an efficient IT solution for various aspects of assets construction and management. The Department may revise and update its Manual to incorporate extant instructions and best practices to improve its efficiency and ensuring transparency in execution of works. The Department may ensure that preliminary/detailed estimates are prepared according to IRC norms and government instructions, duly supported by prescribed tests and survey results. Complete database of registered contractors including registration status, detail of available equipment and technical staff, balance sheets, works executed, etc. may be maintained by the Department. The human resources requirements, both in terms of number and qualification, may be assessed in view of the changes in the style of operations in the Department.

(Paragraph 2.1)

Protection of Forest and Wildlife in Rajasthan

Forests are essential to sustain the life support system on earth. Article 48-A of the Constitution of India requires that the State shall endeavour to protect and improve the environment and to safeguard the forest and wildlife of the country. Recognizing the fact that preservation and conservation of wildlife is an onerous task, 'forests' and 'Protection of wild animals and birds' have been placed in the Concurrent List of the Seventh Schedule of the Constitution so as to enable both the Centre and State Governments to regulate on this matter.

We conducted audit with the objective of assessing the effectiveness of:

a. measures taken to protect forest and wildlife in the protected area network;
b. measures taken to protect forest and wildlife outside the protected area network and;
c. utilization of fund for protection of forest and wildlife.

Audit analysis revealed that although the Department has taken certain proactive steps which have culminated in increase in number of tigers in Ranthambhore Tiger Reserve, creation of a new biological park at *Machiya*, Jodhpur, initiation of Leopard Safari at *Jhalana*, Jaipur and development of park at *Nahargarh*, measures still need to be taken for enhancing protection of Forest and Wildlife in the State. The working plans for the Forest Divisions were not being implemented properly due to budget constraints. The Department submitted incomplete proposals for formation of Eco-Sensitive Zone which resulted in delay in their notifications. State Level Inter-Agency Coordination Committee as well as Wildlife Crime Control Units were not constituted despite directions received from Wildlife Crime Control Bureau. Concrete action has not been taken by the Department for removal of commercial shops/ activities which are operating in the Sariska Tiger Reserve without approval of National Board of Wildlife. Work of outlining of forest land on revenue maps, its mutation and demarcation through boundary pillars and digitization of forest maps has been very slow. Sampled divisions did not use satellite imagery system to trace forest areas affected by illegal mining. Human Resource Management was weak in the Department with significant vacancies in cadre of protection, technical and field supervisory staff.

➢ In view of these findings we recommend that the the State Government and the Department may take concrete steps to achieve the target of increasing the forest cover in the State; special attention may be devoted for restoration of areas affected by anthropogenic activities and other disturbances. A State Level Inter Agency Coordination Committee and Wildlife Crime Control Unit may be set up for ensuring effective deterrence and punishment of wildlife crimes. Mutation, notification, demarcation and digitization of forest land may be completed under a time bound programme. The State Government may like to strengthen the mechanism to prevent illegal mining/encroachment/ fires on forest land. The Department may strengthen its human resources management functions to fill up vacancies in frontline and technical staff.

(Paragraph 2.2)

1.5.2 Significant audit observations arising out of Compliance Audit

Rajasthan Farmers Participation in Management of Irrigation Systems Act, 2000

Participatory Irrigation Management (PIM) through association of farmers in planning, operation and maintenance of the irrigation system is essential for effective management of an irrigation system. It provides opportunities for collective action, dialogue between users, agencies and governments.

Audit analysis revealed that the Apex Committee for laying down the policies for implementation of the Rajasthan Farmers Participation in Management of Irrigation Systems Act has not been constituted. In selected 18 divisions, against the target of 867 Water Users Associations (WUAs), only 519 WUAs were formed in 16 divisions while WUAs were not formed in two divisions. There were significant shortfalls in formation of Distributary Committees and Project Committees for various projects.

Out of 16 divisions where WUAs were constituted, WUAs in 11 divisions were not performing its mandated functions. The functioning of WUAs was unsatisfactory in the test-checked four divisions as only 26.26 *per cent* of total demand of the water charges from farmers were collected during 2015-16 to 2017-18. Financial Management and accounting systems in WUAs were poor as prescribed guidelines were not followed.

Elections were not conducted after the expiry of regular tenure of five years. Monitoring system at the Departmental level was non-existent. The cell to monitor the activities relating to PIM was not constituted and Performance Measurement Criteria were not adopted to evaluate the functioning of the WUAs.

Audit recommends that the Department may constitute the Apex committee as envisaged under the Act as well as the PIM cell so that proper monitoring of implementation of the Act can be ensured. The Department may take steps for formation of Water User Associations, Distributary and Project committees for all the projects. The Department may ensure proper collection of water charges from users so that financial resources for smooth functioning of WUAs can be arranged. The Department may ensure timely election of WUAs.

(Paragraph 3.1)

Non-approval of the proposed eco-development project led to non-utilization of the eco-development surcharge amounting to ₹ 16.12 crore recovered from tourists visiting the Keoladeo National Park.

(Paragraph 3.2)

Wrong costing of excavated forest produce (stones) resulted in non- recovery of ₹ 0.83 crore from the user agency.

(Paragraph 3.3)

In violation of the condition stipulated by the Ministry of Environment and Forest (MoEF), Government of India, only 419.70 hectares of revenue land was transferred in favour of Forest Department against 2380 hectares required to be transferred. Further, payment for the compensatory afforestation

amounting to ₹ 34.26 crore is pending towards Urban Improvement Trust, Kota.

(Paragraph 3.4)

In violation of the departmental directions stipulating use of steel sourced from primary producers only, steel was procured from local manufacturers for construction of buildings, which resulted in irregular expenditure of ₹ 1.24 crore. Besides, there was a possibility of lack of quality in the construction works.

(Paragraph 3.5)

Non- adherence to the provisions of Pradhan Mantri Gram Sadak Yojana and PWF&AR for ensuring availability of land before taking up proposed road works led to non-achievement of objective of providing road connectivity to the end point habitation despite incurring an expenditure of ₹ 2.07 crore on incomplete roads.

(Paragraph 3.6)

Due to negligence of the concerned authorities the appeal against the arbitration award was filed at the wrong legal forum which resulted in delay and the appeal became time-barred and the Department could not contest the matter effectively. The Department prolonged the matter which finally resulted in excess payment of ₹ 15.01 crore to the contractor.

(Paragraph 3.7)

1.6 Response of the Departments to Performance Audit/Compliance Audit Paragraphs

The draft paragraphs are forwarded to the Additional Chief Secretary/Principal Secretary/Secretary of the departments concerned, drawing their attention to the audit findings and seeking their response on these findings. They are also advised to have meetings with the Accountant General to discuss the performance audit/draft paragraphs proposed for inclusion in the Audit Report. Accordingly, the performance audit/draft paragraphs proposed for inclusion in this Report are forwarded to the Additional Chief Secretary/Principal Secretary/Secretary concerned. Replies to draft paragraphs and performance audit furnished by the State Government have been appropriately incorporated in the Report.

As of 31 July 2019, 2408 Inspection Reports (10278 paragraphs) were outstanding against nine departments under the Economic Sector. Year-wise details of the outstanding IRs and paragraphs are given in table below:

Year-wise details of the outstanding Inspection Reports

S. No.	Department	Upto 2013-14		2014-15		2015-16		2016-17		2017-18		Total	
		IRs	Paras	IRs	Paras	IRs	Paras	IRs	Paras	IRs	Paras	IRs	Paras
1.	Public Works Department	881	3695	155	893	112	707	107	677	88	620	1343	6592
2.	Water Resources Department	344	951	26	110	47	207	66	356	65	347	548	1971
3.	Forest Department	221	520	24	94	27	148	51	314	50	319	373	1395
4.	Command Area Development	54	74	02	03	02	05	03	19	01	01	62	102
5.	Indira Gandhi Nahar Project	22	52	01	01	03	11	03	15	01	01	30	80
6.	Science & Technology	05	05	-	-	02	02	01	03	04	11	12	21
7.	Information Technology & Communication	01	01	-	-	-	-	01	01	02	11	04	13
8.	Ground Water Department	19	32	01	01	01	01	06	11	02	08	29	53
9.	Environment Department	04	27	01	05	-	-	01	17	01	02	07	51
Total		**1551**	**5357**	**210**	**1107**	**194**	**1081**	**239**	**1413**	**214**	**1320**	**2408**	**10278**

1.7 Follow-up on Audit Reports

The Finance Department of the State Government decided (December 1996) that explanatory notes on all paragraphs/performance audits that have appeared in Audit Reports be submitted to the Public Accounts Committee (PAC), duly vetted by Audit, within three months from the date of laying of the Reports in the State Legislature. No explanatory note on paragraphs/ performance audits is pending as of 31 July 2019.

Discussion of Audit Reports by PAC

The status of discussion of Performance Audits and Paragraphs which appeared in Audit Reports (Economic Sector) by the PAC as of 31 July 2019 is as under:

Performance Audits/Paragraphs appeared in Audit Reports vis-a-vis discussed

Period of Audit Report	Number of Performance Audit/Paragraphs			
	Appeared in Audit Report		Paragraphs discussed	
	Performance Audit	Paragraphs	Performance Audit	Paragraphs
2016-17	1	11	-	9

The discussion on Performance Audits and Paragraphs which appeared in Audit Reports (Economic Sector) up to 2015-16 has been completed.

Chapter II
Performance Audit

Chapter II
Performance Audit

This chapter includes two Performance Audits *i.e.* performance audit on Contract Management of Road Works in Public Works Department and performance audit on Protection of Forest and Wildlife in Rajasthan.

Public Works Department

2.1 Contract Management of Road Works in Public Works Department

Executive Summary

Rajasthan has 2,36,572 kilometers (km) of various category of roads such as National Highways (NH), State Highways (SH), Major District Roads (MDR), Other District Roads (ODR) and Village Roads (VR) as on 31 March 2018. A performance audit on the contract management of road works in Public Works Department was conducted to assess whether the tendering process and contract management had been managed in a transparent and efficient manner. The audit reveals the following findings:

There was absence of systematic and comprehensive planning of road construction in the Public Works Department as the proposals of road construction by the State Government were generally sanctioned on the basis of recommendation of representatives of people, local groups of people, etc. No prioritization of roads was carried out in majority of cases to support project proposals. The department also did not have an updated data base of roads to facilitate systematic and objective planning.

(*Paragraph 2.1.7.1*)

The existing Public Works Department Manual is not updated and most of its provisions have become redundant, the Department does not have a consolidated document available at present which contains all the government and departmental instructions relating to public works for guidance and uniform application by the responsible authorities.

(*Paragraph 2.1.8.3*)

Divisions were not maintaining the important records such as Works Abstract, Register of Works and Contractors' Ledger.

(*Paragraph 2.1.9.2*)

Enlistment of contractors is governed by Public Works Financial & Accounts Rules (PWF&AR) and Public Works Department Manual. Audit found cases where provisional enlistment period was extended beyond stipulated two-year period; the Department did not institute a system to review the performance of the existing contractors so as to safeguard the interest of the Government through debarment and/or de-registration of the persistent defaulters.

Contractor enlistment register was not maintained in prescribed format; confidential register of contractors was not maintained.

(*Paragraph 2.1.10.1 to 2.1.10.3*)

Instances of irregularities in preparation and sanction of estimates were noticed such as non-preparation of preliminary estimates of roads, non-availability of road history and road register, traffic census not being carried out as per IRC specifications, estimates prepared without assessing California Bearing Ratio (CBR) value of soil and Benkelman Beam Deflection Technique (BBDT). Technical sanctions were accorded for estimates having excess/ deficient/ wrong provisions and in cases where exact percentage of components of price variation were not approved which led to avoidable/ unauthorised/ excess/ short/irregular expenditure.

(Paragraph 2.1.11.1 to 2.1.11.3)

Deficiencies in tendering system such as tenders invited before issue of technical sanction, Notice Inviting Tenders (NITs) issued before administrative sanction, irregularities in issuing corrigendum in NITs and inadequate time for submission of bids were noticed.

(Paragraph 2.1.12.1 to 2.1.12.5)

Cases like award of work without additional performance guarantee for unbalanced bid and agreement not signed/ provided by the contractor were noticed.

(*Paragraph 2.1.13.1 to 2.1.13.2)*

Execution of contracts suffered from deficiencies such as non-submission of work programme, non-deployment of technical staff by the contractor, bank guarantee not renewed after expiry of validity date, insurance cover not provided by the contractor, Non-registration of labour under Workmen's Compensation Act, non-recovery/levy of compensation and delay in payment of final bill.

(Paragraph 2.1.14.1 to 2.1.14.7)

Cases of irregular sanction of time-extension, sanction of extra/excess item in deviation from Central Road Fund guidelines, irregular award of work as additional/remaining/balance work against the savings in original work and excess payment of price variation were noticed.

(Paragraph 2.1.15.1 to 2.1.15.4)

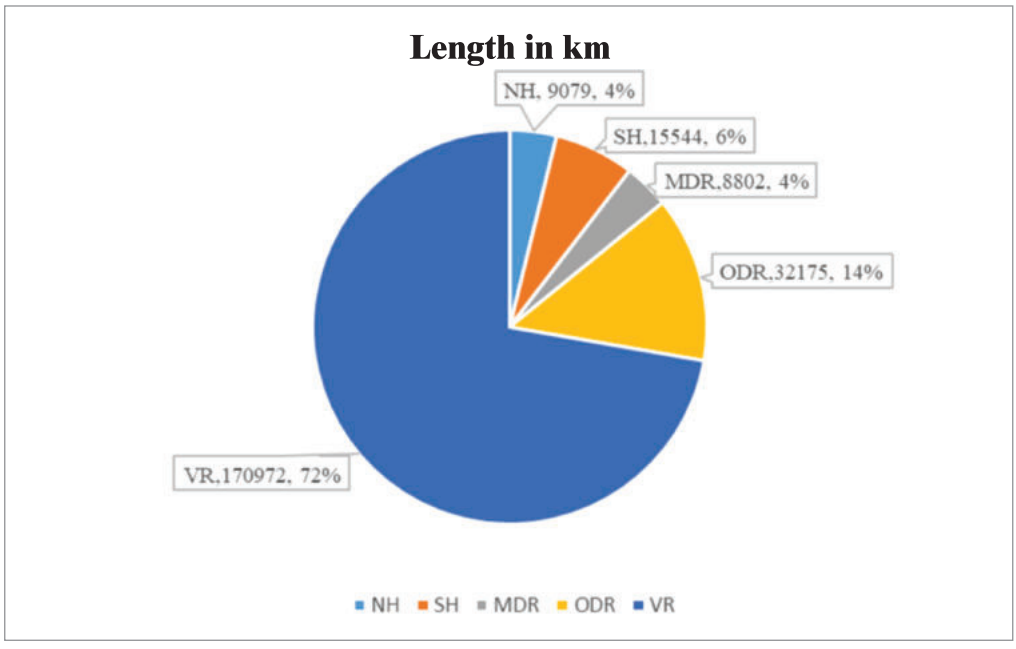
Quality control testing in the road works was not being carried out properly in many divisions. Payments to the contractors were made without ensuring receipt of quality control test reports.

(Paragraph 2.1.16.2)

2.1.1 Introduction

Rajasthan has 2,36,572 kilometers (km) of various categories of roads such as National Highways (NH), State Highways (SH), Major District Roads (MDR), Other District Roads (ODR) and Village Roads (VR) as on 31 March 2018 as shown in the chart below:

Composition of various types of roads in the State of Rajasthan as on 31 March 2018



(Length in km and share of respective road in percentage)

The NHs are constructed and managed by the National Highway Authority of India (NHAI), Government of India and the Public Works Department (PWD) of the State, whereas SHs, MDRs, ODRs and VRs are constructed and maintained by the Public Works Department of the Government of Rajasthan. In order to connect all villages in the State, new roads are constructed under different schemes[1].

The Public Works Department of Rajasthan has made notable progress in developing road infrastructure in the state. The road length in the State has increased from 1,91,694 km as on April 2013 to 2,36,572 km as on April 2018 i.e. a creditable increase of 23.41 per cent. Road length constructed by PWD has also recorded noticeable progress from 1,32,112 km as on 31.03.2013 to 1,59,349 km (20.61 % increase) as on 31.03.2018. The State has the third largest network of National Highways in the country behind Maharashtra and Uttar Pradesh. Further, the State occupies ninth position in terms of total road length in the country. The State has been able to link all the district headquarters with all-weather double roads. The expenditure on

[1] Missing Link Project (MLP), Central Road Fund, *Pradhan Mantri Gram Sadak Yojana* (PMGSY), State Road Fund (SRF), *etc.*

roads and bridges construction has seen an increase of 109.34 per cent over the five year period of 2013-2018.

Contract Management is of critical importance for construction of good quality roads and their proper maintenance. It includes activities such as preparation of estimates, invitation of bids and their evaluation, awarding of contract and their implementation, measurement of completed work and computation of payments.

2.1.2 Financial outlay

The position of budget allotted and capital expenditure incurred on roads and bridges by Public Works Department during the period 2013-14 to 2017-18 is given below:

Position of budget allotment and expenditure

(₹ in crore)

Allotment/Expenditure	2013-14	2014-15	2015-16	2016-17	2017-18
Allotment	2677.17	3055.27	3354.20	3181.24	5646.50
Expenditure	2678.79	3057.46	3318.88	3166.26	5607.36

Source: Appropriation Account

The budget allotment for roads and bridges and expenditure thereof, both have shown an upward trend increasing from ₹ 2677.17 crore and ₹ 2678.79 crore during 2013-14 to ₹ 5646.50 crore and ₹ 5607.36 crore respectively in 2017-18.

2.1.3 Organisational structure

The Public Works Department functions under the overall control of Principal Secretary, PWD of the Government of Rajasthan. The Department is administered by Chief Engineer cum Additional Secretary who is assisted by Chief Engineers (CEs)/Additional Chief Engineers (ACEs), Superintending Engineers (SEs) and Executive Engineers (EEs). The Additional Chief Engineers are administrative heads of their respective zones and are responsible for issuing technical sanctions for the detailed estimates, finalisation of contracts as per the schedule of powers, sanctioning extension of time for contracts, *etc.* The Superintending Engineers heading the circles are responsible for preparation and periodic revision of Basic Schedule of Rates[2] (BSR), finalisation of contracts, *etc.* Circles are further divided into Divisions, headed by Executive Engineers who are directly responsible for execution of works.

2.1.4 Audit objectives

Audit was conducted with a view to ascertaining that:

- planning of road works was comprehensive and sanctions of works were compliant with prescribed technical and financial norms/standards;

[2] Basic Schedule of Rates is a document, which provides rates of different material and items of works to be used for preparation of estimates for construction of roads and buildings.

- tendering and contract management was fair, transparent and competitive and consistent with sectors' best practices, and contract variations and payments were managed efficiently as per provisions of agreements and financial rules;
- sound management information system existed for effective planning, monitoring and decision making at all levels in the Department with effective dispute redressal system, and the prescribed quality control norms and timelines were adhered to.

2.1.5 Audit criteria

The audit criteria was drawn from provisions of;

- Indian Contract Act, 1872.
- Standard Bid Document.
- Specification of roads laid down by Indian Road Congress.
- Accounting and Financial Rules of the State Government (Public Works Financial and Accounting Rules).
- Project Reports.
- Sanctioned estimates of the works and other related records available in the PWD offices.
- Rural Road Manual.
- Rajasthan Transparency in Public Procurement Act and Rules.

2.1.6 Scope of audit and methodology

The Department has six offices of Chief Engineers[3], eight zones, 40 circles and 131 divisions. Further there are 33 Quality Control Divisions. Field study for the Performance Audit was conducted during the period January to July 2018 covering the activities from 2013-14 to 2017-18 in the offices of the Principal Secretary, PWD, offices of four[4] out of six Chief Engineers, eight[5] Zonal offices, eight[6] out of 40 Circle offices and eight[7] out of 33 Quality Control divisions. Besides, 27 divisions[8] out of 131 divisions were randomly selected on the basis of sampling using Probability Proportionate to Size (PPS) method. There were 1886 packages/ works executed during 2013-14 to 2017-18 in selected 27 divisions, out of these, 283 packages/ works were randomly selected for detailed scrutiny. The scope of audit excluded Roads under *Pradhan Mantri Gram Sadak Yojana* (PMGSY), Rajasthan Road Sector Modernization Project (RRSMP), State Road Fund (SRF) and Repair and Maintenance as these were reviewed during the last five years and audit findings included in the Audit Reports of the relevant years.

An 'Entry Conference' with the Chief Engineer cum Additional Secretary, PWD was conducted on 27/03/2018, where audit objectives, scope and methodology of the performance audit were discussed. The 'Exit Conference'

[3] CE cum Additional Secretary, CE (Road), CE (NH), CE (QC), CE (SS) and CE (Building).
[4] CE cum Additional Secretary, CE (Roads), CE (QC) and CE (NH).
[5] ACE Zone: Ajmer, Bikaner, Bharatpur, Jaipur-I, Jaipur-II, Jodhpur, Kota and Udaipur.
[6] SE: Ajmer, Bikaner, Bharatpur, Jaipur-Rural, QC Jaipur, Jodhpur, Kota and Udaipur.
[7] EE (QC): Ajmer, Bikaner, Bharatpur, Jaipur-I, Central Laboratory Jaipur, Jodhpur, Kota and Udaipur.
[8] EE- District Divisions: Ajmer, Amet, Barmer, Balotra, Beawar, Bhilwara, Chittorgarh, Dausa, Didwana, Dhariawad, District Dn.-I Jodhpur, Jhalawar, Mangrol, Phulera, Sagwara, Rajgargh (Alwar), Sardarshahar, Sriganganagar, Shahpura (Bhilwara), Kushalgarh, Garhi, Neem ka Thana, Hindauncity, Bonli, Nokha, Khairwara and Tonk.

was held on 30/08/2018 with the Principal Secretary, PWD Rajasthan to discuss the findings of the performance audit.

Acknowledgement

Audit wishes to acknowledge the co-operation extended by the officers/staff of Public Works Department, Government of Rajasthan in providing necessary information and records during conduct of this Performance Audit.

Audit findings

The audit findings are discussed in succeeding paragraphs:

2.1.7 Planning of road development works

2.1.7.1 Planning

It is imperative that the Department prepares long term, medium term and short term plans to achieve goals of providing connectivity to all habitations and for providing an efficient road infrastructure in the State. Scrutiny of records in audit revealed absence of systematic and comprehensive planning for construction of roads. Audit noticed that a policy for road construction (September 2013) based on 2001 census, was in existence wherein broad targets were prescribed. However, neither any comprehensive implementation plan for this policy was available nor any long/ short term annual working plans were prepared by the Department to ensure implementation of this Road policy.

Audit observed that the proposals for construction of roads by the State Government were sanctioned on the basis of recommendation of representatives of public, local groups of people, *etc.* However, neither any prioritization of roads was carried out nor traffic surveys were conducted properly in majority of cases (as indicated in para 2.1.11.1) to support project proposals. The Department did not update the database of roads to facilitate systematic and objective planning. Hence, in the absence of a proper planning process the entire system of submission of proposals by divisional officers and sanction of road works by the State Government lacked transparency.

In reply, the State Government stated (October 2018) that the works were sanctioned as per Rajasthan Road Policy 2013 incorporating the local need or requirement through local public representatives and elected political leaders. State Government assured that a new realistic road planning policy covering the implementation part, financial aspects and political aspirations, is under consideration and would be submitted for approval soon.

The fact remains that the Department lacks a comprehensive document which incorporates suitable provisions for prioritization of road works.

2.1.8 Framework of rules

The rules and procedures for tendering and execution of works in the State are detailed in Public Works Financial & Accounts Rules, Rajasthan Transparency

in Public Procurement Act and Rules, Rajasthan PWD Manual and instructions issued from time to time.

Major deficiencies noticed in the prevailing practices adopted by the Department are discussed in detail below:

2.1.8.1 Assessment of bid capacity of the contractor

According to the special conditions of contract issued (September 1995) by the PWD which was part of all contract agreements, the capacity of the contractors to bid is to be assessed on the basis of a formula:

$$A \times N \times 2 - B$$

where A is the maximum value of works executed in any one year during the last five years, N is the number of years prescribed for completion of works for which bids are invited, B is the value of existing commitments and on-going works and 2 is a constant.

For assessment of B*, i.e.*, existing commitment and ongoing works of the contractor, the department's circular (September 1995) provides that the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer in Charge of the Department. However, Audit observed that in all the 27 test-checked divisions, the department did not independently verify the details of the works being executed by the contractors. Audit also noticed that the Department was relying solely on the information provided by the contractor himself and did not independently verify the accuracy of claims made by the contractor. It was further noticed that details of works being executed by the existing contractors were not readily available on the Departmental website and the commitments of the contractors for works done outside the Department were also not being assessed.

Thus, due to non-compliance with the prescribed checks in place for verification of existing commitments and on-going works of the contractors for the assessment of bid capacity, the risk of awarding large value contracts to contractors who are already overburdened with existing works and whose resources might be engaged elsewhere could not be ruled out.

In reply, the State Government stated (October 2018) that the present criteria for bid assessment is satisfactory, however the Finance Department and Information and Technology Department of Rajasthan are working on development of online Geographic Information System (GIS) based web portal which will also have provisions for better assessment of bid capacity of the contractor.

2.1.8.2 Integrity pact not included in notice inviting tenders

Rule 80 to 82 of Rajasthan transparency in public procurement (RTPP) rules 2013 stipulates that every procuring entity and bidder is required to follow the code of integrity. The code of integrity envisages an agreement between the prospective vendors/bidders and procuring entity to maintain an unimpeachable standard of integrity, not solicit or accept or offer any bribe, reward or gift, disclose conflict of interest, *etc.*

NHAI has adopted Integrity Pact for civil works contracts above ₹ 100 crore. Central Public Works Department (CPWD) also incorporated Integrity Pact in General Condition of contract.

Scrutiny of records of selected divisions revealed that though PWD executed contracts worth ₹ 100 crore and above, the Standard Bidding Document for works did not stipulate the inclusion of Integrity Pact in General Condition of contract.

The State Government stated (October 2018) that all the procuring entities and bidders are required to follow code of integrity as per Rule 80 to 82 of RTPP Rules, 2013. Reply was not tenable because though the provisions of RTTP Rules 2013 stipulated for code of Integrity, however, same was not incorporated in the general conditions of contract to make it binding on both parties.

2.1.8.3 Obsolescence of PWD manual

PWD Manual Volume I, II and III containing procedure for preparation of estimates, execution of works, preparation of budget, office procedure, establishment, survey & investigation, *etc.* were published in 1954 and last revised in January 1984.

A number of government orders have since been issued by the Department, but the PWD Manual has not been revised and updated for more than thirty four years (October 2018). As the existing Manual is old and most of its provisions have become redundant, there is no consolidated document available at present containing all the government and departmental instructions relating to public works for guidance and uniform application by the responsible authorities.

In reply, the State Government accepted (October 2018) the fact and stated that new PWD Manual has been prepared and is under process of approval.

2.1.8.4 Revision of basic schedule of rates

Basic Schedule of Rates (BSR) is a document, which provides rates of different material and items of works to be used for preparation of estimates for construction of roads and buildings. BSRs of PWD are also used by other departments in preparation of estimates. As per rule 20 of PWF&AR and para 2.6.14 of PWD Manual Vol. I, Superintending Engineers are responsible for regular revision of BSR pertaining to their circles. It is worth mentioning here that as per existing rules, schedule of rates of Public Works Department, Government of Uttar Pradesh are to be revised every six months. Further, as per Rule 501 of PWF&AR, the Chief Engineer will form committees for analytical preparation of BSR on scientific line. There are 40 BSRs prevalent in PWD under 40 circles in the State.

Audit examined the system of preparation of BSRs in circles and observed that during the last five years BSRs were revised in the year 2013 and then in 2016 and were, thus, not current. Further, the Chief Engineer had not formed any committee for analytical preparation of BSR on scientific line as required under Public Works Financial & Accounts Rules.

In reply, the State Government stated (October 2018) that the road BSRs of 20 circles have been revised during current financial year 2018-19 and BSRs of rest of the circle were not revised as it was felt the rates in other districts have not changed significantly. Reply is not acceptable as there was no evidence on record to suggest that non-revision of BSR in concerned districts was a conscious decision based on scientific study. Besides, Finance Department, GoR had amended (March 2017) the PWF&AR and accordingly, BSRs were to be revised annually.

2.1.9 Financial management

Financial management involves efficient and effective use of financial resources to achieve the objectives of the Department. In the context of Public Works Department dealing with construction of roads, it involves ensuring timely availability of funds to fulfil contractual commitments, optimising cost, allocating resources in a fair and transparent manner and ensuring utilisation of funds and proper record keeping. Audit observed that lack of adequate planning as discussed in Para 2.1.7 above, had adverse implications on financial management resulting in delayed release of funds and consequential time over run in most of the road projects as discussed in the following paragraphs:

2.1.9.1 Budget provision and expenditure

The budget provides projections or estimations of receipts and expenditure for a particular year. The importance of accuracy in the estimation of receipts and expenditure is widely accepted in the context of effective implementation for overall economic management.

During 2013-18, expenditure of ₹ 17828.75 crore was incurred by PWD on construction of roads and bridges. Position of budget allocation and expenditure during this period is given in table below:

Position of budget provision, expenditure and savings

(₹ in crore)

Year	Original Estimates	Final Estimates*	Actual Expenditure	Savings (-)/ Excess (+)	*Percentage* Savings/Excess
1	2	3	4	5 (2-4)	6
2013-14	2352.44	2677.17	2678.79	(+) 326.35	13.87
2014-15	4143.31	3055.27	3057.46	(-)1085.85	26.21
2015-16	3885.14	3354.20	3318.88	(-) 566.26	14.58
2016-17	5031.50	3181.24	3166.26	(-)1865.24	37.07
2017-18	6082.16	5646.50	5607.36	(-) 474.80	7.81
Total	**21494.55**	**17914.38**	**17828.75**	**(-)3665.80**	

*Including supplementary grant / re appropriation and surrender.
Source: Appropriation Accounts

Scrutiny of budget allotment and expenditure under the Major Head 5054: Capital outlay on roads and bridges, revealed that there was excess

expenditure of ₹ 326.35 crore during 2013-14. However, the Department could not utilize the allotted budget during 2014-15 to 2017-18 and short utilization ranged between 7.81 *per cent* (2017-18) and 37.07 *per cent* (2016-17) against the budget provision made during 2014-18.

In reply, the State Government stated (October 2018) that the savings were due to late issuance of sanctions, non-achievement of desired progress, delay in forest clearances *etc.* It also stated that excess expenditure for 2013-14 is being examined and finding will be intimated to audit.

2.1.9.2 Maintenance of records

Proper maintenance of records prescribed by PWF&AR is vital for smooth functioning of the divisions and it helps the superior authorities to exercise control over the working of the divisions. Scrutiny of records of the test-checked divisions revealed that all these divisions were not maintaining important records such as Works Abstract[9], Register of Works[10] and Contractor's Ledger[11].

In absence of Works Abstract, it was difficult to calculate the monthly expenditure of any work on account of cash, stock or other charges. As Register of Works was to be prepared from the Works Abstract, in absence of maintenance of Works Abstract, Register of Works could not be prepared. Transactions with the contractors could not be watched as the Contractor's Ledger was not maintained.

It is important to mention here that the issue of non-maintenance of these records was persistently highlighted in previous years through audit inspection reports sent to EE/SE/ACE/CE and the State Government. But, despite repeated reference to this irregularity, supervising officers failed to ensure maintenance of these basic records.

In reply, the State Government accepted (October 2018) the fact and stated that the instructions/ circulars are being issued for ensuring regular update of Work Abstract, Register of Work and Contractor's ledger. Further, Chief Engineer cum Additional Secretary issued (November 2018) directions that during the course of annual inspection, the concerned SE would check the said records of divisions and offer his comments in the inspection report. Further, action taken has not been intimated to Audit (August 2019).

2.1.10 Enlistment of contractors

Enlistment of contractors in PWD is governed by Rules prescribed in PWF&AR-II and PWD Manual. According to Rules, tender documents are to be issued only to the contractors having valid enlistment on the date of issue of tender document. Contractors in the state are registered under five

[9] Rule 464 and 488 of PWF&AR
[10] Rule 489 and 490 of PWF&AR
[11] Rule 502 and 503 of PWF&AR

categories[12]- 'AA', 'A', 'B', 'C' and 'D' on the basis of tender amount. For enlistment, contractors have to submit requisite information, enlistment fee, security deposit and other documents/proofs to enlisting authority to establish genuineness of the information submitted.

Scrutiny of records of enlistment cases pertaining to 2013-18 in the selected offices of CE, ACE, SE and EE revealed cases where authorities registered the contractors without adhering to the prescribed norms. Further, proper records regarding contractors were not maintained as discussed below:

2.1.10.1 Irregular provisional enlistment of contractors

PWF&AR-II, Appendix XVI, Rule 1.8 provides that the maximum period up to which the prescribed authority may enlist a contractor, provisionally, shall be one year at a time and total provisional enlistment period shall not exceed two years in total. Scrutiny of the records of test-checked offices/division revealed that in 39 cases under 16 divisions/offices, provisional enlistment period was extended beyond two years ranging from two months to 56 months.

In reply, the State Government stated (October 2018) that compliance is being called for from concerned divisions. Further, action taken has not been intimated to Audit (August 2019).

