Report of the
Comptroller and Auditor General of India
(Compliance Audit)
for the year ended March 2022

Government of Odisha

Report No. 2 of the year 2024

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TABLE OF CONTENTS

APPENDICES

Preface

This Report of the Comptroller and Auditor General of India for the year ended 31 March 2022 has been prepared for submission to the Governor of Odisha under Article 151 of the Constitution of India and under provisions of Section 13 and 19A of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971, as amended from time to time, for being laid before the Legislature of the State.

This Report contains significant results of the Compliance audit of the Department of Agriculture and Farmers' Empowerment, Commerce and Transport Department, Forest, Environment and Climate Change Department, Housing and Urban Development Department, Steel and Mines Department, Tourism Department and Works Department of Government of Odisha under the purview of Accountant General (Audit-II).

The instances mentioned in this Report are those, which came to notice in the course of test audit during the period 2020-22 as well as those which came to notice in earlier years but could not be reported in the previous Audit Reports. Matters relating to the period subsequent to 2020-22 have also been included, wherever pertinent.

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

OVERVIEW

Overview

This Report of the Comptroller and Auditor General of India (CAG) for the year ended 31 March 2022 contains five Detailed Compliance Audits on Package for Farmers' Welfare "Krushak Assistance for Livelihood and Income Augmentation", "Application of Environmental Laws by the State Pollution Control Board in Sundargarh District", "State Compensatory Afforestation Fund Management and Planning Authority", "Construction of North-South Corridor – Biju Expressway" and "Odisha State Road Project". This Report also contains 26 Compliance Audit paragraphs.

The primary purpose of the Report is to bring to the notice of the State Legislature significant results of Audit. The Audit findings are expected to enable the executive to take timely corrective action. This would help in framing policies and directives that will lead to improved management of the organisations, thus contributing to better governance.

I. Introduction

Chapter I provides the audited entity's profile, the planning and extent of audit and a synopsis of the significant audit observations. Chapter II, III, IV, V and VI deal with the findings of subject specific Detailed Compliance Audits and Chapter VII with findings arising out of Compliance Audit of various departments.

II. Significant Audit Observations of Detailed Compliance Audit on Package for Farmers' Welfare "Krushak Assistance for Livelihood and Income Augmentation"

Government scheme Krushak Assistance for Livelihood and Income Augmentation (KALIA) having six components aimed to accelerate agricultural prosperity and reduce poverty of cultivators. Compliance Audit on package for farmers under KALIA scheme revealed the following:

- Department did not provide complete databases of the KALIA portal and also other databases which were used in selection and identification of beneficiaries in spite of repeated requests. The Department also did not provide the payment acknowledgement data from bank which authenticate the payment. Out of total disbursement of ₹9,333.01 crore, an amount of ₹2,060.29 crore pertaing to the year 2021-22 disbursed by the Department could not be analysed in the absence of data and information.

  (Paragraph 2.1.3)

- Due to lack of preparedness in planning, the Department did not ensure the feasibility of implementation of the Scheme owing to which out of six components under KALIA scheme approved by the Government, only two components *i.e* 'Support to cultivators for cultivation' and 'Livelihood support for landless agricultural households', were implemented during 2018-21. Further, only three out of five instalments were released to beneficiaries under first component as of March 2021. The two components *i.e* 'Financial assistance to vulnerable agricultural households' and 'Interest free crop loan' were dropped. The remaining two components *i.e.* 'Life insurance support to cultivators and landless agricultural labourers' and 'KALIA Scholarship' are under planning stage even after more than two years from the commencement of the scheme. There was also delay in disbursement of assistance to farmers.

(Paragraph 2.2.1)

- The Department had provided KALIA benefit assistance to 65.64 lakh beneficiaries during 2019-21 and released instalments thrice to 41.64 lakh beneficiaries, twice to 8.09 lakh beneficiaries and only once to 15.91 lakh beneficiaries. This happened due to identification of 9.76 lakh ineligible beneficiaries while implementing the scheme. In addition to this, Audit also analysed the KALIA database, with reference to other databases like SECC, VAHAN, IFMS and HRMS and identified another 2.96 lakh ineligible beneficiaries, bringing the total number of identified ineligible beneficiaries to 12.72 lakh. Against these 12.72 lakh ineligible beneficiaries, the Department had transferred ₹782.26 crore, with remote chances of recovery.

(Paragraphs 2.2.2 and 2.2.2.4)

- Payment of ₹107.64 crore was released to 1.28 lakh account holders in which the names of account holders were different from names of the beneficiaries indicating payment to unauthorised persons.

(Paragraph 2.2.3)

- There was release of all the three instalments to 14.04 lakh Landless Agricultural Labourers without imparting necessary training and capacity building, which defeated the scheme objectives.

(Paragraph 2.2.5)

- Department had extended an undue favour by engaging M/s CSM Technology Private Limited informally for the work without inviting tender.

(Paragraph 2.2.6.1)

- There were critical inconsistencies in the database like changes in names of beneficiaries, bank account number and farmer category in master table to that of applications without logs and audit trails of transactions leading to lack of integrity of data.

(Paragraph 2.2.6.2)

- There was no input control or validation in the data entry form to prevent duplicities and junk entries. Audit noticed that after the transactions were completed and recorded, the vital data were again manually updated without any log or audit trail resulting inconsistent, unreliable and disintegrated database.

(Paragraphs 2.2.6.2 and 2.2.6.3)

III. Significant Audit Observations of Detailed Compliance Audit on "Application of Environmental Laws by the State Pollution Control Board in Sundargarh District"

Audit examined number of applicable environmental laws in Sundargarh district which is one of the most industrialised districts in Odisha. Audit observed the following major irregularities, which need immediate action by the Department.

- Audit noticed that for the 7,238 Ambient Air Quality (AAQ) samples analysed in six stations of the district, average PM_{10} and $PM_{2.5}$ values remained high during 2016-20. Due to high concentration of pollutants and silica dust in ambient air, 2,440 pulmonary cases and 61,698 cases of Silicosis were detected in the district.

(Paragraph 3.2)

- The operation of the conveyor belt by M/s Dalmia Cement (Bharat) Limited without Consent to Establish (CTE) and Consent to Operate (CTO) for over nine years was a major lapse on the part of Regional Officer, Odisha State Pollution Control Board (OSPCB) in enforcement of environmental laws.

(Paragraph 3.2.2.1)

- Two mines failed to maintain Ambient Air Quality standard components of Respiratory Particulate Matter and Suspended Particulate Matter of PM_{10} level during 2016-21.

(Paragraph 3.2.2.2)

- There were 1,100 renal cases handled at Sub-Divisional Hospital (SDH), Bonai due to use of contaminated water of River Brahmani, which flows near Rourkela Municipal Corporation (RMC) and Rourkela Steel Plant (RSP).

(Paragraph 3.3)

- Due to non-implementation of Zero Liquid Discharge (ZLD) by RSP, there was high concentration of fluoride at five outlets/ outfalls ranging from 2.6 mg/l (130 *per cent*) to 17 mg/l (850 *per cent*) against the prescribed standard of 2.0 mg/l. Similarly, at Biological Oxygen Demand (BOD) outlet, concentration of cyanide was 3.6 mg/l (1,800 *per cent*) against prescribed standard 0.2 mg/l. These contaminated outfalls were connected to Guradhi Nullha ultimately polluting river Brahmani.

(Paragraph 3.3.1.1)

- Due to non-establishment of Sewage Treatment Plant (STP), Rourkela Municipal Corporation discharged untreated sewage into rivers Brahmani and Koel causing pollution. No STP was constructed by Urban Local Bodies (ULBs) resulting in discharge of untreated waste water directly into water bodies and open land. Achievement of 100 *per cent* treatment of sewage by March 2020 remained unfulfilled.

(Paragraph 3.3.1.2)

- Due to want of manpower, 100 *per cent* Door to Door (D2D) collection of waste remained unachieved as of January 2021.

(Paragraph 3.4.2)

- Although eight Micro Composting Centres (MCCs) were constructed, they could not be operationalised due to want of electricity, water connection, non-installation of machineries *etc.* even after expenditure of ₹3.40 crore.

(Paragraph 3.4.3)

- The operator of Common Bio Medical Waste Treatment Facility (CBMWTF) had not collected, transported and disposed bio-medical waste within the prescribed time limit of 48 hours and the delay ranged up to 30 days.

(Paragraph 3.5.4)

- Due to non-establishment of barcoding with Global Positioning System (GPS), Health Care Facilities (HCFs) failed to ensure tracking of transportation of Bio-medical Waste (BMW) and its timely disposal.

(Paragraph 3.5.5)

- None of the incinerators was operational as of March 2021 due to want of three-phase power connection rendering the expenditure of ₹97.34 lakh unfruitful. This resulted in burning of bio-waste in open spaces causing environmental hazard.

(Paragraph 3.5.7)

- Unsegregated plastic waste mixed with Municipal Solid Waste (MSW) were dumped and disposed in an unscientific manner creating environmental problems.

(Paragraph 3.6.3)

- Although hazardous waste generation was on increasing trend during the period 2016-20, no programme was devised and implemented to reduce or prevent the generation of hazardous waste.

(Paragraph 3.6.4.2)

IV. Significant Audit Observations of Detailed Compliance Audit on "State Compensatory Afforestation Fund Management and Planning Authority"

State CAMPA was constituted to accelerate the activities for compensatory afforestation, management and protection of forests and wildlife, development of infrastructure and other allied works.

- State CAMPA was constituted in the State with a delay of nine years from the date of notification of CAMPA guidelines by the Government of India (GoI).

(Paragraph 4.2.1)

- In nine cases of diversion of forest land for which Stage-II/ final approval was pending for more than five years, the Department did not realise Net Present Value (NPV) of ₹88.40 crore at revised rate.

(Paragraph 4.3.2)

- There was a shortfall in achievement of compensatory afforestation target by 6,995.97 ha for diversion of forest land since enactment of Forest Conservation Act, 1980 till date.

(Paragraph 4.4.1)

- The conditional works under forest clearance such as elephant underpasses/ overpasses, reptile underpasses were either under progress or not undertaken by user agencies even after two to four years after Stage-II approval.

(Paragraph 4.4.5)

- The number of forest fire incidents increased by 208 *per cent* and the extent of forest area damaged increased by 300 *per cent* in 2021 compared to 2019, despite expenditure of ₹58.84 crore for fire protection out of CAMPA funds.

(Paragraph 4.4.7)

- Out of total funds of ₹2,284.98 crore received from CAMPA, the State CAMPA could utilise the assistance of ₹2074.44 crore during 2019-22.

(Paragraph 4.5.1)

- The annual accounts of state CAMPA could not be finalized since inception, i.e., from 2009 to till 2022.

(Paragraph 4.5.3.1)

- An amount of ₹56.82 crore was irregularly utilised out of State CAMPA funds for construction works.

(Paragraph 4.5.4.1)

- An amount of ₹248.06 crore was diverted from CAMPA funds to Ama JangalaYojana.

(Paragraph 4.5.5.1)

- There were 51 elephant death cases recorded in Athagarh and Dhenkanal divisions from preventable causes due to deficiency in forest foot patrolling, improper utilization of trap cameras, and other protection measures.

(Paragraph 4.7.3)

- Monitoring and Evaluation wing of the State Forest Department (SFD) did not plan or undertake any monitoring or evaluation activities during 2019-22.

(Paragraph 4.7.4)

V. Significant Audit Observations of Detailed Compliance Audit on "Construction of North-South Corridor – Biju Expressway"

This Compliance Audit on Construction of North- South Corridor–Biju Expressway (BEW) project was conducted to assess whether the intended objective of the road project was achieved. The Compliance Audit of the project revealed the following:

- The project with four lanes was not visualised in a comprehensive manner. Works were executed in piecemeal under different schemes. Due to this, issues on alignment of roads and bridges, change in pavement specifications, land acquisition *etc.*, were observed.
- Non-consideration of the recommendation of the Consultant taking into account the prevailing equity IRR as 21.66 *per cent* rendered the State Government to award the road project from Rourkela-Sambalpur on PPP mode with Viability Gap Fund (VGF) instead of Engineering, Procurement and Construction Contracts (EPC) mode.

(Paragraph 5.2.1)

- Preparation of faulty Detailed Project Report (DPR) of the Rourkela-Sambalpur PPP project and non-reduction of cost of utility shifting and forest clearance led to excess provision of ₹134.67 crore towards VGF to the concessionaire.

(Paragraph 5.2.1.1)

- Based on the cost reduction of ₹918.41 crore on Rourkela-Sambalpur PPP project, the concession period should have been reduced proportionately to 16 years. Due to inflated estimate and consequent enhancement of the concession period by six years, the concessionaire would collect additional revenue of ₹4,876.38 crore from the general public including a net profit of ₹2,322.19 crore as per concessionaire assessment.

(Paragraph 5.2.1.2)

- Had the Department carried out proper survey and investigation, the change of scope for 24 works under Rourkela-Sambalpur PPP project costing ₹137.57 crore could have been included in the original scope. By this means, the liability towards VGF would have been only ₹49.53 crore (36 *per cent)* and Government could have saved ₹88.04 crore.

(Paragraph 5.2.1.4)

- The work of widening and strengthening of Sinapalli - Dharamgarh road to two lane (3.75 m to 7 m) from RD 0.0 to 2.00 km and from RD 16 to 24 km was not planned properly. Thereby, this road could not be aligned while converting the road to four-lane BEW as envisaged, resulting in wasteful expenditure of ₹21.91 crore.

(Paragraph 5.3.1.2)

- Inadequate survey and investigation led to execution of a bridge over river Mudra through a separate contract resulting in extra cost of ₹2.12 crore including Goods and Services Tax (GST).

(Paragraph 5.3.1.3)

- Erroneous demarcation of land with structures for construction of a service road at Saradhapali village led to irregular payment of ₹1.13 crore for non-existing structures by the then SE, Bargarh (R & B) Division.

(Paragraph 5.3.1.4)

- Execution of works in deviation to Indian Road Congress specifications, and Schedule of Rate/ Analysis of Rate led to extra expenditure of ₹89.78 crore and ₹52.52 crore, respectively.

(Paragraphs 5.3.1.5 and 5.3.1.6)

- Due to increase in median width during construction of Sohela – Nuapada road, the quantity of burrow earth was increased from 9.16 lakh to 20.30 lakh cum leading to unwarranted extra expenditure of ₹15.13 crore.

(Paragraph 5.3.2.1)

- Increase in height of Cross Drainage in 11 road work construction from Ghatipada to Ampani led to provisioning of excess quantity of earth for

19.85 lakh cum. This was in deviation to the DPR quantity which was unwarranted and thereby resulted in avoidable extra expenditure of ₹25.99 crore.

(Paragraph 5.3.2.2)

- Failure of the Executive Engineer (R&B) Division, Bargarh to check authenticity of the securities submitted by the bidder before award of work led to recession of contract causing avoidable extra expenditure of ₹14.28 crore. Besides, the value of leftover work of ₹16.07 crore due to rescinding the contract was not recovered from the contractor.

(Paragraph 5.5.1)

- Due to delay in land acquisition (LA) process and not effecting timely payment to the beneficiaries necessitated revaluation of the land in Panchupada village of Rourkela-Sambalpur Road as per amended LA Act, 2013 resulting in extra cost of ₹30.28 crore.

(Paragraph 5.6.1)

- A number of patches of rutting, cracks and potholes were found on the Rourkela-Sambalpur road within three years of its completion which exhibits poor workmanship. The Department, however, had not taken any action against the concessionaire for non-maintenance of the road.