2.1.10.2 Review of performance of contractors

In order to assess the veracity of the assertions relating to capacity, performance and experience given by the bidders in the tender documents, it is desirable that the Department should adopt a system of review of performance of contractors as stated in section VII of Appendix XVI of PWF&AR. However, the Department did not institute such a system for the existing contractors so as to safeguard the interest of the State Government through debarment and/or de-registration of the persistent defaulters. Online data on debarred/deregistered contractors was also not available in this regard.

In reply, the State Government accepted (October 2018) the fact and stated that the guidelines and instructions in this regard are being issued. The State Government also stated that list of debarred/blacklisted contractors was available on departmental website. Reply is not acceptable as list of only the AA and A class contractor who have been debarred/blacklisted was available and list of rest of classes *i.e.* B, C and D was not available on the website.

[12]

S. No.	Class of contractor	Extent upto which qualified to tender for any work	Enlistment Authority
1	AA class	Any amount	CE
2	A class	Upto 3 crore	CE
3	B class	Upto 1.5 crore	ACE
4	C class	Upto 50 lakh	SE
5	D class	Upto 15 lakh	EE

2.1.10.3 Miscellaneous irregularities in respect of enlistment of contractors

PWF&AR-II, Appendix XVI, Rule 1.4 provides that Register of enlistment of contractors showing different classification (separate register for every class) shall be maintained in Form RPWA 109 by every Division/Circle/Zone/Head quarter of the Department. Whenever a contractor is black-listed, removed, or temporarily suspended from the list of approved contractors, necessary remarks shall be made in this register against the contractor concerned. Scrutiny of records of all test-checked offices/ divisions revealed that in 18 offices/divisions[13] the aforesaid register was not maintained in prescribed form RPWA 109. In the absence of this, the information about any contractor being black listed could not be ascertained.

In reply, the State Government stated (October 2018) that compliance is being called for from concerned divisions.
Rule 4 of Section III, Volume I of PWD Manual prescribes that enlistment of contractor who has not executed any work in the Department for the last three years will cease automatically. All test-checked divisions/offices, however, did not maintain the list of contractors who had not executed any work in the Department for the last three years and, thus, the compliance with this provision of the Manual could not be assessed.

In reply, the State Government stated (October 2018) that instructions have been issued to review enlistment of contractors.

PWF&AR-II, Appendix XVI, Section VII, Rule VII. 3 and 4 provides that a confidential register of contractors shall be maintained and kept in personal custody of the divisional officer and while writing confidential reports of contractors in the confidential register, the Executive Engineer should record his remarks on prescribed points respectively. However, on being called for, none of the test-checked divisions could furnish the confidential register of contractors and any such confidential reports of contractors thus, the compliance to these provisions of the rule could not be assessed.

In reply, the State Government stated (October 2018) that the instructions have been issued to maintain confidential register and report of the contractor.

2.1.11 Cost estimation and sanction of works

According to the PWF&AR no work can commence without obtaining administrative approval of the competent authority and sanction to incur the proposed expenditure. The rules require that preparation of detailed design and preliminary estimates should precede sanction of work by the administrative authority. Preparation of cost estimates and issue of sanctions has a direct bearing on the total project cost, quality of works executed and timeliness of completion of road works. It is essential that provisions of rules and standards/norms prescribed are strictly adhered to in preparing cost estimates and according administrative and technical sanctions.

[13] EE-Divisions: Mangrol, Phulera, Didwana, Sagwara, Dausa, Hindauncity, Kushalgarh, Barmer, Balotra, Garhi, Neem ka Thana, Shahpura (Bhilwara), Distt. Dn.I Jodhpur, Distt. Dn. Ajmer, SE circle Kota and Bharatpur, ACE Zone-I Jaipur and Bharatpur.

Audit, however, observed certain deficiencies in preparation of cost estimates and issue of administrative and technical sanctions, weakness in internal control mechanism and monitoring as elaborated in succeeding paragraphs:

2.1.11.1 Irregularities in preparation and sanction of estimates

It is essential that the Department has reliable information on traffic density of the existing road, soil strength of the area where the road is being constructed and the status of the existing road in term of the crust thickness for accurate preparation of preliminary estimates/detailed estimates of a road work. Calculation of values of Passenger Car Unit (PCU)[14] and Million Standard Axle (MSA)[15] based on traffic census data, California Bearing Ratio (CBR)[16] for determining soil strength and Benkelman Beam Deflection Technique (BBDT) was required for arriving at the crust thickness required as per Indian Road Congress (IRC) guidelines while assessing the need for widening and strengthening of existing roads.

Audit, however, noticed that the Department either did not conduct traffic surveys on roads as per IRC which were being proposed for widening or did not maintain proper records to monitor the status of existing road. Further, the Department also did not conduct required soil tests to prepare road design and cost estimates. Audit also observed that required tests needed for designing the crust of the road such as BBDT and CBR were also not conducted properly in test-checked cases. These cases are enumerated below:

- **Non-preparation of preliminary estimates of roads**

PWD Manual, Volume –II, Para No. 31.7.1 provides that preliminary estimate is required to be prepared on the basis of the plinth area or length/area of road and in case of water way for bridges, *etc.* it is worked out on the rate per unit length/area or other such methods adopted for rough and ready calculations so as to give an approximate idea of the likely cost involved in the proposal**.**

Scrutiny of records in test-checked divisions revealed that in 15 divisions[17] preliminary estimates for 79 out of 158 packages/works of estimated cost amounting to ₹ 422.01 crore were neither found on record nor made available to Audit on being called for.

In reply, the State Government stated (October 2018) that generally Department prepares estimates on cost per km basis which are taken as preliminary estimates. However, there was no data on record to substantiate the Government's reply. It further stated that the Finance Department and Information and Technology Department are working on online GIS based web portal which will include facility for preparation of forecast estimates.

- **Non-availability of history of roads and road register**

PWD Manual, Volume –II, Para No. 31.31 provides that a renewal history diagram and charts for each road shall be maintained in the division and sub-

[14] Passenger Car Unit- is calculated in terms of load of different vehicle *i.e.* Motorcycle, Car, Bus, Truck, *etc*. with their corresponding value as 0.5,1, 3 and 3.
[15] Million Standard Axle is an indicator of traffic load on a road.
[16] California Bearing Ratio is a measure of load bearing of soil.
[17] EE PWD District Dn. Ajmer, Barmer, Balotra, Dausa, Didwana, Dhariawad, Jhalawar, Mangrol, Sagwara, Shahpura (Bhilwara), Kushalgarh, Garhi, Neem ka Thana, Hindauncity and Bonli.

division. The complete information about roads in the division and sub-division shall also be maintained showing statistics like length of each category of roads upto end of previous financial year and length added or improved during the current year. This report shall be furnished by the Executive Engineer to Superintending Engineer and Chief Engineer by end of the month of April every year.

Scrutiny of records of test-checked divisions revealed that in 16 divisions[18] history of roads was not available for 61 out of 175 packages of works.

In reply, the State Government stated (October 2018) that PWD is working on development of software for Road Assets Management System (RAMS) for management of road works. In this system (RAMS), all the characteristic/ history/ geographic details were being collected and it would be useful in future for road renewal/ strengthening/ widening purposes. However, records for history of roads and Road register were not found or made available to audit. Further, Chief Engineer cum Additional Secretary issued (November 2018) directions that in future all these records should be maintained and updated by the Executive Engineer concerned.

- **Traffic census**

The width of the road is decided on the basis of traffic density of a road. The traffic density is calculated in terms of Passenger Car Unit[19] (PCU) per day. IRC-09: 1972 provides that traffic census should be conducted 24 hours a day for seven days and provides for conducting traffic census at least twice every year for every road.

Scrutiny of records of test-checked divisions revealed that in 45 out of 155 packages/ works costing ₹ 300.91 crore in 18 divisions[20], traffic census was not found on record in 40 packages despite being mandated as per IRC specifications which resulted in preparation of detailed estimates without traffic census reports. Further, the competent authorities accorded technical sanctions ignoring this basic requirement. In the remaining five packages, Audit observed that traffic census was conducted for three/four days instead of seven days as per IRC specifications.

In reply, the State Government stated (October 2018) that traffic census was conducted for seven days twice every year on the State Highways (SH) and Major District Roads (MDR) and for three days in other roads. Reply is not acceptable as the IRC 1972 norms prescribe for seven days census and there is no categorization for SH and MDRs.

- **Assessment of CBR value of soil**

California Bearing Ratio (CBR) is a measure of load bearing strength of the soil and also is an important factor in determining the crust design of the road. IRC-37: 2001 prescribes that at least three samples should be taken from each

[18] EE PWD District Dn. Ajmer, Barmer, Balotra, Dausa, Didwana, Dhariawad, Jhalawar, Mangrol, Sagwara, Shahpura (Bhilwara), Kushalgarh, Garhi, Neem ka Thana, Hindauncity, Distt. Dn Jodhpur and Bonli.

[19] Traffic density is calculated in terms of load of car (value taken as one) and values of other vehicle like cycle, motor cycle, truck, bus are calculated with reference to car by taking their value as 0.50, 0.50, 3 and 3 *etc*.

[20] EE PWD Dn. Jhalawar, Sagwara, Ajmer, Didwana, Distt. Dn.I Jodhpur, Rajgarh, Bhilwara, Tonk, Kherwada, Amet, Nohar-Nohar to Fefana (Zone Bikaner), Rajsmand-(VR-96) (Zone Udaipur), Bonli, Hindauncity, Balotra, Neem ka Thana, Kushalgarh and Shahpura.

site for each type of soil at the same density and moisture content and tested for CBR value. As per pavement thickness design of IRC-37:2001, increase and decrease in CBR values has a direct impact on the assessment of required crust thickness.

Scrutiny of test-checked divisions revealed that CBR test reports were not found enclosed with the estimates in 39 out of 142 packages/ works costing ₹ 401.90 crore in 16 divisions[21]. In the absence of required soil test reports as per IRC norms, the adequacy of estimates and design of road crust could not be ensured.

In reply, the State Government stated (October 2018) that CBR value of soil was conducted as per requirement. However, no such record was found or made available to audit.

- **Calculation of Million Standard Axle**

An important factor on which crust design of a road depends is the Million Standard Axle (MSA) which is an indicator of traffic load on the road.

The value of MSA depends, among other things, on the number of commercial vehicles per day (CVPD) and California Bearing Ratio (CBR) of the soil. Higher the MSA (traffic load) of a road, greater will be the thickness of the crust required. Since, the traffic census was not regularly and properly carried out and the value of CBR was not always available as mentioned in the previous bullets, computation of MSA factor based on unreliable traffic data/soil tests would adversely impact the designing of the road crust**.**

- **Assessment of Benkelman Beam Deflection Technique (BBDT) test**

To assess the required overlay (in terms of Bituminous Macadam) for strengthening of different stretches of the roads, IRC-81:1997 prescribes Benkelman Beam Deflection Technique (BBDT) test for categorizing the road (good, fair, poor, *etc.*) on the basis of pavement conditions. This requires a road survey to be conducted before the test is actually carried out so that the road stretches are correctly categorized as good, fair and poor sections depending on the pavement conditions. Further, in each such category, minimum 10 points at the interval of not more than 50 meters should be marked for deflection observation.

Scrutiny of records of test-checked divisions revealed that in 10 divisions[22] BBDT tests in respect of 31 out of 75 packages with estimated cost of ₹ 76.35 crore were not shown to audit/ found on record.

Thus, it may be concluded that the divisional officers as well as SEs/ACEs who were responsible for preparation of preliminary and detailed estimates and according the technical sanctions did not adhere to the basic requirements prescribed under IRC norms for designing of road crust and preparation of estimates. The traffic census, soil testing and other necessary tests which were required for designing of the road were not found on record with detailed estimate.

[21] EE PWD Dn. Rajgarh, Bhilwara, Tonk, Kherwada, Amet, Jhalawar, Sagwara, Ajmer, Didwana, Distt. Dn.I, Jodhpur, Bonli, Hindauncity, Balotra, Neem ka Thana, Kushalgarh and Shahpura.

[22] EE PWD Dn Sagwara, Distt.Dn I Jodhpur, Hindauncity, Bonli, Bhilwara, Tonk, Kherwara, Amet, Nohar (Zone Bikaner) and Rajsamand (Zone Udaipur).

- **Plantation works**

Chief Engineer cum Additional Secretary, PWD, instructed (November 2009) that provision of plantation and its maintenance should be included in estimates of all new construction, rehabilitation and renewal & widening of roads.

Scrutiny of test-checked divisions revealed that in 18 divisions[23], provision of plantation was not made in the estimates for 58 out of 132 works amounting to ₹ 158.63 crore during 2013-18. Thus, plantation work could not be undertaken in these divisions and the divisional authorities and the administrative authorities failed to ensure compliance to the norms and instructions related to environmental protection.

In reply, the State Government stated (October 2018) that it will be covered under Road Asset Management System (RAMS). The State Government further stated that rural road plantation work could not be executed due to non-availability of required width to develop plantation.

2.1.11.2 Accuracy of estimates

Audit observed that the preparation of estimates indicated major deficiencies. The estimates were not based on authentic and reliable data. SEs/ACEs also accorded technical sanctions for such estimates without ensuring adherence to important norms and instructions of State Government and Indian Road Congress as discussed in paragraph 2.1.11.1 above. As a result, estimates contained serious deficiencies which led to avoidable excess expenditure, loss to the State Government, execution of sub-standard works, *etc.* Certain important issues are discussed below:

- **Excess provision in estimates**

Scrutiny of estimates of road works of test-checked divisions revealed that in seven divisions[24], the roads were designed by adopting higher specifications, excess provision of crust thickness, crust design without traffic census, *etc.*, in contravention of IRC specifications and/or departmental orders. This resulted in excess or avoidable expenditure of ₹ 6.18 crore as detailed in ***Appendix 2.1.***

In reply, the State Government stated (October 2018) that more precaution would be taken while preparing estimates in future.

- **Deficient/wrong provision in estimates**

Scrutiny of records of test-checked divisions revealed that in 49 out of 151 packages/works of 16 divisions, deficient / wrong provisions in estimates were adopted against required specifications of IRC/departmental orders which led to avoidable/ unauthorised/ excess/ irregular expenditure amounting to ₹ 41.88 crore during 2013-18 as detailed in ***Appendix 2.2.***

In reply, the State Government stated (October 2018) that estimates were prepared on the existing/requirement of site. However, during period of

[23] EE PWD Rajgarh, Tonk, Kherwara, Sardarshahar, Nokha, Sriganganagar, Rajsamand (Zone Udaipur), Barmer, Balotra, Dhariawad, Mangrol, Shahpura (Bhilwara), Kushalgarh, Garhi, Neem ka Thana, Hindauncity, Phulera and Bonli.

[24] EE PWD Distt. Dn Ajmer, Amet, Didwana, Dausa, Hindauncity, Sagwada and Tonk.

execution due to change in requirement at site, the work was completed with variations. It also stated that more precautions shall be taken while preparing the estimates. Reply is not acceptable as it shows that estimates were not prepared as per actual site conditions.

Further, for the audit observations included in Para 2.1.11.1 and 2.1.11.2 regarding deficient estimates due to non-adherence to and/or violation of IRC norms, Chief Engineer cum Additional Secretary issued (November 2018) directions that detail estimate should be prepared as per actual requirement of widening/strengthening of roads duly supported with crust design based on traffic census, CBR of existing road, BBDT test, *etc.*

2.1.11.3 Component of price variation not approved

General conditions for admissibility of price variation of clause 45 of conditions of the contract provides that the exact percentage of labour, material, petrol, oil, lubricant (POL), cement, steel and bitumen component for the work shall be approved by authority while sanctioning the detailed estimate.

Scrutiny of records of test-checked divisions revealed that in 16 divisions[25] exact percentage of components in 54 out of 178 packages/works was not approved by competent authority while sanctioning the detailed estimates.

In reply, the State Government stated (October 2018) that component of price variation in seven divisions has been approved by competent authority and show-cause notices have been issued to remaining divisions. But details of approvals in seven divisions were not attached with the reply. Further, Chief Engineer cum Additional Secretary issued (November 2018) directions that in future exact percentage of labour, POL, cement, steal and bitumen component should be approved at time of issuing of TS of work and accordingly should be entered in bid document.

2.1.12 Invitation of tenders

Finance rules and government instructions require that public contracting should be conducted in a transparent manner to bring competition, fairness and elimination of arbitrariness in the system. The first stage in the process of public procurement after assessment of requirement is to issue tender to obtain bids from all prospective bidders in a fair, open and transparent and competitive manner. Adequate publicity of notice inviting tender should be done for ensuring maximum possible participation of bidders and sufficient time should be allowed to tenderers to prepare and submit their bids.

Audit observed certain deficiencies in the system of inviting bids for road works in the State as discussed below:

2.1.12.1 Tender invited before issue of technical sanction

Rule 289 of PWF&AR provides that the tenders for the work shall be invited only after issue of technical sanction and a reference of this shall be made in

[25] EE PWD Dn. Dausa, Dhariyawad, Didwana, Distt. Dn. I Jodhpur, Jhalawar, Kushalgarh, Neem ka Thana, Sagwada, Shahpura, Distt. Dn. Ajmer, Beawar, Bonli, Hindauncity, Balotra, Barmer and Garhi.

NIT. Technical sanction contains detailed estimates and is a guarantee that the proposals are sound and estimates are accurately calculated and based on data.

Scrutiny of records of test-checked offices/ divisions revealed that in 65 out of 131 packages/ works of 17 offices/divisions[26] tenders were issued by competent authorities before issue of technical sanctions. The technical sanctions were issued after a period ranging from one to 150 days of the issue of NITs. Issue of NITs before technical sanctions violated the fundamental principle of tendering as the scope of a particular work can be determined only through a technical sanction. Thus, in these cases, the NITs were issued before finalization of the scope of the work.

In reply, the State Government stated (October 2018) that tenders were invited before issue of technical sanction with intention to save time in tender process.

Reply is not acceptable as inviting tenders before issue of technical sanction is in clear contravention of Rule 289 of PWF&AR. Moreover, there was no record to support the argument being proposed by the Department now. Further, audit also observed that 28 out of these 65 packages/ works have been delayed beyond the stipulated date of completion. It shows that even after clear violation of Rule 289 of PWF&AR, the Department could not ensure timely completion of work.

- **Work being awarded to ineligible contractor**

Section II of Annexure XVI of PWF&AR-II prescribed that a contractor belonging to 'D' Category is eligible to bid for works within ₹ 15.00 lakh. Scrutiny of records of three offices[27] revealed that in five cases estimated cost shown in NITs was lower than the sanctioned technical estimates which were approved later. Consequently, contractors of lower class were allowed to participate in the higher category bids.

Thus, in five cases, ineligible contractors were allowed to participate and were awarded contracts in the higher category bid amounting to ₹ 401.83 lakh.

The State Government accepted (October 2018) the fact and stated that it had happened in some cases where mass sanctions were issued and in order to reduce the time, centralized NITs were issued. However, now NITs are being issued only after uploading complete documents of work on the portal.

2.1.12.2 NITs issued before administrative sanction

Rule 285 (b) of PWF&AR provides that execution of work should not commence without administrative and financial sanction. Rule 286 (1) also stipulates that for every work it is necessary to obtain, in the first instance, the concurrence of the competent authority of the Administrative Department requiring a work.

Scrutiny of test-checked offices/ divisions revealed that in 32 out of 101 packages/ works in 15 offices/divisions[28] with an estimated cost of ₹ 123.67

[26] EE PWD Dn. Rajgarh, Sardarshahar, Bhilwara, Sriganganagar, Bonli, Hindauncity, Balotra, Barmer, Kushalgarh, Garhi, Shahpura, Neem ka Thana, Jhalawar, Dhariyawad, Sangod Ajmer and ACE Zone Udaipur.
[27] EE PWD Sardarshahar, Nokha and SE PWD Udaipur.
[28] EE PWD Dn. Rajgarh, Tonk, Bonli, Amet, Sardarshahar, Bhilwara, Sriganganagar, Hindauncity, Balotara, Barmer, Kushalgarh, Garhi, Shahpura, Ajmer and ACE Zone Udaipur.

crore, tenders were issued by CE/ACE before issue of administrative and financial sanction of work by the State Government. The administrative and financial sanctions were issued after 2 to 84 days of the issue of NITs.

The State Government accepted (October 2018) the fact and stated that it happened because in some cases mass sanctions were issued and in order to reduce the time, centralized NITs were issued. It further stated that NIT is now being published through Department of Information and Public Relations (DIPR) after uploading on State Public Procurement (SPP) portal. However, there was no record to support the argument being proposed by the Department now as audit scrutiny of these cases revealed that 12 out of these 32 works/ packages have been delayed beyond the stipulated date of completion. It shows that even after clear violation of Rule 285 (b) of PWF&AR, the Department could not ensure timely completion of work.

2.1.12.3 Issue of corrigendum for NITs

Note-6 of Rule 327 (a) of PWF&AR provides that if the date of opening/selling of tenders is extended, the approval of next higher authority up to Chief Engineer is required. Such extension is required to be notified to all prospective bidders by issue of corrigendum.

Scrutiny of records of ACE PWD Zone Udaipur and Bikaner, EE PWD Dn. *Rajgarh, Tonk and Khairwara* revealed that 11 NITs involving amount of ₹ 160.01 crore were invited by ACEs and subsequently corrigendum for extension of time were also issued by ACEs. However, approval of CE in these cases was not found on record/ furnished by the Department.

In reply, the State Government stated (October 2018) that in exceptional cases corrigendum for NITs are issued only after consent of CE. Reply is not acceptable as in these cases, on being enquired, neither the Department furnished the copies of approval during the course of Audit nor did it attach them with the reply.

2.1.12.4 Inadequate time for submission of bids

Decision under Rule 331 of PWF&AR provides that the time for submission of tenders in respect of works costing ₹ 100 lakh and above should be 30 days from the date of publication of the NIT in the newspaper. However, the time period allowed could be reduced with prior approval of Finance Department.

Rule 43 (7) and (10) of RTPP rules 2013 also provides that in emergent conditions the procuring entity after recording reasons may reduce the period of Notice Inviting Bids (NIB).

Scrutiny of records of test-checked offices/ divisions revealed that in 26 offices/divisions[29] in 68 out of 172 packages/ works bids were invited by giving tender notices for period ranging between five to 28 days only. This was in violation of tendering norms and financial rules. This limited the

[29] ACE PWD Zone Ajmer, Bharatpur, Zone-I Jaipur, Zone-II Jaipur, Kota and Udaipur; SE Circle Alwar, Kota and Udaipur; EE PWD Dn. Rajgarh (Alwar), Tonk, Khairwara, Amet, Sardarshahar, Nokha, Sriganganagar, Bonli, Neem ka Thana, Garhi, Shahpura, Dausa, Chittorgarh, Mangrol, Ajmer, Phulera and Distt Dn Jodhpur.

competition in the tendering process as all the eligible bidders may not have been in position to respond and submit their bids in such a short time.

In reply, the State Government stated (October 2018) that as per Rule 43 (7) and (10) of RTPP Rule, 2013 in emergent condition procuring entity after recording reasons may reduce the period of submission of bid.

Reply is not acceptable as reasons for publications of short-term NIT and prior approval of Finance Department were not found on record in concerned divisions/offices.

2.1.13 Evaluation of bids, selection of contractor and award of contract

Financial rules prescribe for evaluation of bids strictly in accordance with the criteria laid down in the terms and conditions of tender. Further, public procurement has to be transparent and competitive to ensure that most efficient and competitive bidders are selected for award of contract.

2.1.13.1 Award of work without additional performance guarantee for unbalance bid

As per circular issued (September 2016) by Chief Engineer cum Additional Secretary PWD, a bid is to be considered un-balanced if the Bid price offered by the bidder is more than 10 *per cent* lower than the cost worked out as per market rate analysis for which additional performance guarantee of the difference amount should be taken from the contractor. For purpose of determination of additional performance security, current BSR rates shall be considered as market rates.

Scrutiny of records of test-checked divisions revealed that in seven divisions[30], the EEs awarded 18 out of 74 packages/ works of unbalanced bid costing ₹ 115.17 crore without obtaining additional performance guarantee aggregating to ₹ 12.94 crore during 2016-18. This not only violated the tender conditions but also resulted in extending undue financial benefits to contractors. Further, risk of non-performance by the contractor was also not taken care of by the Department.

In reply, the State Government quoted (October 2018) circular issued in 2009, stating that earlier circular issued for obtaining additional performance security was applicable for NH works only. In September 2016 it was made applicable on all PWD works. After that, additional performance security is being obtained on all works as applicable.

Reply is not acceptable as in case of these 18 packages/ works, work orders were issued after September 2016 and additional performance security was not obtained by the Department.

[30] EE PWD Divisions Jhalawar, Sagwara, Dausa, Mangrol, Hindauncity, Kushalgarh and Garhi

2.1.13.2 Agreement not signed/provided by the contractor

For a contract to be legally binding, it should be signed by both the parties of the agreement. In this regard, Chief Engineer, PWD also directed (June 2008) that contractor and EE should sign the agreement.

Scrutiny of records of test-checked divisions revealed that in five divisions[31] signature of Executive Engineer or contractor or both were missing on the agreement form in 14 works/packages. Thus, EEs did not perform their responsibilities with due care and did not ensure signing of agreement form by both the parties. In the absence of signatures in the agreement form with stamp, authenticity of contract was doubtful. Also, the agreements would not be binding and legally enforceable in case of default by contractors.

In reply, the State Government accepted (October 2018) the fact and stated that direction is being issued for strict compliance.

2.1.14 Execution of contracts

2.1.14.1 Non-submission of work programme

For proper monitoring of construction works, Chief Engineer PWD issued (June 2016) a circular that the bidder shall submit a construction schedule as to how he proposes to commence the works and there after shall complete various stages of the works within the time schedule. Before start of work, contractor shall submit to the Engineer-in-charge for approval, a programme for execution of the works including Environment Management Plan showing the general methods, arrangement sequence and timing for all the activities along with cash flow forecast. The programme shall be updated monthly by the contractor.

Scrutiny of the records revealed that construction schedule was not submitted and updated in the 27 test-checked divisions. Hence, the planning for timely completion of works was not assessed by the Department.

In reply, the State Government accepted (October 2018) the fact and stated that divisional officers have been warned to be more cautious in future.

2.1.14.2 Non-deployment of technical staff by the contractor

Clause 39 of Appendix XI of PWF&AR provides that the contractor shall engage the technical staff on the contract works. Such technical staff should be available at site whenever required by engineer-in-charge to take instructions.

During scrutiny of records in test-checked 27 divisions, Audit could not find any evidence of the deployment of technical manpower by the contractor. There was no record of payment of salary/wages to technical personnel by the contractor.

In reply, the State Government accepted (October 2018) the fact and stated that divisional officers have been warned to be more cautious in future.

[31] EE PWD Division Dausa, Didwana, Distt. Dn.-I Jodhpur, Kushalgarh and Sagwara.

2.1.14.3 Bank guarantee not renewed after expiry of validity date.

Rule 338 of Public Works Financial & Accounts Rules (PWF&AR) provides that a contractor may elect to deposit full amount of ten *per cent* security in the shape of bank guarantee (BG) or any acceptable form of security before or at the time of executing agreement. As per clause 1 of condition of contract, the bank guarantee shall remain valid up to the specified date unless extended on demand by the Engineer in Charge, which shall include the period of completion of the contract and the defect removal period as per terms of the agreement.

During scrutiny of records of three divisions[32], it was observed that the BG in 15 out of 22 cases amounting to ₹ 223.52 lakh were not renewed to cover the period of contract and contract's defect liability period. The period of non-renewal of BG after the expired validity date ranged from 21 months to 38 months.

In reply, the State Government accepted (October 2018) the fact and stated that divisional officers have been warned to be more cautious in future.

As regards the audit observations on deficiencies in execution of contracts included in Para 2.1.14, Chief Engineer cum Additional Secretary issued (November 2018) directions to Divisional Officers to adhere to PWF&AR rules. Further, he directed that the concerned Executive Engineer would be personally responsible for any such lapses, if observed in future.

2.1.14.4 Insurance cover not provided by contractor

General conditions of agreement (clause 13) of Central Road Fund (CRF) work provide that the contractor shall submit insurance[33] in joint name of employer and contractor from date of commencement to the date of completion of defect liability period (DLP). If contractor failed to do so, the employer shall execute the insurance and its premium shall be deducted from payments otherwise due to contractor. It was observed that in six divisions[34], insurance cover was not provided by the contractors in 12 out of 67 packages/ works costing ₹ 291.98 crore. Contractors were thus allowed undue benefit of ₹ 350.37 lakh[35] due to non-payment of premium. Further, on failure of the contractor in providing insurance cover, the Department did not take any action for getting the works, plants and equipments insured in these 12 packages/ works thereby risking its interests.

In reply, the State Government accepted (October 2018) the fact and stated that insurance policy for remaining period has been obtained from the contractors and also stated that in future contractors will be bound to purchase insurance cover as per rules.

[32] EE PWD Dn Garhi, Kushalgarh and Amet.
[33] For (a) loss of or damage to the works, plant and material (b) loss of or damage to equipment.
[34] EE PWD Dn. Jhalawar, Dhariyawad, Chittorgarh, Didwana, Rajgarh and Hindauncity.
[35] Premium calculated at the rate of 1.20 *per cent* of work order amount applicable in case of World Bank Projects as the conditions of agreement in case of Central Road Fund is silent regarding rate of insurance premium.

2.1.14.5 Non-registration of labour under Workmen's Compensation Act

Clause 31 of condition of contract, Appendix XI of PWF&AR-II provides that the contractor shall adhere to the requirements of the Workmen's Compensation Act (WCA) and labour registration in force from time to time and be responsible for and shall pay any compensation to his workmen which would be payable for injuries under WCA.

All contracts shall require registration of workers under the Building and other Construction Workers Act 1996 and extension of the benefit to such worker under the Act.

Scrutiny of records of test-checked divisions revealed that in 102 out of 155 packages/works amounting to ₹ 426.07 crore in 21 divisions[36], contractors had not registered the workers with the labour department which would deprive such workers of the benefits as mentioned above.

In reply, the State Government stated (October 2018) that it is the responsibility of contractor to ensure registration of the workers.

The reply is not acceptable as this clause is a part of conditions of the contract and both the parties are bound to ensure compliance of the conditions of the contract. Thus, non-adherence to the conditions of the contract would deprive the workers of the benefit under WCA.

2.1.14.6 Non-recovery/levy of compensation

Under clause 2 and 3 (c) of the agreement executed with the contractor, the contractor was liable to pay compensation for not maintaining the *pro rata* progress of the work and to bear the extra cost incurred on completion of balance work by another contractor.

Scrutiny of records of seven divisions revealed that in 17 out of 79 packages/ works (***Appendix* 2.3**), compensation amounting to ₹ 383.55 lakh was not levied/ short levied on the contractors for not maintaining the *pro rata* progress of the work under clause 2 and incurring of extra cost on execution of balance work by another contractor under clause 3 (c) of the agreement.

In reply, the State Government accepted (October 2018) the facts and stated that cases are under review and the amount shall be recovered from the contractors for not maintaining the *pro rata* progress of works and extra cost incurred on completion of balance work by another contractor.

2.1.14.7 Delay in payment of final bill

Clause 7A of the agreement provides that the final bill shall be paid within three months on presentation by the contractor after issuance of final completion certificate. Final bill should not be unpaid after nine months of completion of the work.

[36] EE PWD Dn. Rajgarh, Bhilwara, Tonk, Khairwara, Amet, Sardarshahar, Nokha, Sriganganagar, Bonli, Hindauncity, Balotra, Barmer, Kushalgarh, Garhi, Shahpura, Neem ka Thana, Jhalawar, Dhariyawad, Sagwara, Dausa and Distt Dn. Ajmer.

Scrutiny of records of 10 divisions[37] revealed that in 28 completed packages/ works out of 90 packages/ works, payment was made to contractors in 14 packages/ works after delay ranging from one to 56 months and payment in remaining 14 packages/works is still (October 2018) pending. However, the actual date of completion of these 14 works ranged from 25 February 2013 to 10 December 2017. Reasons for delay were not intimated to audit.

In reply, the State Government accepted (October 2018) the fact and stated that divisional officers have been warned to be more cautious in future. Further, Chief Engineer cum Additional Secretary issued (November 2018) directions that final payment to the contractors should be made within the schedule prescribed in PWF&AR.

2.1.15. Contract variations

2.1.15.1 Time extension in cases of delay

State Government issued directions (September 2016) that time extension cases be scrutinized carefully and decided on the merit of the case after evaluating the reasons for delay, and to whom (to State Government or contractor) it is attributable.

Scrutiny of records of test checked divisions revealed that in seven divisions[38], competent authorities sanctioned time extension in 12 works ranging between six to 843 days on grounds such as rainy season, standing of crops, festival, encroachment, assembly election, cold waves, labour on leave during festival, etc., with delays being attributed to the Department in a majority of the cases.

Audit is of the opinion that the Department may prescribe clear guidelines for its field formations to factor in common or recurring causes of delay. Adequate time may be provided for, wherever possible, in the time schedule of works itself, so as to ensure smooth implementation of the contract.

The State Government (October 2018) stated that cases are being examined at Department level for suitable action in this matter in the future.

2.1.15.2 Sanction of extra/excess items in deviation from CRF guidelines

Clause 7(3) CRF Rule 2014 prescribed that change in scope of work is not allowed. Further, Rule 7 (8) envisaged that revised estimates shall not be considered by the Central Government.

PWF&AR, Rule 289 provides that before preparation of detailed estimates, detailed survey and investigation must be carried out and working designs/drawing should be prepared. CE (NH) also directed (March 2016) that no excess/extra items beyond the work order issued should be proposed. Any violation will invite disciplinary action.