(Paragraph 5.8.1.2)

VI. Significant Audit Observations of Detailed Compliance Audit on "Odisha State Road Project"

This Compliance Audit on Odisha State Road Project (OSRP) was conducted to assess whether the intended objective of the road project was achieved. The Compliance Audit of the project revealed the following:

- Laxity in survey and investigation, the scope of many works was changed. Out of 1,103 items of works in four roads, department could estimate the correct quantities only in 43 items. The increase in quantities varied up to 80.68 times of the original value.

(Paragraph 6.2.2.1)

- Unwarranted provision of 11.21 lakh cum capping layer of sand using 500 mm sand in addition adoption of GSB at the rates ranging between ₹286 and ₹700 per cum in the estimates of the eight roads was in contravention to the IRC specification, resulted in an extra expenditure of ₹43.51 crore.

(Paragraph 6.2.3.3)

- Due to lack of adequate planning, contracts had to be terminated and the project had suffered cost overrun of ₹238.36 crore (32.86 *per cent*) and time overrun ranged between 38 and 116 months pertaining to 14 packages.

(Paragraph 6.2.4)

- The expenditure towards Land Acquisition, Resettlement and Rehabilitation and utility shifting was enhanced from ₹88.22 crore to ₹198.44 crore due to delay in acquisition process and deviation in Project Appraisal Document.

(Paragraph 6.3.2)

- Improper reduced provision of defect liability period in four road works, had resulted in avoidable extra expenditure of ₹9.10 crore by the department**.**

(Paragraph 6.4.1)

- In two road works, the Department did not recover differential cost of ₹132.08 crore arising out of retender of balance work as per the provision of Clause 15.4 of GCC, resulting loss to the State exchequer.

(Paragraph 6.4.2)

- Incorrect provision of lead charges from 10 to 68 km instead of five km, resulted in inflated estimates and undue benefit to the contractors to a tune of ₹13.91 crore.

(Paragraph 6.5.1)

- In 13 road works, adoption of MoRT&H data book instead of State SoR resulted in inflation of the project costs and undue benefit of ₹69.54 crore to the contractors.

(Paragraphs 6.5.2)

VII. Significant Audit Observations on Compliance Audit

Non-realisation of motor vehicles tax and additional tax from Goods Carriages

Regional Transport Officers failed to realise Motor Vehicles tax of ₹4.64 crore and penalty up to ₹9.28 crore from 3,081 defaulting vehicle owners.

(Paragraph 7.1)

Short levy of Motor Vehicles Tax

Motor Vehicles tax including additional tax of ₹1.16 crore and penalty of ₹23.26 lakh was short realised from the owners of 4,373 vehicles due to adoption of old rate of taxes.

(Paragraph 7.2)

Non-disposal of Red Sanders wood

Blockage of Government revenue due to non-disposal of Red Sanders wood of ₹349.70 crore.

(Paragraph 7.3)

Non-levy of interest on belated payment of Net Present Value

Interest of ₹95.69 lakh was not levied, as the User Agency had paid the Net Present Value belatedly.

(Paragraph 7.4)

Non-disposal of Timber and Poles

Divisional Forest Officers failed to take timely action for disposal of timber, poles and firewood, which resulted in blocking of revenue of ₹88.37 lakh.

(Paragraph 7.5)

Idle expenditure on construction of modern meat shops

Non-allotment of 29 meat shops led to idle expenditure of ₹1.78 crore and consequent loss of revenue of ₹55.02 lakh.

(Paragraph 7.6)

Undue benefit to the contractors

Excess provision for rates of Ductile Iron pipes in laying of water supply distribution systems in seven municipalities led to undue benefit to contractors for ₹1.05 crore.

(Paragraph 7.7)

Avoidable extra expenditure

Shifting of underground reservoir from Balugaon to INS Chilika for water supply project led to laying of excess pipelines resulted in avoidable extra expenditure of ₹5.16 crore**.**

(Paragraph 7.8)

Wasteful Expenditure

Construction of pedestals for a water supply project, without obtaining permission from the Department of Water Resources (DoWR) led to change in the scope of work, rendering expenditure of ₹91 lakh wasteful.

(Paragraph 7.9)

Non-realization of dead rent and consequential interest

Failure to raise demand for levy of dead rent and consequential interest from non-working mines, resulted in non-realization of revenue of ₹2.06 crore.

(Paragraph 7.10)

Non-realisation of additional amount and short realisation of royalty on sale of coal

Failure to realise additional amount from OCPL and incorrect assessment of royalty on the sale of coal, resulted in non/ short realisation of Government dues of ₹19.88 crore.

(Paragraph 7.11)

Irregular excess payment to foreign company

Non-deduction of Tax at Source, on payment made to foreign company, resulted in irregular excess payment of ₹23.50 lakh to the Odisha Tourism Development Corporation.

(Paragraph 7.12)

Undue benefit to contractors

Excess payment to contractors in deviation from Schedule – H of Engineering, Procurement and Construction Contracts led to undue benefit of ₹11.29 crore to contractors.

(Paragraph 7.13)

Excess payment to contractor

Excess payment to contractor in deviation to Article 13 of Engineering, Procurement and Construction Contract led to undue benefit of ₹1.43 crore to contractor.

(Paragraph 7.14)

Avoidable extra cost due to laxity in survey and investigation

Laxity in conducting survey and investigation led to avoidable extra cost of ₹9.54 crore.

(Paragraph 7.15)

Avoidable extra expenditure due to crust failure

Provision of inadequate crust thickness of a heavy traffic/ axle load road, led to crust failure within 16 months and required further overlaying at an avoidable extra expenditure of ₹3.14 crore.

(Paragraph 7.16)

Non-deduction of voids led to excess payment

Non deduction of voids in gabion box walls led to excess payment of ₹81 lakh to the contractor.

(Paragraph 7.17)

Avoidable extra cost for excess provision of bituminous surfacing and granular sub base

Adoption of excess thickness for bituminous surfacing and granular sub base in deviation to IRC provision led to avoidable extra cost of ₹4.35 crore.

(Paragraph 7.18)

Undue benefit to contractor

Adoption of faulty analysis for calculation of item rates of excavation of foundation in laterite rock inflated the estimated cost by ₹5.83 crore, leading to undue benefit of ₹4.64 crore to the contractor, out of which ₹ 1.23 crore was recovered from the contractor at the instance of Audit.

(Paragraph 7.19)

Wasteful expenditure

Laxity of departmental officers in preparation of estimates for an existing road led to wasteful expenditure of ₹3.54 crore.

(Paragraph 7.20)

Excess payment to contractor

Non-reduction of cost of work under negative change of scope of contract led to excess payment of ₹3.71 crore.

(Paragraph 7.21)

Idle expenditure due to abandonment of work in midway

Improper survey and investigation before commencement of work and adoption of faulty design for a bridge, led to abandonment of road and bridge work, resulting in idle expenditure of ₹1.41 crore.

(Paragraph 7.22)

Inflated estimates led to undue benefit to contractors

Incorrect adoption of transportation cost of GSB, on conveyance of material inflated the estimates of road works and resulted in undue benefit of ₹6.26 crore to the contractors.

(Paragraph 7.23)

Avoidable extra expenditure due to provision of excess width of road

Construction of two-lane road with paved shoulders, in deviation from IRC provisions, led to avoidable expenditure of ₹7.30 crore.

(Paragraph 7.24)

Avoidable expenditure

Utilisation of high cost sub-base material, despite availability of low cost slag, in the construction of road pavement, led to avoidable expenditure of ₹2.76 crore.

(Paragraph 7.25)

Undue benefit to the contractor due to invitation of tender at inflated rate

Invitation of tender, at inflated estimated cost, led to undue benefit to the contractor of ₹18.94 crore.

(Paragraph 7.26)

CHAPTER I

Introduction

CHAPTER I
Introduction

1.1 About this Report

The Compliance Audit Report of the Comptroller and Auditor General of India (CAG) relates to matters arising from the Audit by Accountant General (Audit - II), Odisha relating to 15 Government Departments. There are 114 Urban Local Bodies under the control of Housing and Urban Development Department. The compliance Audit covers examination of the transactions relating to expenditure of the audited entities to ascertain whether the provisions of the Constitution of India, applicable laws, rules, regulations and various orders and instructions issued by the competent authorities are being complied with.

1.2 Profile of Audited Entities

The 15 departments are headed at the Secretariat by Additional Chief Secretaries/ Principal Secretaries/ Commissioner-cum-Secretaries who are assisted by Commissioners/ Directors and subordinate officers under them. The details of expenditures incurred by these 15 Departments in the past five years from 2017-22 are detailed below:

Table No. 1.1: Trend of expenditure

(₹ in crore)

Sl. No.	Name of the Department	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1	Commerce & Transport	469.73	294.00	521.21	636.05	751.78	2,672.77
2	Energy	2,306.43	2,146.36	2,431.76	1,845.59	3,632.38	12,362.52
3	Forest, Environment and Climate Change	615.48	779.52	822.96	930.56	1,755.87	4,904.39
4	Handlooms, Textiles & Handicrafts	137.10	155.82	147.70	172.04	134.37	747.03
5	Home	4120.78	4847.31	4855.60	4,588.15	5,307.94	23,719.78
6	Housing & Urban Development	4682.45	4536.50	5257.05	4,802.67	5,616.05	24,894.72
7	Industries	257.36	295.39	250.04	92.24	363.95	1,258.98
8	Law	249.59	320.39	359.42	400.40	417.31	1,747.11
9	MSME	149.11	157.09	151.42	249.97	349.55	1,057.14
10	Odia Language, Literature & Culture	0.00	131.12	157.65	123.48	189.33	601.58
11	Public Enterprises	8.99	12.88	8.45	8.29	9.02	47.63
12	Science & Technology	59.64	63.31	69.98	98.35	135.95	427.23
13	Steel & Mines	84.33	100.59	101.21	163.48	110.41	560.02
14	Tourism	273.00	191.79	205.26	367.46	497.08	1,534.59
15	Works	4,564.14	4,352.76	5,620.88	5,711.65	6,108.57	26,358.00
	Total	**17978.13**	**18384.83**	**20960.59**	**20,190.38**	**25,379.56**	**1,02,893.49**
	Total Expenditure of GoO	**88,325.00**	**1,04,097.94**	**1,14,491.00**	**1,08,063.73**	**1,95,723.37**	**6,10,701.04**
	Expenditure of above departments as a percentage of total expenditure	**20.35**	**17.66**	**18.31**	**18.68**	**12.97**	**16.85**

(Source: Appropriation Accounts for the years 2017-18 to 2021-22)

1.3 Authority for Audit

The authority for audit by the Comptroller and Auditor General is derived from Articles 149 and 151 of the Constitution of India and the CAG's (Duties, Powers and Conditions of Services) Act (CAG's DPC Act), 1971. The CAG conducts audit of expenditure of the departments of Government of Odisha under Section 13[1] of the CAG's DPC Act, 1971. The CAG is the sole Auditor in respect of Autonomous Bodies which are audited under Section 19(3)[2] and 20(1)[3] of the CAG's DPC Act. In addition, the CAG also conducts audit of other Autonomous Bodies, under Section 14[4] of CAG's DPC Act, which are substantially funded by the State Government.

1.4 Planning and Conduct of Audit

The primary purpose of this Report is to bring the significant 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 magnitude of transactions. The audit observations are expected to enable the Executive to take corrective action, as also to frame policies and directives that will lead to improved financial management, thus, contributing to better governance.

Audit process starts with the assessment of risks faced by various Departments of Government based on expenditure incurred, criticality/ complexity of activities, level of delegated financial powers, assessment of overall internal controls and concerns of stakeholders. Previous audit observations are also considered in this exercise. The frequency and extent of audit are decided based on this risk assessment.

Inspection Reports (IRs) containing audit observations are issued to the Heads of the Department/ field offices after completion of audit. The Departments are requested to furnish replies to the audit observations within one month of receipts of the IRs. Whenever replies are received, audit observations are either settled or further action for compliance is advised. Important audit observations arising out of these IRs are processed for inclusion in the Audit Reports, which are submitted to the Governor of the State under Article 151 of the Constitution of India for laying on the table of the house of the State Legislature.

The total audit universe was 1,325 units of 15 departments. Out of which 298 units were audited during 2020-22. In addition, 13 out of 23 Autonomous

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[1] Audit of (i) all transactions from the Consolidated Fund of the State, (ii) all transactions relating to Contingency Fund and Public Account and (iii) all trading, manufacturing, profit and loss accounts, balance sheets and other subsidiary accounts.

[2] Audit of the accounts of Corporations (not being Companies), established by or under law made by the State Legislature, at the request of the Governor

[3] Audit of accounts of any body or authority on the request of the Governor, on such terms and conditions as may be agreed upon between the CAG and the Government

[4] Audit of (i) all receipts and expenditure of a body or authority substantially financed by grants or loans from the Consolidated Fund of the State and (ii) all receipts and expenditure of anybody or authority where the grants or loans to such body or authority from the Consolidated Fund of the State in financial year is not less than ₹ one crore.

Bodies under the control of these departments which qualified for conduct of audit under sections 14, 19 (2), 19 (3) and 20 (1) of the CAG's DPC Act, 1971 were also audited during 2020-22.

1.5 Draft paragraphs and Compliance Audit

Twenty six draft Paragraphs and five Detailed Compliance Audits on Package for Farmers' Welfare "Krushak Assistance for Livelihood and Income Augmentation", "Application of Environmental Laws in Sundargarh District", "State Compensatory Afforestation Fund Management and Planning Authority", "Construction of North-South Corridor – Biju Expressway", and "Odisha State Road Project" were forwarded, to the Additional Chief Secretary/ Principal Secretaries of the Department concerned between January 2022 and January 2023, with the request to send their responses. Government replies to 16 Draft Paragraphs and five Detailed Compliance Audits were received. The replies have been suitably incorporated in the Audit Report.

1.6 Follow-up action on Audit Reports

With a view to ensure accountability of the Executive in respect of the issues dealt with in the Audit Reports, the Finance Department directed that the Departments concerned should furnish remedial Action Taken Notes (ATNs) on the recommendations of PAC, relating to the Paragraphs contained in the Audit Reports, within four months. We reviewed the outstanding ATNs on the Paragraphs included in the Reports of the Comptroller and Auditor General of India relating to the Departments under the Audit purview of this office and found that recommendations pertaining to the Audit Paragraphs discussed by PAC were not pending as on 31 March 2022.

1.7 Outstanding replies to Inspection Reports

On behalf of the CAG, the Accountant General conducts periodical inspections of the Government Departments to test check transactions and verify maintenance of important accounts and other records as prescribed in the rules and procedures. These inspections are followed up with issue of IRs, incorporating irregularities detected during the inspection and not settled on the spot, which are issued to the Heads of the offices inspected with copies to the next higher authorities for taking prompt corrective action. The Heads of the offices/ Government are required to promptly comply with the observations contained in the IRs, rectify the defects and omissions and report compliance through replies. Serious financial irregularities are bought to the notice of the Heads of the Departments and the Government.

Inspection Reports issued upto 31 March 2022 were reviewed and found that 18,309 paragraphs relating to 3,796 IRs remained outstanding at the end of June 2022 ***(Appendix - I).*** Of these, 1,584 IRs containing 5,787 paragraphs are outstanding for more than 10 years. Even first replies from the Heads of Offices, which was to be furnished within one month, had not been received in respect of 358 IRs issued up to March 2022, though it was pursued through Apex Committee meetings and the Departmental monitoring committee meetings.

This large pendency of IRs, due to lack of corrective action or non-receipt of replies, was indicative of the fact that Heads of the offices and Heads of the Departments did not take appropriate action to rectify the defects, omissions and irregularities pointed out in the IRs.

CHAPTER II

Detailed Compliance Audit on Package for Farmers' Welfare Krushak Assistance for Livelihood and Income Augmentation (KALIA)

CHAPTER II

DEPARTMENT OF AGRICULTURE AND FARMERS' EMPOWERMENT

2. Detailed Compliance Audit on Package for Farmers' Welfare "Krushak Assistance for Livelihood and Income Augmentation"

2.1 Introduction

The State Government approved (December 2018) the Scheme of Package for Farmers' Welfare - "Krushak Assistance for Livelihood and Income Augmentation (KALIA) Scheme" with following five components.

(i) Support to cultivators for cultivation;

(ii) Livelihood support for landless agricultural households;

(iii) Financial assistance to vulnerable agricultural households;

(iv) Life insurance support to cultivators and landless agricultural labourers; and

(v) Interest free crop loan.

Subsequently, in February 2019, a sixth component 'KALIA Scholarship' was added to provide scholarship on merit basis to the children of beneficiaries under Scheme pursuing professional courses in the State.

The aim of the Scheme was to accelerate agricultural prosperity and reduce poverty amongst the cultivators. Loanee as well as non-loanee farmers, sharecroppers[5] and landless agricultural labourers were to be covered under the Scheme. Beneficiaries having the following eligibility criteria were to be selected for the Scheme.

(i) The Farm family constitutes the farmer and his or her spouse along with their dependent children.

(ii) The farmer must be a permanent resident/ domicile of Odisha.

(iii) The farmer or his/ her spouse should neither be an income tax payer nor a Government/ PSU sector employee (including retired staff).

(iv) The amount was to be transferred to the bank account of head of the farm family.

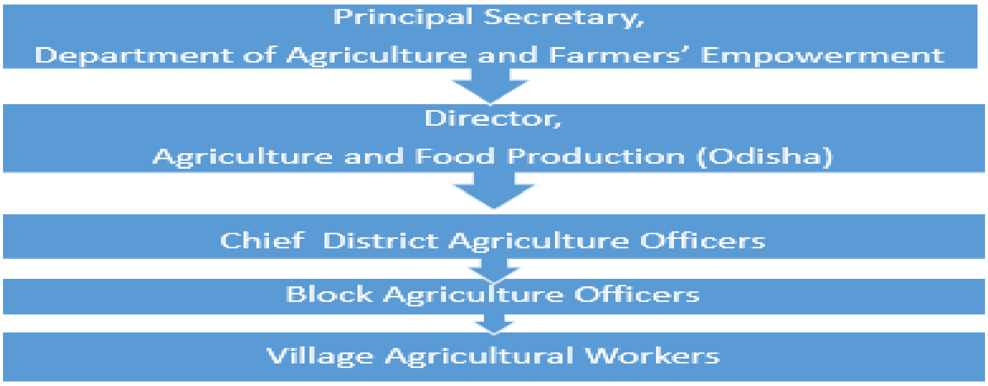
The Department of Agriculture and Farmers' Empowerment (DA&FE) along with the Fisheries and Animal Resources Development Department (F&ARD) and Department of Co-operation, assessed the initial funds requirement of ₹10,310 crore for three years from 2018-19 to 2020-21 for implementation of the Scheme covering 127.29 lakh beneficiaries for six components. Besides, extra two *per cent* was allowed towards administrative expenses for

[5] A farmer who gives part of his or her crop as rent to the owner of the land

implementation of the Scheme. Subsequently, the Department increased (June 2019) the target of beneficiaries from 40.18 lakhs to 75 lakhs for the first two components of the scheme. A web based IT system named as KALIA portal (www.kalia.co.in) was developed for selection of beneficiaries, managing payments and monitoring of the Scheme.

The Scheme was to be implemented by the Department of Agriculture and Farmers' Empowerment as per the following organisational chart.

Chart-1: Organisational Chart



2.1.1 Audit objectives

Audit of the Scheme was undertaken during September 2019 to April 2021 (split periods due to pandemic) with the objectives to examine whether:

- the process of identification and selection of beneficiaries was equitable, fair and transparent;
- the desired benefits reached to the targeted beneficiaries; and
- the IT System developed for the Scheme was robust and facilitated selection of eligible beneficiaries and eliminated ineligible ones.

2.1.2 Scope of Audit and methodology

Audit scrutinised (September to October 2019 and February to April 2021) the scheme records for the period from 2018-19 to 2020-21 maintained by the Department, Director of Agriculture and Food Production, Odisha, Director, Horticulture, Odisha and Odisha State Agricultural Marketing Board (OSAMB). The electronic data of KALIA Portal furnished by the Department was analysed using Structured Query Language (SQL) and python. The reports of KALIA portal were also examined. The Audit findings were discussed in the Exit Conference held on 18 May 2022 and replies of the Government have been suitably incorporated in the Report.

2.1.3 Limitations in the Audit

Department used the database of beneficiaries from two farmer databases[6] and also collected fresh applications from farmers through KALIA portal for

[6] 1. Sharecroppers' Data maintained by Food and Civil Supplies Department and 2. Seed Subsidy Direct beneficiary database of the Department

Department did not provide complete databases of the KALIA portal and also other databases which were used in selection and identification of beneficiaries in spite of repeated requests. The Department also did not provide the payment acknowledgement data from bank which authenticate the payment. Out of total disbursement of ₹9,333.01 crore, an amount of ₹2,060.29 crore pertaing to the year 2021-22 disbursed by the Department could not be analysed in the absence of data and information.

selection of beneficiaries and 14 databases[7] to screen the applicants' eligibility for the scheme. All the above databases were required for detailed audit analysis of the functioning of the scheme. However, the Department did not provide complete databases of the KALIA portal and also other databases which were used in selection and identification of beneficiaries in spite of repeated requests. The Department also did not provide the payment acknowledgement data from bank which authenticate the payment. However, audit examined this scheme with the limited data[8] and records/ documents furnished by the Department upto March 2021. Out of total disbursement of ₹9,333.01 crore, an amount of ₹2,060.29 crore pertaining to the year 2021-22 disbursed by the Department could not be analysed in the absence of data and information.

2.1.4 Budget provision and Expenditure

Budget provision, re-appropriation, advance from Odisha Contingency Fund (OCF) and expenditure incurred under the Scheme for 2018-22 are as shown in **Table No.2.1**:

Table No.2.1: Details of budget provision, re-appropriation, advance from Contingency Fund and the expenditure incurred during 2018-22

(₹ in crore)

Year	Budget Provision under Farmers' Welfare	Re-appropriation from other heads of accounts	Advance from OCF	Total Provision	Expenditure	Surrender/ Savings
2018-19	250.00	(+) 681.00	1,244.66	2,175.66	2,175.66	0
2019-20	5,501.00	(-) 48.01	-	5,452.99	3,243.01	2,209.98
2020-21	3,195.00	-	-	3,195.00	1,854.05	1,340.95
2021-22	1,827.85	(+) 259.47	-	2,087.32	2,060.29	27.03
Total	**10,773.85**	**892.46**	**1,244.66**	**12,910.97**	**9,333.01**	**3,577.96**

(Source: Data compiled from records of the Department, Government of Odisha)

7 1. National Food Security Act (NFSA), 2. National Population Register (NPR), 3. Socio Economic Caste Census (SECC) 4. Unique Identification Authority of India (UIDAI), 5. Pradhan Mantri Fasal BimaYojana (PMFBY), 6. State Food Security Scheme (SFSS), 7. Sharecropper, 8. Paddy Procurement Automation System (PPAS), 9. Human Resource Management System (HRMS), 10. Police Constable data base, 11. Teachers' data base, 12. Pensioners' database, 13. Medical Professionals' data base, and 14. Bankers database

8 Instead of complete data backup, Department had furnished only 29 tables like applications, grievances, final payment to beneficiaries, Village list, GP list *etc.*

Surrender of funds was mainly due to delay in identification of beneficiaries for the Scheme components which are discussed in subsequent paragraphs.

The KALIA beneficiaries' payments were made through provision in the State Budget. The DA&FE draws the funds from State treasury and deposits in a designated Account maintained in State Bank of India. The payments to the beneficiaries were directly released from this account to the beneficiaries' accounts.

2.2. Audit Findings

2.2.1 Lack of Planning

Out of six components under KALIA scheme approved by the Government, only two components i.e 1 – 'Support to cultivators for cultivation' and 2 – 'Livelihood support for landless agricultural households', were implemented during 2018-21. Further, only three out of five instalments were released to beneficiaries under first component as of March 2021. The two components i.e 3 – 'Financial assistance to vulnerable agricultural households' and 5 – 'Interest free crop loan' were dropped. The remaining two components i.e. component 4 – 'Life insurance support to cultivators and landless agricultural labourers' and component 6 – 'KALIA Scholarship' are under planning stage even after more than two years from the commencement of the scheme.

The package for farmers' welfare – KALIA Scheme was implemented from 21 December 2018 for five cropping seasons starting from *Rabi*[9] season of 2018-19. As per Finance Department circular (January 2013)[10], the Department was required to ensure the feasibility of implementation of any new Scheme/ project before proposing. Under the scheme, there were six components. The scale of assistance of these six components are given in the **Table No.2 2**.

Table No. 2.2: Details of components and scale of assistance of the Scheme

Sl. No.	Component	Scale of assistance	Initial		Revised	
			Targeted beneficiaries (in lakh)	Funds required (₹ in crore)	Revised numbers of beneficiaries (in Lakh)	Funds required (₹ in crore)
1	Support to Cultivators for Cultivation	₹5,000 per family per crop season for five cropping seasons	30.18	7,540	50.00	12,500
2	Livelihood support for landless agricultural households (LL)	₹12,500 per household in three years.	10.00	1,250	25.00	3,125
3	Financial assistance to vulnerable	₹10,000 per household	10.00	1,000	-	-

[9] Cropping season from October to March
[10] OM No. 1068/F dated 10/01/2013 of Finance Department, GoO

Sl. No.	Component	Scale of assistance	Initial		Revised	
			Targeted beneficiaries (in lakh)	Funds required (₹ in crore)	Revised numbers of beneficiaries (in Lakh)	Funds required (₹ in crore)
	agricultural households					
4	Life insurance support to cultivators and landless agricultural labourers	₹171 per beneficiary (Age group from 18 to 50 year). An Additional amount of ₹12 per beneficiary from 51 to 70 year)	57.00	170	-	-
5	Interest free crop loan	₹110 crore per year towards additional subvention for interest free crop loan up to ₹50,000	20.00	220	-	-
6	KALIA Scholarship	All fees including hostel / mess charges	0.11	130	-	-
Total			**127.29**	**10,310**	**75**	**15,625**

(Source: Records of the Department, Government of Odisha)

Government approved (December 2018) the scheme 'KALIA' to be implemented by Department without adequate feasibility study as discussed below:

- **Dropping of components:** During implementation of the scheme, Government noticed that the component No.3 and 5 were redundant because the beneficiaries under component No.3 were already covered under component No.1 and 2. Further, Co-operation Department, GoO had already started (June 2019) a similar scheme "Interest subsidy/ subvention crop loan" up to ₹0.5 lakh to all farmers in line with the component No.5. Thus, the department removed (November 2019)[11] the above said two components i.e component No.3 and 5 from implementation of the scheme.
- **Non-implementation of components:** Other two components i.e Component No.4 and 6 are under planning Stage even after more than two years from the commencement of the scheme. As such, the department could implement only first two components *i.e* component No.1 and 2 of the scheme in the State since January 2019.
- **Non-achievement of target:** The first two components *i.e* Component No.1 and 2 were implemented with a target of 40.18 lakh beneficiaries. However, Department had no available data for such targeted beneficiaries, it used list of 21.76 lakh farmers under Seed Direct Benefit Transfer scheme (SDBT) and 1.05 lakh sharecroppers under Paddy Procurement Automation System (PPAS) of Food Supply and Consumer Welfare Department for implementation of said two components of Scheme. The landholding data from Bhulekh could not be used as Bhulekh database did

[11] Government of Odisha, Department of Agriculture & Famers' Empowerment Notification No.22660/A&FE dated 30 November 2019

not have any common key like Aadhaar Number for use in KALIA. Besides, during January to May 2019 it also collected 96.43 lakh fresh applications from farmers using the KALIA portal making the beneficiary universe to 1.19 crore. Finally, Department selected 51.05 lakh beneficiaries for the KALIA first instalment phase stating that they had adopted exclusion criteria by using 14 databases for elimination of ineligible beneficiaries from the universe. Subsequently, the Department modified (June 2019) the target from 40.18 lakh to 75 lakhs so that no one who is eligible will be left out. Audit observed that the revised target of 75 lakh beneficiaries for component No.1 and 2 also could not be achieved, as the beneficiaries selected during third phase assistance (February 2021) *i.e.* after two years of implementation, were only 56.15 lakhs.

- **Delay in implementation of components:** As per scheme guidelines, assistance to the farmers was to be released in five crop seasons from *Rabi* 2018-19 to *Rabi* 2020-21 under Component No.1. However, Audit noticed that Department had released only three instalments *i.e. Rabi* 2018-19, *Kharif* 2019-20 and *Kharif* 2020-21.

Thus, there was lack of preparedness in planning in fixation of initial target and the Department did not ensure the feasibility of implementation of various components of the Scheme and Government had to drop two of its components[12] midway of implementation. Further, despite lapse of two years Department could not even commence implementation of two components as of March 2021. Even in the remaining two components, against target of five crop seasons from *Rabi* 2018, only three instalments were disbursed.

Agreeing to the fact, the Department stated (April 2022) that the first two components of the scheme achieved 56.67 lakh beneficiaries against the target of 75 lakh. The component No.4 could not be settled due to non-finalisation of premium between LIC authorities and Government of India. Proposal will be submitted to Government for deleting the component. Regarding Component No.6, the Department stated that the scheme was delayed as the Department of Higher Education of the State has developed a common portal for scholarship programme of all the Departments which is fully functional during 2021-22 and the said component have been integrated in this. The fact remained that the two components had not been started even after two years of implementation of the scheme as of March 2021.

2.2.2 Implementation of Scheme and payment of assistance to ineligible beneficiaries

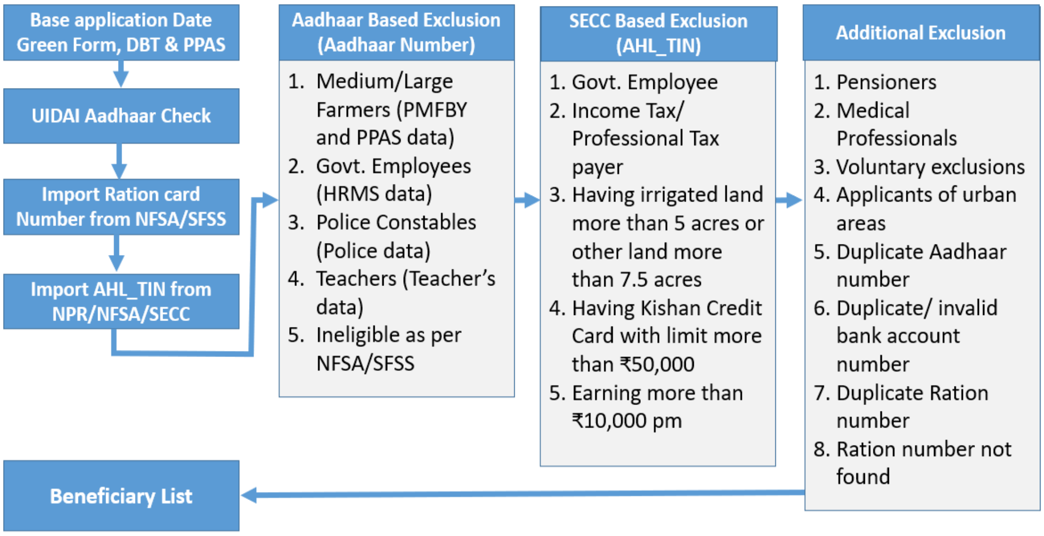
Under first component of KALIA the support was to be provided for cultivation to the small and marginal farmers by way of a grant of ₹5,000 per family per season (two instalments per year) for purchases of inputs and other instruments in the field of operation based on the farmers' choice for the crop season under the component "Support to cultivators for cultivation". This assistance was to be provided for five cropping seasons spanning 2018-19 to 2020-21. However, Government had disbursed only three installments as of February 2021.