[37] EE PWD Division Distt. Dn. Ajmer, Amet, Balotra, Chittorgarh, Garhi, Khairwara, Kushalgarh, Mangarol, Rajgarh (Alwar) and Sagwara.
[38] EE PWD, Dn Chittorgarh, Sangod, Ramgangmandi, Mangrol, Tonk, Bonli and Shahpura

Scrutiny of records of four test-checked offices/divisions revealed that the Department sanctioned excess/extra items such as executing additional length of road, construction of Annicut with four lane road, construction of bypass of road and deviations in items from the specifications in the estimates 13 out of 22 packages/works worth ₹ 94.79 crore, which were not provided in the original estimates as detailed in ***Appendix 2.4,*** without the approval of the competent authority (GoI).

In reply, the State Government stated (October 2018) that cases are being examined at the Department level and suitable action shall be taken against the defaulter.

2.1.15.3 Irregular award of works as additional/remaining/balance work against the savings in original work

Paragraph 31.5.8 of PWD Manual Vol. II provides that if at any time either before or during the construction, it is found that the original estimate is excessive due to low percentage of tender premium or any other reason, cases for reducing amount of expenditure sanctioned should be moved to the competent authority.

PWF&AR, Rule 352 provides that the authority granted by a sanction to an estimate must on all occasions be looked upon as strictly limited by the precise objects for which the estimate was intended to provide. Accordingly, any anticipated or actual savings on a sanctioned estimate for definite project should not, without special authority, be applied to carry out additional work not contemplated in the original project or fairly contingent on its actual execution.

Scrutiny of records of test-checked divisions revealed that in seven divisions[39] 29 works were irregularly awarded against the savings in 21 original works as additional/balance/remaining works to various contractors without obtaining administrative, financial and technical sanctions of these works from competent authority. The additional works such as roads and drainage works were awarded which resulted in expenditure of ₹ 584.23 lakh on these additional works.

In reply, the State Government stated (October 2018) that these cases were being examined at the Department level and suitable action shall be taken against the defaulter along with recovery of excess amount paid, if any.

2.1.15.4 Excess payment of price variation

Clause 45 of Appendix IX of PWF&AR-II provides that if, during the progress of the contract of value exceeding ₹ 50.00 lakh and where stipulated completion period is more than three months, the price of any material/bitumen/diesel/petrol/cement/ steel incorporated in the works and wages of labour increases or decreases, as compared to the price and/or wages prevailing at the date of opening of tender or date of negotiation for the work (if negotiated rates have been accepted, prices as on the date of negotiation

[39] EE PWD Dn. Sagwara, Dausa, Mangrol, Ajmer, Distt Dn-I Jodhpur, Jhalawar and Kushalgarh.

shall be considered for price adjustment), the amounts payable to contractors for the work shall be adjusted for increase or decrease in the rates of material.

Scrutiny of records of test-checked divisions revealed that in 29 out of 122 packages/ works in 11 divisions, the Department paid excess amount of ₹ 227.80 lakh price variation to contractors due to applying wrong date of bid opening in 19 cases, wrong calculation in one case, wrong index price in four cases, wrong percentage of component in one case, wrong base quarter in two cases and by giving price variation in two cases where it was not admissible, as detailed in ***Appendix 2.5.***

In reply, the State Government stated (October 2018) that cases are being examined at the Department level and suitable action shall be taken against the defaulter.

2.1.16 Quality control, monitoring and management information system

2.1.16.1 Human resource management in PWD

The Department used to undertake construction works on its own *i.e.* own labour, machines and funds. With passage of time the Department initiated system of hiring contractors to execute the works wherein certain plant and machinery and material were provided through the Mechanical Divisions and stores of the Department. In due course, with advent of latest technology and progress achieved by the infrastructural firms in the country, the contractors now arrange their own labour, machines, quality testing labs and working capital. The Department's role is now limited to conducting feasibility studies, preparing estimates, floating NITs, awarding tenders, monitoring the progress of work and making payments as per contractual conditions *i.e.* the Departmental officers and staff are no longer involved in the actual construction work. In this background, it was essential for the Department to bring changes in its Human resources management functions, work processes and procedures and to take steps to introduce new operational models as so to leverage the benefits of the private sector expertise and IT to the fullest.

Audit requested for the records of exercise, if any, conducted by the Department in this area. The Department did not have any such records. The Departmental manual has not been revised since 1984. The work norms are being disseminated through issue of administrative instructions. The Department did inform that cadre restructuring of SEs, EEs, AENs and JENs was done in year 2007 and 2012 in the Department. Further, the exercise of cadre restructuring has been largely for improvement of career opportunities since, it led to increase of 85 posts of CE/ACE/SE/EE cadre (September 2013). Reorganization/ restructuring of cadre has not been carried out based on changes in duties of officials/ staff of the Department. The mechanical engineering cadre was declared to be redundant in the year 2007 by a high level committee but only three out of seven work shops were closed by State Government up to March 2016.

Audit is of the view that the Department should review its entire system of operations. The Department in its reply has informed about implementation of

an IT based system to handle estimate preparation, Measurement Book (MB) and also that it is working on development of software for Road Assets Management System (RAMS) which will cover history and geography of roads, traffic census, California Bearing Ratio (CBR) value, Benkelman Beam, Deflection Technique (BBDT) tests and plantation. It would be a wise option to review the proposed system being set up at this stage itself to examine the feasibility for introduction of features to streamline the quality control and monitoring processes along with restructuring the human resource requirement.

2.1.16.2 Quality control

Quality control is an essential part of any production process and buildings, bridge and highway construction are no exception. The need for proper and effective quality control had increased considerably in recent time due to increased allocations on civil construction works and the level of service expected by the users. Quality control in the form of sensory checks which are intrinsically subjective and qualitative are grossly inadequate for present day needs and must instead be based on proper objective and quantitative measurements.

As per para 20.4.3 of PWD Manual Vol.-I, the utility of the organization for quality control was realized and separate quality control wing was set up comprising of CE (QC), SE (QC), EE (QC), AEN (QC) and JEN (QC). The testing facilities with proper equipment were to be made available at the central lab, regional lab and field lab, divisional and sub-divisional labs. The Testing Officers, Assistant Testing Officers, Scientists, Lab operators and junior/sub Engineer conduct the quality tests.

For quality control to be effective, the maintenance of records of process and acceptance control in a manner suitable for easy retrieval of information by all interested is of immense help to all the interactive parts of quality control system.

CE (SS) issued detailed instructions (September 2009, June 2011, July 2011 and March 2012) for ensuring quality control in works executed by PWD. Audit noticed that the government directions have not been adhered to by the divisions, thus compromising the road quality as well as road safety as discussed below:

- **Quality control meetings**

As per Chief Engineer (SS), PWD, Rajasthan, Jaipur order (March 2012), ACEs were to conduct one review meeting every fortnight with all Executive Engineers (QC) and report of every fortnight meeting shall be submitted to Chief Engineer (SS) by 5th and 20th of every month.

During scrutiny of records of all the zonal offices, Audit could not ascertain whether any such meetings took place as agenda and minutes for the meetings were not available.

In reply, the State Government stated (October 2018) that zones are lacking in achieving task assigned to them. Directions have been issued to ensure compliance in future.

- **Quality control workshops**

As per Chief Engineer (SS), PWD office order (September 2009), workshop on Quality Control was to be conducted once in a year in the laboratories of PWD at every district.

Scrutiny of records of seven quality control divisions[40] revealed that 21 Workshop for technical staff were organized against total 35 workshops required to be held by EE (QC) during 2013-14 to 2017-18.

It was also observed that in 21 workshops conducted, neither agenda was prepared and submitted to the higher authority nor minutes were found on record. Only the attendance of participants was taken during the workshop.

In reply, the State Government stated (October 2018) that due to constraint of inadequate manpower and other obligations, the requisite target could not be achieved.

- **Field laboratories not established by contractors**

As per Chief Engineer (SS) PWD circular (June 2011), the contractor shall establish field laboratories for carrying out mandatory tests as prescribed in the specification. The concerned Executive Engineer will ensure that the laboratory is fully equipped, and it is maintained by trained staff. This will be verified by EE (QC) before start of the work.

Scrutiny of records of test-checked divisions revealed that 12 divisions[41] did not ensure establishment of field laboratories for 66 out of 117 works/packages involving expenditure of ₹ 266.75 crore. Audit also noticed that documents regarding establishment of field lab were not available in the records.

In reply, the State Government stated (October 2018) that concerned ACE, SE (QC) and EE (QC) have been directed to ensure compliance and documents regarding establishment of field labs be made available during inspections.

- **Quality assurance procedure**

CE (SS) (September 2009) had fixed the norms of quality control test to be conducted by ACE and Superintendent Engineer as 0.5 and two *per cent* of the quality control tests prescribed as per norms respectively.

However, the selected Zonal and Circle offices did not provide information regarding conduct of quality control test by ACEs and SEs. In the absence of information, compliance with the quality assurance norms could not be ascertained in Audit.

In reply, the State Government stated (October 2018) that concerned officers have been directed to ensure compliance with the directions to submit information regarding conduct of QC test by field officers including zonal and circle officers.

[40] Bharatpur, Jodhpur, Ajmer, Jaipur, Kota, Udaipur and Bikaner.

[41] EE PWD Dn. Jhalawar, Dhariawad, Sagwara, Dausa, Bonli, Hindauncity, Balotra, Barmer, Kushalgarh, Garhi, Shahpura and Neem ka Thana.

- **Shortage of technical staff in quality control divisions and central laboratory**

Paragraph 20.4.5 of PWD Manual provides that the testing in laboratories shall be carried out through Testing Officer (TO), Assistant Testing Officer (ATO), Scientist, Laboratory Operator (LO) and Junior Engineers.
Scrutiny of records of seven Quality Control Divisions[42] and Central Laboratory-Jaipur revealed that shortfall of technical staffs ranged from 47.17 *per cent* to 63.46 *per cent* during 2013-18 as detailed in table below:

Shortage of Technical staff in Quality Control Offices

Year	Sanctioned					Men-in- position					Percentage of Vacancy
	TO	ATO	Scientist	LO	Total	TO	ATO	Scientist	LO	Total	
2013-14	3	13	15	22	53	2	7	6	12	27	49.06
2014-15	3	13	15	22	53	2	7	5	14	28	47.17
2015-16	3	13	15	22	53	1	3	6	12	22	58.49
2016-17	3	13	15	21	52	1	3	7	10	21	59.62
2017-18	3	13	15	21	52	1	2	7	9	19	63.46

Source: Information provided by Public Works Department

In the absence of proper technical staff, proper testing of samples received in laboratories cannot be ensured. No efforts were made to fill up the post of technical staff.

The State Government accepted (October 2018) the fact regarding shortage of the technical staff for proper testing of samples received in laboratory.

- **Quality control measures in Central Road Fund work**

Rule 9 (1) (ii) and (iii) of Central Road Fund (CRF) provide that there should be a quality monitoring system at the State Level or Union territory level, consisting of such experts and supporting staff as may be appointed by the State Government or Union territory and the said quality monitoring system shall devise a Quality Assurance (QA) System delineating the requirements of quality, the responsibility of the officers and contractors, conduct independent tests, and examine QA documentation to spot non-conformities and shall have the responsibility of training of PWD staff and recommending laboratory and field testing facilities.

Rule 9 (2) provides that the Central Government shall depute an officer or agency as an independent quality monitor to inspect the work every quarter during the execution and exercise such checks as may be necessary to ensure observance of the time schedule and proper implementation.

Audit could not find any evidence of such quality monitoring system being established and operative during the scrutiny of the records of 16 CRF works in selected divisions[43].

[42] EE (QC) Ajmer, Bharatpur, Bikaner, Kota, Jaipur, Jodhpur and Udaipur.
[43] EE Dn. Jhalawar, Dhariwad and Didwana

In reply, the State Government stated (October 2018) that CE (NH) will examine the cases and action taken shall be intimated accordingly.

- **Bitumen used without random sample testing in laboratory**

Chief Engineer, PWD directed (January 2012) the Executive Engineers and Assistant Engineers to take random samples from each lot of bitumen and test it in the laboratory. If the bitumen is found to be of sub-standard quality, immediate legal action *i.e.* lodging of FIR, *etc.* should be taken against the defaulter. All relevant tests for Bitumen like *penetration, softening point, ductility, flash point* should be carried out as per norms and the results should conform to the provisions of the Indian Standards and IRC Codes. Departmental empanelment orders issued in favour of private supplier in the state also provides that Company/supplier should submit test certificate with batch number with every supply.

Scrutiny of records in test-checked divisions revealed that in case of 72 consignments under three divisions[44], bitumen was used without taking random samples and testing in the laboratory as no evidence for testing was found on records. Further, test certificate with batch number with every supply was not taken by the engineer concerned where bitumen was supplied by private company.

In reply, the State Government stated (October 2018) that instructions for compliance regarding taking random samples are being issued to concerned officers.

- **Non-adherence to the Inspection reports**

The Chief Engineer, PWD, directed (September 2009) the ACEs to monitor the action taken report on sub- standard works and also directed the EEs (QC) to submit the Inspection Report of substandard tests to the concerned EE within seven days with a copy to respective SE/ACE. The concerned EE will submit an action taken report on rectification of substandard tests of works within 15 days positively to SE/ACE. If any field officer fails to take action on substandard tests within time schedule prescribed action shall be taken against the defaulter.

Scrutiny of records revealed that 497 inspection reports issued by the concerned SE/EE (QCs) were pending action by the concerned EE as detailed below:

[44] EE PWD Dn Barmer, Balotra and Bonli.

Position of outstanding inspection reports

S.N.	Name of office	As of March of the year					
		2014	2015	2016	2017	2018	Total O/s Inspection Reports
1	EE QC Sriganganagar	-	-	09	10	13	32
2	EE QC Jhalawar	40	40	30	73	109	292
3	EE QC Banswara	-	-	-	12	-	12
4	SE Circle QC Bikaner	-	01	14	12	15	42
5	EE QC Udaipur	22	-	-	-	-	22
6	EE QC Kota	06	24	61	06	-	97
Total		**68**	**65**	**114**	**113**	**137**	**497**

Source: Public Works Department records

Above position shows that direction of CE was not being complied with by the field officers.

In reply, the State Government stated (October 2018) that directions have been issued to SE (QC) and EE (QC) in respect of non-adherence to inspection report and ATRs.

- **Payment of bills without quality control test reports**

Paragraph 20.5 of PWD Manual provides that the registers of test results should be numbered and issued like measurement book and muster rolls. Every 3rd running bill of works will be accompanied with field test registers and payment will be linked with the test result.

Chief Engineer PWD directed (September 2010) that the test results received from quality control unit must be enclosed with agreement file and it must be linked with payment.

Scrutiny of records of test-checked divisions revealed that in 43 out of 114 works of 14 divisions[45] bills amounting to ₹ 169.06 crore were passed without obtaining QC test report.

In reply, the State Government stated (October 2018) that directions have been issued to SE (QC) and EE (QC) to ensure compliance of manual and directions issued by CE.

2.1.16.3 Monitoring

- **Time overrun for CRF works**

CRF Rule, 2014, Rule 7 (10), provides that work should be completed within 24 months from the date of sanction including period of tendering of projects. Contrary to direction, it was observed that in five divisions[46], 15 works were delayed by seven to 42 months (up to June 2018).

[45] EE PWD Dn. Kherwada, Amet, Sardarshahar, Nokha, Sriganganagar, Balotra, Barmer, Kushalgarh, Garhi, Bonli, Jhalawar, Dhariyawad, Sagwara and Dausa.
[46] EE PWD Dn Jhalawar, Didwana, Sangod (ACE Kota), Aklera (ACE Kota) and Khanpur (ACE Kota)

- **Shortfall in administrative inspection**

Para 12.1.2 of Public Works Manual Volume-I provides that the State Government should give greater importance to the inspections by the officers of the Department. The effective supervision of the works and knowledge about local problems of the people of the area and the officials of the Department and contractors can be better solved by making day and night halts at the site works.

The Department fixed norms (April 2012) of administrative inspection for various officers. In continuation of earlier circulars, the Principal Secretary, PWD, Rajasthan, Jaipur fixed (March 2015) monthly norms for tours, night halts and inspections of various officers of the Department.

Scrutiny of records of the office of Chief Engineer cum Additional Secretary revealed that there was short fall of 48 *per cent* and 62 *per cent* respectively in respect of tours and night halts of PWD officers[47] in the year 2016-17 against the targets fixed *ibid* circular mentioned above for EE, SE, ACE and CE. Information for the remaining years were not provided by the Department.

2.1.17 Good practices for the Department to consider

- **Introduction of Computerized Measurement Books**

Measurement Book (MB) is the basic document which records the progress of any construction activity in the Department. The present system of manual preparation of MB in the Department is time consuming and vulnerable to human errors. In this regard audit observed that Central Public Works Department's Work Manual 2014 provides the procedure, application and format of Computerized Measurement Books. However, such initiative has not been taken by the Department. The State Government accepted the facts and stated (October 2018) that the Finance Department (FD) and Information and Technology (IT) Department are working on development of e-measurement book on Geographic Information System (GIS) based web portal.

- **Non availability of online facility to deposit the earnest money**

Most of the stages of the contract management cycle are performed on IT systems except deposit of earnest money which is still done manually through Cheque/Demand Draft. Introduction of an electronic facility to deposit the earnest money will be a more efficient way of getting the deposit and will also be in line with the government policy of promoting online transactions. State Government accepted the suggestion and stated (October 2018) that provision for e-deposit of Earnest Money Deposit (EMD) is under consideration in Finance Department.

2.1.18 Conclusion

The Department has ensured substantial increase in road length in the State from 1,91,694 km to 2,36,572 km and has incurred ₹ 17828.75 crore on construction of Roads and Bridges during 2013-18. Keeping in view the ever increasing road infrastructure requirements of the State, contract

[47] EE, SE, ACE and CE

management is a critical component for the Public Works Department and should receive attention at all levels of the State Government machinery, policy-making as also implementation whether the current structure and staffing of PWD is appropriate and best for contract management also needs reflections and thought. Given the volume of transactions involved it is desirable that the Department should have a robust system for ensuring proper implementation of the contracts. We, however, observed certain deficiencies in respective stages of contract management system. The existing framework of rules has gaps and is not consistent with best practices. The Department lacks a comprehensive implementation plan incorporating suitable provisions for prioritization of road works. There were instances where basic norms for cost estimation were not adhered to, tenders were invited before issue of technical sanctions, contractors not meeting the minimum technical requirements were allowed to participate in tenders, *etc.* Cases of violations of Indian Road Congress (IRC) specifications and norms were noticed in designing of roads and their construction such as non-conducting traffic census, non-calculation of Million Standard Axle test, non-testing of California Bearing Ratio of soil, *etc.* Policy objective of ensuring environmental protection through plantation along the roads was not achieved. Road projects were delayed, however, liquidated damages from the contractors in most of the cases were not recovered attributing the reasons for delay on the part of the Department without justified grounds. Price Variation claims were not calculated correctly, thereby, undue benefit was extended to contractors. Quality testing in road works was not being carried out properly in many divisions. Payments to contractors were being made without ensuring receipt of quality tests reports. Reorganization/ restructuring of cadre, based on changes in duties of officials/ staff of the Department, has not been carried out.

2.1.19 Recommendations

Though the Department has done considerably well in developing the road infrastructure and providing road connectivity to the inhabitants in the State, the State Government may consider following recommendations:

- *The State Government may prepare a comprehensive Road Development Policy for the state.*
- *The Department may consider preparation of comprehensive Five Year and Annual Plans for road development to achieve desired objective of providing complete habitation connectivity, improved maintenance and up gradation of all roads.*
- *The Department may consider to improve efficiency and competitiveness of the tendering process by issuing guidelines for signing of integrity pact, adoption of proper parameters for assessment of bid capacity of contractors, adoption of an efficient IT solution for various aspects of assets construction and management.*
- *The Department may revise and update its Manual to incorporate extant instructions and best practices to improve its efficiency and ensuring transparency in execution of works.*

- *The Department may ensure that preliminary/detailed estimates are prepared according to IRC norms and government instructions, duly supported by prescribed tests and survey results.*
- *Complete database of registered contractors including registration status, detail of available equipment and technical staff, balance sheets, works executed, etc. may be maintained by the Department.*
- *Action may be considered against the contractors, who do not establish field labs and submit the requisite test reports and against the divisional officers who fail to submit the test samples.*
- *The human resources requirements, both in terms of number and qualification, may be assessed in view of the changes in the style of operations in the Department.*

Forest Department

2.2 Protection of Forest and Wildlife in Rajasthan

Executive Summary

Rajasthan has recorded forest area of 32,828.37 sq. km (9.59 *per cent* of the geographical area) which is significantly below the national average of 23.34 *per cent* and the target of 33 *per cent* as envisaged in National Forest Policy (NFP) 1988. A performance audit on "Protection of Forest and Wildlife in Rajasthan" for the period from 2013-14 to 2017-18 was carried out to analyse the department's efforts in achieving this goal. The significant audit observations are as follows:

The 10-years working plans (WPs) for the forest divisions were approved by Government of India, but the WPs were not being implemented in letter and spirit due to non-provisioning of adequate budget.

(Paragraph 2.2.11.1)

Eco Sensitive Zones (ESZs) could not be notified due to incomplete proposals being sent by the Department; resultantly, the activities in ESZs could not be regulated.

(Paragraph 2.2.11.2)

State Level Inter-Agency Coordination Committee and Wildlife Crime Control Units to combat wildlife crime were not established in the state despite the fact that maximum crimes related to environment in the country were committed in Rajasthan.

(Paragraph 2.2.11.3)

Though State Government issued (November 2011) Gazette Notification under section 35 of Wildlife (Protection) Act 1972, declaring government's intention of establishing the Kumbhalgarh National Park for protection of leopard and other species but the final notification for the said Park was not issued (March 2018).

(Paragraph 2.2.11.4)

Tiger Conservation Plan (TCP) for the Ranthambore Tiger Reserve (RTR) submitted in 2013 was still to be approved by the National Tiger Conservation Authority (NTCA) and the corridor between RTR-I and RTR-II was not yet completed. Local Advisory Committee (LAC) was not formed in RTR and Sariska Tiger Reserve (STR). In the absence of LAC, the tourist activities in the parks could not be regulated which caused disturbance to wild animals. Contrary to the directions of NTCA, zone number six to ten of the RTR, core areas of the park were not closed in monsoon season.

(Paragraph 2.2.12 to 2.2.12.6)

The site selected for construction of Abhera Biological Park at Kota was not conducive due to adjoining garbage dumping yard, industrial areas, firing range of Indian Army, existence of unauthorized kachchi basti, etc. in nearby area.

(Paragraph 2.2.14)

The Department received 28.17 sq. km of non-forest land in lieu of forest land diverted for non-forest activity during 2013-18, however notification for the same is still to be completed. Further out of 5974.54 sq. km of forest land pending for mutation as of April 1999, only 1218.71 sq. km (20.40 per cent) forest land was mutated in 19 years. 7145.43 sq. km of mutated land was still pending to be demarcated on revenue maps as of March 2018. 1,72,701 pillars for demarcation of forest land are yet to be erected.

(Paragraph 2.2.15.3 and 2.2.15.4)

As of March 2018, 6,369 cases involving encroachment on 81.91 sq. km of land, 7,879 cases relating to illegal mining and 4,446 cases of illegal grazing were pending for disposal.

(Paragraph 2.2.16.1 to 2.2.16.3)

The Department did not recover Additional Compensatory Afforestation (ACA) amount of ₹ 26.52 crore in lieu of diversion of forest land for non-forest purpose.

(Paragraph 2.2.16.6)

Good Practice:

There has been a steady increase in the number of Great Indian Bustard (GIB) from 103 in 2013-14 to 166 in 2016-17 which is one of the most endangered birds in the world after the State Government had launched a scheme in the year 2013-14 for the protection of GIB in Rajasthan.

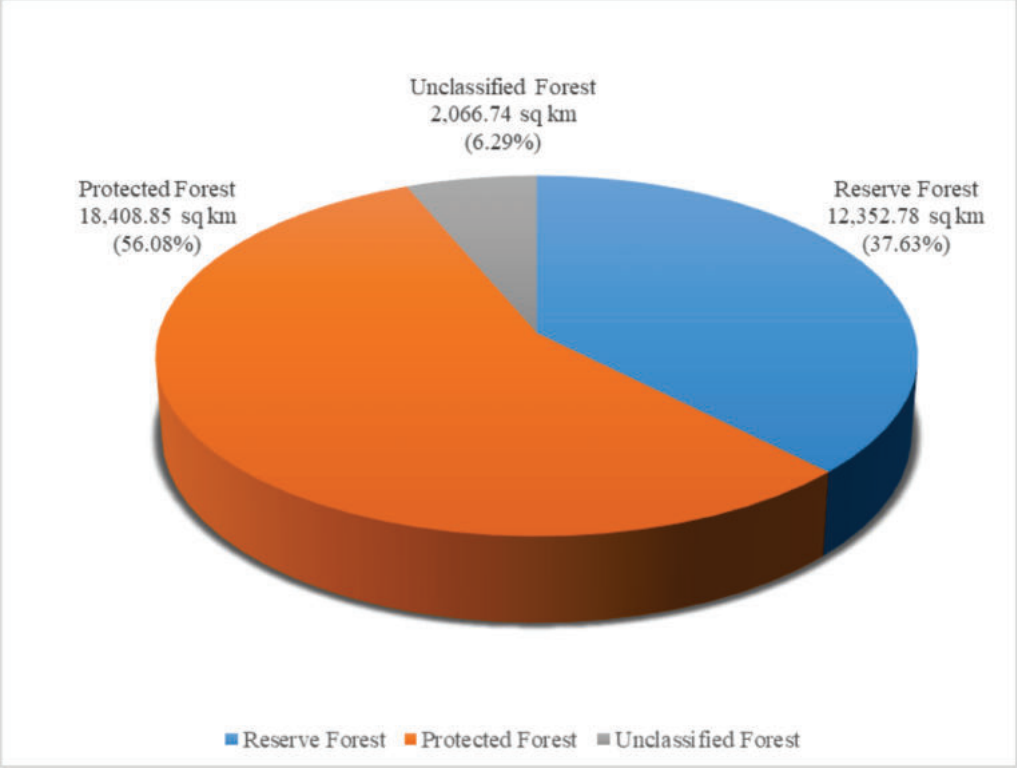
2.2.1 Forest cover at a glance

The responsibility to protect and improve the environment and to safeguard the forests and wildlife in the state lies with the Forest Department (Department). Despite being the largest state of the country with an area of 3,42,239 sq. km, Rajasthan has recorded forest area[48] of 32,828.37 sq. km *i.e.* (9.59 *per cent* of the geographical area) which is significantly below the national average of 23.34 *per cent* and the target of 33 *per cent* as envisaged in National Forest Policy (NFP) 1988. However, as per the Forest Survey of India (FSI) Report 2017, the digitized boundary of recorded forest area in the state covers an area of 23,105 sq. km only (*i.e.* 6.75 *per cent of total area*). Besides, the forest cover[49] in Rajasthan is 16,572 sq. km *i.e.* 4.84 *per cent*, whereas the country's forest cover is 21.54 *per cent.*

[48] Area recorded as a 'Forest' in the government records.

[49] All land more than one hectare in area with a tree canopy of more than 10 *per cent* irrespective of land use, ownership and legal status.

The Rajasthan Forest Act (RFA), 1953 classifies the recorded total forest area in the State *i.e.* 32,828.37 sq. km into three types (a) Reserve Forest[50] (b) Protected Forest[51] and (c) Unclassified Forest[52] as depicted in the chart below:



2.2.2 Protection of forest and wildlife

The Forest Department is responsible for the protection, development and management of the forest and wildlife resources of the state. Wildlife (Protection) Act (WPA), 1972, Rajasthan Forest Act (RFA) 1953 and Forest Conservation Act (FCA) 1980 lay down the detailed provisions for protection of forests and wildlife, prevention of offences being committed and investigation and prosecution of the offences committed.

The scenario of forest and wildlife related crime is alarming for the state. According to National Crime Record Bureau (NCRB) report 2016, Rajasthan has recorded 40.59 *per cent* of the environment related crimes in the country during 2014-2016 as detailed in Para 2.2.11.3.

2.2.3 Organizational setup

Principal Secretary, Forest and Environment Department heads the Department at the Government level while the Department is headed by Principal Chief Conservator of Forest (Head of Forest Force) who is assisted by Additional Principal Chief Conservator of Forest, Chief Conservator of Forest,

[50] Reserve Forest is an area or mass of land duly notified under the provision of India Forest Act or the State Forest Act having full degree of protection.
[51] Protected forest is an area or mass of land notified under the provisions of India Forest Act or the State Forest Act having limited degree of protection.
[52] Unclassified forest means an area or mass of land which is not notified under the provisions of India forest Act or the State Forest Act as RF/PF.

Conservator of Forest and Dy. Conservator of Forest. The Principal/Additional Principal Chief Conservator of Forest are responsible for the administrative control of the Department in their respective sphere of functions.

The Department has 50 forest and 16 wildlife divisions headed by the Dy. Conservator of Forest.

2.2.4 Scope of audit

The scope of this audit covers review of efforts of the Department for protection of forest and wildlife in the protected area network and outside the protected area network, diversion of forests for development projects, adequacy of measures taken for wildlife conservation, enhancing forest coverage, removal of encroachments and poaching, measures adopted for protection of forest from fire, *etc.* during 2013-14 to 2017-18.

2.2.5 Audit coverage and methodology

Audit examined the records relating to measures taken for protection of forest and wildlife for the period from 2013-14 to 2017-18 in the offices of Principal Chief Conservator of Forest (PCCF)/ Head of Forest Force (HoFF), Additional Principal Chief Conservator of Forest, Chief Wildlife Warden and 12 Zonal Chief Conservator of Forest and Wildlife[53]. Further, 20 divisions (14 out of 50 divisions[54] of forest[55] and six out of 16 divisions[56] of wildlife[57]) were selected across the state based on Probability Proportional to Size (PPS) sampling method. An entry conference was held with the PCCF and other officers of the Department on 19 April 2018. An exit conference was conducted with the PCCF and other senior officers of the Department on 12 September 2018. The draft performance audit report was issued to GoR in October 2018 and replies were received in November 2018.

2.2.6 Audit objectives

Audit was conducted with the objective of assessing the efficiency, effectiveness and economy in regard to

a. measures taken to protect forest and wildlife in the protected area network;
b. measures taken to protect forest and wildlife outside the protected area network;
c. utilization of fund for protection of forest and wildlife.

2.2.7 Audit criteria

The criteria for audit were drawn from the provisions of:

a. Indian Forest Act, 1927

[53] CCF, Forest: Udaipur, Jaipur, Kota, Ajmer, Bharatpur, Bikaner, Jodhpur and CCF, WL: Jodhpur, Jaipur, Kota, Udaipur, RTR Sawai Madhopur.
[54] DCF, Udaipur, Udaipur (North), Banswara, Chittorgarh, Jaipur (North), Sikar, Bundi, Bhilwara, Dholpur, Bikaner, Jodhpur, Pali, Jalore and IGNP Stage II Jaisalmer.
[55] Conservation of Forest and Wildlife as well as forestry development works are being executed by forest divisions.
[56] DCF, Rajsamand, Jaipur, Kota, RTR Sawai Madhopur, Sariska and Udaipur.
[57] The Wildlife Sanctuaries, National Parks and Conservation Reserves are being managed by wildlife divisions.

b. Rajasthan Forest Act, 1953
c. Wildlife Protection Act, 1972
d. Wildlife (Protection) Rajasthan Rules, 1977
e. Forest Conservation Act, 1980
f. National Forest Policy, 1988
g. National Wildlife Action Plan (2002-16)
h. Rajasthan State Environment Policy, 2010
i. Rajasthan State Forest Policy, 2010
j. Rajasthan Forest Manual Volume II, 2013

2.2.8 Financial management

The State Government allocates funds for implementation of various activities for the protection and conservation of forest and wildlife under the State plan schemes. Besides, Government of India (GoI) releases funds under Centrally Sponsored Scheme (CSS) mainly for development and maintenance of Wildlife Sanctuaries and National Parks and relocation of villages for tiger projects, *etc*.

Position of budget allotted under Non-Plan, CSS and State Plan and expenditure during 2013-18 is given below:

Position of budget allotment and expenditure during 2013-18

(₹ in crore)

Year	Non-Plan			CSS and State Plan			Total		
	Allot.	Exp.	Saving	Allot.	Exp.	Saving	Allot.	Exp.	Saving
2013-14	426.92	426.58	0.34	418.49	419.02	-	845.41	845.60	0.34
2014-15	489.55	489.41	0.14	431.40	427.06	4.34	920.95	916.47	4.48
2015-16	513.98	513.43	0.55	463.39	460.61	2.78	977.37	974.04	3.33
2016-17	546.20	545.96	0.24	410.16	410.48	-	956.36	956.44	-
Total	**1,976.65**	**1,975.38**	**1.27**	**1,723.44**	**1,717.17**	**7.12**	**3,700.09**	**3,692.55**	**8.15**
Year	**State Fund**			**CSS**			**Total**		
	Allot.	**Exp.**	**Saving**	**Allot.**	**Exp.**	**Saving**	**Allot.**	**Exp.**	**Saving**
2017-18	852.11	851.95	0.16	14.30	14.29	0.01	866.41	866.24	0.17
Total	**852.11**	**851.95**	**0.16**	**14.30**	**14.29**	**0.01**	**866.41**	**866.24**	**0.17**

Source: Information provided by the Forest Department.

Note: From financial year 2017-18, State Government has abolished the system of bifurcation of funds into non-plan and plan and have introduced the concept of State Fund.

It can be seen from the above table that there was savings of ₹ 7.12 crore in the allotted provisions under CSS and State plan during 2014-16. The State Government replied (November 2018) that the main reasons for savings were non-utilization of funds allotted for relocation of villages in the tiger projects area as the relocation process was voluntary and consent of all families in the villages was essential.

2.2.9 Protected areas

The Wildlife (Protection) Act, 1972 was enacted with the objective of effectively protecting the wildlife and for matters connected therewith or ancillary or incidental thereto. In pursuance of this objective, the State

Government, under this Act, can declare any area of adequate ecological, faunal, floral, geo-morphological, natural or zoological significance, as a National Park, Wildlife Sanctuary, Conservation Reserve or Community Reserve for protecting, propagating or developing wildlife or its environment. Further, an area with significant number of tigers would be declared as a Tiger Reserve (TR) with the approval of National Tiger Conservation Authority. There are three National Parks, 26 Sanctuaries, 12 Conservation Reserves and five Zoological Parks in Rajasthan, covering an area of 10097.46 sq. km which is 2.95 *per cent* of total geographical area of the State (Details given in ***Appendix 2.6***).

2.2.10 Status of wildlife census

For undertaking effective conservation efforts, it is essential for the Department to ascertain the details of the wildlife which exists in the State. For this purpose, the Department carried out census of 19 wildlife species annually. Scrutiny of census (2013 - 17) revealed that there was reduction in the population of the 14 wildlife species ranging from 3.97 *per cent* to 96.07 *per cent* and increase in five wildlife species in the range of 12.18 to 58.56 *per cent* (Details given in ***Appendix 2.7***). Besides, there was increase in number of Tigers from 32 in 2006 to 45 in 2014 and in case of Great Indian Bustard from 103 in 2014 to 166 in 2016. Reasons for reduction in the population of 14 wildlife species were called for, reply is awaited (April 2019).

Audit findings

Audit findings are detailed in the following paragraphs:

2.2.11 Planning

Working plans are the main instruments in forest planning. The Ministry of Environment and Forest (MoEF), GoI adopted a uniform National Working Plan Code 2004 for preparation of working plans for the management of forests in compliance with direction of Hon'ble Supreme Court (December 1996). Under the provisions of Forest Conservation Act, 1980 and the Supreme Court's orders (December 1996), the State Government had to prepare Working Plans (WPs) for all the forest and wildlife divisions and get them approved from GoI. In Wildlife divisions annual plans for operations for all protected areas are submitted as per guidelines of GoI while in Forest divisions, a ten years' working plan is prepared and submitted to GoI for approval. Based on this 10 year plan, annual working plans of forest divisions are prepared for provisioning of budget to ensure that no deviation takes place on account of shortage of funds.

2.2.11.1 Preparation and execution of working plans

Proper execution of working plans depends upon adequate budget provisions commensurate with the activities prescribed in the working plan.

Rajasthan State Forest Policy also envisaged that budgetary provision for the Department shall be based on the works approved to be undertaken in the working plan of the division.

Scrutiny of records of PCCF (WP) revealed that though 10 years working plans in respect of 42 forest divisions under 33 districts were approved by GoI, the Department did not had information regarding preparation of annual plans for execution of these plans. Further, out of the 14 test-checked Forest divisions, only one division[58] stated that WP was being implemented, however, details with respect to work wise execution was not provided in this regard by the Division. Nine divisions[59] intimated that WPs were not being implemented due to non-provision of adequate budget commensurate with the working plan while four divisions[60] did not furnish information in this regard.

The State Government stated (November 2018) that execution of work by the Department in the forest area depends on the availability of budget. From a bouquet of prescription in the working plan, works are prioritized depending on the availability of budget.

Reply is not acceptable as it is the responsibility of the State Government/ Department to allocate budget provisions based on the work prescriptions in the approved working plan. Instances were noticed in CCF Bikaner where felling and regeneration work could not be completed as per working plan in two divisions *i.e.* Bikaner division and Departmental Operational Division (DOD) due to budget constraint, while in CCF Jaipur, activities as mentioned in working plan such as soil conservation, plantation, grass and grazing, forest protection, non-timber work, joint forest management, tourism management and social forestry circles could not be completed in Sikar division due to budget constraint. It was also accepted by PCCF in exit conference that all the components of the working plan cannot be implemented in annual plans because of budget constraints.

2.2.11.2 Declaration of eco sensitive zone

National Board of Wildlife adopted the Wildlife Conservation strategy 2002 which envisaged that lands falling within 10 km of the boundaries of National Parks (NPs) and Wildlife Sanctuaries (WLSs) should be notified as eco-fragile zone. The National Wildlife Action Plan (NWAP) 2002-2016 reiterated the same and laid down that all identified areas around Protected Areas (PAs) and wildlife corridors are to be declared as ecologically fragile under the Environment (Protection) Act (EPA), 1986. Accordingly, MoEF&CC issued (February 2011) guidelines for declaration of Eco-Sensitive Zone (ESZ) around PAs and directed all the States to submit the ESZ proposals on the basis of these guidelines.

The purpose of declaring ESZ around National Parks and Wildlife Sanctuaries was to create a "Shock Absorber" for the Protected Areas. ESZ would also act as a transition zone from areas of high protection to areas involving lesser protection. The aim to regulate certain activities

[58] IGNP stage-II, Jaisalmer.
[59] DCF, Jalore, Jaipur (N), Bikaner, Sikar, Bhilwara, Bundi, Udaipur (N), Jodhpur and Chittorgarh.
[60] DCF, Pali, Udaipur, Banswara and Dholpur.

around NPs and WLSs was to minimize the negative impacts of growing commercial activities in and around the PAs on the fragile ecosystem encompassing the PAs.

Scrutiny of records of office of Additional Principal Chief Conservator of Forest, Wild Life revealed that even after lapse of more than seven years, 21 proposals for declaration of ESZ could not be notified due to incomplete documentation sent by the divisions. Resultantly, the activities in ESZ could not be regulated and the objective of protecting the forest could not be achieved.

The State Government stated (November 2018) that the Department had submitted all the 25 proposals in August 2013. The updated position of 25 ESZ to be notified is: four ESZ notified, draft notifications issued for two ESZ, four proposals pending with GOI and 15 with State Government/CWLW.

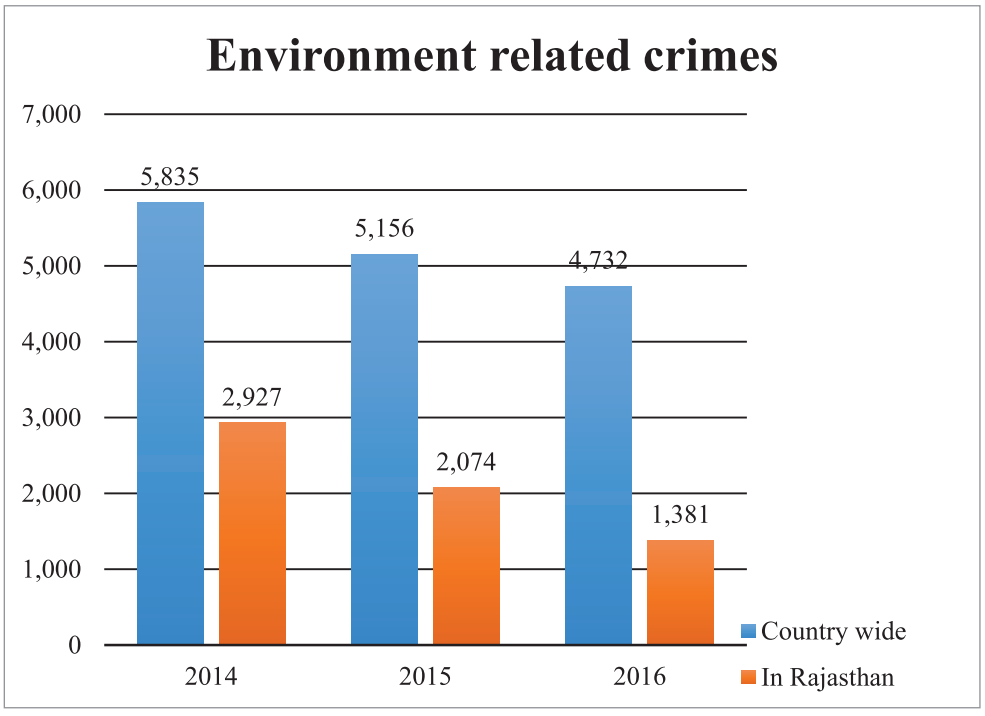
The reply is not acceptable as MoEF&CC clearly stated (December 2017) that draft notification issued during August 2015 to January 2016 for 10 ESZs of Rajasthan State, expired due to delay in submission of requisite information by the State Government. Further, the Hon'ble Supreme Court directions state that in case an ESZ is not notified for protected areas, the default ESZ would be 10 km from the boundary of the protected area in which no harmful activities will be allowed. Audit requested for details of the action taken on these directions of the Hon'ble Supreme Court, however, specific reply for the same was not furnished.

2.2.11.3 Establishment of state crime control unit

Rajasthan State Forest Policy 2010 stipulated[61] that in order to tackle wildlife related crimes, a State Wildlife Crime Bureau will be established for intelligence gathering and speedy investigation of the wildlife related crimes. Further Public Accounts Committee also recommended[62] for the same. Wildlife Crime Control Bureau (WCCB), GoI advised (November 2014) all the State Governments to constitute a State Level Inter-Agency Coordination Committee to combat wildlife crime and establish exclusive Wildlife Crime Control Units in the Department and in the State Police in order to make the system of wildlife crime detection, investigation and prosecution more effective. Thereafter WCCB (GoI) issued directions constantly for constitution of such unit at State level.

The position of environment related crime in the country (15,723 cases) and in the state (6,382 cases) during the year 2014-16 are as follows:

[61] vide para 5.9.19.
[62] Recommendation no. 22 of PAC Recommendation Report no. 109 on Audit Report for the year ended 31 March 2012.



Source: Data from the National Crime Record Bureau (October 2017).

The data reveals that 40.59 *per cent* of the crimes related to environment in the country were committed in Rajasthan during 2014-16; the State thus tops among all the states in this regard. These crimes were mostly related to the violations of the Forest Conservation Act such as uses of forestland for non-forest purpose without approval of Government and Wildlife Protection Act such as capturing, poisoning, snaring or trapping of wild animals.

After being pointed out by audit the proposals for constitution of State Level Inter-Agency Coordination Committee and Wildlife Crime Control Units were submitted (September 2018) to the State Government. Proposal is still pending with State Government as it has requested for certain further information from the Forest Department (May 2019). Thus, non-constitution of State Level Inter-Agency Coordination Committee and non-establishment of 'Wildlife Crime Control Units' in the Department and in the State Police despite directions of WCCB, GoI was indicative of the inaction on the part of the Department to prevent environment crimes in the State.

2.2.11.4 Notification for Kumbhalgarh national park

State Government issued (November 2011) Gazette Notification under section 35 of Wildlife (Protection) Act 1972, declaring governments' intention of establishing a National park at Kumbhalgarh for protection of leopard and other species. For declaring any area as a National park, Section 35 (4) of Wildlife (Protection) Act, 1972 states that when the period for preferring claims has elapsed and all claims made in relation to any land have been disposed of by the State Government and all rights in respect of lands proposed to be included have become vested in the State Government, the State Government shall publish a notification for declaring the said area as a National Park. Besides, Section 25-A of the said Act stipulates that the District

Collector shall as far as possible complete the acquisition proceedings, within a period of two years from the date of notification of declaration. However, Audit scrutiny revealed that the final notification for the said Park has not been issued so far (November 2018).

The Department stated (September 2018) that the District Collectors[63] had completed (August 2016) the process of the acquisition of rights of local inhabitants. The matter is under consideration with the State Government. It was further stated that a decision about exclusion of two temples situated at the periphery of the park is pending with District Collector, Pali. Hence final notification for declaration of Kumbhalgarh National Park under section 35(4) of Wildlife (Protection) Act 1972 could not be issued.

Non- declaration of NP even after seven years of the notification by the State Government means lesser degree of protection to wild animals as unless it is notified, human activities are permitted in the sanctuary. This will have an adverse impact on the protection measures undertaken by the Department.

2.2.12 Preparation of tiger conservation plan

According to para 38 V (3) of The Wildlife (Protection) Amendment Act, 2006, the State Government shall prepare a Tiger Conservation Plan (TCP) including staff development and deployment plan for the proper management of each Tiger Reserve. This will provide a blue print of managerial action required in the core[64], buffer[65] and corridors[66].

Rajasthan has three Tiger Reserves namely Sariska Tiger Reserve (STR), Ranthambhore Tiger Reserve (RTR) and Mukundra Hills Tiger Reserve. Audit reviewed the records of Sariska and Ranthambhore Tiger Reserve.

Audit scrutiny revealed that Tiger Conservation Plan for Sariska Tiger Reserve (STR) has been approved in 2014, however the TCP for the Ranthambore Tiger Reserve (RTR) submitted in 2013 was still to be approved by the National Tiger Conservation Authority (NTCA).

On being queried, Chief Conservator of Forest and Field Director (CCF&FD), Ranthambhore stated that Chief Wildlife Warden (CWLW) had issued guidelines to prepare TCP only in August 2011. The TCP was prepared and sent for approval to NTCA in April 2013. However, it was deficient to the extent that it was submitted without maps. It was again sent to NTCA for approval in April 2016. During Exit conference (September 2018), the PCCF & CWLW stated that TCP was submitted in 2013 but it was not approved so far due to the fact that about 250 hectares of land of buffer area in *Lakheri* forest area was notified by mistake.

The reply of the State Government (November 2018) revealed that the revised Buffer Zone plan was resubmitted in June 2018. Approval for the same is still awaited (November 2018) from National Tiger Conservation Authority (NTCA).

[63] Pali, Rajsamand and Udaipur.
[64] Core area: A forest area which is to be managed as an inviolate area.
[65] Buffer zone: areas that lie in the periphery of the core zone.
[66] Corridors are inherent geographical linkages which facilitate movement of tiger and other wild animals from one source area to another.

Non-approval of TCP affected the managerial action such as establishment of corridors, *etc.* in the Ranthambhore Tiger reserve as commented in paragraph 2.2.12.2.

2.2.12.1 Management of tiger reserves

A National Park or Wildlife Sanctuary that is considered significant for protection of tigers can be additionally designated as a Tiger Reserve. A Tiger Reserve consists of a 'Core' or 'Critical Tiger Habitat', which is to be managed as an inviolate area, and a 'Buffer' or Peripheral area immediately abutting the core area, which may be accorded a lesser degree of habitat protection. MoEF launched (1973) 'Project Tiger' Scheme for the management of Tiger Reserves in India. NTCA coordinates, implements and monitors the 'Project Tigers' Scheme.

Scrutiny of records at the offices of the Chief Conservator of Forest (CCF) and Field Directors of the two Tiger Reserves revealed the following deficiencies.

2.2.12.2 Establishment of corridors between RTR-I and RTR-II

Corridors are inherent geographical linkages which facilitate movement of tiger and other wild animals from one source area to another. Para 7.4.3 of the guidelines under section 38-O (c) of the Wildlife (Protection) Act 1972 envisaged that corridor should be established for:

- Supplementing declining local tiger population;
- Facilitating re-colonization in habitat patches through restorative management;
- Providing opportunity to tiger for colonizing new areas through patches of habitats (stepping stones) between isolated populations.

The Ranthambhore Tiger Reserve comprises of two divisions RTR-I in Sawai Madhopur district and RTR-II in Karauli district. Three villages are situated between the territories of these two divisions. Absence of corridor adversely affects protection of tigers as well as villagers. Creation of corridor can provide a link for smooth movement of tigers.

Scrutiny of records of DCF, RTR, Sawai Madhopur revealed that the formation of corridor between RTR-I and RTR-II has not been completed (November 2018) due to non-relocation of three villages[67]. The State Government accepted the facts and intimated (November 2018) that relocation of villages is a completely voluntary process, however the Department is making continuous effort for relocating villages for creation of corridor. Non-establishment of corridor resulted in restricted opportunity for the movement of wild animals.

2.2.12.3 Implementation of village relocation policy

National Tiger Conservation Authority had issued (February 2008) guidelines for voluntary village relocation. Since then the process of voluntary relocation has continued.

[67] Gadi, Kalakhora and Talerakhet.

As per the recommendations of the State Level Monitoring Committee (SLMC) for village relocation, a revised relocation policy was prepared and submitted (September 2016) to the State Government for approval vide which the compensation package was proposed to be enhanced from ₹ 10 lakh to ₹ 20 lakh for inhabitants of the villages to be relocated. However, the State Government has not approved the policy so far (November 2018) despite follow-up (January 2017) by the Department.

The status of pendency of villages to be relocated as of May 2018 is as follows:

Status of villages to be relocated

S. No.	Tiger Reserve	Total Existing Villages	villages to be relocated	Number of Families in the 14 villages to be relocated
1	Sariska	29	6	309
2	Ranthambhore	65	8	419

Source: Information provided by the Forest Department.

The State Government stated (November 2018) that it has constituted (February 2012) a State Level Monitoring Committee for village relocation in the Tiger Reserve. In the meeting (April 2018) of SLMC a sub-committee has been formed to redraft the relocation package based on *"The right to fair compensation and transparency in land acquisition, rehabilitation and resettlement Act 2013"*. The revised package will not only conform to the guidelines of NTCA but also provide additional benefits to relocated families as per the said Act. A draft proposal has been prepared and is presently under circulation for consent and approval of the members of the sub-committee. Further progress on the matter is awaited. (May 2019).

The revised policy being more attractive could lure more families to opt for relocation and hence should be implemented without delay.

2.2.12.4 Creation of local advisory committee

According to Para 2.1.8 of NTCA guidelines[68] 2012, a Local Advisory Committee (LAC) shall be constituted for each Tiger Reserve by the State Government for following functions:

- To review the tourism strategy for the Tiger Reserve and make recommendations to the State Government.
- To ensure computation of reserve specific carrying capacity and its implementation through periodic reviews.
- Regularly monitor the activities of tour operators to ensure that they do not cause disturbance to animals while taking visitors into the Tiger Reserve.

Hon'ble Supreme Court also directed (October 2012) that LAC had to be formed by State Government for each Tiger Reserve.

Scrutiny of information provided by RTR and STR revealed that LAC had not yet been formed in these reserves (July 2018). In the absence of LAC, the provisions of guidelines issued by the Department (June 2011) were not

[68] Normative Standards for Tourism activities and Project Tiger.

adhered to by these Tiger Reserves. Contrary to the guidelines, RTR allowed an average of 70 vehicles in every shift into the park instead of the permissible limit of 40 vehicles during 2013 to 2017 and did not also close the core Zones of the park in Monsoon season during 2015 to 2018. Further, STR allowed entry of 1,094 tourists during the prohibited period *i.e.* from July to September into the park**.** Thus, non-formation of LAC resulted in lack of monitoring of tourist activities which cause disturbance to the animals.

The State Government stated (November 2018) that as per NTCA guidelines and directions of Supreme Court, proposals for formation of LAC in STR and RTR have been submitted in March 2013 and July 2013 respectively. State Government raised (August 2018) query about need of LAC as a fresh monitoring agency, whereas Tiger Conservation Foundation has already been established in all Tiger Reserves. It has been clarified to the State Government that the role and responsibilities of LAC are quite different from the already established Tiger Conservation Foundations. LAC is primarily an advisory body for State Government regarding tourism in Tiger Reserve, whereas Tiger Reserve Foundation is a mechanism to receive funds and utilize the same for development and protection of people and park. The LAC is thus expected to be constituted soon. The proposal was pending with the State Government (November 2018).

2.2.12.5 Anthropogenic disturbances in Sariska tiger reserve

Sariska is one of the most popular Tiger Reserves in the country, being nearest to the National Capital. The tiger census from 1999 to 2003 indicated presence of 25 to 28 tigers in this Reserve. However, by 2005 there were no tigers left in STR, the main reason being poaching. The State Government decided to reintroduce the tigers in STR and hence, from June 2008 to January 2013, eight tigers were reintroduced. STR has 17 tigers including five cubs as of November 2018.

Section 38-O (g) and 33 (a) of WPA 1972 prohibit commercial activities in the Tiger Reserve without the approval of National Board of Wildlife (NBWL). Scrutiny of records revealed that 304 commercial shops/ establishments were presently operating in the STR without approval of NBWL. No action was taken in this regard by the Department which resulted in creation of stress among tigers and also had an adverse effect on the breeding and population growth of tigers.

A study conducted by Wildlife Institute of India and National Tiger Conservation Authority on evaluation of physiological stress and reproductive potential in reintroduced tiger population in STR, Rajasthan in 2015 revealed that most of the tigresses in STR are fertile and cycling. However, the disturbance caused by human induced stress is potentially responsible for the poor breeding of tigresses in STR.

During March 2018, a tiger in STR died due to poaching through wire snare and another tiger went missing. Audit sought the status report from the Department about missing tiger, which is awaited (May 2019). The State Government directed (March 2018) the Standing Committee of State Board of Wildlife to submit an enquiry report on the issue.

The committee recommended (April 2018) essential measures necessary for the future health of STR such as creation of Sariska Strike Force for better protection of area, Wildlife Crime Cell, adequate staff to manage the STR, and immediate creation of inviolate area through installation of strategic physical barriers to minimize man-animal conflict.

Scrutiny of records of Deputy Conservator of Forests (DCF) (STR) office revealed that no action was taken on the recommendations of the committee. The State Government admitted (November 2018) the facts and stated that very high anthropogenic pressure due to state highways through the Reserve, village inside the sanctuary, pilgrimage, poaching and negligence of staff were the main issues faced by STR. The State Government further stated that in compliance to the committee's recommendations the Wildlife Crime Cell has been established. For creation of inviolate space for tigers, 26 villages inside the Critical Tiger Habitat need to be relocated. The process of creation of 112 posts for constitution of Special Tiger Protection Force is pending with the State Government. It was also stated that five tiger cubs were born in STR in the current year.

Audit is of the view that the above measures suggested by the committee should be implemented on priority to reduce the risk of fall in tiger population in the STR once again in the future.

2.2.12.6 Tourist activities during monsoon season

On the recommendation of the Technical Committee of National Tiger Conservatory Authority, the competent authority approved (August 2015) closure of all Tiger Reserves for a minimum period of three months, extending up to five months, keeping in view the breeding period of wild animals specially tigers, condition of forest roads, repair thereof and safety of eco tourists/ visitors. The period of closure for the said duration was to be decided by the respective State Government based on local prevailing conditions.

However, contrary to the directions of NTCA, the Department closed only zone one to five of the RTR during monsoon season (July to September) of years 2015 to 2018 while zone six to ten remained open despite the fact that the entire area of zone number one to ten of the RTR is designated as core area and there is no difference between zones one to five and six to ten.

Further, scrutiny of records revealed that between July and September of these years, 24,647 tourists visited the park which would have caused disturbance to the eight tigers who had territories in these zones.

The State Government stated (September 2018) that NTCA mentioned in its letter (August 2015) that the period of closure for the said duration shall be decided by respective State Government based on local prevalent conditions. In view of the fact that monsoon operates for a very short period in Rajasthan, the State Board of Wildlife allowed opening of five out of 10 zones during monsoon citing non-closure of other TRs during monsoon as reason. Further, State Government did not furnish (November 2018) any specific reply on this issue.

The reply is not acceptable as allowing tourist activities in zone 6 to 10 during the same period is a violation of the directions of NTCA. NTCA had also called for (June 2018) compliance of aforesaid direction from CWLW.

2.2.13 Protection of peafowl

Peafowl, the India National Bird[69] is protected under schedule I of WPA, 1972. Thus, highest protection is to be accorded to its habitats both inside and outside forest.

Scrutiny of the records of the Department revealed that:

- The Department did not formulate any specific action plan/strategy to protect the National Bird although there were numerous reports about their deaths.
- CWLW, while taking action on a complaint (March 2014) by an organization[70] about mass casualty of peafowl due to poisonous grain, directed (April 2014) the 11 concerned divisions to submit action taken report along with suggestions to protect the bird from such incidents. However, none of the divisions prepared the action taken report/suggestions and the CWLW also did not take any follow up action.
- Based on the directions of the Hon'ble High Court of Rajasthan Jaipur, Department of Administrative Reforms, the State Government issued circular (July 2016) for constitution of State Level Committee (SLC) and District Level Committees (DLC) for the protection of peafowl. The District Level Committee was to conduct a census of peafowl every year and the State Level Committee was to review the district wise increase/decrease noticed in this census.

Scrutiny of records of CWLW office revealed that District Level Committees did not conduct the census of peafowl for the period 2016-17. The State Government stated (November 2018) that as per the latest census (January 2018) the total population of peafowl in the State is 6,07,360. In the absence of census data for the year 2016-17, the status of increase/decrease in numbers of peafowl could not be ascertained.

- State Level Committee was to meet twice a year. The documents relating to meeting of SLC were not furnished to audit. Besides, four meetings in a year were to be organized by the District Level Committees. It was observed that in three districts[71] meetings were not conducted, while in two districts[72], only one meeting was conducted but minutes of meeting were not issued making the meetings held useless. In remaining 28 districts, number of meetings organized ranged between one and six as against requirement of seven during July 2016 to March 2018.
- There was no separate allotment of budget for the protection of National Bird.
- The DLC was responsible to take effective steps and create awareness among the people for the protection of peafowl within the district. Audit observed that there were several cases of persistent casualties of peafowl in

[69] Declared in 1963.
[70] People for Animals.
[71] Barmer, Sirohi, Tonk.
[72] Jodhpur, Udaipur.

Kota. On being pointed out, DCF Kota intimated (May 2018) that stray dogs and pigs repeatedly injured the peafowl. The DCF, Kota suggested to shift the dogs/pigs through Nagar Nigam Kota. However, the action taken by the DLC in this matter was not intimated (July 2018) to audit.



तिल-तिल कर मरने को मजबूर आईएल कॉलोनी के मोर

लगातार मरते रहे मोर, सोते रहे जिम्मेदार अफसर

पत्रिका खाउंड रिपोर्ट

वन विभाग को फुर्सत न पुलिस गंभीर

वन विभाग करेगा मोरों का संरक्षण

आईएल टाउनशिप पहुंचे वन विभाग के अधिकारी

परिसर का लिया जायजा, संरक्षण के लिए करेंगे काम

सूअर व कुत्तों को पकड़ने का चलेगा अभियान

शिकारियों पर सख्त कार्रवाई करेंगे

श्वान और सूअर बने समस्या

फॉलोअप

आईएल टाउनशिप में हो रहा मोरों का शिकार

सीसीएफ को मोरों के शिकार पर अंकुश लगाने के लिए दिया ज्ञापन

विशेष टीम गठित होगी

Source: Rajasthan Patrika (Daily Newspaper), Kota Edition dated 23.03.2018.

- In compliance to the order (July 2016) of the State Government, an action plan for the protection of peafowl was prepared by the District Collector, Jaipur for implementation in the whole district. According to the action plan natural habitats for peafowl were to be identified in the villages and the specific areas were to be declared as protected area by the forest department.

Scrutiny of records of DCF, WL, Jaipur revealed that natural habitat for peafowl was neither identified nor declared as protected by the forest department.

The State Government stated (November 2018) that it has institutionalized the protection and awareness mandate of National Bird under existing legal provisions. Peafowl census was conducted in 2017-18. During exit conference, PCCF informed that due to staff constraints it was not possible to collect information about peafowl at village level. However, the Department has made a beginning in this direction.

2.2.14 Selection of inappropriate site for Abhera biological park, Kota

Para no 3.1.3 of National Zoo policy 1998 stipulates that every zoo shall maintain a healthy, hygienic and natural environment in the zoo, so that the visitors get an adequate opportunity to experience a natural environment. Further para 10 (i) of "The Recognition of Zoo Rules 1992" stipulates that the

primary objective to operate the zoo shall be conservation of wildlife and no zoo shall allow any activity that is not consistent with the well-being of the wild animals. Scrutiny of records of Deputy Conservator of Forest, Wildlife (DCF, WL) office Kota revealed that Kota Zoo was in bad condition and the animals were not being provided the facilities as per the Central Zoo Authority (CZA) norms. In order to provide better living conditions to the animals, the office had submitted (January 2014) the master plan to CZA for approval for shifting and relocation of the Kota zoo to the *Abhera* Biological Park. The CZA after scrutinizing the plan intimated that it would consider the plan for approval subject to the condition of submission of an assurance from the Chief Wildlife Warden (CWLW), Rajasthan regarding removal of garbage dumping yard from the vicinity of the proposed site.



Pic - Garbage dumping yard surrounding *Abhera* Biological Park, Kota. (Dated **27/07/2018)**

The CZA approved (February 2017) the revised plan of *Abhera* Biological Park, Kota with provision of 400 mts. wide green belt adjacent to garbage dumping ground at the Park site subject to the condition that the State Government should continue their efforts for shifting the garbage dumping yard from the surrounding of the proposed zoo premises.

During the joint physical verification of the site conducted[73] by the audit team along with the Departmental officials it was noticed that the atmosphere at the park was not conducive due to adjoining garbage dumping yard, industrial areas, firing range of Indian Army and existence of unauthorized *kachchi basti* in nearby area, *etc*.

The State Government stated (November 2018) that directions of CZA to complete the green belt within 400 meters area from the boundary of the proposed Biological Park has been complied and constant efforts are being made by the Department regarding shifting of the dumping yard.

However, during the exit conference (September 2018) the PCCF and CWLW admitted that the local bodies are presently not able to shift the dumping yard because the land around the Kota city is too costly and there are also agricultural and forest lands in the vicinity.

[73] on 27 March 2018.

Good practices

The Department completed the creation of a new biological park at Machia, Jodhpur and the development work at two other biological parks at Sajjangarh (Udaipur) and Nahargarh (Jaipur). All these three biological parks have now been opened for public. Department also started a safari in the Jhalana Leopard Park, Jaipur.



Pic – Jhalana Leopard Park, Jaipur.

The Great Indian Bustard (GIB) is the State Bird of Rajasthan and one of the most endangered birds in the world. The Desert National Park (DNP), Jaisalmer in the State is the site for its conservation. There has been a steady increase in the number of these birds; from 103 in 2013-14 to 166 in 2016-17 after the State Government had launched a scheme in the year 2013-14 for the protection of GIB in Rajasthan.

2.2.15 Measures taken to protect forests outside the protected area network

2.2.15.1 Management of forest land

The National Forest Policy 1988 requires the Department to make efforts so that a minimum of one third of total geographical area of the State should come under forest or tree cover. Due to inhospitable climatic and edaphic[74] conditions coupled with severe biotic pressure a realistic goal of 20 *per cent* forest cover was adopted in the Rajasthan Forest Policy, 2010. The Policy envisages protection of existing forest from all kinds of human pressures and managing on sustainable basis through working plans.

Audit scrutiny revealed lapses on part of the State Government in protecting forest land as detailed in following paragraphs:

2.2.15.2 Status of forest area

As per the records of the Department, the recorded forest area of Rajasthan is 32,828.37 sq. km which is 9.59 *per cent* of its geographical area of 3,42,239 sq. km as of March 2018 whereas according to National Forest

[74] Pertaining to the chemical and physical characteristics of the soil, without reference to climate.

Policy (1988), total forest area should be one third i.e.1,14,080 sq. km (33 *per cent*) of its geographic area. Forest area is the area recorded as a forest in the Government records. It increased slightly by 83.89 sq. km during last five years, on the other hand reserve forest area decreased by 86.48 sq. km, despite the fact that the Department incurred an expenditure of ₹ 2,309.51 crore on protection and conservation of forest during 2013-18 (***Appendix 2.8***). Forest cover is the area covered by trees irrespective of its ownership and legal status. Status of forest cover as per India State of Forest Report, 2013 and 2017 is given below:

Status of forest cover (area in sq. km)

Status as per	Forest cover[75]	Very dense forest[76]	Moderately dense forest[77]	Open forest[78]
State Forest Report 2013	16,086	72	4,424	11,590
State Forest Report, 2017	16,572	78	4,340	12,154
Net increase(+)/decrease(-)	(+) 486	(+6)	(-) 84	(+) 564

Source: India State Forest Report 2013 and 2017

Above data indicates that forest cover of the state was 4.84 *per cent (16,572 sq. km)* of total geographical area of Rajasthan (3,42,239 sq. km) as against 20 *per cent* envisaged in Rajasthan Forest Policy, 2010. Though there was an increase of total 486 sq. km in forest cover, 564 sq. km in open forest and six sq. km in very dense forest, but the moderate dense forest decreased by 84 sq. km during 2013-17. Further in 11 districts[79] the forest cover decreased in 2017 as compared to 2013 ranging between one sq. km and 356 sq. km.

The State Government stated (November 2018) that there was a net increase of 486 sq. km in forest cover during 2013-17, which reflects the overall conservation and protection efforts. The decrease in moderate forest cover was due to its change to open forest because of increasing biotic and abiotic pressure on adjoining forest land. Decrease in forest cover in 11 districts was due to diversion of forest land for non-forestry purpose/ developmental project, *etc*. The exact areas affected by negative change are being ascertained from FSI, Dehradun and once it is available, reasons will be known and appropriate mitigative and ameliorative steps will be taken. The PCCF in exit conference accepted that reduction in forest area is due to continuous population pressure.