[12] (i) Financial assistance to vulnerable agricultural households (ii) Interest free crop loan

Under the second component "Livelihood Support for Land Less Agricultural Households", assistance of ₹12,500 for each landless agricultural household was to be provided to 10 lakh households[13] over the entire period of three years being ₹5,000 in the first year, ₹5,000 in the second year and ₹2,500 in the third year to enhance their income and overall well-being. All beneficiaries should have got three installments.

The Department selected beneficiaries after applying the exclusion criteria as depicted in the following chart.

Chart-2: Process for selection of Beneficiary List



Audit noticed that the exclusion criteria did not include the database of land records (Bhulekh), which was the basic record of land ownership. In the Scheme Implementation Committee meeting (January 2019) it was stated that the details of *Khata* number and plot number of farmers in the farmer list were not available.

On scrutiny, it was noticed that Department had provided KALIA benefit assistance to 65.64 lakh beneficiaries during 2019-2021 as given in **Table No. 2.3.**

Due to improper planning, while implementing the scheme Government identified 9.76 lakh ineligible beneficiaries in different phases. Audit also analysed KALIA database and found 2.96 lakh ineligible beneficiaries in addition to 9.76 lakh ineligible beneficiaries identified by Government.

Department had paid ₹782.26 crore to ineligible beneficiaries in three phases which needs to be recovered at the earliest.

[13] The target was revised in June 2019 to 25 lakh.

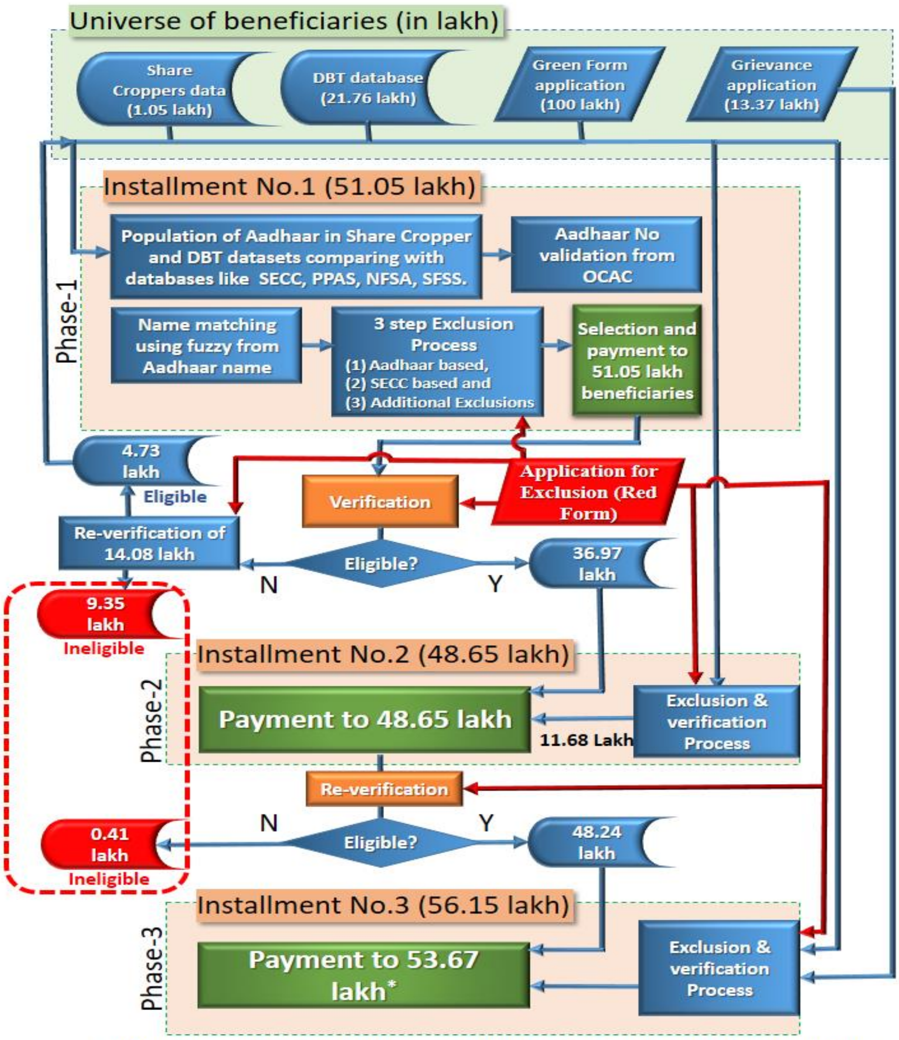
Table No. 2.3: Statement showing instalment-wise beneficiaries benefitted

Instalments paid[14]	Number of beneficiaries benefitted (in lakh)	Amount Paid (₹in crore)
Three instalments	41.64	5,053.46
Two instalments	8.09	659.49
One instalment	15.91	731.35
Total	**65.64**	**6,444.30**

(Source: KALIA database)

This non-uniform disbursement had happened due to implementation of scheme without verification of beneficiaries which resulted in identifying 9.76 lakh ineligible beneficiaries subsequently at different phases. The phase wise identification and selection of beneficiaries is given in the following Chart:

Chart-3: Phase-wise identification and selection process of beneficiaries



* *The release of instalment to the rest 2.48 lakh beneficiaries were kept pending for verification of bank details, Aadhaar seeding status and name matching with NFSA. Once verified the installment was to be released to them.*

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14 The rate of payment of first instalment and second instalment was ₹5,000 each and in the third instalment the rate of payment was ₹2,000 each to SMF (component No.1) and ₹2,500 each to LL (component No. 2)

In this context, Audit noticed the following irregularities:

First Phase of Scheme

2.2.2.1 Payment of assistance to ineligible beneficiaries in the first phase

As per Office Memorandum of Finance Department[15] (January 2013) and Cabinet Memorandum of Department[16], GoO (December 2018), the Administrative Department should specify the baseline data and the preparedness/ ability of panchayats for executing the Scheme for appraisal for getting approval from the Finance Department.

Department released ₹2,552.65 crore as first instalment to 51.05 lakh beneficiaries in five batches between January and May 2019 at ₹5,000 per beneficiary as listed in the **Table No.2.4**.

Table No. 2.4: Batch-wise and date-wise release of funds to beneficiaries

Batch No.	Source of data	Total records of beneficiaries considered	Date of release of funds	Selected no. of Small/ Marginal Farmers	Selected Landless Agricultural Households	Total beneficiaries selected
1	*2*	*3*	*4*	*5*	*6*	*7*
First	DBT	21,76,477	25 January 2019	12,45,490	-	16,13,696
	Sharecroppers	1,05,571	27 January 2019	57,614	-	
	Green Form[17]	65,45,039	15 February 2019	-	3,10,592	
Second	Green Form		21 February 2019	14,26,342	-	16,04,808
	Green Form		24 February 2019	-	1,78,466	
Third	Green Form		05 March 2019	3,48,462	1,35,018	4,83,480
Fourth	Green Form	30,98,353	12 April 2019	2,46,924	3,15,879	5,62,803
Fifth	Green Form		29 May 2019	3,09,878	5,30,625	8,40,503
Total		**1,19,25,440**		**36,34,710**	**14,70,580**	**51,05,290**

(Source: Data compiled from records of Department)

To detect the ineligible beneficiaries, Department conducted field level verification (August 2019) and found that out of 51.05 lakh, 14.08 lakh (27.58 *per cent*) ineligible beneficiaries were assisted with ₹611.91 crore during release of first instalment for which an amount of ₹704.08 crore was released to the designated Account maintained in State Bank of India.

Audit analysed the procedures (scripts or queries) for exclusion of applicants and KALIA data furnished by the Department using the Socio-Economic Caste Census (SECC) data (Rural) obtained from Ministry of Rural Development, Government of India (GoI), Human Resource Management System (HRMS) data from GoO, VAHAN data from Ministry of Road Transport and Highways, GoI and pensioners data from IFMS. Audit analysis revealed that there were 4.64 lakh ineligible beneficiaries that got benefited under the Scheme. Out of 4.64 lakh ineligible beneficiaries, Audit found that

15 Office Memorandum No 1068/F dated 10/01/2013 of Finance Department, GoO

16 Cabinet Memorandum No 23029 dated 21/12/2018 of Department of Agriculture and Farmers' Empowerment, GoO

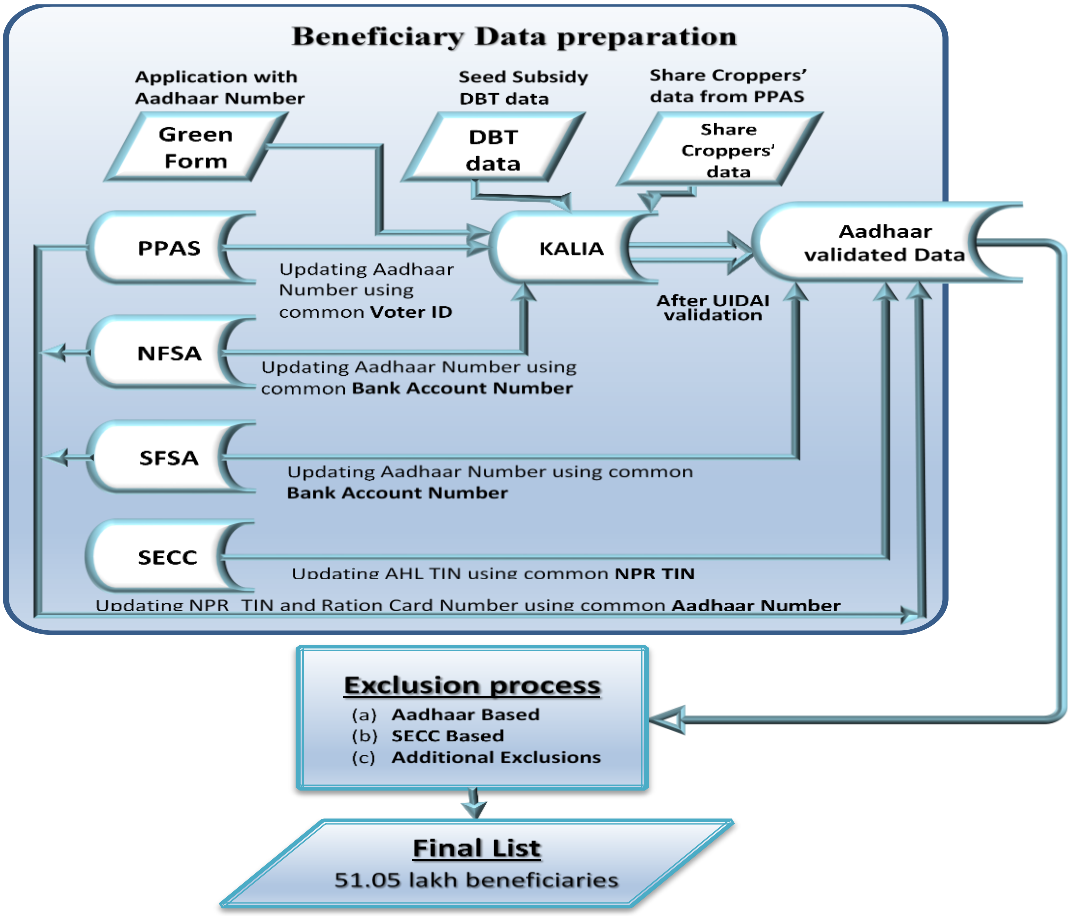
17 Green Forms: Application forms from beneficiaries willing to be included in KALIA scheme

2.35 lakh ineligible beneficiaries were in addition to 14.08 lakh ineligible beneficiaries which were identified by the Department. Had Department provided the complete database along with all other 12 databases, Audit could have detected much more ineligible beneficiaries. The ineligible beneficiaries, who were not detected and excluded from the list by the Department before release of first instalment due to deficiencies in the logics/ processes of exclusion are detailed below:

(i) Incomplete application of SECC exclusion criteria

Department had used databases like the KALIA beneficiaries, the SECC, National Food Security Act (NFSA) and State Food Security Scheme (SFSS) for selection of beneficiaries as depicted in the following Chart.

Chart-4: Beneficiaries data preparation using various databases in the first phase



Abridged Household List-Temporary Identification Number (AHL TIN)[18] is common data field in KALIA database and SECC database. Thus, the Department used AHL TIN for applying the SECC Criteria of exclusion.

As Department failed to provide databases of NFSA, SFSS *etc.* despite several requests, therefore, Audit independently analysed the database with the help of

18 AHL TIN identifies a member of a household which is of 29 characters. First 26 characters of the AHL TIN represents the household number as per SECC data. The last three digits denote the identification of members of the household.

SECC database only. Audit observed that there were AHL TIN against 30.14 lakh records out of 51.05 lakh beneficiaries. Thus, the Department could not filter the remaining beneficiary data of 20.91 lakh (40.95 *per* cent) against SECC exclusion criteria, as there was no data in the common field such as AHL TIN, for establishing the link with the SECC data.

The Government stated (April 2022) that SECC data was used at the initial phase with an aim to exclude ineligible beneficiaries, wherever TIN number matches. There are also different data sets used for exclusion purpose and the 20.91 lakh might have been taken care of by other data sets. The response of Department is based on the assumption that 20.91 lakh beneficiaries might have taken care by other data sets used by Department. However, the fact remained that despite several request by Audit, Department failed to provide 12 databases like NFSA, SFSS, PPAS *etc.* which indicated that selection process of beneficiaries was not transparent. Despite exclusion of 14.08 lakh ineligible beneficiaries by the Department, Audit analysis found additional 2.35 lakh ineligible beneficiaries which Department failed to detect. It is also pertinent to mention that Department failed to detect ineligible beneficiaries even in SECC as discussed in the following paragraphs:

(ii) Non-exclusion of SECC based ineligible beneficieries

Audit analysed the KALIA database with SECC database having common AHL TIN (30.14 lakh) and observed that there were 35,983 ineligible beneficiaries under following five SECC exclusion criteria in the list of selected beneficiaries:

- **Government employee:** Under the Scheme, if the beneficiary or his/ her family member is a Government employee *i.e.* under State Government (SG)/ Central Government (CG) or Public Sector Undertaking (PSU), that household is not eligible as beneficiaries for KALIA. Data analysis by Audit, however, revealed that 11,972 household members of Government employees were selected and released ₹5.99 crore.

- **Paying Professional tax/ Income Tax:** Any person or his/ her family member paying professional tax/ income tax is not eligible for KALIA. Data analysis by Audit revealed existence of 1,794 ineligible beneficiaries having household member paying profession tax/ income tax as per SECC, were not excluded from the beneficiary list and released ₹0.90 crore.