2.2.15.3 Notification of forest blocks

Under section 4 and 29 of Rajasthan Forest Act 1953, all forest blocks/land are required to be notified as Reserve Forest (RF) and Protected Forest (PF) for their protection and conservation. As per the records of the Forest Department, out of 32,828.37 sq. km (9.59 *per cent*) area covered with forest (March 2018), RF constitutes 12,352.78 sq. km (37.63 *per cent*) and PF constituted 18,408.85 sq. km (56.08 *per cent*). The remaining 2,066.74 sq. km (6.29 *per cent*) is still

[75] area covered by trees irrespective of ownership and legal status.
[76] forest land with tree cover of canopy of 70 *per cent* and above.
[77] forest land with tree cover of canopy density between 40 *per cent* and below 70 *per cent*.
[78] forest land with tree cover of canopy density between 10 *per cent* and below 40 *per cent*.
[79] Alwar (6 sq km), Banswara (114), Baran (71), Bharatpur (14), Bhilwara (6), Churu (10), Dholpur (1), kota (63), Sikar (1), Tonk (2) and Udaipur (356).

unclassified (March 2018). Further, according to the provision of FCA, 1980 and conditions prescribed in the sanction for use of forest land for non-forest activity, issued by the MoEF&CC, land received in lieu of non-forest activities is also to be notified as RF/PF by the State Government within six months of mutation of land.

Audit scrutiny revealed that the Department received 28.17 sq. km of non-forest land in lieu of forest land diverted for non-forest activity during 2013-18, out of which, proposals for 3.70 sq. km were sent to State Government between August 2016 and July 2017 for notification which was still pending (March 2018). The Department attributed the reasons for delay to land allotted being scattered and small in size, time consuming process to obtain revenue maps as per latest "*Jamabandi*" from revenue *tehsils* and vacant posts of settlement officers, technical staff and lack of technical resources *etc*.

The State Government stated (November 2018) that notification of forest block as RF/PF was a continuous process. Proposal for preliminary and final notification of 3.76 sq. km and 29.12 sq. km of unclassified land respectively was sent to the State Government for notification. Out of proposal sent for final notification of 29.12 sq. km of unclassified land, 23.46 sq. km was notified till 30 September 2018 and in respect of non-forest land a proposal of 3.70 sq. km received under FCA, 1980 is pending with the State Government.

Thus, Department could not notify 28.17 sq. km (100 *per cent*) non-forest land received in lieu of forest land diverted for non-forest activity as Reserve Forest/ protected Forest within six months of its mutation. Further, 2043.28 sq. km (98.86 *per cent*) of unclassified forest is also pending notification as Reserve Forest/Protected Forest as of November 2018.

2.2.15.4 Mutation and demarcation of forest land by erecting boundary through pillars and digitization of forest maps

Rajasthan Forest Policy envisages that all notified forest area in the State will be mutated and demarcated on the revenue maps so as to ensure that the land allotted to the Department is not re-allotted by Revenue Authorities. The demarcation of the land has to be done by erecting boundary through pillars or *pucca* walls on the ground and boundary line digitized on the maps with proper geo-referencing in order to protect the forest land from encroachment for residence, grazing or agriculture purposes.

Administrative Reforms Department, Government of Rajasthan constituted (August 1999) District Level Committees (DLCs) to record all categories of forest land in the name of the Department in revenue records by 31 December 2000. The tenure of DLCs was periodically extended up to 31 December 2015. A Divisional Commissioner Level Committee (DCLC) was constituted on 15 September 2016 in place of the earlier arrangement. The tenure of DCLC was up to 31 December 2018.

Scrutiny of records of PCCF revealed that out of 5974.54 sq. km of forest land pending for mutation as of April 1999, only 1218.71 sq. km (20.40 *per*

cent) forest land was mutated in 19 years (1999 - 2018) and 4755.83 sq. km (79.60 *per cent*) was pending for mutation. Thus, out of total 32828.37 sq. km forest land, only 28072.54 sq. km was mutated as of 2018. Further, out of 28072.54 sq. km of mutated land, 20927.11 sq. km of land (74.54 *per cent* of total mutated land of 28072.54 sq. km) was demarcated on the revenue maps as of March 2018.

In order to achieve the objective of erecting boundary through pillars, PCCF submitted (September 2005) a Five Year Plan (2005-10) to the State Government for erection of 2,83,943 pillars with the financial requirement of ₹ 4506.38 lakh. Audit observed that only 1,11,242 pillars (39.18 *per cent*) were erected at an expenditure of ₹ 1413.17 lakh (31.36 *per cent)* as of March 2018. Remaining pillars could not be erected due to non-availability of funds.

The Department stated (February 2018) that the mutation of forest land will be dealt by Revenue Department. Directions in this regard have been issued to Revenue Department at the State Government level. Further the State Government accepted the facts (November 2018) and stated that main reasons behind delay in mutation of forest land were disputes over land cases, dual allotment and litigation cases pending before the court.

Regarding demarcation of mutated land, Department stated (May 2018) that though forest land records were provided to revenue authorities but demarcation could not be done. However, a committee under the chairmanship of Divisional Commissioner (DC) for demarcation at DC level was constituted[80] in September 2016. Further the State Government stated (November 2018) some of the land was still to be mutated. Efforts were being made for mutation and demarcation on revenue maps in coordination with Revenue Department.

In respect of erection of boundary walls through pillars, State Government stated (November 2018) that boundary pillars could be erected only after proper survey and demarcation of the forest boundary. In most of the divisions surveyors were not posted, so demarcation of the forest boundary was taking more time and non-availability of fund was also a constraint. Efforts are being made to speed up the process of erection of pending pillars.

The Audit is of the view that since about 4755.83 sq. km forest land was yet to be mutated and 7145.43sq. km (25.45 *per cent*) of mutated land was also pending for demarcation; the Department needs to be proactive in this regard. Delays in this regard are indicative of weak monitoring and poor implementation of the mutation process which resulted in increasing encroachment of forest land, resultant court cases and adverse effect on the forest cover in the State. Absence of demarcation would affect conservation efforts as transfer/ encroachment of non-demarcated land cannot be ruled out.

Audit further observed that out of 16 wildlife divisions and 38 forest divisions in which digitization was required, forest maps in six forest division of *Indira Gandhi Nahar Pariyojna* (IGNP) and desert area were still to be digitized.

[80] Tenure of the DC level committee has been extended up to December 2018.

The Department stated (March 2018) that due to lack of adequate points in Geo-referencing for maps and pending work of notification in these divisions, digitization work would take more time. Further the State Government stated (November 2018) that total forest area covered under these six divisions is about 2,150 sq.km. Special efforts were made to digitize the boundaries using Global Positioning System (GPS) co-ordinates of forest area. Since most of forest areas are scattered and small in size the recording of GPS coordinates is a time consuming process hence needs more time.

2.2.16 Protection and conservation of forest

2.2.16.1 Encroachments on forest land

Section 91(i) of the Rajasthan Land Revenue Act (LRA), 1956 under which Assistant Conservator of Forests (ACF) is authorised to take action for levy of penalty, stipulates that any person who occupies or continues to occupy any land without lawful authority should be regarded as a trespasser and might be summarily evicted at any time. Section 91(2) *ibid* provides for levying of penalty on such trespasser.

According to the information provided by the office of PCCF (HoFF) there were 18,577 cases of encroachment on forest land involving area of 255.05 sq. km in the State as on 1st April 2013. Audit observed that during 2013-14 to 2017-18, 36,975 new cases of encroachments involving 358.25 sq. km forest land were registered and 49183 cases were disposed of wherein encroachers were evicted from 531.39 sq. km forest land while, 6,369 cases involving encroachment on 81.91 sq. km of land were pending as of March 2018.

The Department stated (May 2018) that regular patrolling was being conducted for prevention of encroachment and action was being taken according to Section 91 of the LRA. The State Government stated (November 2018) that pending cases are being disposed of by the concerned authorities.

The reply needs to be viewed in light of the number of encroachment cases pending.

2.2.16.2 Mining in forest areas

Section 26 (1) (g) of the Rajasthan Forest Act, 1953 prohibits mining in the forest area. Further, the State Forest Policy stipulate that efforts should be made for curbing illegal mining in forest areas by enforcing strict surveillance mechanism, including the use of satellite imagery and by beefing up surveillance in forest areas through joint inspection by Mining Department, Forest Department and Police officials.

According to the information provided by the office of PCCF (HoFF), 15,883 cases of illegal mining were registered during 2013-18, of which, 8,004 cases were disposed of by levying penalty and 7,879 cases were pending as of March 2018. Further it was observed that 3,491 cases were pending for

one to three years and 1,534 cases were pending for more than three years. 4388 cases were pending for consideration before the Court.

Besides, none of the 14 test-checked divisions used satellite imagery system to trace forest areas affected by illegal mining and only three divisions[81] carried out joint inspections with Mining Department and Police officials.

The Department stated (May 2018) that regular patrolling was being conducted for prevention of illegal mining and action was being taken as per rules. The State Government stated (November 2018) that FSI, Dehradun also prepared a report by using satellite imagery system on mining affected areas of *Aravali* on the order of Hon'ble Supreme Court and submitted its report to Central Empowered Committee (CEC). Matter is pending in court and action will be taken accordingly. Besides, the Department has issued instructions for prevention of illegal mining through joint inspection with Police and Mining Department.

The reply is not acceptable as the measures taken to curb illegal mining have not been successful as indicated from the number of cases registered. Further, the department did not furnish information regarding imposition of penalty on the defaulters as provided in Section 26(1). The Department should adopt an effective system to trace forest areas affected by illegal mining. PCCF (Hoff) also accepted in exit conference that the Department needs improvement in monitoring system at many levels.

2.2.16.3 Grazing in forest areas

Section 26(1) (d) of the Rajasthan Forest Act, 1953 prohibits pasturing of cattle in reserved forest area. The Rajasthan Forest policy recommended enhancement of grazing fees, regulated grazing, promoting stall feeding by permitting cut and carry of grass at nominal cost and development of improved pastures as certain steps to curb illegal grazing.

According to the information provided by the office of the PCCF (HoFF), the Department registered 20,539 cases of illegal grazing during 2013-18, of which 16,093 cases were disposed of and a penalty of ₹ 270.51 lakh was recovered. As of March 2018, 4,446 cases were pending for disposal, out of which, 1,212 cases were pending for one to three years and 1,566 cases were pending for more than three years. 1668 cases were pending before the court.

In the test-checked 14 divisions, 6,018 cases were registered during 2013-18, out of which, 5,981 cases were disposed of and 37 cases were pending as of March 2018.

The Department stated (May 2018) that cases were pending due to non-recognition of offenders and non-recovery of penalties. It was also informed that the Department undertakes sowing of grass seeds along with its plantation work and efforts are being made by the Forest protection committees to regulate grazing. Regular Patrolling is also carried out to keep a check on illegal grazing.

[81] DCF Jalore, Bhilwara, and Jodhpur.

However, Audit observed that in 14 test-checked divisions, no pastures were developed for cattle grazing except by DCF Sikar. Further, mechanism to regulate grazing and plans for promotion of stall feeding of cattle was not developed.

The State Government stated (November 2018) that as per latest information received from divisions, pasture in 73.72 sq. km in seven divisions[82] were developed under various schemes. Because of budget constraint being faced by the Department, efforts are being made to develop stall feeding with the help of Agriculture and Animal Husbandry Department. Reply is not acceptable as significant number of cases of illegal grazing persists. Further, the test-checked divisions had informed audit about non-development of pasture land whereas the latest reply shows considerable progress in this regard. The Department should undertake proper analysis of the divergent information furnished.

2.2.16.4 Plantation efforts

The norms fixed by the Department (November 1990) prescribed that the plantation should be categorized as (i) Good, where survival rate of plants was above 70 *per cent*. (ii) Ordinary, where survival rate of plant was between 40 and 70 *per cent*, and (iii) Failure, where survival rate was below 40 *per cent*. Further, the revised norms of evaluation of plantation (March 2004) prescribed that detailed evaluation was to be carried out in the first, second and third years after plantation.

According to the information provided by the office of the PCCF (HoFF) plantation in an area of 409.36 sq. km and 2808.50 Row Per Kilometer (RKM) at 970 sites was carried out during 2009-10 to 2014-15, but the survival rate of plantation was zero to 39.81 *per cent* at 44 sites, involving area of 19.11 sq. km at 41 sites and 103.00 RKM at three sites evaluated during 2013-14 to 2017-18. This signifies failure of the Department to take adequate preventive measures to protect plants and ensure tree growth. The expenditure incurred on failed plantation sites was not intimated by the Department. The Department stated (April 2018) that action taken report in the matter is being asked from the concerned divisions.

The State Government stated (November 2018) that as per the revised circular (March 2004) if survival percentage is below 40 *per cent* and it appears that it is due to some human error then before taking any disciplinary action against the responsible staff, concerned DCF will carry out 100 *per cent* evaluation of the site. Thereafter action to be taken against the defaulter has to be determined. It further replied that action is being taken against the responsible officers at 39 out of 44 sites. At two sites, on 100 *per cent* evaluation, survival rate of plantation was found to be above 40 *per cent,* at other two sites, wrong information was furnished due to incomplete records and at one site, the concerned defaulter officials have retired. Therefore, no action could be taken.

The reply shows that the method of data collection is not reliable, the field officials projected divergent results based on different methods used for

[82] Banswara 3.75 sq. km, Chittorgarh 3.46 sq. km, Udaipur 1.50 sq. km, Bikaner 5.35 sq. km, IGNP Stage-II Jaisalmer 49.55 sq. km, Pali 8.70 sq. km and Sirohi 1.41 sq. km.

evaluation. The plantation activity being highly prone to weather affects had to be properly monitored and recorded.

We further observed that an independent evaluation was carried out by Arid Forest Research Institute, Jodhpur (AFRI) between November, 2016 and June 2017 for the plantation under the Compensatory Afforestation Management and Planning Authority (CAMPA) scheme done between 2010 and 2014. This evaluation report revealed that overall survival rate remained below State average (*i.e.* 40 *per cent*) in 17 divisions out of 29 divisions. Another independent midterm evaluation carried out by Centre for Development Communication and Studies, Jaipur (CDECS) between October 2014 and April 2015 for plantation done under Rajasthan Forestry and Biodiversity Project (RFBP) Phase-II, for the plantation during 2012-15, found that overall survival rate of plantation ranged between 41 and 80 *per cent*. However, during performance review of 44 sites as mentioned above, we also observed that overall survival rate of plantation was below 40 *per cent* at six sites of CAMPA and two sites of RFBP Phase-II.

2.2.16.5 Protection of forest from fire

Fire is one of the major destructive agents of the forest. In Rajasthan, most of the fires are ground fires, which normally do not cause permanent damage to the forest tree crop, but they tend to reduce the density of the stocking and destroy invaluable wildlife habitat. Forest fire is generally caused by human either due to carelessness or intentionally.

Rajasthan Forest Policy envisages that during summer, occurrence of forest fire is very common. In order to curb the forest fire, the fire lines need to be created and maintained in forest areas at regular intervals. Subordinate staff will be given modern gadgets for controlling and extinguishing forest fire. The members of the Joint Forest Management Committee and local people on demand will be duty bound to help in extinguishing the forest fire.

According to India State Forest Report 2017, total of 544[83] forest fire alerts were disseminated during 2013-17. Forest fire alerts in 2017 were highest in the last four years.

Scrutiny of records of test-checked 20 divisions (forest-14, wildlife-6) revealed that 183 cases of forest fire were recorded during 2013-18, which caused a loss of ₹ 18.88 lakh worth of forest assets in five[84] divisions. Fire prone area was not identified in eleven divisions and fire lines were not maintained in nine divisions. Firefighting equipments were not provided to Range Offices in 15 divisions and fire watchmen were not deputed in fire prone areas in 19 divisions.

The State Government stated (November 2018) that budget allotted for forest fire control and management under Intensification of Forest Management Scheme was utilized for the intended purpose viz. construction of watch towers, creation and maintenance of fire lines and deployment of fire watchers for controlling and extinguishing forest fires. Out of 260 forest fire alerts disseminated by FSI in 2017, 145 forest fire alerts were for the forest and

[83] 75 in 2013, 53 in 2014, 90 in 2015, 66 in 2016, and 260 in 2017.
[84] DCF, IGNP Stage-II Jaisalmer, DCF, Bundi, DCF, WL, Rajsamand, Jaipur and Kota.

wildlife area and rest 115 alerts were found to be for non-forest area. The Department is acting proactively to control the forest fire in the State by way of using modern information technology, satellite data, utilizing the funds available for above purpose and taking support of local administration, Village Forest Protection and Management Committee and local people.

2.2.16.6 Diversion of forest land for development activities

Section 2 of Forest (Conservation) Act (FCA), 1980 stipulates that it is mandatory to obtain prior approval of GoI for diversion of forest land for non-forest purposes.

According to Guidelines and Clarifications of FCA, 1980, forestry clearance will be given in two stages. In the first stage, the proposal shall be agreed to in-principle wherein usually the conditions relating to transfer, mutation and declaration a RF/PF under the Indian Forest Act, 1927 of equivalent non-forest land for compensatory afforestation thereof are stipulated and after receipt of compliance report from the State Government in respect of the stipulated conditions, formal approval shall be issued.

Office of the PCCF (HoFF) informed that 51.52 sq. km forest land in 131 cases was diverted for non-forest purpose during 2013-18. Scrutiny of records of CCF, Bikaner revealed that MoEF&CC issued (June 2013) in-principle approval for diversion of 0.14 sq. km forest land (Bikaner division- 0.10 sq. km and Sriganganagar division- 0.04 sq. km) for widening and strengthening of km 10.630 to km 173.000 section of National Highway (NH)-15 in favour of Public Works Department (PWD). Condition No. 2 of in-principle approval stipulated that the user agency will deposit an amount of ₹ 26.52 crore on account of Additional Compensatory Afforestation (ACA) for plantation on both side of the proposed road and median of road and their maintenance upto 18 years. Audit observed that the State Forest Department did not recover ACA amount of ₹ 26.52 crore[85] from the user agency. On the request of PWD (May 2017), the department took up the matter for allowing relaxation in Condition No. 2 of the in-principle approval with the GoI. Meanwhile, the department granted permission (May 2017) to the user agency for starting the work on the basis of an undertaking that if GoI will not agree and relax the condition then the amount will be deposited by the user agency. Considering the fact that the work of road side plantation was to be done in notified Protected forest, which could be done by State Forest Department only, the GoI did not allow relaxation in the condition and therefore, an amount of ₹ 26.52 crore was to be recovered from the user agency. In reply of audit query, CCF, Bikaner accepted (March 2018) that the amount was not deposited by the user agency.

The State Government stated (November 2018) that the Principal Secretary PWD was requested to direct user agency to deposit the amount and PCCF (HoFF) had also written to Principal Secretary PWD to take urgent necessary action.

[85] ₹ 16.55 crore in Bikaner division for 92,000 plants and their maintenance at the rate of ₹ 1799/- per plant and ₹ 9.97 crore in Sriganganagar division for 56,400 plants and their maintenance at the rate of ₹ 1768/- per plant.

2.2.17 Human resource management

Performance of any organization for efficient implementation of programmes depends on availability of qualified and trained manpower. Periodical assessment of requirement of manpower taking into account the present and future needs is essential to fulfil its objectives. Scrutiny of records revealed the following weaknesses in management of human resources in the Department:

Availability of Field Staff

➢ Rajasthan Forest Policy, 2010 envisages that there should be one Forest Guard for every five sq. km to seven sq. km of forest land for beat inspection. The Department constituted a Working Committee (2013) for assessing the requirement of frontline staff. As per recommendation of Working Committee, one Forester and one Forest Guard are required for 21 sq. km area of territory forest division and one Forester for 15 sq. km and one Forest Guard for five sq. km area of wildlife divisions. Accordingly, 3804 Foresters/Assistant Foresters and 11312 Forest Guards were required whereas the Department had only 2477 and 4467 sanctioned posts of Foresters/Assistant Foresters and Forest Guards, respectively. Thus there was shortage of 8172 sanctioned posts in these two categories. Further, 534 posts of Foresters/Assistant Foresters and 1041 posts of Forest Guards were vacant against the present sanctioned strength of 6944 (2477+4467). Lack of adequate staff adversely affects protection activities and hence needs to be immediately addressed.

The Department intimated that proposal for direct recruitment of Forester was sent (March 2018) and remaining posts will be filled up in due course. Regarding shortage of 8172 posts, the State Government sanctioned 1080 posts. Remaining posts had been sought from the State Government.

Audit is of the view that the Department did not pay due attention to deployment of protective staff in the field as the posts of officers increased by 32 times whereas the posts of protective staff were increased 2.69 times only in the last 68 years.

The State Government while accepting the facts stated (November 2018) that the State Government have increased various posts of different cadres in the last few years.

Reply is not acceptable as 7,092 post are still to be sanctioned and 1,575 posts are still (November 2018) lying vacant in the Department.

➢ Para 10 of Chapter 2 of Rajasthan Forest Manual stipulates that the duty of Forest Guard is to protect the forest under his charge from injuries from men, animals and fires.

Scrutiny of information furnished by the selected units revealed that 53 Forest Guards in 13 units were deployed in the offices for performing ministerial duties, which adversely affects the efforts for protection of forest.

The State Government stated (November 2018) that the duties of forest guard include forest protection and development as per the forest manual. Further all the activities like GPS surveying digitization of forest maps, wireless

operation, wildlife monitoring and its data maintaining at office level etc. which is being done by some Forest Guards in office is part of forest protection and development itself. Reply is not tenable because as per the forest manual, Forest Guard is responsible to ensure protection of forest in his beat area. Utilization of services of Forest Guards at other places instead of their beats will certainly hamper the protection work of forest and wildlife.

- Range Officer is responsible for execution of all the developmental works allotted to the Range, proper maintenance of boundary lines and pillars of the range, for all revenue and expenditure within his range and to ensure that funds are used in the most economical and efficient way. Departmental Recruitment Rules (RR), 1963 (amended in 2015) prescribes the bifurcation of quota for direct recruitment and promotion of Range Officer (RO) as 50:50.

Audit observed that during 2013-18 as against the sanctioned strength of 258, vacancies of Range Officers varied from 34 to 166.

The State Government stated (November 2018) that recruitment in RO Gr.-I was not done as the State Government had banned direct recruitment after 1986.

Reply needs to be viewed in light of the fact that as against the vacancy of 166 posts of RO Gr.-I, 159 posts are still (November 2018) vacant.

- For land record management, technical staff like Surveyor, Amin, Draftsman and Tracer among others are the key posts for the Forest Department. The sanctioned strength of the posts of technical staff in 2013-14 was 467 which increased to 613 in 2017-18. The men-in-position against the sanctioned strength was 350 in 2013-14 which increased to 428 in 2017-18. Audit observed that despite recognizing the requirement of 146 additional posts, the Department could fill only 78 additional posts. Thus, the short fall in manpower in these cadres increased from 25.05 *per cent* in 2013-14 to 30.18 *per cent* in 2017-18 which affected activities like mutation, demarcation, digitization, *etc*.

The State Government intimated (November 2018) that the posts of Amin were merged (August 2013) in the cadre of Surveyor. The State Government further stated (November 2018) that request for filling the vacant posts has been sent to Subordinate Selection Board in March 2018.

2.2.18 Follow up of PAC's recommendations

A performance audit on Protection of Forest and Wildlife of Rajasthan was carried out covering the period from 2009-10 to 2011-12. This PA was included in chapter 2.1 of the Audit Report of the Comptroller and Auditor General of India on General and Social Sector, Government of Rajasthan for the year ended 31 March 2012 (Report No. 1 of the year 2013).

This performance audit was discussed in PAC (2015-16) and 54 recommendations were issued. Out of these recommendations, PAC accepted compliance of 31 recommendations, while compliance of 11 recommendations was conditionally accepted with the rider that final action taken by the Department was to be sent to the office of the Accountant General. However,

final action on these 11 recommendations is still awaited. Details of these 11 recommendations are given in ***Appendix 2.9.***

In respect of 12 recommendations (details given in ***Appendix 2.10***), PAC issued further recommendations in February 2018. Compliance to these 12 recommendations has been received (July 2018 to July 2019). Final decision on five of these recommendations is vested with PAC. Interim replies for remaining seven recommendations have received by office of the Accountant General and comments on same have been forwarded to Forest Department. The final replies on these are yet to be submitted to PAC by the Forest Department (July 2019).

2.2.19 Conclusion

Although the Department has taken certain proactive steps which have culminated in increase in number of tigers in RTR, creation of a new biological park at *Machiya*, Jodhpur, initiation of Leopard Safari at *Jhalana*, Jaipur and development of park at *Nahargarh*, a lot of measures still need to be taken for proper protection of Forest and Wildlife in the State. The department did not have any information regarding preparation of annual plans based on the Working Plan approved by the GoI for the forest divisions. It submitted incomplete proposals for formation of Eco-Sensitive Zone which resulted in delay in notification of ESZs. To combat wildlife crimes, State Level Inter-Agency Coordination Committee as well as Wildlife Crime Control Units were not constituted despite directions received from Wildlife Crime Control Bureau. Corridors for movement of tigers have not been created to link RTR-I and RTR-II. Speed of relocation of villages from the tiger reserves has been very slow. Concrete action has not been taken by the Department for removal of commercial shops/ activities which are operating in the Sariska Tiger Reserve without approval of National Board of Wildlife. Work of outlining of forest land on revenue maps, its mutation and demarcation through boundary pillars and digitization of forest maps has been very slow. Sampled divisions did not use satellite imagery system to trace forest areas affected by illegal mining. Human Resource Management was weak in the Department with significant vacancies in cadre of protection, technical and field supervisory staff.

2.2.20 Recommendations

- *The State Government and the Department may take concrete steps to achieve the target of increasing the forest cover in the State; special attention may be devoted for restoration of areas affected by anthropogenic activities and other disturbances.*
- *The State government may consider setting up a State Level Inter Agency Coordination Committee and Wildlife Crime Control Unit for ensuring effective deterrence and punishment of wildlife crimes.*
- *The State Government may consider allocating proper financial resources for effective implementation of the working plans in Forest divisions.*

- *Village relocation policy may be finalized on priority and implemented without delay.*
- *The State Government may consider that the Tiger Conservation Plan is approved on priority; Specific programme for protection of peafowl may be considered.*
- *Mutation, notification, demarcation and digitization of forest land may be completed under a time bound programme.*
- *The State Government may like to strengthen the mechanism to prevent illegal mining/encroachment/ fires on forest land.*
- *The Department may lay more emphasis on identification of the fire prone areas and ensure creation and maintenance of fire lines. It may consider to provide modern gadgets to subordinates staff.*
- *The Department may strengthen its human resources management functions to fill up vacancies in frontline and technical staff.*

Chapter III
Compliance Audit

Chapter III

Compliance Audit

Water Resources Department

3.1 Implementation of Rajasthan Farmers Participation in Management of Irrigation Systems Act, 2000

3.1.1 Introduction

Participatory Irrigation Management (PIM) through association of farmers in planning, operation and maintenance of the irrigation system is essential for effective management of an irrigation system. It provides opportunities for collective action, dialogue between users, agencies and governments.

Government of Rajasthan enacted the Rajasthan Farmers Participation in Management of Irrigation Systems Act, 2000 (RFPMIS Act, 2000) to govern the distribution of water among the farmers and also framed (October 2002) Rajasthan Farmers Participation in Management of Irrigation Systems Rules, 2002 (RFPMIS Rules, 2002) for carrying out the purposes of the Act. Water Resources Department is the nodal department for implementation of this Act.

Irrigation projects in Rajasthan

Project cost and culturable command area[1] (CCA) of major[2], medium[3] and minor[4] irrigation projects in Rajasthan are as under:

Position of Irrigation Projects in Rajasthan

Nature of Project	Completed Projects		Ongoing Projects		
	Number	CCA (in lakh hectare)	Number	CCA (in lakh hectare)	Estimated Cost (₹ in crore)
Major and Medium	119	33.69	12[5]	16.98	19659.80
Minor	14814[6]	4.83	47	0.52	152.00

Source: Progress/Administrative Report (2017-18) of the Water Resource Department.

RFPMIS Act prescribes that the Project Authorities will delineate every command area on hydraulic basis to be declared as water users' area. There shall be one Water Users Association (WUA) for every water user area, consisting of all the water users who are landowners in such area as members. A Distributary Committee for every distributary area comprising of two or more water user areas and a Project Committee for the project area shall be formed for performing functions laid down in the Act. Grant received from the Government as a share of the water tax collected in the area of particular

[1]Culturable command area (CCA) means the area which can be irrigated from a scheme and is fit for cultivation.
[2]Major irrigation project means having irrigation command area of more than 10000 hectares.
[3]Medium irrigation project means having irrigation command area of more than 2000 hectares and up to 10000 hectares.
[4]Minor irrigation project means having irrigation command area of up to 2000 hectares.
[5]Including IGNP phase-II.
[6]Completed Minor Project's figure is inclusive of projects under State plan as well as other plans.

WUA and such other funds, as may be granted by the State and Central Government for the development of the area of operation constitute the main source of funds for the WUAs.

3.1.2 Audit objectives

The present Audit of implementation of RFPMIS Act, 2000 was conducted with the objective to assess whether provisions of the Act and the RFPMIS Rules, 2002 were being implemented effectively across the State.

3.1.3 Audit coverage and methodology

The Water Resource Department has 13 offices of Chief Engineers, 39 Superintending Engineers and 72 Executive Engineers (Divisions). Further there is an Irrigation Management and Training Institute. The field study for the audit was conducted during February 2018 to May 2018, covering the period 2015-18. Records were examined in the four offices of the Chief Engineers (CE)[7] along with three offices of Superintending Engineers (SE)[8] and eighteen offices of Executive Engineers[9] (Divisions) of Water Resource Department covering 8.42 lakh hectare of culturable command area. Out of 72 offices of Executive Engineers (Divisions), 12 Divisions were selected being considered high risk units due to not achieving 50 *per cent* target of formation of WUAs. Out of the remaining 60 Divisions, 10 *per cent* (6 Divisions) were selected by using random sampling method using IDEA. Against the target of 867 WUAs to be formed under these 18 divisions, only 519 WUAs were formed.

Divisions under Narmada Canal Project (NCP) were not included in the audit coverage for sample selection as audit observations regarding these were already included in Performance Audit carried out in 2015-16 and reported in the Report of the Comptroller and Auditor General of India on Economic Sector for the year ended 31 March 2016, Government of Rajasthan (Report No. 1 of the year 2017). In addition, records of Irrigation Management and Training Institute, (IMTI) Kota which imparts training to members of WUAs were also examined.

Audit findings

3.1.4 Formation of apex committee

According to Section 35(1) and 35(2) of the Act, the State Government may, by notification, constitute an Apex Committee to lay down the policies for implementation of the provisions of the Act and give such directions to any farmers' organization as may be considered necessary in exercising their powers and performing their functions in accordance with the provisions of the Act.

[7] CE, WRD Jaipur, CE, WRD Hanumangarh, CE CAD, IGNP Bikaner and CE (East) and Additional Secretary CAD, Jaipur.
[8] SE, DAM circle, Deoli, SE, WR Hanumangarh and SE (Works), WRD Jaipur as a Nodal Officer of (WUAs).
[9] TMC Mohangarh, 16th Division Bikaner, Kolayat lift Bikaner, KSL Lunkaransar, Gharsana, Chattargarh, Srivijaynagar-I, Srivijaynagar-II, Dn.-II Hanumangarh, Dn.-I Baran, Jhalawar, Canal Dn.-I Bisalpur Project Tonk, Udaipur, Karauli, Dam Dn.-I Banswara, Pratapgarh, Canal Dn.-I Banswara and Deeg.

During audit of records at the office of CE, Water Resources Department (WRD), Jaipur, it was intimated (May 2018) that the Apex Committee as envisaged under the act has not been constituted. Further, no record was available in respect of meetings held by the Apex Committee, if constituted, for development work of WUAs.

However, the State Government replied (August 2018) that Committee has been constituted under Section 35(3) and 35(4) in October 2002. The reply is not acceptable as the Apex Committee was to be formed under Section 35(1) and 35(2) whereas Section 35(3) and 35(4) deals with appointment of Commissioner. The diametrically opposite information being provided on such an important matter indicates the casual approach of the State Government towards ensuring successful implementation of the Act.

3.1.5 Deficiencies in implementation of the Act

3.1.5.1 Formation and functioning of WUAs

As per Section 4 of the Act, there shall be one WUA for every water user area, consisting of all the water users who are landowners in such area as members.

According to section 16 of the Act, the objects of the Farmers' Organisation (Water User Association) are to promote and secure distribution of water among its users, adequate maintenance of the irrigation system, efficient and economical utilization of water to optimize agricultural production, to protect the environment, and to ensure ecological balance by involving the farmers, including a sense of ownership of the irrigation system in accordance with the water budget and the operational plan.