- **Beneficiary having Kisan Credit Card (KCC):** Any person having KCC with credit limit greater than or equal to ₹50,000 is not eligible for inclusion in the KALIA beneficiary list. Audit, however, noticed that there were 4,880 ineligible beneficiaries as per SECC having KCC not excluded from the KALIA beneficiary list for which ₹2.44 crore was released.

- **Beneficiary earning more than ₹10,000 per month:** Any person earning more than ₹10,000 per month is ineligible for KALIA. But, analysis of KALIA beneficiaries' data with SECC data revealed that there were 11,902 beneficiaries with household member earning more than ₹10,000 per month included in the KALIA beneficiary list and released ₹5.95 crore to those ineligible beneficiaries.

- **Irrigated land more than five acres or other land more than seven acres for two more crop seasons:** Similarly, any farmer with more than or equal to five acres of irrigated land or more than seven acres of other land for two or more crop seasons is ineligible for the Scheme. Data analysis, however, revealed that there were 5435 farmers fulfilling the above condition were inappropriately included in the KALIA beneficiary list and ₹2.72 crore was released to them.

Thus, from the above it is evident that the Department failed to use SECC database effectively before releasing first instalment which resulted in payment of ₹18 crore to the ineligible beneficiaries. Out of 35,983 ineligible beneficiaries detected by Audit, Department could indentify only 12,326[19] (34.26 *per cent*) and failed to detect remaining 23,657 ineligible beneficiaries.

In reply, the Government stated (April 2022) that conclusion of ineligibility only on the basis of exclusion parameter of SECC was not right as the SECC data was not used in second and subsequent phases of selection due to its vintage.

The reply is not acceptable since the methodology used by the Department for exclusion of ineligible beneficiaries was not correct. Therefore, the Department failed to identify cases of 23,657 ineligible beneficiaries who were Government employees, paying professional tax/ income tax and having Kisan Credit Card *etc*.

(iii) Ineligible beneficiaries as per HRMS, IFMS and VAHAN data

Based on KALIA scheme exclusion criteria Government servant, Pensioners and persons having four wheeler vehicles/ heavy vehicles/ tractors should not be included in beneficiary list. Audit analysed these exclusion criteria and found the following deficiencies:

- **HRMS exclusion**: Under KALIA, the Government servants are not eligible for getting assistance. Towards providing assistance under KALIA, the Department had used HRMS[20] database for exclusion of ineligible beneficiaries. Audit received the HRMS database from General Administration Department. Audit analysis of the HRMS data linking to KALIA data on bank account number revealed that 872 Government officials who were wrongly selected and listed in the

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19 12,326 cases were included in 14.08 lakh ineleigible beneficiaries detected by Department.

20 Human Resource Management System data contains all State Government employees' data

KALIA beneficiary list and ₹43.63 lakh was released to them indicating selection of beneficiaries without application of appropriate logic by the Department.

Agreeing to the fact the Government stated (April 2022) that for the purpose of exclusion using HRMS database, aadhaar number was used and bank account number was not used. The fact remained that 872 Government employees who were ineligible for scheme were in the selected list for KALIA scheme, which could have been avoided.

- **Non-exclusion of pensioners**: Pensioners are not eligible for getting assistance under the Scheme. Audit analysis of IFMS[21] data linking to KALIA data on bank account number revealed that 1,074 pensioners were selected for KALIA benefit who should have been excluded from the beneficiary list and released ₹53.70 lakh**.**

  This indicated that the Department did not use an appropriate database for detecting these ineligible beneficiaries.

  In reply the Government stated (April 2022) that no such case exists in the pensioners' database available. Department had not used IFMS data for the purpose of exclusion of pensioners. However, the fact remained that the Department had not verified the pensioners' database of IFMS and failed to detect 1,074 pensioners in KALIA beneficiary list.

- **Non-exclusion of applicants having four-wheeler vehicles/heavy vehicles/tractors:** Government adopted NFSA ineligibility criteria for exclusion of beneficiaries. As per NFSA ineligibility criteria households having four wheelers/heavy vehicles/tractors were not eligible. Audit received the VAHAN data from the Ministry of Road Transport and Commerce, New Delhi. Audit analysis of VAHAN data linking it to KALIA data using applicant's name, father's name, and address as the link revealed that there were 5,145 applicants selected and listed in the KALIA beneficiary list who were having four-wheeler vehicles/heavy vehicles/tractors.

  As such, those persons were to be excluded from the beneficiary list for providing assistance under KALIA. Since, the Department did not use the VAHAN database to detect such ineligible beneficiaries for exclusion, ₹2.57 crore was released to 5,145 ineligible beneficiaries.

  In reply, the Government stated (April 2022) that VAHAN database does not have Unique Identification Number for linking with KALIA applicant for application of exclusion criteria. Matching the applicant name, father name and address may not be in the appropriate logic in view of absence of any particular unique identifier. The reply is not

[21] Integrated Financial Management System (IFMS) data contains all Government transactions in which payment to pensioners is a part

acceptable as the Department had applied fuzzy logic for matching of names in other databases for exclusion of ineligible beneficiaries, which could have been used with VAHAN database also.

(iv) Additional Exclusions

- **Duplicate beneficiaries**

For establishing relationship between the KALIA database and the SECC database, Department first mapped the KALIA applicant database with NFSA and NPR databases to capture NPR TIN in applicant data. The captured NPR TIN was used as a common bridge to populate the AHL TIN in applicant database. For the records that could not be directly mapped using either of the identifiers, fuzzy logic using Applicant Name, Father Name and Village Name was used for populating the AHL TIN in the applicant database. Department used the AHL TIN of KALIA database to apply the SECC exclusion criteria from the SECC data as AHL TIN is the common field between the two datasets. Thus, there should not be any AHL TIN repeated in the KALIA data more than once. However, database analysis by audit revealed that there were 1925 duplicate and one triplicate AHL TINs involving 3,853 beneficiaries. These duplicate AHL TINs were attached to different beneficiaries resulting in incorrect application of SECC exclusion criteria. Admitting the fact, Government stated (April 2022) that out of 1926 number of duplicate beneficiaries, only 281 cases have been adjusted against eligible beneficiaries after verification. The fact remained that payment was made to 1645 ineligible beneficiaries. Moreover, Government failed to provide the required datasets or logics to audit for verification.

- **Doubtful beneficiaries**

The Department used the data field AHL TIN of KALIA database to apply the SECC exclusion criteria from the SECC data as AHL TIN is the common field between the two datasets. Hence, the name as per the KALIA data should be the same as appearing in SECC data. If the names differ, then there would be application of exclusion logic against wrong beneficiaries. Database analysis by Audit revealed that in case of 56,613 records there was mismatch in names of beneficiaries between these two data sets as illustrated in **Table No. 2.5** below:

Table No. 2.5: Sample list showing difference in names between KALIA and SECC data

AHL TIN	Name as per KALIA data	Name as per SECC data
15210100100020000000620028002	Golapi Bariha	Sabitri Das
23210100100030000000900081005	Manabodh Patel	Ranjit Malik
47210100100050000001300119002	Thabira Banchhor	Abir Bangir
37210100100570000009600088002	Raibari Parua	Malli Bhoi
55210100100290000005200098002	Santoshini Luhar	Jashobanti Mahanand
11210100100130000002500127008	Puspa Bariha	Bishakha Banchhor
43210100100790000012900115001	Nepala Bariha	Puja Bhoi
55210100100650000010900073001	Iswar Sahu	Bhasa Biswal

AHL TIN	Name as per KALIA data	Name as per SECC data
312101002004600000056100010003	Chandrika Yadab	Faguni Podh
132101002002000000000210052003	Chunilal Bhoi	Padmalaya Jal
592101002002000000000210050001	Tapananda Barge	Nishamani Dip
532101002003100000001500022002	Rasmita Patel	Khira Sahu
172101003001000000001000103002	Asha Chak	Sankar Bariha
212101002007700000009500054001	Gobinda Patel	Judhistira Baga
252101003001300000001400057002	Sashmita Rout	Rinky Barik
292101002007300000008700090001	Tejabati Nial	Kasturi Banchhor

(Source: Data as provided by DA&FE and SECC data)

The above findings indicated incorrect application of exclusion logic where identity of a beneficiary of KALIA data was compared with identity of a different beneficiary in SECC data. In such cases, the Department should have excluded those records from the list.

The Government without giving any specific reply, stated (April 2022) that no name matching has been done with the SECC database. Name matching was taken up from the responses of UIDAI and fuzzy logic with the NFSA database, which is more appropriate logic for the said purpose. The reply is not acceptable as Government could not detect name mismatch between KALIA and SECC data and failed in verification of such doubtful beneficiaries from beneficiary list.

- **More than one beneficiary in a household**

As per the selection criteria, head of the family of a household would get the benefit of KALIA assistance. However, analysis of the AHL TIN of the database revealed that the final list of beneficiaries contained selection of multiple members of one household in respect of 2.78 lakh households involving 5.72 lakh beneficiaries. Thus, there were 2.94 lakh (5.72 lakh *minus* 2.78 lakh) ineligible beneficiaries in the KALIA database as per SECC data**.**

In addition to the above, the Department also populated Ration Card Numbers from the NFSA database against each beneficiary. The Ration Card Number, which identifies one family, should not be repeated in the database. However, data analytics revealed that same ration card was used multiple times and there were 0.54 lakh Ration Card Numbers in the database against 1.09 lakh beneficiary records, which means 0.55 lakh ineligible beneficiaries were selected for KALIA.

Thus, Department failed to exclude the 2.94 lakh extra members of a family based on SECC database using AHL TIN and 0.55 lakh ineligible beneficiaries based on Ration Card Number. Thus, 3.49 lakh ineligible/doubtful beneficiaries were not excluded in the first phase and were released assistance of ₹174.40 crore under KALIA.

Accepting the fact, the Government stated (April 2022) that in the initial period, there were duplicate ration records erroneously included in the beneficiaries list due to non-seeding of Aadhaar number resulting in multiple beneficiaries in a household. Out of 3.20 lakh duplicate ration card holders, 2.13 lakh cases have been adjusted during subsequent payment. However, the fact remained that recovery from 1.07 lakh ineligible beneficiaries is still pending.

- **Duplicate Bank account numbers**

As per the Scheme guidelines, the amount was to be transferred online directly to the bank account of the Head of the farmer's family and therefore, the beneficiaries with duplicate account numbers were to be excluded from the selected list. Analysis of the database by Audit, however, revealed that 6,477 bank account numbers were captured in the datasheet more than once involving 13,578 beneficiaries. Accordingly, Department released ₹6.79 crore as first installment to those beneficiaries. In this context, one example is given below in which Audit found that the account number provided in green form (farmer's application) was different from the beneficiary list.

Table No. 2.6: Data as per Green Form table

Sl. No.	Applicant Name	Father's Name	IFSC	Account No.	Farmer type	Green form Source
5061314	Asili Dhibar	Bakuli Dhibar	CBIN0281623	3539635755	LL	Phase 1
2463735	Asili Dhibar	Dara Dhibar	CBIN0281623	3328650242	SM	Phase 1
978970	Asili Dhibar	Bakuli Dhibar	CBIN0281623	3539635755	LL	Phase 2

(Source: Data as provided by DA&FE)

Table No. 2.7: Data as per beneficiary selected table

Sl. No.	Applicant Name	Father Name	IFSC	Account No.	Farmer type
5061314	Asili Dhibar	--	CBIN0281623	3328650242	LL
2463735	Asili Dhibar	Dara Dhibar	CBIN0281623	3328650242	SM

(Source: Data as provided by DA&FE)

Audit could not analyse the reasons for such abnormal updation of bank account numbers due to non-production of the complete data and source code. Audit noticed that the Department had released ₹3.55 crore to 7,101 account numbers which did not belong to the beneficiaries as same account number entered against different persons.

In reply, the Government stated (April 2022) that every KALIA applicant might not have their own bank account. It was possible that an applicant can provide the account details of some of his friends or relatives. To ward off such issues, Aadhaar Bridge system has been introduced. The reply was not acceptable, as during physical verification of nine duplicate account numbers audit noticed that in only two cases beneficiaries have mentioned wrong account number inadvertently, out of the remaining seven, in five cases there were wrong data entry by Department and in two cases the account numbers were changed due to software flaw. Further, the reply that an applicant can provide the account details of some of his friends or relatives is contrary to the guidelines for releasing payment to the bank account of the Head of family.

Thus, from the above audit analysis using only two of 14 databases[22] along with VAHAN and IFMS database revealed that 4.64 lakh beneficiaries were ineligible as per exclusion criteria. Department had released ₹231.92 crore to the bank accounts of those beneficiaries of which ₹216.76 crore was successfully credited to their respective bank accounts. This indicates that the Department had failed to detect ineligible beneficiary and hastily released (January - May 2019) first instalment of ₹2,552.65 crores to 51.05 lakh beneficiaries.

In reply, the Government stated (April 2022) that there was quick implementation of the scheme and not hasty implementation. The fact remains that out of 51.05 lakh beneficiairies, identification of 14.08 lakh (27.58 *per cent*) ineligible beneficiaries by Department themself indicates lack of preparedness before releasing first instalment which resulted in payment of ₹611.91 crore to ineligible beneficiaries.

Second Phase of Scheme

2.2.2.2 Ineligible beneficiaries in the second phase

Towards providing second phase assistance under KALIA, the Department conducted field level verification and applied exclusion criteria for selection of eligible beneficiaries during May 2019 to September 2019. Accordingly, the Department finalised 48.65 lakh beneficiaries for the scheme. These included 36.97 lakh eligible beneficiaries already selected in the first phase and 11.68 lakh new beneficiaries. Department then released (November 2019 to April 2020) ₹2,693.18 crore to 48.65 lakh beneficiaries.

In order to derive an assurance regarding the selection process, Audit analysed the database by applying SECC exclusion criteria and observed that there were still 1.43 lakh ineligible/doubtful beneficiaries in the list. The details of which are given in **Table 2.8**.

Table No. 2.8: List showing criteria-wise number of ineligible/ doubtful beneficiaries in the list of second instalment

Exclusion criteria	Beneficiaries found eligible for second instalment from initial list of 51.05 lakh	New applications considered for payment of KALIA	Total
1	*2*	*3*	*4*
Number of beneficiaries	36,97,122[23]	11,67,931	48,65,053
A. Incorrect selection			
1. Duplicate AHL TIN	1,940	-	1,940
2. Doubtful beneficiaries as names were different in KALIA and SECC data	37,432	-	37,432

[22] 1. National Food Security Act (NFSA), 2. National Population Register (NPR), 3. Socio Economic Caste Census (SECC) 4. Unique Identification Authority of India (UIDAI), 5. Pradhan Mantri Fasal BimaYojana (PMFBY), 6. State Food Security Scheme (SFSS), 7. Sharecropper, 8. Paddy Procurement Automation System (PPAS), 9. Human Resource Management System (HRMS), 10. Police Constable database, 11. Teachers' database, 12. Pensioners' database, 13. Medical Professionals' database, and 14. Bankers database

[23] 51.05 lakh (1st phase selected) – 14.08 lakh (ineligible) = 36.97 lakh

Exclusion criteria	Beneficiaries found eligible for second instalment from initial list of 51.05 lakh	New applications considered for payment of KALIA	Total
B. SECC exclusion criteria			
i. Government Employee	6,999	3,233	10,232
ii. Paying Income/Professional Tax	1,266	1,352	2,618
iii. Beneficiary having Kisan Credit Card (KCC)	3,329	8,497	11,826
iv. Beneficiary earning more than ₹10,000 per month	8,002	2,377	10,379
v. Irrigated land more than five acres or other irrigated land more than seven acres cultivated for two or more crop seasons	4,068	1,035	5,103
C. Additional Exclusions			
3. Duplicate members in a households as per SECC	58,059	2,030	60,089
4. Employee as per HRMS	88	23	111
5. Pensioner as per IFMS	102	37	139
6. Owner of four wheeler vehicle/heavy motor vehicle/tractor	1,973	470	2,443
7. Duplicate Bank Accounts	313	2	315
8. Red form[24] Excludable persons	323	0	323
Total Ineligible Persons	**1,23,894**	**19,056**	**1,42,950**
Amount Released (₹ in crore)	**59.11**	**17.69**	**76.80**
Amount transferred (₹ in crore)	**58.47**	**17.59**	**76.06**

(Source: Database furnished by the Department, SECC, HRMS and VAHAN data)

As such, despite exclusion of 14.08 lakh beneficiaries, the data was not properly sanitised and Audit found that 1.24 lakh ineligible beneficiaries continued to be in the list of second phase. Data of new applicants was also not properly analysed resulting in further addition of 19,056 ineligible beneficiaries in second phase. Due to this Department released ₹76.80 crore to 1.43 lakh ineligible beneficiaries.

Besides, as the Department did not furnish data like NFSA, SFSS, PPAS etc. to Audit due to which Audit could not use these databases to identify the ineligible beneficiaries Therefore, during second phase, assistance to higher number of ineligible persons could not be ruled out.

On this being pointed out, the Government stated (April 2022) that from the second phase onwards they did not use SECC data. Further, IFMS and VAHAN were not used for identification of beneficiaries. On the issue of release of payment to duplicate bank accounts, the Government stated that the duplicate account holder had different Aadhaar Numbers. The Department admitted the presence of 65 ineligible beneficiaries on the ground of exclusion through red form.

The reply is not acceptable as the Department had not applied appropriate logic for exclusion in the first phase for which ineligible beneficiaries as per

[24] Red forms are the application forms for objection/self exclusion.

SECC criteria were still present in the second phase selection. Department failed to use IFMS and VAHAN data to detect the ineligible beneficiaries. Therefore, Government employees and pensioners are still included in the KALIA beneficiary list, which could have been detected as ineligible beneficiaries had IFMS data used. Had Department used VAHAN database, it was possible to detect the 2,443 ineligible beneficiaries as owner of four-wheeler vehicles/ heavy motor vehicles/tractors.

2.2.2.3 Role of DBT Cell in implementation of KALIA scheme

The GoI guidelines for DBT in the States envisaged the setting up of a State DBT Cell (SDC), under the guidance of a State level DBT Advisory Committee. The role of the SDC is to act as a nodal point for all activities and issues related to DBT operations in the State.

As DBT operates in an environment that involves multiple stakeholders, the SDC's primary function is to coordinate and liaise with government departments and various stakeholders, for seamless transitioning of schemes to the DBT mode. Further, GoI guidelines also required the setting up of a State Level Advisory Committee, to provide the DBT Cell's executive body with holistic, well-rounded advisory and consulting inputs.

As regards the operational part of SDC, the GoI guidelines[25] envisaged that the Cell incorporate an implementation support layer of the three main categories of Coordinators (Technical, Non-Technical, Financial and Administrative), who would be responsible for carrying out support activities for the SDC.

The State DBT Cell had been set up (October 2016) in Finance Department with the Principal Secretary, Finance as the State DBT Coordinator. A state DBT portal was also developed (June 2018) for aggregating and displaying the beneficiary payments pertaining to the on-boarded schemes. KALIA scheme was on-boarded in the DBT portal from February 2021. As per this SoP, the responsibilities of the SDC were as follows:

- Onboarding of schemes on the DBT portal.
- Collecting data from various departments and technical support team on factors, such as Aadhaar enrollment, number of beneficiaries, number of active bank accounts, number of Aadhaar seeding *etc*.
- Establishing user database for all Departments to link Aadhaar numbers with the NPCI server.
- Facilitating all kinds of IT support for implementing DBT in different schemes.
- Collecting and analyzing data for the State, Department and scheme.
- Training and capacity building of State officials on DBT.

[25] DBT is included in the State Protocol Document (June 2017)

The Department had linked Aadhaar with the beneficiary data during the 1st phase of the scheme. However, Aadhaar Payment Bridge System was not adopted for payment in 1st and 2nd phases of KALIA scheme.

Non-validation of bank account of beneficiaries by the bank is pointed out in para 2.2.3. Therefore, Phase-I and Phase-II payments (January 2019 to April 2020) were not available in the State DBT Portal.

Aadhaar Bridge Payment System (ABPS) was adopted during third phase of payment (February 2021) which is incorporated in report under Para 2.2.2.4. The total payments from February-2021 to April 2023 were captured in the State DBT portal.

The KALIA beneficiaries' payments were made through provision in the State Budget. The DA&FE draws the funds from State treasury and deposits in a designated account maintained in State Bank of India. The payments to the beneficiaries were directly released from this account to the beneficiaries' accounts.

Third Phase of Scheme

2.2.2.4 Ineligible beneficiaries in the third phase

During May 2020 to February 2021, the Department scrutinised the grievance applications received through online portal and verified the existing beneficiaries for selection of eligible beneficiaries for assistance of third phase KALIA scheme. Accordingly, the Department finalised 56.15 lakh beneficiaries, out of which 44.48 lakh (79.22 *per cent*) were Aadhaar seeded for the third phase in order to implement Aadhaar Bridged Payment System (ABPS). These 56.15 lakh beneficiaries included 52.01 lakh beneficiaries from the first and second phase selection list and rest 4.13 lakh beneficiaries from application through grievance redressal mechanism. Department then released (February 2021) ₹1,272.19 crore to 53.56 lakh beneficiaries (42.46 lakh through ABPS and 11.10 lakh through account based system) and adjusted instalment against member of same family in case of 11,130 beneficiaries. The rest 2.48 lakh applications were pending for verification of Bank details and Aadhaar seeding status from National Payment Corporation of India (NPCI) and adopted the method of name matching with NFSA data.

Audit analysis of the selected beneficiaries for the third phase for exclusion criteria like Government servants, pensioners, persons having four-wheeler vehicles/heavy vehicles/tractors revealed the following:

- HRMS data linking to KALIA data on bank account number revealed that 125 Government servants were selected and listed in the KALIA beneficiary list.
- IFMS data linking to KALIA data on bank account number revealed that 186 pensioners were selected for KALIA benefit who should have been excluded from the beneficiary list.

- VAHAN data linking to KALIA data using applicant's name, father's name, and address as the link revealed that there were 3,162 applicants having four-wheeler vehicles/ heavy vehicles/ tractors were selected and listed in the KALIA beneficiary list.
- There were also 502 applicants, who were approved for exclusion through red forms were listed in the KALIA beneficiaries list

Thus, after several verifications for two years from January 2019 to January 2021 using 14 databases, there were still 3975[26] ineligible beneficiaries in KALIA eligible beneficiary list. Department had not taken action (February 2021) to stop further release of assistance to the ineligible beneficiaries and to recover the already paid amounts to them.

In reply, the Government stated (April 2022) that VAHAN and IFMS data was not used for exclusion of beneficiaries. There were 67 red form excludable persons, which was rectified subsequently. Further, No aadhaar matched Government employee as per HRMS data was found. The reply is not acceptable as the Government did not use VAHAN and IFMS to identify ineligible beneficiaries which resulted in presence of Government employees, pensioner and persons having four wheelers in the beneficiary list of KALIA.

Further, out of total 65.91 lakh[27] beneficiaries selected during 2018-19 to 2020-21, there were 56.15 lakh eligible beneficiaries as on 31 March 2021, as selected in the third phase, leaving 9.76 lakh ineligible beneficiaries eliminated during different phases of assistance. Department had released an amount of ₹507.11 crore to those 9.76 lakh ineligible beneficiaries out of which ₹457.88 crore was successfully transferred to their accounts. As sanitisation process is still underway, chances of recovery are remote. In addition to 9.76 lakh ineligible beneficiaries, audit also noticed presence of 2.96 lakh ineligible beneficiaries after data analysis of KALIA data along with other databases like SECC, VAHAN, IFMS, and HRMS. An amount of ₹324.38 crore was also transferred to these bank accounts.

Thus, Department had paid ₹782.26 crore to 12.72 lakh ineligible beneficiaries in three phases with very little chance of recovery. The detailed analysis of instalment-wise release of payments to ineligible beneficiaries is as in the **Table 2.9** below.

Table No. 2.9: Instalment-wise release of payments to ineligible beneficiaries

Instalments paid	Number of ineligible beneficiaries (Number in lakhs)	Amount credited in beneficiary Bank Account (₹ in crore)
Once	8.57	427.19
Twice	1.01	89.44
Thrice	2.17	265.63
Failed payments	0.97	0.00
Total	**12.72**	**782.26**

[26] 125 (Government employee) *plus* 186 (Pensioners) *plus* 3,162 (Having four wheelers/ heavy vehicles) *plus* 502 (Red form) is equal to 3,975

[27] 51.05 lakh in first phase, 11.68 lakh in second phase and 3.18 lakh in third phase

In reply, the Government stated (April 2022) that as on date 1.01 lakh ineligible beneficiaries were found. Besides, there were 3.33 lakh multiple members of same family, 0.86 lakh beneficiaries had no ration card, IT payers and death cases. Further, 0.28 lakh had applied for grievance redressal and 3.55 lakh beneficiaries were under the process of field verification in view of incomplete details. However, the exact number may further change in view of adoption of Ration card data sets which are of dynamic in nature.

2.2.3 Payment to bank accounts other than the bank accounts of the intended beneficiaries

As per the Scheme, the beneficiaries were to be paid instalments to their respective bank accounts under Direct Benefit Transfer. As such, the name of the beneficiary should be the same as the name of the account holder of the bank to ensure the transfer of benefits to the actual beneficiaries. To address this, the State Level Committee (SLC) on KALIA chaired by Chief Secretary decided (January 2019) that:

- The banker *i.e.* State Bank of India (SBI) was to perform a validation check to verify the bank accounts of the beneficiaries.
- As 40 *per cent* of the beneficiaries were having bank accounts with SBI, it would validate account holders from their own systems.
- For non-SBI account holders, SBI would ensure validation against genuineness of Bank Account details of beneficiaries by way of crediting of ₹ one to each.

Accordingly, SBI validated (23 January 2019) only 6.71 lakh non-SBI account holders, of which 0.07 lakh accounts failed validation due to dormant bank accounts, incorrect Indian Financial System (IFS) Code, closed bank accounts, *etc*. Audit observed that thereafter SBI did not perform any further validation check for both SBI and non-SBI account holders but released payment to 51.05 lakh beneficiaries during 25 January 2019 and 29 May 2019.

Audit analysed the Database[28] comparing the names of beneficiaries with the corresponding names of account holders and found that payment of ₹107.64 crore was released to 1.28 lakh account holders in which the names of account holders were different from names of the beneficiaries, but despite this ₹104.08 crore[29] was transferred to those accounts indicating payment to persons having different name than beneficiaries. Audit also found that ₹14.15 lakh was transferred to 152 institutional accounts due to non-validation of bank accounts.

In reply the Government stated (April 2022) that the KALIA assistance reached to the self-reported account of the intended beneficiaries due to lack of bank accounts available at their end. All the beneficiaries with mismatched names got their KALIA assistance through Aadhaar Payment Bridge System

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[28] The SBI provided the payment scroll to the Department and the Department imported the same in KALIA Database which was captured in a beneficiary master table.

[29] One instalment to 29,143 beneficiaries, two instalments to 88,529 beneficiaries and three instalments to 846 beneficiaries was successfully transferred.

(APBS) and the amount was successfully credited to the account seeded with their respective aadhaar number.

The reply is not acceptable as the payment to the cases where names were different from account holder names should have been verified before payment. However, the Department was silent about validation check of accounts before transfer of benefit indicating hasty implementation of the scheme.

2.2.4 Assistance to Income Tax payers under KALIA

Income tax payers were ineligible for getting assistance under KALIA. The Department was to get the KALIA data verified against income tax data of Department of Income Tax. But Department did not get KALIA data verified against the income tax data.

GoI has implemented (December 2018) PM KISAN scheme in line with the KALIA scheme in which there is an exclusion criterion that the income tax payers should not be included as beneficiaries under PM KISAN. To avail the benefit under PM KISAN, the GoO has selected small and marginal farmers from the KALIA beneficiary list for consideration. GoI intimated that there were 9,643 farmers, whose names were sent for PM KISAN scheme out of KALIA beneficiaries, were income tax payers. Therefore, these 9643 beneficiaries of KALIA database were ineligible for the scheme. Hence, an amount of ₹4.82 crore[30] was released to these ineligible beneficiaries.

Agreeing to the fact, the Government stated (April 2022) that 4,479 numbers of SF/ MF identified as IT payer by PM KISAN have been excluded from KALIA beneficiary list.

2.2.5 Imparting training under the component for 'Livelihood support to landless agricultural households' of KALIA scheme

The second component of KALIA scheme *i.e*, 'Livelihood support to landless agricultural households for livestock and horticultural crop based activities'[31] was aimed to further accelerate agricultural prosperity. Under this component, support was to be provided for Small Goat Rearing Unit/Mini Layer Unit/Dual Purpose Low-input Technology Birds/ Duckery Unit/ Fishery Kit/Bee-keeping and Mushroom cultivation *etc.* to the landless households by way of grant of ₹12,500 per family, based on the choice of activity selected by the household. Under the scheme, ₹5,000 to each was to be transferred to the bank accounts of landless beneficiaries on selection. Then orientation training was to be given by the Department to these beneficiaries for understanding the household preference of the activities. Based on the households' choice, capacity building and training was to be imparted to each household within six months followed by release of second instalment of ₹5,000 each. The third and final instalment of ₹2,500 each was to be released after grounding and verification of assets by the Department.

30 ₹5,000 x 9,643

31 (i) Small goat rearing unit, (2) Mini layer Unit, (3) Dual purpose low input technology birds, (4) Duckery unit, (5) Fishery kit, (6) Bee keeping, (7) Mushroom cultivation, and (8) Dairy Development

Scrutiny of records revealed that ₹2,007.67 crore were released in three instalments to the 18 lakh beneficiaries as of March 2021 without undertaking capacity building and training. Audit noticed that ₹4.89 crore only was released (February 2019) to the Director, Horticulture (DH) to conduct orientation training programme for 4.89 lakh beneficiaries. DH could cover 3.96 lakh beneficiaries under the orientation training programme till March 2021 with shortfall of orientation training programme for 0.93 lakh beneficiaries. Audit also observed that Department failed to capture the choice of activity to support the livelihood of these beneficiaries.

Thus, non-imparting of necessary training to 14.04 lakh beneficiaries and releasing the amount of ₹1,755 crore (14,04,000 beneficiaries X ₹ 12,500) towards assistance to these vulnerable and needy groups, defeated the scheme objectives to some extent. The Department did not capture the status of household preference of the activities, grounding, and verification of assets. Therefore, audit could not evaluate the achievement of the objective of the desired benefits reaching the targeted beneficiaries and thereby augmenting the income and to accelerate agricultural prosperity.

Agreeing to the fact, the Government stated that all field activities were held up due to outbreak of COVID-19 pandemic. After normalisation of COVID-19, ₹13.11 crore has been released to complete the orientation training programme.

However, the fact remained that the amount of assistance was released without imparting necessary training which defeated the scheme objectives.