Audit scrutiny revealed that against the prescribed number of 3107 WUAs[10] to be formed in the State, only 2458 WUAs were constituted up to March 2018. In selected 18 divisions out of total 72 divisions, against the target of 867 WUAs, only 519 WUAs (59.86 *per cent*) were formed (March 2018) in 16 divisions while no WUAs were formed in remaining two divisions[11]. Audit scrutiny further revealed that out of 519 WUAs constituted in 16 divisions, only 275 WUAs (53 *per cent*) in five divisions were functioning. The remaining 244 WUAs under 11 divisions even though constituted but were not performing their mandated functions viz. preparation and implementation of a *Warabandi*[12] schedule, preparation of a plan for maintenance, extension, improvement, renovation and modernization of irrigation system, regulation of the use of water among the various outlets, preparation of demands and collection of water charges from users as laid down in Section 17 of the Act. Out of 244 non-functional WUAs, 68 WUAs could not function due to non-handing over the charge to WUAs by the State Government, 101 WUAs due to lack of budget and remaining 75 due to insufficient training to WUA members. Thus, due to non-formation and/or non-performing of the functions by constituted WUAs, the objective of involving farmers in water

[10] Excluding 2202 WUAs to be formed for Narmada canal system (2052 formed till March 2018). The audit observations in this regard have been printed in the Report of the CAG of India on Economic Sector for the year ended 31 March 2016 GoR.

[11] Dam Division I, Banswara and Division Deeg.

[12] '*Warabandi*' means a system of distribution of water allocation to water user by turn, according to an approved schedule indicating the day, duration and the time of supply.

management and inculcating a sense of ownership of irrigation system among them could not be achieved. Further there was no monitoring mechanism in place in the Department to check on the formation/working of WUAs.

Further scrutiny of records of 275 functional WUAs revealed that the functioning of these WUAs was also not satisfactory as detailed below:

- RFPMIS Act Section 17(q) prescribes that WUA shall perform function to encourage avenue plantation of canal bunds and tank bunds. Scrutiny of records of divisions revealed that no action was taken to encourage avenue plantation on canal bunds by these 275 functional WUAs under five divisions;
- RFPMIS Rule 47 prescribes the various records to be maintained by the WUAs. Scrutiny of records revealed that registers, inventory of irrigation system and other prescribed records were not maintained in these 275 functional WUAs.
- Scrutiny of records of Executive Engineer, Kolayat Lift Division IGNP Bikaner also revealed that a number of complaints regarding non-maintenance of damaged pipeline, water courses and non-clearance of silt deposited in *diggies* were filed by the farmers. Though the WUAs were formed but these were not functioning in Kolayat Lift Division, IGNP Bikaner. In the absence of proper revenue collection by the WUAs, as discussed in succeeding paragraph, the repair work was not undertaken by the WUAs. On this being pointed out, concerned division replied that repair and maintenance work would be carried out after receiving budget allocation for this purpose.

In reply Government stated (August 2018), that efforts are being made to constitute the remaining WUAs. It was further stated that due to lack of staff and insufficient water in dams for irrigation, the WUAs are not working properly.

3.1.5.2 Formation of Distributary and Project Committees

According to Section 6 and 8 of the Act i*bid, a* Distributary Committee for every distributary area comprising of two or more water user areas and one Project Committee for the project area shall be formed for performing functions laid down in section 18 and 19 of the Act as mentioned below:

Section 18 of the Act stipulates that Distributary Committee shall:

- prepare an operational plan based on entitlement, area, soil, cropping pattern at the beginning of each irrigation season;
- prepare a plan for extension, improvement, renovation, modernization and annual maintenance of both distributaries and medium drains within its area of operation;
- regulate the use of water among the various WUAs under its area of operation, resolve disputes between WUAs, maintenance of various records of WUAs and inventory of irrigation system, promote economy in the use of water allocation, *etc.*

In respect of functions of Project Committee, Section 19 of the Act stipulates that the Committee shall approve:

- An operational plan based on its entitlement, area, soil, cropping pattern as prepared by the Competent Authority for entire project area at the beginning of each irrigation season.
- A plan for extension, improvement, renovation, modernization and annual maintenance of irrigation system including major drains within its area of operation at the end of each crop season.
- RFPMIS Act section 19 (b) prescribes that Project Committee shall perform function to approve the plan for extension, improvement, renovation, modernization and annual maintenance of irrigation system.

Audit scrutiny revealed that as against 284 Distributary Committees and 85 Project Committees to be formed (up to March 2018) for various projects in the State, only 159 Distributary Committees and 34 Project Committees were formed leading to shortfall of 125 (44 *per cent*) and 51 (60 *per cent*) in formation of Distributary Committees and Project Committees respectively. Further, in selected 18 divisions against the target of 73 Distributary Committees and nine Project Committees, only 33 Distributary Committees and two Project Committee were formed (August 2018).

- Due to shortfall (60 per cent) in formation of Project Committees, there is no assurance that the plans for extension, improvement, renovation and modernization of major drains under the projects were prepared. The annual maintenance and other related activities of the irrigation systems were also not carried out in Executive Engineer Division-II Hanumangarh. Scrutiny of records of 275 functional WUAs in 5 divisions revealed that though *Warabandi* schedule was prepared in these divisions, however, there was no evidence on record to substantiate that in the absence of distributary committees, the *Warabandi* schedule among the various WUAs under its area of operation were regulated.

In reply, Government stated (August 2018) that due to shortage of staff and staff remaining busy in other works, the distributary and project-committees could not be formed.

3.1.5.3 Formation of sub-committees of Farmers' Organization

According to Section 11 of the Act, *ibid* read with rule 53 of RFPMIS Rules, 2002, Farmers' Organization may constitute

- Administration, Finance and Resources Sub-Committee, which shall examine and put up its recommendation on administrative reforms required for better functioning of the Farmers' Organization and methods for raising of resources to achieve financial soundness of the farmers' organization.
- Works-Sub Committee (*Nirman Up Samiti*) to carry out the work in most economical manner adhering to required specifications and time with regular supervision.
- Water Management and Agriculture sub-committee (*Sinchai Up Samiti*) to ensure all water management activities in consultation with Project/ Competent Authority for un-interrupted distribution.
- Monitoring, Evaluation and Training sub-committee to look after overall monitoring and evaluation and give suggestion for any improvement required in functioning of the Farmers' Organisation.

➢ *Chak Samiti* for efficient distribution of water, and to implement decisions taken in general body meeting within the *Chak* concern.

Audit scrutiny revealed that although 275 WUAs were working in five divisions but the sub-committees mentioned above were not constituted. Non-constitution of these sub-committees resulted in lack of efforts for raising of resources and carrying out the work in the most economical manner with regular supervision, water management activities, *etc*.

In reply Government stated (August 2018), that due to non-taking of interest by President of WUAs, the sub-committees could not be formed.

3.1.5.4 Conduct of meetings and audit of accounts

As per section 33 of RFPIMS Act read with rule 39 of RFPMIS Rules, the general body of a farmers' organization (WUAs) shall meet twice in a year, once before the *Kharif* season and once before the *Rabi* season.

Further as per rule 45, the meetings of the Managing Committee of WUAs shall be held quarterly at the office of the Farmers' Organisation.

As per section 31 of RFPIMS Act read with rule 51 of RFPMIS Rules, at the end of each financial year and not later than three months after the commencement of the new financial year, the Farmers' Organisation shall cause its accounts to be audited by such authority and in such manner as prescribed in the rule.

During audit of selected Divisions, records relating to meetings and audited accounts were called for but were not provided by the concerned divisions. In response to the audit query, the department stated (August 2018) that records regarding conduct of meetings of the various committees and audit of accounts of the Farmers' Organisations were maintained at WUAs level and they did not furnish the details to the respective division offices except one division (Hanumangarh division II) where WUA's meeting register was found on record but follow-up action on decision taken in meetings was not available in the records.

Non-availability of information in the divisions in respect of meetings and maintenance and audit of accounts by WUAs shows that monitoring mechanism to oversee the functioning of the WUAs was non-existent due to which maintenance and timely audit of accounts of the WUAs could not be vouchsafed in Audit.

3.1.5.5 Collection of water charges

Availability of resources is an important factor for success of any institution. In RFPMIS, collection of water charges was the main source of funding of a WUA. Share of water charges collected in particular operation was to be allocated as a grant to the particular WUA.

Section 17 of RFPMIS Act stipulates that the WUAs should raise demand and ensure collection of water charges. Section 32 provides that all the amount payable or due to a farmers' organization, if not paid on demand, should be recovered as arrears of land revenue.

The water charges were to be collected from farmers as per rate prescribed by the State Government[13].

Audit scrutiny of the test-checked 16 divisions where WUA were formed revealed that water charges were not demanded by WUAs in 12 divisions while in remaining four divisions[14] there was under recovery of water charges by 73.70 *per cent*. In reply, Government accepted the observation and stated (August 2018) that as against demand of ₹ 46.45 crore, water charges amounting to ₹ 12.20 crore (26.26 *per cent*) were collected in these four divisions during 2015-16 to 2017-18. It was also stated that water tax collection was postponed during October 2016 and 2017-18 by the State Government. In respect of the 12 divisions, it was stated that due to non-raising of demand of water charges and non-taking of interest by WUAs, the collection of water charges could not be ensured.

3.1.6 Grant to WUAs

3.1.6.1 Transfer of grant-in-aid to WUAs

Section 24 of the Act envisages the resources of the farmers' Organisation;

(i) grants received from the Government as a share of the water tax collected in the area of operation of the Farmers Organisation;
(ii) such other funds, as may be granted by the State and Central Government for the development of the area of operation;
(iii) resources raised from any financing agency for undertaking any economic development activities in its area of operation;
(iv) income from the properties and assets attached to the irrigation system within its area of operation;
(v) fees collected by the Farmers Organisation for the service rendered in connection with better management of the irrigation system; and
(vi) sums received from any other source.

As per guidelines on command area development & water management progarmme issued (December 2013) by Government of India, Ministry of Water Resources, one-time functional grant at the rate of ₹ 1200 per hectare was payable to registered/elected WUAs comprising Centre, State and farmers share as ₹ 540:540:120 respectively. The amount received as one-time functional grant will be deposited as fixed deposit in bank account and the interest received will be used by WUAs for performing their functions.

According to the directions issued (July 2014) by Additional Commissioner, Regional Development, Indira Gandhi Nahar Pariyojana Bikaner[15] the grant was to be paid only to those WUAs, which were registered and performing the work relating to distribution of water. The lump sum grant was to be deposited in the bank accounts of WUAs as fixed deposit. The share of ₹ 1080 per hectare of Central Government and State Government was to be paid only after collection and deposit of farmers' share at the rate of ₹ 120 per hectare.

[13] Notification No – F 13(4) Irg/79 dated 24/05/1999.
[14] Gharsana, Srivijaynagar-I, Srivijaynagar-II and Hanumangarh-II.
[15] vide letter no. F.8(8)/training/PIMs/2014-15/1521-23 dated 14/7/2014.

Audit scrutiny of test-checked divisions revealed that EE, Kolayat Lift Division, Bikaner transferred a grant of ₹ 0.81 crore to seven non-functioning WUAs[16] without ensuring that the share of the farmers had been deposited.

No specific reply has been furnished by the Government in this regard. However, the Department replied that Fixed Deposit Receipts (FDRs) have been kept in the custody of the Division with a direction to the bank not to release interest on the FDRs to the WUAs. However, the fact remains that the guidelines issued by IGNP, Bikaner were not adhered to while transferring the grant resulting in transfer of ₹ 0.81 crore to seven non-functioning WUAs.

3.1.6.2 Institutional Support to WUAs under Centrally Sponsored Schemes

Bisalpur Command Area Development Project was a centrally sponsored scheme. Government of India, Ministry of Water Resources, New Delhi sanctioned (August 2006) an amount of ₹ 4.91 crore under centrally sponsored scheme for institutional support to 53 WUAs formed under this Project. An amount of ₹ 0.50 crore and ₹ 3.70 crore was allotted during 2015-16 and 2016-17 respectively to Superintending Engineer (SE), Dam Circle, Bisalpur project Deoli. Audit scrutiny revealed that SE, Bisalpur CAD circle Tonk took seven months to issue direction[17] to the SE Dam Circle Bisalpur Project, Deoli for opening the bank accounts of WUAs so that the amount could be transferred. Audit scrutiny further revealed (May 2018) that the amount could not be transferred to WUAs account through respective divisional offices due to further delay in initiation of action for opening of bank account by SE Dam Circle, Bisalpur Project, Deoli as well as non-providing institutional help to WUAs by XENs and AENs of both divisions under Dam Circle. Thus, the institutional grant could not be transferred to 53 WUAs under Dam circle, Bisalpur Project, Deoli, in absence of their bank accounts resultantly these WUAs remained non-functional.

No specific reply has been furnished by the Government in this regard.

3.1.6.3 Utilization of interest accrued on fixed deposit amount under Rajasthan Minor Irrigation Project

Finance Department, Government of Rajasthan issued (December 2014) consent for reclamation of 336 Minor Irrigation Projects under Rajasthan Minor Irrigation Project (RAJAMIP). The project provided for a fixed deposit (FD) of ₹ 2.00 lakh for each WUA in the joint name of Executive Engineer (EE) WR division and President of WUA for a period of 10 years for sustainability of WUAs. The interest received from the FD was to be utilized by WUA for meeting administrative expenses and performing the functions stipulated in the Act.

Audit scrutiny revealed that the amount of ₹ 6.66 crore was deposited in respect of 333 WUAs under 31 divisions. Scrutiny revealed that interest

[16]Sanwat Minor-I, Sanwat Minor-II, Grandhi Minor, Tejpura Sub-Minor, Tejpura Minor, Ramsingh Minor and Grandhi Sub-Minor.
[17] vide letter no. 2160 dated 4.10.2016.

amounting to ₹ 1.12 crore (up to March 2018) was received by these 333 WUAs. Out of this, 136 WUAs under jurisdiction of eight divisions utilized ₹ 0.15 crore only out of ₹ 0.43 crore available with them which ranged between 5.18 *per cent* and 89.48 *per cent* of the amount available with these divisions. Remaining 197 WUAs under the jurisdiction of 23 divisions had not utilized ₹ 0.69 crore available with them as detailed in ***Appendix 3.1***.

In reply, the State Government stated (August 2018) that the amount could not be utilized as WUAs did not show interest in using the same. It was also stated that directions are being issued to utilize the interest amount as per rule.

3.1.6.4 Preparation of budget by WUAs

As per rule 55 of RFPMIS Rules 2002, Farmers' Organisation shall prepare its budget based on its resources as prescribed in section 24 of the Act before every *Kharif* season for the next financial year and place it before the General Body for its approval.

Audit scrutiny revealed that budget as prescribed in section 24 of the Act was not prepared by WUAs in any of the selected 18 divisions.

3.1.7 Election of WUAs

According to Section 5(1) of the Act, there shall be a Managing Committee for every Water Users' Association. Section 5(2) stipulates that the Project Authority shall make arrangements for the election of President of the Managing Committee of the Water Users' Association through direct election from among its members by the method of secret ballot in the manner as may be prescribed. As per section 5(5) of the Act, the President and the Members of the Managing committee shall, if not recalled earlier under section 10, be in office for a period of five years, from the date of the first meeting.

Audit scrutiny revealed that elections for Managing Committee were not conducted in 70 WUAs under five divisions out of 18 test-checked divisions even after the expiry of tenure of five years resulting in holding of excess tenure ranging from two months to 135 months by the existing managing committee. Details are tabulated below:

WUAs where elections were not conducted

S.N.	Name of division	No. of WUAs		Election last held	Election due to be held in the year
		formed	where elections were not held timely		
1	XEN WR Dn.-II, Hanumangarh	30	19 05	2007 2011	2012 & 2017 2016
2	XEN WR Dn., Jhalawar	35	17 06 01	2007 2009 2012	2012 & 2017 2014 2017
3	XEN WR Dn.-I, Baran	06	01	2009	2014
4	XEN WR Dn., Pratapgarh	06	02 02 02	2009 2010 2013	2014 2015 2018
5	XEN WR Dn., Karauli	16	08 03 01 02 01	2006 2009 2010 2011 2012	2011 & 2016 2014 2015 2016 2017
Total		**93**	**70**		

Source: Information provided by the Division offices

Failure to conduct election after expiry of tenure was a violation of RFPMIS Act.

Government accepted the facts and stated (August 2018) that due to lack of budget and staff, the election could not be conducted timely. The reply is not acceptable as Section 15 of the RFPMIS Rules 2002 prescribes that the elections were to be held under the general superintendence and control of Commissioner appointed under the Act. Though the Commissioner has been appointed under Section 35 (3) and (4) of the Act, timely conduct of election could not be ensured.

Government should make efforts for conduct of elections timely as delays in this regard indirectly help in establishing monopoly of the incumbents.

3.1.8 Expenditure on office buildings and furniture

For effective functioning of WUAs, an urgent need for construction of office buildings for strengthening of WUAs was assessed by the Government of Rajasthan in October 2010.

Audit scrutiny of records revealed that 92 office buildings under six divisions[18] were constructed and furniture like table, chairs, *etc.* were provided by the Department at an expenditure of ₹ 2.23 crore incurred during 2010-11

[18] Hanumangarh-II, Jhalawar, Baran Dn.-I, Pratapgarh, Karauli and Bhilwara Dn.-I.

to 2014-15. However, out of 92 office buildings, except one building[19], none of the buildings were being used by the WUAs due to lack of electricity connection and/ or non-functioning of the WUAs, *etc*.



Office Building of the Water Users Association Number- BK 101, Hanumangarh.
Building was being used as its residence by a family.



Office Building of the Water Users Association, Mamchari, Karauli.
Not being used as office.

Source: Photographs taken during site visits by audit party.

Government stated (August 2018) that in five divisions, all the buildings and furniture are being used by WUAs as per their requirement including 29 buildings of Hanumangarh Division except one building of WUA (BK 101). Government remained silent about buildings under Karauli Division. The reply is not tenable as Executive engineer of Hanumangarh Division confirmed that 28 out of 29 buildings were not being used. Further, joint inspection of two office buildings by the audit party under Jhalawar Division and Baran Division in the presence of the President of WUA and officers from the concerned Divisions also confirmed that buildings were not being used by the WUAs.

3.1.9 Expenditure incurred on repair/maintenance/renovation on irrigation system by the department

According to section 17(b) of the Act, WUAs will carry out such works of both distributary system and field drains in its area of operation with the funds of the associations.

[19] BK 59, Hanumangarh

Audit scrutiny revealed that despite getting their share of water charges as grant from the division office, in 136 WUA's under the two divisions out of 18 test-checked divisions, the work was carried out by the Department by incurring an expenditure of ₹ 6.84 crore. Details are given below:

Expenditure incurred on maintenance and operation of irrigation system

S. No.	Name of division	Year wise expenditure by the Department			Total expenditure (₹ in crore)
		2014-15	2015-16	2016-17	
1	XEN WR Dn., Gharsana	1.08	0.32	0.18	1.58
2	XEN WR Dn.-II Srivijaynagar	4.12	1.05	0.09	5.26
	Total	**5.20**	**1.37**	**0.27**	**6.84**

Source: Information provided by the Division offices

No specific reply was furnished by the Government.

3.1.10 Training to WUAs

RFPMIS Rules, 2002 section 57(XII) prescribes that competent authority shall help in imparting training to members and other persons nominated by the farmer's organisation for efficient discharge of their duty. According to the guidelines issued by Irrigation Department, Government of Rajasthan[20], advance training was to be given to members of WUAs so that they can become operational as soon as the project is commissioned. The Irrigation Management Training Institute IMTI, Kota is responsible for providing training to all the officials of WRD/Agriculture Department and Command Area Development including president/members of WUAs.

Audit scrutiny revealed that the (IMTI) Kota had not prepared any action plan for imparting training to the President and Members of WUAs and trainings were organized in a random manner. Further, information received from the selected divisions revealed that trainings were not imparted to the members / presidents of 215 WUAs out of 519 WUAs.

In reply, Government stated (August 2018) that efforts are being made to impart training to remaining WUAs.

3.1.11 Maintenance of records by WUAs

As per section 30 of the RFPMIS Act 2000, following records were to be maintained by WUAs:

- Upto date copy of Act
- Map of area of WUA along with map of structures and distributary network prepared in consultation with the irrigation department
- A statement of assets and liabilities

[20] vide circular no. 3 dated 23/07/1999.

- Minutes book
- Books of receipt and payment
- Books of purchases and sales
- Register of MB's level field book, work orders, *etc.*
- Copy of audit reports and enquiry reports
- All such other accounts, records and document as may be prescribed from time to time.

Rule 47(XII) of RFPMIS Rules, 2002, prescribes that accounts records viz. cash book, receipt book & voucher file, cheque register, *etc.* were required to be maintained for proper maintenance of accounts.

Audit scrutiny revealed that out of selected 16 divisions where WUAs were formed, none of the WUAs under 12 divisions maintained such records and in four divisions[21] only few records such as Cash Book, Irrigation Tax cashbook, Meeting Register, *Warabandi* Schedule were maintained.

Further, there was no mechanism prescribed by the Department such as periodical verification of such records/registers, *etc.* to ensure that these records are being maintained by the WUA's to ensure compliance of section 30 of the Act.

Besides as per agreement executed between President of WUA and Executive Engineer of concerned divisions the statement of income and expenditure showing receipt of income from the State Government and expenditure there against should be maintained by WUAs and submitted to Executive Engineer of the concerned division each month.

Audit scrutiny revealed that income and expenditure account was not maintained by the 99 WUAs under Srivijaynagar, Division-I. Thus, compliance of the provisions for monthly submission of the income and expenditure statement to the concerned division offices was not ensured. Due to non-maintenance of account, the possibility of misuse of government money cannot to be ruled out.

In response to the audit query, the Department replied (March 2018) that the cashbooks were being maintained by WUAs. The reply is not tenable as only irrigation tax cashbooks (*Sinchai Kar Rokad-Bahi*) containing the details of receipt of water tax from farmers and payment thereof to the State Government were maintained. However, income and expenditure account in accordance with the agreement executed between President of WUA and Executive Engineer of concerned divisions was not maintained. The State Government stated (August 2018) that directions are being issued to WUAs to maintain the records.

[21] Gharsana, Srivijaynagar I, Srivijaynagar II and Hanumangarh Dn.-II.

3.1.12 Monitoring mechanism

3.1.12.1 Constitution of participatory irrigation management cell

A Participatory Irrigation Management Cell headed by Executive Engineer (Works) along with two Assistant Engineers was constituted (September 2010) by the Chief Engineer WRD. This Cell was to monitor all activities relating to Participatory Irrigation Management (PIM) system, such as declaration of project area and project officer, fixing of boundaries of each Water User Association (WUA), preparation of list of members of each WUA, election for WUA's and members, transfer of management of Canal to respective WUA's, training for elected members of every WUA, *etc.* Audit observed though the Act/rules came into existence in 2000/2002, it took the Department eight years to constitute a Monitoring cell.

On being enquired, the Department stated that separate posting of Executive Engineer and Assistant Engineers was not done for the cell. The Engineers working in the Chief Engineer office were authorized to do this work in addition to their own work. The reply was not tenable as non-posting of Executive Engineer and Assistant Engineers separately in the PIM Cell was in violation of the extant orders (September 2010). Further, the engineers cannot be expected to monitor the working of the WUAs and provide effective guidance on the issues related to PIM in addition to the day to day duties entrusted to them. This is reflected in poor implementation of the Act as the required number of WUAs were not constituted, the water charges were not collected, the required committees and sub-committees were not constituted among other deficiencies.

The State Government stated (August 2018) that formation of Participatory Irrigation Management Cell is not possible due to excess work of day to day activity as well as shortage of posts of Executive Engineer and Assistant Engineer.

3.1.12.2 Performance benchmarking of WUAs

Performance Benchmarking could be useful tool for measuring how a WUA is performing in comparison to either (a) other well-functioning WUAs, or (b) established standards or norms.

Audit scrutiny revealed that benchmarking the system for measuring of performance of WUAs was not in place. In reply State Government confirmed (August 2018) that system of benchmarking for measuring performance of WUAs in the state does not exist. To encourage effective functioning of the Farmer's organisations, the Government may contemplate prescribing incentives and disincentives for farmers organisations based on their performance.

3.1.12.3 Deficiency in the Act/Rules regarding system of supply of water through WUAs

Audit scrutiny of Maharashtra Management of Irrigation Systems by Farmers Act, 2005 revealed that Section 7 of the Maharashtra Act provides "*On*

delineation of Command area of Water User's Association, no water shall be supplied by the appropriate authority to the individual holder or occupier and the system of supply of water through WUA shall be binding on all holders and occupiers of such land". This provision was in place to strengthen the system of PIM and ensuring its implementation.

However, in Rajasthan, system of supply of water through WUAs was neither provisioned in the Act nor in the Rules. Besides, no time limit for formation of WUAs was prescribed in the Act and Rules. Thus the Department lost out on an opportunity to strengthen the WUAs and make the RFPMIS really effective.

3.1.12.4 Availability of Consolidated Data

Consolidated information e.g. details of culturable command areas and actual irrigated area under each division, year wise target vis-à-vis achievement of formation of WUAs, year wise demand and collection of water tax by WUAs, division wise demand and distribution of water, working and non-working status of WUAs, *etc.* is of vital importance for proper planning and implementation of the act. However, audit observed that provision for maintaining consolidated information/records at State level was not prescribed in the Act/Rules, in absence of which such information was not being maintained at the office of CE, WRD, Jaipur. The State Government initially replied (August 2018) that this information is being maintained by the individual divisions. However, audit is of the view that in absence of consolidated information, the State Government was not in a position to monitor the implementation of the provisions of the Act and Rules.

Government of Rajasthan informed that it has constituted (February 2019) state level, zone level and project level task force for sustainable functioning of WUAs which will collect and create database to register WUAs information.

3.1.13 Conclusion

The Apex Committee for laying down the policies for implementation of the provisions of Rajasthan Farmers Participation in Management of Irrigation System Act has not been constituted. In selected 18 divisions, against the target of 867 WUAs, only 519 WUAs were formed in 16 divisions while no WUAs were formed in two divisions. There were significant shortfalls in formation of Distributary Committees and Project Committees for various projects. Besides, sub committees were also not constituted in five divisions where WUAs are functioning.

Out of 16 divisions where WUAs were constituted, WUAs in 11 divisions were not performing its mandated functions. The functioning of WUAs was unsatisfactory in the four divisions test-checked during 2015-16 to 2017-18 as only 26.26 *per cent* of total demand of the water charges were collected from the farmers. Financial Management and accounting systems in WUAs were poor as prescribed guidelines in this regard were not followed.

Elections were not conducted after the expiry of regular tenure of five years. Monitoring system at the Departmental level was non-existent. The cell to

monitor the activities relating to PIM was not functioning properly due to lack of staff and Performance Measurement Criteria were not adopted to evaluate the functioning of the WUAs.

3.1.14 Recommendations

- *The Department may constitute the Apex committee as envisaged under the Act so that proper monitoring of implementation of the Act can be ensured.*
- *The Department may take steps for formation of Water User Associations, Distributary and Project committees for all the projects.*
- *The Department may depute staff separately for the Participatory Irrigation Management cell for effective monitoring of WUAs.*
- *The Department may ensure proper utilization of buildings constructed for office use of WUAs.*
- *The Department may ensure proper collection of water charges from users so that financial resources for smooth functioning of WUAs could be arranged.*
- *The Department may ensure timely election of WUAs.*
- *The Department may consider to compile and publish the data for use of all stakeholders.*

Forest Department

3.2 Non-utilization of eco-development surcharges

Non-approval of the proposed eco-development project led to non-utilization of the eco-development surcharge amounting to ₹ 16.12 crore recovered from tourists visiting the Keoladeo National Park

Chief Secretary, Government of Rajasthan (GoR) in March 1995 while observing that the fees being collected at Ghana Bird Sanctuary was quite negligible, acknowledged the need to raise the entry fee/video charges and utilize the money so collected for undertaking development works such as development of educational material for tourists, for making films, for purchase of communication equipment and for arrangement of audio-video presentation to the visitors. For this purpose, need for decentralization and local initiative was stressed upon and it was instructed that a society be formed to take suitable measures to raise entry fee/charges for video camera from foreign nationals as well as Indian tourists.

Accordingly, the Forest Department (GoR) introduced levy of eco-development[22] surcharge and also enhanced entry fee w.e.f. August 1997 for the Keoladeo National Park, Bharatpur, Tiger Reserve Sawaimadhopur/ Sariska and all other sanctuaries. This was notified vide Gazette Notification dated 25 March 1998 and amended time to time.

Test-check (December 2017) of records of Deputy Conservator of Forest (DCF), Wildlife, Bharatpur revealed that a sum of ₹ 16.12 crore was collected between August 1997 and March 2018 as eco-development surcharge and was deposited as revenue under Budget head 0406-01-800-(01) (Income from Eco-development). As per the directions of State Government (April 2007), this amount was to be re-appropriated to the account of society so formed for use only after submission of the detailed proposals for use of this money under eco-development project and approval of the same by the State Government. It was observed that even though, the Deputy Chief Wildlife Warden, KNP Bharatpur had submitted a detailed Eco-development project (January 2011) to the PCCF Rajasthan, no action was taken on it.

On being pointed out (December 2017), the DCF, Bharatpur replied (December 2017) that this amount was to be spent on development of Keoladeo National Park and nearby villages, but, even after regular correspondence, no amount was made available under this head. Hence, even though the amount was collected, however no expenditure has been incurred for eco-development activities due to non-appropriation of the fund to the society by the State Government.

The matter was referred (March 2018 and August 2018) to the State Government for comments. Forest Department, Government of Rajasthan in its reply (February 2019) confirmed the facts and intimated that even after a

[22] Eco Development activities include security and development works in the park area as well as villages in the proximity of the park such as promotion of non-conventional energy, cattle breed improvement, juliflora eradication, promotion of local handicraft, training in hospitality and nature awareness as well as English/foreign language speaking courses for naturalists and rural youth *etc.*

scheme for utilization of Eco Development Surcharge was submitted by DCF, Wildlife, Bharatpur, the State Government did not provide the amount of Eco Development Surcharge to Keoladeo National Park.

Forest Department

3.3 Non-recovery of cost of forest produce

Wrong costing of excavated forest produce (stones) resulted in non-recovery of ₹ 0.83 crore

Ministry of Environment and Forests (MoEF), Government of India issued (May 2012) final sanction for diversion of 69.19 hectare of forest land for up-gradation and realigning of existing 2 lane road to 4/6 lane from Jaipur to Jhalawar under jurisdiction of Forest Division, Bundi. The sanction prescribed that reclamation of quarry should be done under the supervision of the State Forest Department and the same should be afforested before the project was closed. The scope of work included construction of a tunnel on forest land from chainage 41180 to 42300 (in 1120 meter length). The Principal Chief Conservator of Forests (PCCF), Government of Rajasthan issued (May 2012) necessary instructions that the stones excavated from tunnel are forest produce and their value was to be deposited in favour of Forest Department by the user agency which in turn would be utilized for safety, conservation and development of forest animals. The assessment of cost of forest produce would be done as per rules and the amount realized would be deposited with the treasury.

A Committee[23], under chairmanship of Chief Conservator of Forest, Kota was constituted (January 2013) by PCCF for deciding the cost of stones/other materials excavated from the tunnel. The committee recommended (January 2013) recovery of ₹ 82.61 lakh on interim basis as per estimated data of excavated material (165226 cum) provided by National Highways Authority of India (NHAI) and price estimation by Executive Engineer (EE), PWD Division, Bundi (₹ 100/- per cum[24]). The committee considered item 3.9 (i) of BSR 2010 for arriving at the estimated quantity of hard rock and considered 50% of the excavated hard rock as useful. Accordingly, 82613 cum of the estimated hard rock was considered to arrive at a figure of ₹ 82.61[25] lakh. The committee further recommended that actual quantity may be decided by officers of Forest, NHAI, PWD and Mining Department and the difference in value may be recovered. User agency deposited (November 2012 and April 2013) the sum of ₹ 82.61 lakh.

Test-check (September 2015) of records of Deputy Conservator of Forests (DCF), Bundi revealed that the calculation formulae used by the committee, based on the interim valuation report submitted by XEN PWD, Bundi was improper as there was no provision of allotting credit of 50 *per cent* under the item 3.9(i) of BSR 2010.

[23] APCCF Forest conservation and nodal officer, Forest Conservation Act, formed committee for valuation of forest produce to be recovered from tunnel.
[24] Item No. M-057 of Chapter "C" Material
[25] 82613X100= ₹ 82.61 lakh

On being pointed out (September 2015) by Audit, the DCF Bundi replied (September 2015) that after the completion of the excavation work, one of the committee member inspected and recommended that quantity of hard rock actually excavated may be treated as 62405.75 cum and accordingly, a sum of ₹ 31.21 lakh (50% of 62405.75cum @ ₹ 100 per cum) was required to be recovered. Since ₹ 82.61 lakh had already been recovered, there was no need for the user agency to deposit additional amount.

Audit further analyzed the issue and found that the committee's decision to provide 50 *per cent* credit for hard rock recovered is not based on any regulation/laid down norms. The committee should have calculated the total amount recoverable based on the quantity of hard rock excavated. Further, (November 2018), a meeting of the committee members was held to discuss the amount recoverable wherein it was found that as per the Mining Engineer's Report (October 2018), 144943 cum of hard rock had already been put to use for works under short term permit which indicated that the actual quantity stipulated by DCF Bundi (62405.75 cum) was not correct. Considering this, it was found appropriate by the committee to recover ₹ 165.23 Lakh considering 165226 cum as the excavated quantity of hard rock.

Thus, the total recoverable amount should have been ₹ 165.23 lakh[26] and accordingly further amount to be recovered is ₹ 82.62 lakh (₹ 165.23 lakh - ₹ 82.61 lakhs already deposited).

The matter was referred (March 2018 and August 2018) to the State Government for comments. Forest Department, Government of Rajasthan in its reply (February 2019) confirmed the facts and intimated that a demand of ₹ 82.62 lakh had been raised to recover the amount from user agency. Process to recover the amount is in progress.