2.2.6 Development of IT system

The KALIA portal was developed with deficient Software Requirement Specification (SRS) and having inadequate application controls, lack of input and validation control. This resulted in incorrect data processing and duplication of records.

Audit analysis revealed that after the transactions were completed and recorded, the vital data were again manually updated without any log or audit trail.

Government developed an IT System named KALIA Portal for managing and monitoring the scheme implementation. The system was developed in Window 2016 server with Internet Information Service (IIS) as web server, ASP.net as application platform and MSSQL Server 2012 as database server. The application is hosted in Odisha State Data Centre. The development process was fraught with deficiencies, as stated in the aforesaid paragraphs, for which ineligible beneficiaries were included and eligible beneficiaries were excluded to get the intended benefits under KALIA. The deficiencies in the IT system noticed in Audit are as follows:

2.2.6.1 Deficient planning in development of the system

A software requirement Specifications (SRS) document describes the intended purpose, requirement and nature of software/ system to be developed. This ensures proper design and implementation of an IT System. However, on scrutiny following irregularities were noticed:

- **System Development:** As per Paragraph 6.2 of guidelines for engagement of consultants and outsourcing of services (November 2018), for every work or service with estimated cost above ₹10 lakh, there should be open advertisement for selection of consultants. The Department engaged (March 2019) M/s CSM Technology Private Limited (CSM) as System Support Team (SST) of KALIA scheme through IDCOL Software Ltd (ISL)[32] for Development of KALIA web portal and beneficiary for data management. The work was awarded at a cost of ₹ one crore without inviting tender, considering it as an enhancement of contract /agreement of Food Supplies and Consumer Welfare (FS&CW). No agreement was also executed with the firm for execution of such work. Data analysis by Audit revealed that CSM was working for KALIA Scheme since January 2019 *i.e.*, before approval of Government and placement of work order. This indicated that the Department had extended an undue favour by engaging CSM informally for the work without inviting tender.

In reply, the Government stated (April 2022) that the engagement of CSM Technologies has been done through ISL observing all codal formalities. However, the fact remained that ISL awarded (March 2019) the work to CSM without tender while CSM had already started (January 2019) the work.

- **Approval of deficient SRS after implementation of the system:** The SRS should have been prepared and approved before implementation of the project. Audit noticed that the CSM did not submit any SRS document to the Department before implementation of the project. Though the Department did not issue any reminder for timely submission of SRS document, it accepted (November 2019) SRS document after completion of the project and User Acceptance Test (31 August 2019).

  As such, Audit scrutiny revealed that the Grievance Redressal System, a part of SRS document, submitted by CSM was irrelevant since many fields denote 'booking of Kalyan Mandap' or 'Booking of Townhall' and 'escalation details of scheme of BeMC with complaint category Sanitation and Public Health' *etc.* which did not relate to KALIA. The details of deficiencies in the SRS were given in ***Appendix - II***. Subsequently, the Department modified (November 2019) the module of "Grievance and Redressal" altogether. Since the SRS document was received after implementation of the project, the intended beneficiaries were deprived of the opportunity to put forth their grievances for inclusion during the said period. This indicated hasty development of system without proper system study and requirement assessment for which deficiencies in implementation were noticed by Audit as detailed in subsequent paragraphs.

[32] IDCOL Software Ltd (ISL) is a Public Sector Undertaking of GoO

Government stated (April 2022) that SRS document was formulated in due period, but some fine-tuning/ modifications were done in SRS by discussion during implementation of the project. The reply was not specific to the Audit comment on irrelevant SRS submitted by CSM.

2.2.6.2 Development of a disintegrated and inconsistent farmer database

As per industry's best practice, there should not be any change in the data of a master table after it is created. However, if required, the changes made in the master data are to be properly logged to preserve the history of changes. Department provided two sets of data (one in September 2020 and one in April 2021) to audit. Audit analysed these two data sets against changes in master data and found critical inconsistencies in the database. Audit also noticed non-maintenance of logs and audit trails of transactions leading to loss of integrity of data. The inconsistencies noticed by Audit are as mentioned below:

- **Changes in applicant master:** Under KALIA, the Department received one crore applications from the citizens of the State for inclusion in the beneficiary list in three phases[33]. Data given in the applications were captured in separate phase-wise tables. By consolidation and verification of those tables, separate beneficiary tables were created which were the master tables of beneficiaries for payment of the benefits. Therefore, the names in the master table must be the same as given in the applications. However, Audit analysis revealed that there were changes in names of 295 beneficiaries in the beneficiary master table resulting in doubtful selection of beneficiaries. The sample of changes in names of beneficiaries' master table to that of applications was as below:

Table No. 2.10: Sample showing names with same Aadhaar number in 'Applicant Master' and 'Beneficiary table' of KALIA database

Sl. No.	Name as per Beneficiary Data	Name as per Application Data
1	*2*	*3*
1	Bishnu Sunani	Natha Harijan
2	T.Fakir	T.Tulasama
3	Panchu Thela	Gura Mahar
4	Umakanta Biswal	Dipti Swain
5	Himirika Nuka	Amalu Kadraka
6	Sk Kasimuddin	Samirun Bibi
7	Riyajuddin Khan	Sofia Bano
8	Tulasi Bag	Ramchandra Bag
9	Namita Mali	Ritarani Ray
10	Akash Chandra Naik	Pinki Naik
11	Sarat Kumar Sethi	Trilochan Sethy
12	Subotha Kumar Bhadra	Nalini Priyadrashni Bhdra
13	Gouriprasad Majhi	Puspanjali Naik
14	Ghanasyam Gouda	Dilip Kumar Gouda

[33] 1st Phase – 14 Jan 2019 to 9 February 2019 – 65.77 lakh
2nd Phase – 14 February 2019 to 11 March 2019 – 30.98 lakh
3rd Phase – 6 August 2019 to 4 September 2019 – 3.37 lakh

Sl. No.	Name as per Beneficiary Data	Name as per Application Data
15	Bidika Sibani	Shibaji Bidika
16	Hemabatee Raul	Purnachandra Roul
17	Rashik Sa	Dola Ram Sahu
18	Satyananda Sahu	Sushil Sahu
19	Aruna Kumar Sahoo	Gajendra Sahu
20	Mahadev Naek	Nirupama Naik

(Source: Data furnished by the Department)

Similarly, Audit analysed the critical fields like bank account numbers, farmer type in the application master table for the first phase payment and observed that account numbers of 1,480 beneficiaries were changed in beneficiary master table as unwanted characters like 'OTHER' were removed from the bank account field without any audit trail/log. This indicated that there was no input validation while capturing the bank account field in the application master table. In addition to above, Audit also pointed out presence of duplicate bank accounts as discussed in **Paragraph 2.2.3.**

Data analysis revealed that while 162 farmers had applied under landless (LL) category to be eligible for getting ₹12,500 in three phases, their category was changed to small/marginal farmers (SMF) for payment of ₹25,000 in the beneficiary master table for release of instalments in five phases. Similarly, 253 farmers applied under SMF were also shown as LL for the payment purpose. There were also other 56,876 cases of change of farmer category in the beneficiary master table like "OTHER" changed to SMF, "OTHER" changed to LL "SELECT" changed to SMF etc. The above changes did not have any log for fixing accountability rendering the database unreliable apart from non-maintenance of equity and fairness in selection and payment process.

Agreeing to the fact, the Government stated (April 2022) that application forms were collected from farmers in Green Form through offline mode for which the applicant details in application master table was not 100 *per cent* correct. The discrepancies were verified by the field officials and have modified the beneficiaries' details. Further, without providing the related data for verification, Government stated that logs have been maintained. The reply is not acceptable as the verified data should have been saved separately with proper logs to preserve the integrity of the system.

- **Lack of input control/validation led to duplicate data:** The beneficiaries of KALIA scheme were identified through Aadhaar number and amount of benefit was transferred to beneficiaries in Direct Benefit Transfer (DBT) to their bank account. The bank account number and Aadhaar number given by the respective authorities are unique. Hence, each beneficiary should give a bank account number and Aadhaar number of its own in the application form so that the benefit would reach the intended beneficiary. In order to check duplicity in bank account number and Aadhaar number given by the applicants, duplicate check validation during data entry should have been conducted to ensure that no duplicate Aadhaar Number or Bank Account Number was entered into the database. Further, there should be a data validation in those fields to prevent unintended junk characters during data entry.

Audit analysed one crore application forms for inclusion in beneficiary list and noticed that 4.17 lakh Aadhaar numbers were duplicated ranging two to three times involving 8.33 lakh applications. Similarly, 4.50 lakh Bank Account numbers were entered repeatedly in the application database ranging from two to 168 times involving 9.15 lakh applications. In addition, there was also presence of 2,984 applications where account numbers mentioned as 'OTHER'.

Thus, it is evident that there was no input or validation control in the data entry form to prevent such duplicities and junk entries which not only resulted in an inconsistent and unreliable farmer database, but also the benefit of KALIA did not reach the intended beneficiaries in those cases.

Agreeing to the fact, the Government stated (April 2022) that during the initial period of collection of KALIA application, there were no input control or input validation process was adopted to prevent any entry or duplicate Aadhaar number or duplicate bank account number in KALIA System.

- **Excludable beneficiaries received KALIA benefit:** Department initially selected 21.76 lakh farmers registered under Direct Benefit Transfer (DBT) data of DA&FE and 1.05 lakh Sharecroppers registered under Paddy Procurement Automation System (P-PAS) data of Food Supply and Consumer Welfare (FS & CW) Department as beneficiaries of KALIA. The list of beneficiaries was then displayed at GP level for allowing general public to identify ineligible beneficiaries and apply for exclusions in 'Red Forms'. The Village Agriculture Workers (VAW)/Gram Panchayat Nodal Officers (GPNOs) were also instructed (January 2019) to suo-moto add exclusions after verification of field reality. The 'Red Form' data along with reason for exclusion was captured in a separate table.

  Database analysis revealed a total 2.47 lakh red[34] forms were captured in the table which included 1.04 lakh suo-moto initiations and 1.43 lakh applications for exclusion. Out of these 2.47 lakh applications, 1.30 lakh applications were accepted for exclusion after verification. However, Audit analysed the data using the logic applied by the Department and found that Department had released payment to 3,357 excludable persons appeared in the list of 1.30 lakh applications accepted for exclusion and paid ₹1.68 crore to them as shown in the following **Table No.2.11**.

[34] Red Forms are the application forms for objection/ self exclusion

Table No.2.11: Details of Exclusion forms accepted for exclusion and payment released to these excludable applicants

Sl. No.	Reasons	Direct applications	Suo-moto initiation	Total number of applications accepted for exclusion	Number of excludable applicants to whom payment was successful	Amount (₹ in lakh)
1	*2*	*3*	*4*	*5*	*6*	*7*
1	Large Farmer	2	1	3	0	0.00
2	Big Farmer	902	10,047	10,949	215	10.75
3	Death case	3,638	13,973	17,611	292	14.60
4	Govt./PSU employee	9,748	29,750	39,498	356	17.80
5	Multiple Entry for same family	3,015	18,825	21,840	1,803	90.15
6	Other	1,404	8,404	9,808	440	22.00
7	Retired Govt. Employee	7,086	21,491	28,577	226	11.30
8	Income Tax payer	509	1,312	1,821	25	1.25
Grand Total		**26,304**	**1,03,803**	**1,30,107**	**3,357**	**167.85**

(Source: compiled by Audit from the data furnished by the Department)

As per SRS, the "reason" column was to be captured using a dropdown list having first visible row was "Select Reason". The applicant while applying has to select the appropriate reason. Data analysis of balance 1.17 lakh exclusion applications revealed that instead of entering a valid reason in the "reason" column, "Select Reason" was entered due to lack of validation in the input field, which was a software flaw. Out of these, payment of ₹36.60 crore was released to 0.73 lakh beneficiaries without excluding them from the beneficiary list which raised question on selection of doubtful beneficiaries. This indicated that the Department had not applied appropriate logic[35] in the exclusion process.

Similarly, Department also invited applications (January-February 2019) for exclusion of the names from the draft beneficiary list selected out of direct applications from public. Department received 4.09 lakh applications for exclusion. District level Nodal Officers (DNOs) approved 3.48 lakh applications which should have been excluded from the beneficiary list. Database analysis however, revealed that 1,062 applicants, approved by DNO as ineligible, were not excluded from the beneficiary list but payment of first instalment amounting to ₹0.53 crore was made to them.

Thus, due to system deficiency of process control in handling the exclusion data, the Department released ₹2.21 crore (₹1.68 crore plus ₹0.53 crore) to 4,419 ineligible or doubtful beneficiaries.

[35] Department had not provided the source code to audit for analysis

Agreeing to the fact, the Government stated (April 2022) that the Department had taken immediate steps to identify these beneficiaries as ineligible and issue refund notice to them.

- **Inconsistent workflow – unauthorised approvals of BNOs and GPNOs:** As per table design and the workflow in the submission of application for exclusion from the beneficiary list, the process of approval for exclusion was as follows:-

  - GPNO will verify and approve the applications received and submit them to Block Level Nodal Officer (BNO).
  - The BNO will submit the applications to District level Nodal Officer (DNO) for approval.
  - After approval of the DNO, the applications will be marked for exclusion from the beneficiary list.

Hence, the approvals of GPNO, BNO and DNO were strictly chronological. As such, there should not be any acceptance by GPNO after approval of an exclusion by BNO or acceptance by BNO after approval of DNO. However, data analysis of exclusion form revealed that there were instances of breach of this hierarchy in 6,556 cases against the designed chronology, making the system inconsistent and unreliable.

Table No.2.12: Details of inconsistent workflow in 2nd phase exclusion process

Sl. No.	Description	Number of cases
1	***2***	***3***
1.	GPNO had approved the exclusion application form one to seven days after approval of BNO	6,523
2.	BNO had approved the exclusion applications from two to six days after approval of DNO	28
3.	Date of exclusion was updated one to two days before the DNO had approved the exclusion form.	5
	Total	**6,556**

(Source: Compiled by Audit from the Databases maintained by Department)

Further, Audit verified the exclusion table and found that in the Phase -2 exclusion process, 21,647 Aadhaar numbers were repeated in 48,590 records ranged between 2 to 2,185 times. To cite an example, the pseudo number[36] in place of Aadhaar number with value '159984352500280' had been entered 2,185 times against different names in the database. Further, name and Aadhaar number taking together, there were 21,833 duplicates which were repeated two to 67 times. Aadhaar number with pseudo value '159984697700897' and name 'SULAVA CHANDRA RAUL' had been

[36] The Department did not provide the Aadhaar number in the database. However, in place of each Aadhaar number, they provided another unique encoded number.

entered 67 times. This happened due to technical errors or a back-end interference.

Thus, the database of KALIA had become inconsistent and lacked reliability.

The Government agreed (April 2022) to the fact and stated that due to exercise of incorrect logic by the SST, the date of verification was wrongly updated against the chronology. Owing to this, no financial irregularities happened. The fact remained that this activity made the system inconsistent and un-reliable. The source code was not furnished to audit for verification.

- **Deficient system design – manual updation in Account numbers in payment table without log:** After payment was disbursed to beneficiaries, the response of bank denoting KALIA ID, account number, date of payment, Unique Transaction number of Bank, status of payment was captured in a payment transaction table. In case of failure of a payment due to invalid bank account number, incorrect IFSC or any other reason, the Department made necessary corrections and re-submitted to the bank for payment. In this case, a separate record for the payment transaction needed to be added with appropriate audit trail/audit log in the payment table.