Forest Department

3.4 Non-recovery of cost of compensatory afforestation

The Forest Department could neither get land for afforestation programme nor recover the cost of compensatory afforestation from the Land Revenue Department and Urban Improvement Trust (UIT), Kota for the forest land handed over and hence tree plantation and development of Green Belt around the city could not be done

The Ministry of Environment and Forests (MoEF), Government of India conveyed (July 1985) approval under section 2 of the Forest (Conservation) Act, 1980 for release of 1250 hectares (ha.) of forest land in Kota district for the purpose of extension of Kota city with the following conditions:

(i) The revenue land admeasuring 2380 ha proposed in exchange be notified first under section 4 of Indian Forest Act, 1927 before the forest land is handed over to Urban Improvement Trust (UIT), Kota;

[26] 165226 cum X ₹ 100 per cum = 165.23

(ii) tree plantation in the allotted land be undertaken at the cost of project authorities;
(iii) 50 metre green belt be raised around the city and trees be planted on both sides of the road constructed in the city area.

A sum of ₹ 47.24 lakh was deposited (June 1990 and April 1992) by UIT, Kota for compensatory afforestation (CA).

Test-check (September 2016) of records of Deputy Conservator of Forests (DCF), Kota revealed that in violation of the condition no. (i) stipulated by the MoEF, Government of India, only 419.70 ha. of revenue land was transferred in favour of Forest Department. The balance land admeasuring 1960.30 ha. (2380.00- 419.70) has not been transferred till date. Further, the complete payment for the compensatory afforestation was not made and sum of ₹ 34.26 crore[27] is required to be deposited by the UIT, Kota

On being pointed out (September 2016, January 2017 and November 2017) by Audit, the Department accepted (June 2017 and October 2017) that the balance land measuring 1960.30 ha. and a sum of ₹ 34.26 crore was still to be recovered from the user agency. Though the reply confirms the facts, the revenue land, in exchange for forest land, was required to be notified as reserve forest before handing over the forest land to the user agency as per MoEF letter mentioned *ibid.* Failure to adhere to this important condition has now resulted in Forest Department neither being able to recover the cost of CA nor getting the required land in return from Revenue Authorities.

Matter was referred (March 2018) to State Government for comments, reply was awaited (May 2019).

Public Works Department

3.5 Irregular expenditure due to not using steel sourced from primary producers

In violation of the Departmental directions stipulating use of steel sourced from primary producers only, Public Works Divisions at Jalore and Neem Ka Thana allowed use of steel procured from local manufacturers for construction of buildings, which resulted in irregular expenditure of ₹ 1.24 crore besides the possibility of lack of quality in the construction work cannot be ruled out

Chief Engineer (CE), Public Works Department (PWD), while highlighting that the use of poor quality of steel procured from local vendors affects adversely the quality and life of the assets created, issued (July 2012) instructions that the steel should be sourced from primary producers such as Steel Authority of India Limited (SAIL), Rashtriya Ispat Nigam Limited (RINL), Tata Tiscon, Essar and Jindal Vijaynagar in the construction of buildings and bridge works. Besides, it was also directed to ensure

[27] 2380 ha* ₹ 145925 = 347301500-4724605 The rate of CA was revised to ₹ 1,45,925 per hectare w.e.f. 1 January 2014.

amendments in the terms of contract conditions in the tenders awarded from July 2012 onwards to incorporate this condition. Further, the CE directed (January 2013) that the procurement of steel from other steel producers may be allowed, by providing a Conversion Agent[28] certificate from primary producers, not being more than two years old, specifying that such steel products have been manufactured from the billets procured from the primary producers and rerolled steel has not been used in manufacturing.

Test-check (December 2016 and March 2017) of records of Executive Engineer (EE), PWD Division, Neem ka Thana and EE, PWD Division, Jalore revealed that these divisions did not ensure usage of steel/billets procured from primary producers in four construction works and an amount of ₹ 1.24 crore[29] was spent on procuring sub-standard steel, in violation of the instructions and terms of conditions of the contract. Thus, the possibility of quality of these works, being compromised due to non-use of steel from primary producers, cannot be ruled out. The use of sub-standard steel has resulted in irregular expenditure of ₹ 1.24 crore.

On being pointed out (March 2018 and May 2018) by Audit, the State Government replied (June 2018) that:

- In one case relating to EE PWD division Jalore, only *Premier brand TMT bars* were used in construction of Excise Thana and Assistant Excise Office Building at Jalore, and *Krishna brand TMT* bars were used in construction of Sub-tehsil building at Jeewana, which met the quality standards as per laboratory results and the third party tests conducted. It was also submitted that steel used was manufactured by the original billets producers.
- In case relating to EE PWD division Neem ka Thana, *Premier brand TMT bars* were used in construction of Government Girls College Building at Hod (Khandela) and *Sharma TMT Fe500 brand* bars were used in construction of Sadar Police Thana Building at Neem ka Thana, which were of quality standards as per laboratory results conducted at MSME- testing station.

The reply is not acceptable as the steel used in the construction was not as per specification given in the tender document. Further, the conversion agent certificate was submitted only by M/s Premier Bars Pvt. Ltd. that too was issued on 13/09/2007, which was more than two years old and hence did not fulfil the condition stipulated in the above mentioned circular. It was also seen that M/s Shree Krishna Rolling Mills, Jaipur and Shri Sharma Steeltech (India) Pvt. Ltd, Jaipur were not listed as one of the original producers of steel in the above mentioned circular and also no conversion certificate was submitted by them.

[28] Conversion agent certificate is a certificate received by steel manufacturers from original producers that steel products have been manufactured from the billets procured from original producers.
[29] ₹ 0.16 crore + ₹ 0.31 crore + ₹ 0.60 crore + ₹ 0.17 crore = ₹ 1.24 crore

Public Works Department

3.6 Lack of proper planning led to incomplete road work

In violation of rules and prescribed guidelines, the Public Works Department did not ensure availability of land before initiating road works under Pradhan Mantri Gram Sadak Yojana. This resulted in expenditure of ₹ 2.07 crore on incomplete roads

Para 6.12 of the guidelines of Pradhan Mantri Gram Sadak Yojana (PMGSY) stipulates that it will be the responsibility of the State Government / District Panchayat to ensure that lands are available for taking up the proposed road works. A certificate that Land is available must accompany the proposal for each road work. The details of land made available should be reflected in the local land records to avoid dispute. Further, para 8.4 of the guidelines stipulates that in order to sort out the issue of land availability (including forest land), Project Implementation Unit (PIU) will organise an informal 'Transect Walk' accompanied by the *Patwari* and the *Pradhan/Panch* of the Panchayat/Ward after adequate advance publicity. Rule 351 of Public Works Financial and Accounts Rules (PWF&AR) also lays down that no work should be commenced on land which has not been duly made over by the responsible civil officer.

State Government issued administrative and financial (A&F) sanction for construction of rural roads under PMGSY under two packages[30] between October 2011 and February 2014. Technical sanctions for construction of roads under these packages were issued by Additional Chief Engineers (ACE) and Superintending Engineer (SE) as per competency and jurisdiction between November 2011 and March 2014. Notice to proceed with the work/ work orders were issued between February 2012 and August 2014 in favour of various contractors with stipulated date of completion between 09 November 2012 and 24 June 2015. Total expenditure of ₹ 2.07 crore was incurred on construction of roads.

Test-check (November 2015 and December 2016) of records of SE, PWD Circle, Jalore revealed that the road from Barwa to Gadi Nadi was constructed in 6.700 km length out of 8.500 km and the work for the remaining length was withdrawn (October 2016) due to non- availability of land and pending court case in Hon'ble court. The road from Nandiya to Charawas road was constructed only up to 3.10 km length instead of sanctioned length of 4.00 km due to non-availability of land. Scrutiny further revealed that the SE, PWD Circle, Jalore in the technical reports of these roads had certified that the road passes through revenue land; hence land acquisition was not required. During joint physical verification (January 2018), it was seen that end point of both the roads was not connected to the habitations. Further, the road from Nandiya to Charawas road was closed at 3.100 kilometre by erecting a gate and it was diverted to a *Kachcha* track. The gate on the road has been put by land owners of the area for protection of their fields.

[30] RJ-18-WB-30 and RJ-18-WB-BN-06 having a total of 5 roads

On being pointed out (May 2018) by Audit, the State Government replied (June 2018) that:

- road from *Barwa to Gadi Nadi* could not be completed due to a court case. Gadi Nadi habitation was connected with the road and the expenditure incurred on this road was not unfruitful.
- during transect walk no objection were raised by anyone and the *Kachcha* track was open for traffic. However, later the field owners closed the track completely. *Sarpanch, Gram Panchayat, Nandiya* had informed (March 2014) that Charawas habitation was connected with the road and there was no need to extend the road. Temporary gate was removed from the road.

Reply was not acceptable as due to non-adherence to the provision of PMGSY and PWF&AR the concerned authorities failed to identify the land available for construction of road. The roads as planned could not be constructed and end point habitation of these proposed roads could not be provided with all-weather connectivity. This was a reflection of poor planning on the part of the concerned authorities.

Water Resources Department

3.7 Excess payment due to negligence of the department

The Department lost a case in the Arbitration Tribunal which awarded compensation of ₹ 12.05 crore in favour of the contractor. In gross negligence of stipulated procedure, the Department filed the appeal against this decision before the Additional District Judge, Jodhpur instead of Additional District Judge, Jaipur which was the designated forum for the matter to be heard. Resultantly, the appeal was dismissed by Additional District Judge, Jodhpur and in the process the appeal became time-barred. The Department continued protracted legal proceedings which resulted in further delays and the Department finally paid ₹ 27.06 crore to the contractor.

Additional Chief Engineer, Irrigation Zone, Jodhpur accepted the offer of M/s Master Construction, Khar, Mumbai (contractor) for Rehabilitation of Jawai canal system under Rajasthan Water Sector Restructuring Project (RWSRP). The works under the project were to be executed under the jurisdiction of Executive Engineer, Jawai Canal Division, Sumerpur with stipulated date of completion between August 2005 and February 2007. Two works were not started and an expenditure of ₹ 4.61 crore was incurred on three incomplete works up to March 2006.

There were several disputes, since April 2003, regarding rates of extra items as (i) dismantling of existing lime concrete lining (ii) chiseling of hard rock from bed and slop side of canal (iii) extra labour rate for labour work, *etc.* between the Department (earlier known as Irrigation Department, now Water

Resources Department) and the Contractor. An adjudicator was appointed (September 2004) for resolving these disputes, the Adjudicator, while analyzing all the issues raised, advised (September 2005) the Department to look into the matter and take a decision at their end. Being dissatisfied with the decision of the Adjudicator, both the parties presented the case before Arbitration Tribunal, Jaipur. The Contractor submitted (April 2006) a claim of ₹ 26.50 crore before the Tribunal for non-fulfilment of promises by the Department. The Department submitted (December 2006) a counter claim of ₹ 59.73 crore towards loss of agricultural produce and drinking water due to wastage of water. The Arbitration Tribunal passed (December 2011) an award of ₹ 12.05 crore in favour of the Contractor on the grounds of non-supply of detailed working drawings by the Department, non-possession of all the parts of site, *etc.* Against the decision of the Tribunal, the Department filed (March 2012) an appeal before Additional District Judge, Jodhpur. The appeal was rejected (July 2013) by the Hon'ble Court as neither the cause of dispute nor the arbitration seat was under its jurisdiction as the arbitration award was passed by the Arbitration Tribunal, Jaipur. According to section 34 of the Arbitration and Conciliation Act, 1996, no appeal could be preferred after three months of the award of arbitration, hence, after the Judgement of the Additional District Judge, Jodhpur an application to condone the delay was filed (November 2013) by the Department before Additional District Judge, Jaipur which was dismissed (December 2013) as being devoid of any merit. Later, appeals filed by the Department in Hon'ble Rajasthan High Court, Jaipur were dismissed as being devoid of any force (February 2015). Finally, a Petition for Special Leave to Appeal as well as review petition filed before Hon'ble Supreme Court of India was also dismissed (May 2016, July 2016 and October 2016).

Meanwhile, Additional Session and District Judge, Jaipur issued (September 2016) *Decree cum recovery orders* and *Kurki Warrant* (March 2017) against the Department for depositing the amount. In compliance to these orders, Deputy Secretary, Water Resources Department (WRD), Rajasthan, Jaipur issued (March 2017) sanction to deposit the amount in the Court while observing that there was departmental negligence in the matter and directed that proposal for disciplinary action against the erring officials be sent within 15 days. As there was a delay of over six years by the Department in making the payment, the amount to be paid became more than double. Resultantly, the Department had to deposit (April 2017) a demand draft of ₹ 27.06 crore in the Court of Additional Session and District Judge, Jaipur.

On being pointed out (April 2018) by Audit, the Department accepted (June 2018) the facts for delay but denied any negligence and stated that legal proceedings were conducted by legal experts and as no other option was left, payment was made to the contractor as per rules. It was further submitted (August 2018) that the work was got executed from other contractors and total expenditure of ₹ 31.86 crore was incurred**.**

The reply is not acceptable as after the Arbitration Tribunal, Jaipur, decided the case in favour of the Contractor, the Department filed the appeal at the wrong legal forum *i.e.* Additional District Judge Court, Jodhpur instead of Additional District Judge Court, Jaipur. The appeal was rejected and due to the time consumed in pursuing the appeal the Department could not file the appeal at the proper legal forum as it became time barred. Thus, due to the negligence of the concerned authorities, the Department paid the arbitration amount after delay of 64 months and therefore had to make an excess payment of ₹ 15.01 crore.

Anadi Misra

(ANADI MISRA)

Accountant General

JAIPUR, **(Economic & Revenue Sector Audit), Rajasthan**

The 2 JAN 2020

Countersigned

(RAJIV MEHRISHI)

NEW DELHI, **Comptroller and Auditor General of India**

The 3rd January, 2020

Appendices

Appendix 2.1

(Refer paragraph 2.1.11.2)

Excess provision in estimates

1. Richer specification without ensuring its necessity

CE (Roads) PWD Rajasthan Jaipur directed (January 2015) that bituminous macadam (BM) on Rural Roads under Rural Infrastructure Development Fund (RIDF) should not be taken. If additional crust required, Wet Mix Macadam/Water Bound Macadam layer shall be taken as per design.

Scrutiny of records of test checked divisions revealed that in four divisions, 12 cases of various village roads under RIDF were executed by the Department by adopting richer specifications of BM. Thus, the Department, in violation of above directions, adopted richer specification of BM without any justification or assessment of the crust thickness in accordance with the provisions of IRC due to which the cost of work increased by ₹ 245.50 lakh as detailed below:

S. No.	Name of Division	Name of works	Total excess amount on BM after adjustment for tender premium (in ₹)
1	EE PWD Dn. Didwana	Const. and Strengthening work of Phalodi Needar (SH-19) Khatu Village Road 162/950 to 167/0 Ag no 149/2015-16	1507061
2	EE PWD Dn. Ajmer	Package no. RJ-01-06/RIDF-20/5054/P/2014-15(Ag no 197/2015-16)	916551
3	EE PWD Dn. Ajmer	Package no. RJ-01-09/NP/5054/P/2014-15 (Ag no 198/2015-16)	807171
4	EE PWD Dn. Ajmer	Reh. of Patan Tiloniya Harmara (VR) km 0/0 to 8/0 (Add Work) Ag no 72/2015-16	916479
5	EE PWD Dn. Ajmer	Reh. of Kishangarh Ararka road 0/0 to 7/0 under RIDF-20 (Add work) Ag no 64/2015-16	794892
6	EE PWD Dn. Ajmer	Add work of RJ-01-06/RIDF-21/2015-16 Ag no 70/2016-17	173457
7	EE PWD Dn. Ajmer	Add work RJ-01-09/ RIDF-20/2014-15 Ag no 36/2015-16	451659
8	EE PWD Dn. Ajmer	Package no. RJ-01-06/RIDF-20/5054/2014-15 (Ag no 35/2015-16)	203859
9	EE PWD Dn. Ajmer	RJ-01-07/5054/RIDF-20/2015-16 (Ag no 274/2015-16)	
		(1) Ramsar-Kanpura road 0/0 to 8/0	1567739
		(2) Doomera-Bhawanta road km 13/500 to 15/0	597086

		(3) Pisangan-Picholiya road km 15/0 to 17/0	734877
10	EE PWD Dn. Ajmer	RJ-01-09/5054/RIDF-20/2014-15 (Ag no 19/2014-15)	
		(1) Googra-Ladpura Nolkha-Shrinagar km 0/0 to 18/0	6759657
		(2) Pushkar-Govindgarh km 14/0 to 18/0	4841212
11	EE PWD Dn. Amet	Package No. RJ-27-02/RIDFXX/14-15	2448623
12	EE PWD Dn. Tonk	Package No. RJ-32-03/RIDFXX/5054/15-16	1829605
Total			**24549928**

2. Incorrect computation of design traffic for crust thickness

As per para 4.6.1 of IRC:37- 2012, for deciding the design of the pavement, the design traffic in terms of the cumulative number of standard axles to be carried by the pavement during the design life of the road should be computed using the following equation:

$$N = \frac{365 \times [(1+r)^n - 1]}{r} \times A \times D \times F$$

Where A-Initial traffic in the year of completion of construction in terms of the number of commercial vehicle per day (CVPD)

D- Lane distribution factor.

F-Vehicle damage factor.

r- Annual growth rate of Commercial vehicle in decimal.

n- Design life in years

Scrutiny of records of four divisions[1] revealed that in six works the Department incorrectly computed the design of the roads due to wrong considerations of the Commercial Vehicle Per Day (CVPD) in two cases, Vehicle Damage Factor (VDF) in 3 cases and design life in one case. For calculation of Annual growth rate of commercial vehicle (r), it was prescribed that if adequate data is not available or the rate arrived at is less than 5%, then it is recommended that average annual growth rate of five *per cent* may be adopted. However, the Department adopted higher traffic growth rate in five cases without any recorded reason/ data/ working. This led to incorrect adoption of crust thickness. The Department also adopted richer specifications/ incorrect crust composition of BM/DBM and SDBC/BC in these works resulting in extra cost of ₹ 326.25 lakh.

In another three works in two divisions[2], substandard specifications of bituminous and wearing courses were adopted, which may lead to requirement of restoration of pavement in future at considerable extra cost.

[1] EE PWD Ajmer, Didwana, Hindauncity and Sagwara.

[2] EE PWD Sagwara and Dausa.

3. Pavement designed of higher specification

IRC-62 is applicable to Concrete Pavement for low volume Roads with average daily traffic less than 450 CVPD. Para 4.8 of IRC-62 provides that rural roads having traffic greater than 150 CVPD shall have cementitious base of 200 mm.

As per circular issued (September 2014) by CE, Crust thickness of CC pavement for Gramin Gaurav Path Scheme (GGPS) shall be 150 mm.

The Government accorded (December 2014) administrative and financial sanction of ₹ 1302.50 lakh for 29 roads (Package No. RJ-01-01/GGP-I/P/2014-15) under Gramin Gaurav Path Scheme. The tender for the same was accepted (December 2014) by CE (Roads) in favour of M/s Mehta Infra Pvt. Ltd. at cost of ₹ 996.28 lakh. Scrutiny of records of EE, PWD District Division, Ajmer revealed that the traffic census of nine roads of GGPS were not found on records or made available to audit but the Department had taken provision of 200 mm cementitious base against the provision of 150 mm as per direction of CE, which resulted in avoidable expenditure of ₹ 46.13 lakh[3].

Appendix 2.2

(Refer paragraph 2.1.11.2)

Deficient/ wrong provisions in estimates

1. Unauthorised execution due to deviation in road length: Rule 285 of PWF&AR stipulates that after working out all technical and working details and on completion of surveys and investigation, formulation of working drawing/designs, detailed technical estimates be prepared and got sanctioned. Rule 289 also stipulates that estimate amounts to no more than a guarantee that the proposals are structurally sound and the estimates are accurately calculated and based on adequate data.

Scrutiny of records of five divisions[4] revealed that there were wide variation in 18 roads of total length of road executed with reference to length approved in administrative and financial sanction as detailed below;

Unauthorised execution due to deviation in road length (Excess length)

(₹ in lakh)

S. No.	Division	Name of Packages	Name of Roads	Sanction Length (km)	Executed Length (km)	Range of Excess Length (km)	Percentage of Excess Length	Total Expenditure	Unauthorized Expenditure
1	EE Dn. Dausa	RJ-12-01/ RIDF - 22/2016-17	Lawan to Khanpura	3	3.53	0.53	17.67	42.81	7.56

[3] EE PWD Division Ajmer, 18450522 – $\frac{18450522 \times 150}{200}$ = 4612631

[4] EE PWD Division Dausa, Dhariawad, District Dn.Jodhpur, Kushalgarh and Sagwara.

2	EE Dn. Sagwara	RJ-14-04/RIDF-21/2015-16	Gamda Bamniya to Piplaganj	7.5	10.5	3	40	118.21	47.28
3	EE Distt Dn.-I Jodhpur	RJ-21-01/RIDF-20/2014-15 Ag no 2/2015-16	Bucheti to Ram Chowki Km 0/0 to 1/700	1.7	2.786	1.086	63.88	27.26	17.41
Total								**188.28**	**72.25**

Short execution due to deviation in road length (Short length)

(₹ in lakh)

S. No	Division	Name of Packages	Number of Roads	Sanction Length (km)	Executed Length (km)	Short Leng-th (km)	Percent age of Short Length	Expend-iture
1	EE Dn. Dausa	RJ-12-01/RIDF-22/2016-17	A/R to Dulhapura	6.3	5.241	1.059	16.81	59.55
2	EE Dn. Dausa	RJ-12-01/RIDF-22/2016-17	Mandawari to Mahariya via Kishorepura Km 0/0 to 4/0	4	3.260	0.740	18.5	51.31
3	EE Dn. Dausa	RJ-12-03/RIDF-22/2016-17	Dausa Kundal Guddha Katla Bandikui Km 11/0 to 22/0	11	7.405	3.595	32.68	234.47
4	EE Dn. Dhariyawad	Const of Lohagarh to Parsola road Km 6/0 to 13/500 TAD	Lohagarh to Parsola road Km 6/0 to 13/500	7.5	6.050	1.450	19.33	108.79
5	EE Dn. Dhariyawad	Job no CRF-794/RJ/2013-14	Salumber Jhallera Dhariyawad Pratapgarh Km 33/0 to 46/0	13	7.140	5.860	45.08	310.97
6	EE Dn. Sagwara	RJ-14-01/RIDF-20/2014-15 Ag no. 88/2014-15	Aspur-Vijvamata	7	5.385	1.615	23.07	129.94
7	EE Dn.-I Jodhpur	RJ-21-01/RIDF-21/2015-16 Ag no. 101/2015-16	Kangta to Devnagar	9	8.026	0.974	10.82	64.14
8	EE Dn.-I Jodhpur	Ag no 2/2015-16	Borunda Road Km 8/0 to 13/0	5	4.055	0.945	18.9	43.78
9	EE Dn.-I Jodhpur	Ag no 2/2015-16	Basni Harisingh to Suwana Km 0/0 to 2/500	2.50	1.943	0.557	22.28	30.58
10	EE Dn.-I Jodhpur	Ag no 2/2015-16	Daikara to Burkiya via Salwa Kallan Km 0/0 to 4/0 and 5/0 to 6/0	5	3.443	1.557	31.15	27.44
11	EE Dn.-I Jodhpur	RJ-21-02/RIDF-22/2016-17 Ag no 67/2016-17	Asop to Borunda 20/0 to 25/0	5	4.130	0.87	17.40	43.26

12	EE Dn-I Jodhpur	RJ-21-03/RIDF-19/2013-14 Ag no 45/2013-14	Bhavi Piparcity Maganiya Khinwsar Km 42/0 to 60/0	18	16.626	1.374	7.63	383.78
13	EE Dn-I Jodhpur	RJ-21-04/RIDF-19/2013-14 Ag no 40/2013-14	Sathin to Gotan Km 0/0 to 21/0	21	15.946	5.054	24.07	588.57
14	EE Dn Kushalgarh	RJ-03-05/RIDF-21/2015-16	Bhilkua to Dungra via Sajjangarh	10	7.40	2.60	26.00	110.56
15	EE Dn Bonli	RJ-28-03/RIDF-22/2016-17	Khedi to Batoda road	16	10.00	6.00	37.50	77.18
Total								**2264.32**

Length of roads executed increased up to 18 to 64 *per cent* in three roads and decreased up to eight to 45 *per cent* in 15 roads in comparison to estimated length. The road length was taken in estimates without adequate survey and investigation and resulted in unauthorised/ short execution of road length.

2. Construction of new roads in deviation of Government Circular: As per circular (December 2014) of PWD, the construction of cement concrete (CC) roads under Gramin Gaurav Path Scheme (GGPS) would be undertaken on already existing CC/ bituminous roads and therefore, a new sub-base or preparation of ground for fresh CC roads will not be required. It was stipulated that while giving the work under GGPS, the Department would ensure that items like excavation of earth, construction of granular sub base and laying of compacted graded stone aggregate should not be included in the estimates. This would exhaust the entire budget of the scheme given for the purpose without having quality construction.

The Department accorded (December 2014 and September 2016) administrative and financial sanction for construction of CC roads under GGPS for 2154 and 2086 works respectively in Rajasthan. The work orders for execution of works were issued by respective divisions.

Scrutiny of records of the six[5] divisions revealed that in eight cases the Department included the items of excavation of earthwork, construction of granular sub-base and laying of compacted graded stone aggregate in the estimate of works and works were awarded accordingly. Expenditure of ₹ 588.49 lakh could have been avoided by not including these items in the estimates and constructing the CC roads on already existing CC/bitumen roads. This would have helped the Department to use the money to connect more areas with CC roads.

3. Avoidable expenditure due to inflated estimate: The administrative & financial sanction of widening and strengthening of Sikar-Tatanwa-Binjashi-shahpura-Dayalpura-Didwana-Barangana-Akoda-Chandi-Safed-Asarwa-Manana-Modi-Charma-Besroli-Gigaliya-harnwa-Gular-Bhakri-Rid-Peech-Baighati-Puskar

[5] EE PWD Dn. Dhariawad, Distt.-I Jodhpur, Kushalgarh, Neem ka Thana, Sagwara and Shahpura (Bhilwara).

road, (MDR-181) under CRF was accorded for km 42/0 to 82/0. The tender was accepted (March 2016) by CE(NH) in favour of M/s SPC Infrastructure Pvt. Ltd. at cost of ₹ 3363.61 lakh and work order was issued (April 2016) by EE PWD Didwana.

Scrutiny of estimate of the work revealed that in addition to sanctioned road work on the villages (Dayalpura, Lalasari, Supka, Maidasar bas, Didwana, Nimbi Kallan, Nimbi Khurd, Begsar and Akoda) situated along km 42/0 to 82/0 of MDR-181, the work on lateral road of Dayalpura, Lalasari and Kurli for the length of 4500m, 3000m and 2000m respectively was also irregularly taken in the sanctioned estimate and works were executed accordingly. The Department prepared inflated estimate for the road work as these lateral roads were not part of MDR-181 and could not be constructed from CRF fund, this resulted in irregular avoidable expenditure amounting to ₹ 259.08 lakh.[6]

In reply, the State Government stated (October 2018) that after completion of the MDR road, heavy traffic was expected on this route. Hence to ensure safety on the road, provision for construction of lateral roads was taken. Reply is not acceptable as these lateral roads were not part of MDR- 181 and therefore could not be constructed from CRF fund.

4. Change in scope after sanction of tender: Rule 7(3) of Central Road Funds Rule provides that there shall not be any change in scope of work from administrative approval. Rule 7(8) also provides that the revised estimate shall not be considered by the Central Government.

The construction of High Level Bridge in km 7/0 (Bhumada Villege) with approaches across river Kali Sindh on Bakshni Raipur Pirwa Rampuriya Patpara road up to MP border (MDR-177) was taken up under CRF with administrative approval (October 2015) of MoRTH and work was entrusted (January 2016) to M/s H.G. Infra Engineering Pvt. Ltd. for ₹ 4069.81 lakh. As the work was under progress, the State Government sanctioned (July 2017), an additional 5.800 kilometer length of road costing ₹ 1081.74 lakh. The cost of additional length of road was also charged by the Department to the CRF fund as extra/ excess items. As such, the construction of additional length of road was not provided in the sanctioned estimate.

This resulted in change in scope of the sanctioned works and also irregular expenditure of ₹ 2826.25 lakh.

5. Avoidable expenditure due to construction of four lanes: For the purpose of design, IRC-73 prescribes the capacity of different types of roads. For a two-lane road having seven-meter carriage way with normal earthen shoulder, the capacity prescribed in terms of passenger car unit (PCU) is 10,000 in both directions and for a four lane divided highways it could be 20,000–30,000 PCU in both directions depending on the actual conditions.

[6] Cleaning & grubbing -3.72 hecx₹ 9000=₹ 33480.00; E/W exc-17521.30cumx ₹ 40 = ₹ 700852.00; Add for E/W-66099.75cumx₹ 30=₹ 1982992.00;GSB-6109.64x300.00=1832892; WMM-4903.79x₹ 1000.00=4903790.00; Primer coat-36915.37sqmx ₹ 30 = ₹ 1107461.00; Tack coat-36915.37sqmx₹10.00=369154.00;DBM-1795.37cumx6500= 11669905.00;BC-1426.22cumx ₹ 1800 =2567196.00 Total=25908198

MoRTH accorded (March 2015 and September 2016) administrative approval for three roads[7] under CRF and tenders were accepted (March 2017) by CE (NH). The work orders were issued by EE PWD Division Didwana. Scrutiny of records revealed that the Department decided to construct four lane divided carriageways ignoring the fact that road had only 11649/ 5217/5219 PCU in these roads. As such, these roads did not have enough PCU to qualify for widening to four lanes. Thus, the expenditure of ₹ 1266.37 lakh incurred on construction of the four lane roads was avoidable.

In reply the State Government stated (October 2018) that the road is one of the busiest roads of Didwana City and connects the SH-60, SH-7D and Mega Highways therefore for eradicating the problem of heavy traffic four lanes were constructed. Reply is not acceptable as these roads did not have enough PCU to qualify for widening to four lanes as per IRC-73.

6. Unauthorized expenditure: The administrative approval of ₹ 5246.06 lakh of construction of 4 lane Railway Over Bridge (RoB) for Railway crossing No.C-33 on Kishangargh - Hanumangargh (Mega highway) road km 149 (Degana-Ratangarh railway line) km 380/6 was accorded (October 2015) by MoRTH and tender was accepted in favour of M/s MCCPL (JV) at cost ₹ 3420.34 lakh. While the work was under progress, MoRTH conveyed (May 2016) the Department to stop the work with direction to get the work done by National Highway Authority of India (NHAI) under BOT (Annuity) scheme. Further, MoRTH issued (October 2016) direction for de-sanction of work under CRF and further directed that no expenditure should be incurred on this work. The CE (NH) also issued (October 2016) direction to SE, PWD, Circle Didwana to ensure stopping of the work with immediate effect and not to create further liability on this account.

7

Name of Road	Length of road/Length of 4 lane (in km)	Cost (₹ in lakh)	Avoidable expenditure (₹ in lakh)
1.Construction of 4-lane CC road for SH-60 and SH-7D km 115/550 (Hospital Choraha) to km 119/050 (Ladnun Phatak) and SH-6- km 162/200 (Nagaur Phatak) to km 164/0 (Madina Masjid) in Didwana.	5.300/5.300	1424.12	1424.12/2 = 712.06
2. Widening to two lane & Strengthening of Ajmer-Badighati-Jayal Ganeri Road, Sh-60 from km 164/0 (kayamkhani Hostel) to 164/900 (Bhagat singh Circle) & km 167/0 (Subhash circle) to 169/500 (Mega Highway, Salasar Choraha).	2.65/1.925	365.99	365.99*1.925/2.65=265.86, 265.86/2 = 132.93
3. Construction of 4-lane of Kuchaman-Didwana-Ladnun road SH-7D km 110/0 (Rehman Gate) to 115/500 (Hospital Choraha).	5.500/4.175	1120.30	1120.30*4.175/5.550=842.75, 842.75/2 = 421.38
Total			1266.37

However, against the direction of MoRTH and CE (NH), an expenditure of ₹ 144.31 lakh was irregularly incurred on the works after October 2016.

In reply the State Government stated (October 2018) that a decision was taken (October 2016) under the chairpersonship of PWD Minister to handover the work to NHAI. Further, SE, PWD, Circle Didwana directed (December 2016) to stop the work at a safe level and therefore, the work was not stopped immediately. The work was withdrawn (March 2017) and handed over to NHAI (September 2017) and the expenditure of ₹ 144.31 lakh was for the period June 2016 to October 2016. Reply is not acceptable as final bill of the contractor and measurement books confirm that expenditure of ₹ 144.31 lakh was incurred after October 2016 which was in violation of directions.

7. Avoidable expenditure due to deviation from sanctioned estimate: Rule 289 of PWF&AR provides that the work should be executed as per technical sanction. As per Rule 322 of PWF&AR Schedule of work- Schedule 'G' shall be prepared on the basis of sanctioned estimate and the work is to be executed as per Schedule 'G'. Scrutiny of records revealed that work was not executed as per sanctioned estimates which resulted in excess/ avoidable expenditure amounting to ₹ 375.27 lakh. Audit noticed deviation in the specification of certain items such as DBM, BC, Dry lean CC, un-reinforced CC and crusted stone in sub-base etc. in the work actually executed in respect of six works and deviation in schedule 'G' in respect of one work as detailed below:

S. No	Name of Division	Name of Work	Item(s)		Excess/ Avoidable expenditure
			To be executed	Executed	
1	EE PWD Dn. Didwana	Widening to 2-lane & strengthening of Nagaur – Salasar (SH-60) road Km 135/0 to 142/0, 149/0 to 153/0, 165/0 to 180/0, 180/400 to 189/0, 190/200 to 193/0	50mm (DBM)	60mm (DBM)	62.85
2		Construction of four lane of Kuchaman- Didwana – Ladnun Road SH-7D Km 110/0 (Rehman Gate) to 115/550 (Hospital Chouraha) Didwana	30mm (BC)	40mm (BC)	30.06
3	EE PWD Dn. Jhalawar	Construction of City Gaurav Path, Jhalawar	10mm (Dry lean CC) 20mm (Un-reinforced CC)	15mm (Dry lean CC) 30mm (Un-reinforced CC)	24.57

4		Construction of City Gaurav Path, Jhalarapatan	20mm (Un-reinforced CC)	30mm (Un-reinforced CC)	27.42
5		Rehabilitation of Patan – Sunel road (MDR-179) Km 0/0 to 15/0	150mm (Crusted stone in subbase)	200mm (Crusted stone in subbase)	43.13
6		Rehabilitation of Patan – Sunel road (MDR-179) Km 15/0 to 29/478	100mm (Crusted stone in sub base) 100mm (CC1:4:8)	200mm (Crusted stone in subbase) 140mm (CC1:4:8)	153.53
7	EE PWD Distt Dn. Ajmer	Construction of Urban Gaurav Path in Kishangarh Nagar Palika	BM SDBC	DBM BC	33.71
				Total	**375.27**

8. Avoidable expenditure due to awarding work without ensuring availability of land

Public Works Finance and Accounts Rules 351 provides that no work should be commenced on land which has not been duly made over by the responsible civil officer.

(i) The Additional Secretary, PWD accorded (November 2016) administrative and financial sanction of ₹ 240 lakh for construction of Papadra to Moodghisya via Shyalawas in 6.00km length under Package RJ-12-04/5054/ML/P/2016-17(RIDF-missing link) with the condition that those work that required land acquisition should not be taken in the scheme. Technical sanction was issued (November 2016) by ACE, PWD, Zone-II, Jaipur for ₹ 240 lakh. The tender was accepted (January 2017) by ACE, PWD, Zone-II Jaipur in favour of M/s Balaji Infra Roads at cost of ₹ 142.54 lakh and work order was issued (January 2017) by EE PWD Division Dausa with scheduled completion date as 05 August 2017. Scrutiny of records revealed that the work could not be completed as of April 2018 due to encroachment on reach 5/500 to 6/00 by villagers even after incurring expenditure of ₹ 100.95 lakh. Besides, the habitants were deprived of connectivity.

(ii) The Additional Secretary, PWD accorded (August 2013) administrative and financial sanction of ₹ 338.80 lakh for construction of roads from Ladli ka Bas to Aluda Khurd (8.70 km length) under Package RJ-12-01/5054/New UCRV after 2001 census/P/2013-14(New UCRV) and technical sanction was issued (September 2013) by ACE, PWD, Zone-II, Jaipur for ₹ 338.80 lakh. The tender was accepted (October 2013) by CE, PWD in favour of M/s Rajendra Singh Bhamboo and work order was issued (October 2013) at cost of ₹ 727.70 lakh by EE PWD Division Dausa with scheduled date of completion as 12/09/2014. Contractor was paid ₹ 227.29 lakh up to 6th& final bill (December 2014). Scrutiny

of records revealed that as per technical report of the work, new road was to be constructed following the available track passing through the revenue land. However, for the geometric improvement of road, extra land width was also to be acquired from adjoining farmers' field but construction of road was started by the Department without taking any step to acquire the adjoining land. During course of construction, cultivator objected and obtained stay order (October 2013) from court. The road could be constructed in reach 0/750 to 7/242 km (6.492km) only. Thus, awarding of road without ensuring the availability of land led to non-completion of road after incurring expenditure of ₹ 227.29 lakh as well as the habitants were also deprived of connectivity of road.

(iii) Tender for construction of village connectivity road works under RIDF-XVIII (Package No. RJ-16-20/5054/VC/RIDF-XVIII/Plan/2012-13 was accepted in favour of contractor M/s Padihar Const. Co. at cost of ₹ 213.60 lakh by the Departmental Committee and conveyed (April 2013) by CE. The work order was issued by EE District. Division-II Jaipur with stipulated date of commencement and completion as 20/04/2013 and 19/10/2013 respectively.

Scrutiny of records of ACE, PWD Zone –II Jaipur revealed that the work was stopped by Forest Department for want of permission as proposed roads (i) Neemala Dagota Road to Bassi km.0/0 to 5/0 and (ii) Bhorgarh to Surethi Road km.0/0 to 3/0 were passing through forest area. Subsequently these two roads were withdrawn under clause 32 of agreement. However, due to non-ensuring availability of land before issuing work order has resulted in avoidable expenditure of ₹ 9.73 lakh on road work of Neemla Dagota to Bassi km.0/0 to 5/0. Also, the purpose of providing road connectivity to habitants was defeated.

9. Irregular expenditure of ₹ 62.46 lakh due to inclusion of item of curing compounding in CC roadwork

A curing compound is a liquid substance that is added as a surface coating on freshly installed concrete. Curing compounds are used to reduce the loss of water or heat in order to create ideal conditions that are favourable to the concrete formation.

Special Condition 04 of NIT provides that the contractor has to submit a suitable mix design for controlled concrete grade M-30 as per para 1501.3 of MORD specification and suitable chemical admixture has to be used by the contractor in controlled concrete grade M 30. The cutting of joints shall be done immediately and suitable joint sealing compound conforming to IS: 1834 shall be applied on the cleaned joint. Curing compound shall be used for curing of C.C. Pavement by the contractor on his own cost.

Scrutiny of BSR rate analysis of Cement Concrete (CC) M-30 revealed that in CC work rate includes curing compound and water and estimates are prepared accordingly. As per special condition at S. No. 4 of NIT, if Curing compound for curing CC is used by the contractor, the payment of curing compound shall be made by the contractor on his own cost. Test check of records of five divisions revealed that in the item of Cement Concrete M-30, curing compound was included for curing of CC roads whereas curing of CC roads was done by the

contractor himself by using water which resulted in irregular expenditure of ₹ 62.46 lakh as detailed below:

S. No.	Name of division	Package Number	Executed quantity in cum (A)	Area for curing in meters (B) (A/0.15=B) (Sq. Mtr.)	Quantity of curing compound (Ltr)	Amount of curing compound (TP)	Net amount ₹
1	Executive Engineer PWD Dn. Mandalgarh	RJ -07-02/5054/ GGP/ Plan/ 2014-15	10986.62	73244.13	24170.563 (73244.13X0.33)	1933645.04 (24170.563X80) (TP -7.11%)	1796162.88
2	Executive Engineer PWD Dn. Hanumangarh	RJ-15-01/5054/ GGP/ Plan/ 2014-15	10181.04	67873.6	22398.288 (67873.60X0.33)	3359743.2 (22398.288X 150) (TP -9.00%)	3057366.31
3	Executive Engineer PWD Dn. Sardarshahar	RJ-11-01/SHW / Non Patchable/ 2012-13	280.00	1866.6666	615.9999 (1866.6666X0.33)	32031.99 (615.9999X 52) (TP +4.86%)	33588.74
4	Executive Engineer PWD Distt. Dn. I Jodhpur	RJ-21-01/GGP-II/ Plan/ 2016-17	9024.51	60163.43	1431016.55 (158.57X9024.51)	1431016.55 (TP -11.11%)	1272030.62
5	Executive Engineer PWD Division Tonk	RJ 32-01/5054/ ML/Plan / 2015-16	878.59	5857.2666	1932.8979 (5857.2666X0.33)	102443.5887 (1932.8979x 53) (TP -14.99%)	87087.29
	Total						**6246235.84**

Appendix 2.3

(Refer paragraph 2.1.14.6)

Non recovery/levy of compensation

S. No.	Name of division	Name of work	Agreement Number	Name of contractor	Work order amount (₹ in lakh)	Stipulated date of		Actual date of completion	Work executed (₹ in lakh)	Compensation levied/to be levied		Amount recovered ₹	Amount to be recovered ₹
						Commencement	Completion			U/s 2	U/s 3		
1	EE PWD Dn. Sagwara	A/R from Ashram Hostel (TAD)	64/ 2016-17	Khushi Const.	30.74	12/2/17	11/7/17	WIP	0	307374	0	0	307374
2	EE PWD Dn. Chittorgarh	RJ-10-04/NP/RIDF-20/14-15	2/ 2015-16	Raghunath Jat	306.2	22/4/15	21/10/15	WIP	277.96	923797	0	0	923797
3	EE PWD Dn. Chittorgarh	RJ-10-04/RIDF-21/15-16	133/ 2015-16	Mateshwari Const.	81.5	18/3/16	17/8/16	3/11/16	0	815020	0	22610	792410
4	EE PWD Dn. Chittorgarh	RJ-10-03/RIDF-17/ML/11-12	5/ 2013-14	Bigaji Const. Co.	203.38	19/4/13	18/10/13	Not Done	0	2033776	17694280	0	3728056
5	EE PWD Dn. Chittorgarh	RJ-10-01/SM&R/12-13	4/ 2013-14	Prithvi Raj Jat	86.33	19/4/13	18/7/13	5/1/15	16.94	4829686	0	51793	4777893
6	EE PWD Dn. Chittorgarh	Rashmi Karohi road (MDR-107) km 1/0 to 2/0 and 3/0 to 7/0	224/ 2013-14	Dhartidhan Const.	130.52	17/2/14	16/7/14	WIP	0	1305126	0	0	1305126
7	EE PWD Dn. Chittorgarh	RJ-10-03/SM&R/NP/12-13	57/ 2013-14	Amol Agarwal	162.04	10/6/13	9/10/13	22/12/14	133.16	288802	0	0	288802

8	EE PWD Dn. Chittorgarh	Renewal of Bhindor-Akola-Ramgarh road /SM&R	60/ 2013-14	Babu Lal Dhakad	111.06	7/6/13	6/9/13	WIP	4.14	1110693	0	0	1110693
9	EE PWD Dn. Chittorgarh	Renewal work RJ-10-02/RSAMB/RIDF-17/2012-13	62/ 2013-14	Raghunath Jat	157.17	17/6/13	16/10/13	20/11/13	108.11	490610	0	9933	480677
10	EE PWD Distt. Dn.-I Jodhpur	Roop Rajat Gosala to Bhola Ram ji ki Uparli Debari	27/ 2015-16	Badri Prasad & Co.	136.97	20/9/15	19/3/16	Withdrawn	102.77	1369662	790508	0	2160170
11	EE PWD Dn. Nokha	RJ-08/BADP/09/15-16	05/ 2016-17	M/s Hari Ram Mangi Lal	355.58	9/6/16	8/1/17	-	133.44	3555837	0	0	3555837
12	EE PWD Dn. Nokha	RJ-08/BADP/07/15-16	03/ 2016-17	M/s Hari Ram Mangi Lal	383.19	9/6/16	8/1/17	WIP	163.96	3831929	0	0	3831929
13	EE PWD Bonli	Construction of ML road	84/ 2016-17	M/s Hem raj Meena	340.77	12/3/17	11/11/17	WIP	207.50	3407654	0	0	3407654
14	EE PWD Bonli	RJ-28-03/RIDF-22/2016-17	77/ 2016-17	M/s Brahm Prakash Modi	739.94	25/2/17	24/11/17	WIP	261.98	7399390	0	0	7399390
15	EE PWD Balotra	RJ-05-03/ML/2015-16	62/ 2015-16	M/s Nemi Chand	223.32	12/12/15	11/5/16	20/12/16	216.94	2233176	0	0	2233176
16	EE PWD Kushalgarh	Const. of City Gaurav path Kushalgarh	43/ 2016-17	M/s Shredhya Construction	141.68	3/3/17	2/9/17	WIP	48.66	930142	0	0	930142
17	EE PWD Kushalgarh	BT road Jalimpura to thunti Kankasiya	03/ 2013-14	M/s Rukkaya Construction	112.15	19/4/13	18/8/13	withdrawn on dt. 02/12/15	60.25	1121468	0	0	1121468
				Total	**3702.54**				**1735.81**	**35954142**	**2484788**	**84336**	**38354594**

Appendix 2.4

(Refer paragraph 2.1.15.2)

Sanction of extra/excess items in deviation from CRF guideline

(₹ in lakh)

S. No.	Name of Division	Name of Work	Nature of main work	Nature of extra/ excess executed	Work Order Amount	Extra/ Excess Amount	Percentage of Extra/ Excess
1	EE Dn Jhalawar	CRF-847/RJ/ 2015-16	High level bridge with approaches	Additional length of road	4069.81	1081.74	26.58
2	EE Dn Jhalawar	CRF-815/RJ/ 2014-15	High level bridge with approaches	Due to modified foundation pattern	1554.74	173.01	11.13
3	EE Dn Jhalawar	CRF-814/RJ/ 2014-15	High level bridge with approaches	Annicut with four lane road	4179.62	685.85	16.41
4	EE Dn Aklera (ACE Kota)	CRF-870/RJ/ 2015-16	Strengthening and renewal of road	Construction of additional length with drain.	1008.37	170.05	16.86
5	EE Dn Didwana	CRF-820/RJ/ 2014-15	Construction of ROB (Rail Over Bridge)	Railway had changed the design due to construction of RUB (Rail Under Bridge).	4349.14	874.80	20.11
6	EE Dn Didwana	CRF-833/RJ/ 2015-16	Widening to two lane and strengthening of road	Geometrical amendment in road profile and taking higher specification Bitumen	3529.48	1744.51	49.43
7	EE Dn Didwana	CRF-832/RJ/ 2015-16	Strengthening and Widening of road	Geometrical amendment in road profile and taking higher specification Bitumen	1879.44	1158.41	61.64
8	EE Dn Didwana	CRF-867/RJ/ 2015-16	Strengthening and Widening of road	Geometrical amendment in road profile and taking specification other than estimate	1026.99	469.75	45.74
9	EE Dn Didwana	CRF-819/RJ/ 2014-15	Construction of ROB (Rail Over Bridge)	Revised drawing from Railway and excess steel in structure	2873.94	387.17	13.47
10	EE Dn Didwana	CRF-831/RJ/ 2015-16	Widening and strengthening of road	Geometrical amendment in road profile and taking higher specification Bitumen	1586.13	747.92	47.15
11	EE Dn Didwana	CRF-866/RJ/ 2015-16	Widening and strengthening	Geometrical amendment in	3363.61	962.47	28.61

			of road	road profile, road security, extra work in water logging area			
12	CE (NH) Jaipur	CRF-816/RJ/ 2014-15	Rehabilitation of road	Construction of by pass of road	3700.02	730.32	19.74
13	CE (NH) Jaipur	CRF-856/RJ/ 2015-16	Widening and strengthening and drain work of road	Specification changed as were not as per IRC	1718.14	292.95	17.05
	Total				**34839.43**	**9478.95**	

Appendix 2.5

(Refer paragraph 2.1.15.4)

Excess payment of price variation

(₹ in lakh)

S. No.	Name of division	Name of work/package	Name of contractor	Amount of price variation paid	Amount of price variation to be paid	Excess payment	Reason for over payment
1	EE PWD Dn Bonli	RJ-28-01/5054/RIDF/XX/2015-16	M/s Devi Lal Chaudhary	3.98	1.99	1.99	Wrong percentage of component
2	EE PWD Dn Hindaun city	RJ-28-02/5054/RIDFXXII/2016-17	M/s Jaiman Const. Co.	3.19	(-)0.19	3.37	Wrong date of bid opening
3	EE PWD Dn Hindau City	Const. Widening SM&AR	R.P. Sharma	1.4	1.01	0.39	Wrong index price
4	EE PWD Dn Balotra	Const. of BT Road under ML RJ-05-05/2015-16	M/s Nemichand	-	(-)1.52	1.52	Wrong date of bid opening
5	EE PWD Dn Balotra	Widening & Strengthening of Dangiawas Balotra Road SH-68	M/s Kera Ram	0.42	(-)1.51	1.93	Wrong date of bid opening/ wrong base quarter
6	EE PWD Dn Balotra	Urban Grurav Path Railway Station to Jasolphanta	M/s B Gautam & Co	1.52	(-)0-51	2.02	wrong base quarter
7	EE PWD Dn Barmer	Rehabilitation work under RIDF RJ-05-01/RIDFXXII/2016-17	M/s Dwarka Das Doshi	(-)2.25	(-)4.86	2.61	Wrong calculation
8	EE PWD Dn Neem ka Thana	Strengthening and Widening Neem ka Thana to Thoi via Bhudoli CRF 786/13-14	M/s Agarwal Const. Co.	10.23	0	10.23	P V not admissible
9	EE PWD Dn Neem ka Thana	CRF-787/13-14/-	M/s Brahma Prakash Modi	12.89	0	12.89	P V not admissible
10	EE PWD Dn Sagwada	63/2015-16(TAD Works)	Jai Gurdev Enterprises	(-)4.33	(-)6.73	2.4	Wrong date of bid opening

11	EE PWD Dn Sagwada	70/2013-14	Balaji Const Co.	32.06	15.14	16.92	Wrong date of bid opening
12	EE PWD Dn Dausa	RJ-12-04/RIDF XX/2015-16/(01/2015-16)	Balaji Const Co.	5.59	(-)9.62	15.21	Wrong date of bid opening
13	EE PWD Dn Dausa	RJ-12-04/RIDF XX/2016-17/(276/2016-17)	Balaji Const Co.	2.43	0.74	1.68	Wrong date of bid opening
14	EE PWD Dn Dausa	RJ-12-06/RSAMB/RIDF 19/13-14/(110/13-14)	Balaji Const Co.	9.11	8.47	0.64	Wrong date of bid opening
15	EE PWD Dn Dausa	RJ-12-03/RIDF 22/16-17	BalaJi Infra Projects P Ltd	3.16	(-)1.48	4.64	Wrong date of bid opening
16	EE PWD Dn Dausa	GGP(263/2016-17)	Heera Lal Saini	3	(-)0.71	3.71	Wrong date of bid opening
17	EE PWD Dn Phulera	RJ 16-13/RIDF XXII/16-17(69/16-17)	Shayam Construction	1.31	(-)2.38	3.69	Wrong date of bid opening
18	EE PWD Dn. Beawar	RJ-01-01/RSAMB/RIDF19/2013-14/66/2013-14	Savinder Jeet Singh	16.73	15.36	1.37	Wrong date of bid opening
19	EE PWD Dist Dn. I Jodhpur	RJ-21-02/RIDF20/14-15(01/2015-16	Dhayal Const Co.	3.62	2.5	1.11	Wrong index price of bitumen
20	EE PWD Dist Dn. I Jodhpur	RJ-21-01/RIDF19/RSAMB/13-14(33/2013-14	B.P Chaudhary	5.14	4.91	0.23	Wrong date of bid opening
21	EE PWD Dist Dn. I Jodhpur	RJ-21-01/RIDF19/13-14(42/13-14	B.P Chaudhary	24.51	16.51	8.00	Wrong date of bid opening
22	EE PWD Dist Dn. I Jodhpur	RJ21-01/MDR/RIDF18/12-13(105/2012-13)	Manda Builders	72.62	10.57	62.05	Wrong date of bid opening
23	EE PWD Dist Dn. I Jodhpur	RJ 21-02/RIDF18/12-13/(119/2012-13)	B.P Chaudhary	11.66	3.36	8.30	Wrong date of bid opening
24	EE PWD Dist Dn. I Jodhpur	RJ 21-06/RIDF18/MLIII/12-13(120/2012-13)	B.P Chaudhary	30.15	3.83	26.32	Wrong date of bid opening
25	EE PWD Dist Dn. I Jodhpur	RJ 21-03/RIDF19/13-14/(45/2013-14)	B.P Chaudhary	21.3	14.68	6.61	Wrong date of bid opening
26	EE PWD Dist Dn I Jodhpur	RJ21-02/RIDF19/13-14/(44/13-14)	B.P Chaudhary	14.13	9.86	4.27	Wrong date of bid opening
27	EE PWD Dist Dn. I Jodhpur	RJ21-04/RIDF19/13-14/(40/13-14)	Mukesh Trading Co.	32.3	25.57	6.73	Wrong date of bid opening
28	EE PWD Jhalawar	255/2014-15,	Satya Const Co	2.15	(-)10.36	12.51	Wrong index price
29	EE PWD Jhalawar	03/2015-16	Ganesh Garhia	2.95	(-)1.51	4.46	Wrong index price
Total						**227.80**	

Appendix 2.6

(Refer Paragraph 2.2.9)

List of protected areas in the state

S. No.	Protected Area Name	District	Area sq.km
A	**National Park**		
1	Ranthambhore National Park	Sawai Madhopur	282.03
2	Keoladeo National Park	Bharatpur	28.73
3	Mukundra Hills National Park	Kota, Chittorgarh	199.55
Total			**510.31**
B	**Wildlife Sanctuaries**		
1	Sariska Sanctuary	Alwar	492.29
1(A)	Sariska 'A' Sanctuary	Alwar	3.01
2	Darrah Sanctuary	Kota, Jhalawar	239.76
3	Jawahar Sagar Sanctuary	Kota, Bundi, Chittorgarh	220.09
4	Jaisamand Sanctuary	Udaipur	52.34
5	Pulwari ki Naal Sanctuary	Udaipur	511.41
6	Sajjangarh Sanctuary	Udaipur	5.19
7	Sitamata Sanctuary	Udaipur, Chittorgarh	422.94
8	Mount Abu Sanctuary	Sirohi	326.10
9	Talchappar Sanctuary	Churu	7.19
10	National Chambar Gariyal Sanctuary	Kota, Bundi, Sawai Madhopur	280.00
11	Nahargarh Sanctuary	Jaipur	52.40
12	Jamwagarh Sanctuary	Jaipur	300.00
13	Desert National Park	Jaisalmer, Barmer	3162.00
14	Ramgarh Vishdhari Sanctuary	Bundi	307.00
15	Keladevi Sanctuary	Karoli, Sawai Madhopur	676.82
16	Shergarh Sanctuary	Baran	81.67
17	Todgarh Raoli Sanctuary	Rajsamand, Ajmer, Pali	475.24
18	Kumbhalgarh Sanctuary	Rajsamand, Udaipur, Pali	610.53
19	Sawaiman Singh Sanctuary	Sawai Madhopur	113.07
20	Sawai Madhopur Sanctuary	Sawai Madhopur	131.30
21	Besrodgarh Sanctuary	Chittorgarh	201.40
22	Bassi Sanctuary	Chittorgarh	138.69

23	Van Vihar Sanctuary	Dholpur	25.60
24	Ramsagar Sanctuary	Dholpur	34.40
25	Kesarbagh Sanctuary	Dholpur	14.76
26	Band Baretha Sanctuary	Bharatpur	199.24
Total			**9084.44**
C	**Conservation Reserves**		
1	Bisalpur Conservation Reserve	Tonk	48.31
2	Jodbeed Gadhwala Bikaner Conservation Reserve	Bikaner	56.47
3	Sundhamata Conservation Reserve	Jalore, Sirohi	117.49
4	Gudha Vishnoiyan conservation Reserve	Jodhpur	2.31
5	Shakambari Conservation Reserve	Sikar, Jhunjhunu	131.00
6	Gogelav Conservation Reserve	Nagaur	3.58
7	Beed Jhunjhunu Conservation Reserve	Jhunjhunu	10.47
8	Rotu Conservation Reserve	Nagaur	0.73
9	Ummedganj Pakshi Vihar Conservation Reserve	Kota	2.72
10	Jawaibandh Leopard Conservation Reserve	Pali	19.79
11	Bansial-Khetri Conservation Reserve	Jhunjhunu	70.18
12	Bansial-Khetri Bagore Conservation Reserve	Jhunjhunu	39.66
Total			**502.71**
	Grand Total		**10097.46**
D	**Zoological Park**		
1	Machia Zoological Park	Jodhpur	-
2	Sajjangarh Zoological Park	Udaipur	-
3	Nahargarh Zoological Park	Jaipur	-
4	Abheda Zoological Park	Kota	-
5	Marudhara Zoological Park	Bikaner	-

Appendix 2.7

(Refer Paragraph 2.2.10)

Position of wildlife census during 2013-17

S. No.	Name of Wildlife	Census					Decrease from 2013 to 2017	Increase from 2013 to 2017	Per-centage
		2013	2014	2015	2016	2017			
1	Leopard	612	420	434	508	507	105	-	-17.15
2	Sloth Bear	957	854	815	902	919	38	-	-3.97
3	Indian wolf	1385	1164	1044	892	888	497	-	-35.88
4	Civets (Bijju)	1870	1533	1488	1673	1716	154	-	-8.23

5	Four-horned antelope	309	359	532	320	360	-	51	+16.50
6	Chital	23141	4038	4274	3672	3205	19936	-	-86.15
7	Indian Gazelle (Chinkara)	41099	40340	42864	41466	46393	-	5294	+12.88
8	Hyena	3449	2509	2367	2370	2599	850	-	-24.64
9	Jungle Cat	4062	4157	4737	5106	5309		1247	+30.69
10	Wild Pig	21650	9732	9994	10979	14466	7184	-	-33.18
11	Black Buck	16560	18021	17697	30530	26258		9698	+58.56
12	Common Langur	49719	29152	23740	22902	8269	41450	-	-83.36
13	Fox	6604	7029	7002	7123	7409	-	805	+12.18
14	Mongooses (Nevla)	3128	2617	2150	2131	1508	1620	-	-51.79
15	Nilgai	84476	65823	70924	73281	77377	7099	-	-8.40
16	Sambhar	22075	747	795	873	867	21208	-	-96.07
17	Indian Porcupine (Sehi)	3676	2768	3271	2893	2999	677	-	-18.41
18	Jackal	25411	21759	21557	21549	22808	2603	-	-10.24
19	Caracal (Siyagosh)	357	707	30	57	76	281	-	-78.71
Total		**310540**	**213729**	**215715**	**229227**	**223933**	**103702**	**17095**	**-27.86**

Major Wildlife				
Year	**2006**	**2010**	**2014**	**2018**
No of Tigers	32	36	45	Information not provided.
Year	**2014**	**2015**	**2016**	**2018**
No. of GIB	103	169	166	Information not provided.

Appendix 2.8

(Refer Paragraph 2.2.15.2)

Position of notified forest area and expenditure incurred on protection and conservation during 2013-18

Year	Geographical area (sq. km)	Reserve forest area (sq. km)	Protected forest area (sq. km)	Unclassified forest area (sq. km)	Total forest area (sq. km)	Percentage of geographical area	Expenditure on protection and conservation (₹ in crore)
2013-14	3,42,239	12,439.26	18,263.02	2042.20	32,744.48	9.57	419.03
2014-15	3,42,239	12,439.26	18,263.02	2042.20	32,744.48	9.57	492.49
2015-16	3,42,239	12,352.75	18,408.87	2066.73	32,828.35	9.59	562.22
2016-17	3,42,239	12,352.78	18,408.85	2066.74	32,828.37	9.59	531.21
2017-18	3,42,239	12,352.78	18,408.85	2066.74	32,828.37	9.59	304.56
Change)((+-) *Per cent*		(-)86.48 (-0.70%)	(+)145.83 (+0.80%)	(+)24.54 (+1.20%)	(+)83.89 (+0.26%)	(+)0.02	2309.51

Appendix 2.9

(Refer Paragraph 2.2.18)

Details of recommendations on which final action is to be intimated to Accountant General

S. No.	Paragraph Number	Recommendation Number	Brief of Recommendation
1	2.1.7.1	3	To intimate full compliance of establishment of National park within 6 months of issue of final notification.
2	2.1.7.1	4	To intimate measures taken for relocation of villages and issue of final notification of National Park for Tiger Project Sariska.
3	2.1.7.1	5	To intimate action taken to submit proposals for increasing compensation package to ₹ 10 lakh for reallocations of six villages.
4	2.1.7.2	10	Out of 94 villages situated in core/critical habitats of 1994.47 sq. km area of RTR and STR 10 villages have been fully relocated. To intimate measure to reallocate remaining 84 villages and to convert CTH area into prohibited /protected area.
5	2.1.7.2	20	To intimate disciplinary action against defaulting officers and fixing responsibilities for not submitting national action plan timely for Sloth Bear at forest block Jaswantpura in Jalore.
6	2.1.7.2	21	To intimate the difficulties faced by the department in relocating the villages from protected area.
7	2.1.7.3	25	The period of district level Committee for mutation of forest land up to 31.12.2018 or to constitute a permanent committee has been approved by the State Government. The factual position of the same has to be intimated to A.G.
8	2.1.7.4	42	To intimate efforts to encourage participation in long term utilization of inputs derived from bio diversity resources.
9	2.1.7.6	46	To intimate the facts along with relevant evidences about completion process of recruitment against the vacant posts.
10	2.1.7.6	49	To intimate the progress of constitution of special tiger protection force in STR.
11	2.1.7.7	51	To intimate the efforts made by the State Government to utilize 60 *per cent* amount of grant received after sanction of first installment.

Appendix 2.10

(Refer Paragraph 2.2.18)

Position of pending recommendations

S. No.	Paragraph Number	Recommendation Number	Brief of Recommendation
1	2.1.7.1	1	Forest policy envisages that five *per cent* of geographical area as to be declared as protected area. Action taken report on the deficiency of 1.72 *per cent* was to be intimated.

2	2.1.7.2	22	The status of establishment of state crime control bureau and the status of crimes of wildlife may be intimated.
3	2.1.7.2	23	Disciplinary action against the defaulting officials who have furnished fake information's in the matter may be intimated.
4	2.1.7.3	26	The land remained pending for mutation (4.86 Ha) is to be mutated under intimation to A.G.
5	2.1.7.3	33	The land remained pending for digitization may be digitized and intimated to audit.
6	2.1.7.3	37	The efforts made for the sanction of project of forest range Byash ki bavri, Jhalamand, Filter Area, Chappi project may be intimated to A.G.
7	2.1.7.3	38	The pending recovery of Chhapi project amounting to ₹ 81.73. crore may be recovered and intimated to A.G.
8	2.1.7.3	40	The amount of land diversion for Kota-Chittorgarh Railway line may be calculated and recovered.
9	2.1.7.4	41	The 10-year plan prepared by Bio Diversity Board for biodiversity conservation may be prepared and forwarded to State Government under intimation to A.G.
10	2.1.7.4	43	The steps taken to notify areas of Biodiversity Heritage Sites to be identified and notified under intimation to A.G.
11	2.1.7.5	44	The Progress of MOU for work with Technical Help group for documentation of traditional knowledge of biodiversity is to be made and intimated to A.G.
12	2.1.7.7	53	The income received as Eco Development surcharge from the parks other than RTR and STR along with the expenditure incurred on the development activities may be intimated.

Appendix 3.1

(Refer paragraph 3.1.6.3)

Details of interest earned and utilized

(Amount in ₹)

S. No.	Name of division	No. of WUA	Interest earned	Utilised amount of interest	Percentage of utilized amount
1	XEN WR Dn.-I, Bhilwara	34	661053	0	0
2	XEN WR Dn., Pratapgarh	04	100000	0	0
3	XEN WR Dn., Sirohi	15	730561	0	0
4	XEN WR Dn., Tonk	09	360210	0	0
5	XEN Chanwali Canal Dn., Jhalawar	05	206250	0	0
6	XEN WR Dn., Jodhpur	03	127500	0	0
7	XEN WR Dn., Jaipur	10	328750	0	0
8	XEN WR Dn.-I, Baran	01	15362	0	0
9	XEN WR Dn., Udaipur	05	173537	0	0
10	XEN WR Dn., Alwar	03	130122	0	0

11	XEN Jawai Canal Dn., Sumerpur	05	53593	0	0
12	XEN WR Dn., Bundi	14	512438	0	0
13	XEN WR Dn., Swaimadhopur	10	376966	0	0
14	XEN WR Dn., Karauli	07	325738	0	0
15	XEN WR Dn.-II, Ajmer	10	510000	0	0
16	XEN WR Dn., Jhalawar	7	207802	0	0
17	XEN WR Dn.-III, Baran	9	122896	0	0
18	XEN WR Dn., Chhabra	1	44448	0	0
19	XEN WR Dn.-I, Ajmer	29	1479000	0	0
20	XEN WR Dn., Sikar	6	148581	0	0
21	XEN WR Dn,. Jalore	3	144192	0	0
22	XEN WR Dn.-II, Sagwara	4	63315	0	0
23	XEN WR Dn., SKAP, Dungarpur	3	111254	0	0
	Total	**197**	**6933568**	**0**	**0**
24	XEN WR Dn., Chittorgarh	20	704724	36500	5.18
25	XEN WR Dn. Pali	19	833744	129000	15.47
26	XEN WR Dn., Dausa	3	118705	25000	21.06
27	XEN WR Dn.-II, Bhilwara	30	400434	104945	26.20
28	XEN WR Dn.-I, Dungarpur	10	194241	66044	34.00
29	XEN WR Dn., Rajasamand	19	754906	282206	37.38
30	XEN WR Dn., Banswara	18	621341	277621	44.68
31	XEN WR Dn., Salumber	17	682805	611000	89.48
	Total	**136**	**4310900**	**1532316**	
	Grand Total	**333**	**11244468**	**1532316**	

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