  Audit analysed the data furnished during September 2020 and April 2021 comparing each payment table of both the years and found that in 2,09,659 records payment status were updated in 4,19,512 occasions[37] (UTR Number, Account Number) without any trail or log. This showed that after the transactions were completed and recorded, the vital data were again manually updated without any log or audit trail. As a result, the database had become unreliable with no integrity. Government noted (April 2022) the audit observation for rectification.
- **Inconsistent payment transactions table:** The beneficiary master table stores details of the eligible beneficiaries of the scheme (both Landless and Small and marginal farmers). The table contained various fields like beneficiary name, father's name, address, category (whether LL or SMF), amount of assistance *etc*. along with number of the last instalment paid. After payment of assistance through this beneficiary master table, the beneficiary particulars of the payment transaction should be captured in the beneficiary master table and must match with those of the last transaction fields of the payment table.

  Audit noticed that:-

  - ✓ There were 2,19,885 beneficiaries' records having same instalment number successfully paid twice.
  - ✓ The instalment mentioned against the beneficiary was not matching with the instalment paid in the payment data in 19,919 cases.

[37] Changes in Account number – 3,224; Bank name – 3,425; failure reason – 10,519; IFSC – 3,222; status – 2,06,220; UTR No. – 1,92,892

- ✓ The instalment number and amount were not shown to the beneficiaries in the track application status screen (https://kaliaportal.odisha.gov.in/TrackToken.aspx).

This indicated that there was deficiency in designing the database system and the data were manipulated manually with loss of transparency.

The Government agreed (April 2022) to the fact and stated that due to delay in receipt of success/failure bank response, the actual status of some beneficiaries has not been updated in time. Some new applicants selected as beneficiaries by grievance application were paid their assistance in prospective manner and the instalment number and amount were not shown to the beneficiaries in the track application status screen.

- **Inequitable selection of beneficiaries through grievance process:** As per the workflow in the Grievance Redressal process, the DNO was the final field level authority to approve the beneficiaries. Database analysis revealed that the DNO approved 4,30,370 eligible beneficiaries from 13.37 lakh applications received through grievance portal. However, in the beneficiary master table, only 4,23,120 beneficiaries were included. Remaining 7,250 beneficiaries were excluded in beneficiary list arbitrarily, thereby depriving assistance to them from the KALIA scheme. Thus, making these beneficiaries ineligible after selection was irregular. Government stated (April 2022) that after field verification of all the farmers' data or application State Level verification or sanitization were done linking other databases and the State excluded 7,250 number of field verified eligible applicant. The reply is not acceptable as physical field verification was more reliable than verification through third party database comparison and the former should have been considered.

- **Non-payment to eligible beneficiaries:** Out of the 4,23,120 beneficiaries included in the beneficiary list selected through Grievance process, the Department released payment to 3,86,067 beneficiaries. The remaining 37,053 beneficiaries had not received any assistance yet since March 2020 *i.e.* the date of their eligibility. This indicated that there was inequitable and arbitrary payment of instalments. Government agreed (April 2022) to audit point and stated that due to non-confirmation of accounts either by NPCI or by the banks, some beneficiaries had not received their assistance. However, Government failed to expedite the verification process and released payment to the eligible beneficiaries.

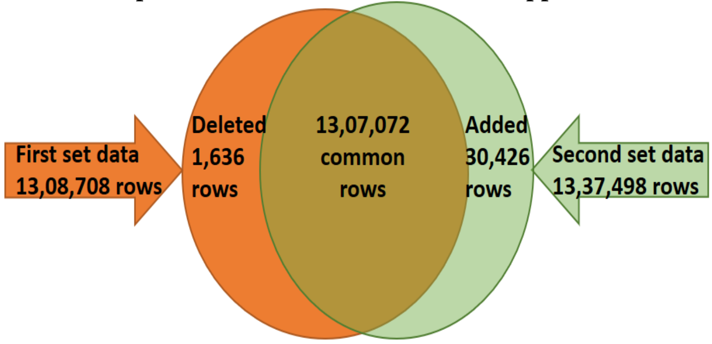
- **Repeated payment of instalment without success of previous instalment:** As a general practice, the second instalment should be released to a beneficiary after successful transfer of first instalment. The subsequent instalment should not be released, if there was failure in transaction of first instalment.

Audit analysis of payment transaction table revealed that there were failed payment of first instalment against 5,01,357 beneficiaries. Subsequently, payment of instalment in respect of 3,91,309 beneficiaries were made after rectification of their account details. The Department released subsequent instalments to 5,006 of the remaining 1,10,048 beneficiaries without ensuring the success of payment of previous instalment. This indicated that even after repeated verification of data of beneficiaries, there were still errors in bank account numbers owing to which the genuine beneficiaries were deprived of getting the benefit of the scheme. In reply Government stated (April 2022) that if Aadhaar seeding was correctly captured, the payment was pushed for subsequent instalment payments ignoring previous failure payment instances. The reply is not acceptable as Government should have ensured payment of instalments to the beneficiaries in cases, where payments failed.

2.2.6.3 Database security and integrity

After release of first instalment (January 2019 to May 2019), the Department realised that there were ineligible beneficiaries present in the selected list. So, it conducted field level verification along with State level verification with various datasets during August-September 2019 *i.e.* before release of second instalment and found 14.08 lakh ineligible beneficiaries. In order to verify their credentials, those beneficiaries were allowed to apply again through grievance process. On receipt of the grievance, their grievance applications were captured in a grievance application master table and from the master table, a separate transaction table was created which captured the step wise verification process at field level.

Chart-5: Comparison of two sets of Grievance Application table



Deletion of records: Analysis of two sets of data provided to audit during September 2020 and April 2021 revealed that 1,636 grievance applications were deleted from the data provided during April 2021. Thus, the database had become unreliable losing its integrity.

Updation of historical transaction data without log: There was difference in month wise record counts in 13,556 records of grievance applications data provided during September 2020 and April 2021. The critical attributes like names of account holders, account numbers *etc.* were changed in 13,06,940 records in grievance application master table without any provision of audit trail or log. Similarly, 1,22,439 records in the grievance application verification table were also changed.

Inconsistent workflow: As per the workflow in the Grievance Redressal process, after the applicant submitted the form, the DNO would approve the beneficiary after receipt of the approval from GPNO and BNO. The hierarchy in such approval process must be automated. Audit noticed that sequence of record creation in 3,747 records relating to date of creation of record, date of creation by GPNO, date of approval by GPNO, date of approval by BNO and date of Approval by DNO of grievance applications was done in a disorderly manner indicating serious inconsistency in the workflow. Thus, the database had become unreliable losing its integrity.

The Government agreed (April 2022) and stated that there was difference in month wise record occurred due to "reapply" option. As some beneficiaries applied again in KALIA web portal resulting in mismatch of grievance application during the period September 2020 to April 2021 dataset. Due to wrong handling of information by the farmers, the GPNO and BNO were compelled to edit the status of the form of the application. The reply is not acceptable as critical application data were changed without any log creating risk of manipulation.

2.2.7 Conclusion

The Government introduced the scheme Krushak Assistance for Livelihood and Income Augmentation (KALIA) having six components without proper planning. Government could implement only two out of the six components. Two components of the scheme were dropped, and two other components were yet to be started as of March 2021. As Government had no foolproof farmers' database as well as a proper plan, the initial implementation of the two components targeting 40.18 lakh beneficiaries got riddled with errors. The increase in number of beneficiaries during identification and selection process was the biggest fault in the planning process.

The department had provided KALIA benefit assistance to 65.64 lakh beneficiaries during 2019-2021 and released instalments thrice to 41.64 lakh beneficiaries, twice to 8.09 lakh beneficiaries and only once to 15.91 lakh beneficiaries. This happened due to identification of 9.76 lakh ineligible beneficiaries by the Department subsequently.

Audit noticed that there were 12.72 lakh ineligible beneficiaries, to whom Department had transferred ₹782.26 crore with remote chances of recovery.

Further, ₹107.64 crore was released to 1.28 lakh account holders in which the names of account holders were different from names of the beneficiaries indicating non-payment of instalment to the genuine beneficiaries.

As per scheme guidelines second instalment for landless Agricultural Labourers was to be released after conducting orientation training. Audit observed that capacity building and training was conducted for 3.96 lakh beneficiaries only out of 18 lakh beneficiaries, till March 2021 defeating the scheme objective. Hence, the entire amount of ₹2,007.67 crore assistance released to them became unfruitful.

There was hasty development of the IT system for KALIA without proper system study and requirement assessment for which deficiencies in implementation occurred. Audit also noticed non-maintenance of logs and audit trails of transactions leading to loss of integrity of data. Audit analysis revealed that there were changes in names of 295 beneficiaries in the beneficiary master table resulting in doubtful selection of beneficiaries. There was no input control or validation in the data entry form to prevent duplicities and junk entries resulting an inconsistent and unreliable farmer database. Audit analysis revealed that after the transactions were completed and recorded, the vital data were again manually updated without any log or audit trail. As a result, database had become unreliable with no integrity.

2.2.8 Recommendations

The Government may:

- develop a robust mechanism to provide KALIA scheme assistance to only eligible farmers after proper identification.

- ensure development of IT application based on approved User Requirement and System Requirement Specifications. The IT Application should have appropriate IT controls to ensure confidentiality, integrity and availability of data and does not allow any modification without audit trail.

- ensure all DBT payments based on Aadhaar Payment Bridge System and validate the bank accounts of eligible beneficiaries before release of payments.

- take necessary steps for prompt recovery of payments from ineligible beneficiaries under KALIA scheme who have been paid assistance incorrectly.

CHAPTER III

Detailed Compliance Audit on Application of Environmental Laws by the State Pollution Control Board in Sundargarh District

CHAPTER III

FOREST, ENVIRONMENT AND CLIMATE CHANGE DEPARTMENT

3. Detailed Compliance Audit on "Application of Environmental Laws by the State Pollution Control Board in Sundargarh District"

3.1 Introduction

As per the Environment (Protection) Act, 1986, environment includes water, air, land and the inter-relationship which exists among and between water, air, land, and human beings, other living creatures, plants, micro-organism and property. Environmental pollution means the presence of any solid, liquid or gaseous substance in such concentration which is injurious to environment. Indiscriminate utilisation of natural resources to meet development demands, rapid industrialisation and unplanned urbanisation adversely impact the environment. Dumping of wastes into rivers and water bodies, excessive diversion of forest land for other purposes and increased emission of harmful pollutants in the air contribute to degradation of environment.

Odisha is a mineral rich State, which has attracted many large scale industries like Steel, Cement, Ceramic Glass, Aluminium *etc.* While the presence of steel giants like Steel Authority of India Limited (SAIL), Neelachal Ispat Nigam Limited (NINL), Jindal Steel *etc*., indicates the industrial growth of the State, it also indicates the need of efforts to contain the adverse effects of industrialisation on the environment.

In view of growing importance of environmental issues and sustainable development, environmental audit has assumed greater significance. In order to check application of environmental laws, Audit decided to pick one of the districts of Odisha and to analyse their compliance.

The Detailed Compliance Audit on the application of environmental laws in a selected district was conducted during 2020-21. The Sundargarh district was selected for this audit, as the district covers 16.96 *per cent* of the total area of the State and it occupies a place of prominence in the mineral ores map of Odisha. Its provisional population is 20.93 lakh as per Census 2011[38]. The mineral ores of manganese, limestone, dolomite and iron constitute a major cover of the district, however, other minerals like bauxite, coal, soapstone/ talc, lead, zinc and copper are

[38] Source: https://sundargarh.nic.in/demography/#

also found in the district. Depending upon the quantum of reserves and the grades available in the exploitable mineral ores, mining activities are mostly under progress in small or large opencast mines, except in a few old underground mines for coal. Methods of open cast mining are manual, semi-mechanised or mechanised. Major industries like SAIL's Rourkela Steel Plant, M/s Dalmia Cement (Bharat) Limited, Mahanadi Coal Fields Limited are situated in this district. The predominant sources of pollutants in Sundargarh District are 44 mines, 376 industries, 47 Health care facilities (generating biomedical waste) and four Urban Local Bodies[39] (generating solid wastes as well as sewage).

3.1.1 Objectives and Audit criteria

The objectives of this Detailed Compliance Audit (DCA) were to assess whether (i) all Environmental Acts and Rules made thereunder were complied with adequately and effectively, (ii) available funds were utilised for the intended purposes in economic, efficient and effective manner and (iii) monitoring and supervision by enforcement authorities were adequate and effective.

The main source of Audit criteria were the (i) The Environment (Protection) Act, 1986; (ii) The Air (Prevention & Control of Pollution) Act, 1981; (iii) The Water (Prevention & Control of Pollution) Act, 1974; (iv) The Solid Waste Management Rules, 2016; (v) The Bio-Medical Waste Management Rules, 2016; (vi) The e-Waste (Management) Rules, 2016; (vii) The Construction & Demolition Waste Management Rules, 2016; (viii) The Plastic Waste Management Rules, 2016; (ix) The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and (x) the Guidelines issued by the Central Pollution Control Board basing on which the Audit observations are made.

3.1.2 Organisational Setup

The Odisha State Pollution Control Board (OSPCB) is working under the administrative control of the Forest, Environment & Climate Change (FE&CC) Department, Government of Odisha (GoO) through its 12 regional offices each headed by a Regional Officer (RO). The OSPCB is entrusted with the responsibility of implementing the Environmental Acts and several rules addressing specific environmental problems like hazardous waste management, bio-medical waste management, solid waste management, e-waste management, plastic waste management, environmental impact assessment *etc.* which have been brought under the Environment (Protection) Act. The OSPCB also executes and ensures proper implementation of other environmental legislations of the Union and the State Government.

The Regional Office, Rourkela of OSPCB headed by Regional Officer (RO) is responsible for prevention and control of pollution, regular monitoring of the effluent emission and waste generation and disposal from the industries, mines, and other units in all Blocks of the Sundargarh District except Hemgiri Block, which is under RO, OSPCB, Jharsuguda.

39 Rourkela Municipal Corporation, Sundargarh Municipality, Rajgangpur Municipality and Biramitrapur Municipality

3.1.3 Scope and Methodology

Audit was conducted between February to March 2020 and January to April 2021 due to pandemic in Odisha. In DCA, the records of State Pollution Control Board, Bhubaneswar, Rourkela Municipal Corporation out of four ULBs, twelve[40] out of 47 Health Care Facilities (HCFs) and five[41] monitoring units were covered for the period from 2016-20.

The HCFs and ULBs were selected on the basis of Random Sampling method taking into consideration the bed capacity and population respectively. The Audit methodology adopted for collection of data through document analysis, response to audit queries, questionnaires, photographic evidence and examination of reports and records of various implementing agencies. Joint Physical Inspection (JPI) of 12 units was also conducted to verify management of different wastes.

Vehicular emissions were monitored by the Transport Department, hence, it has not been covered in this compliance audit.

The draft report of this audit was sent to the Government of Odisha in February 2022. The Audit findings were discussed in the Exit Conference held on 09 June 2022 and replies of the Government have been suitably incorporated in the report.

3.1.4 Good practices adopted by the Department

The following good practices were adopted by the Health & Family Welfare Department for barcoding software for better management of Bio-medical waste:

- The Department was in the process of installation of unique integrated software for Barcoding of Biomedical waste from the site of generation and tracking down the process from segregration till disposal.
- A dashboard giving realtime data and monitoring provision can be visualized everyday strictly from generation to disposal including tracking of GPS enabled vehicles.

Audit Findings

3.2 Air Pollution

3.2.1 Monitoring of Ambient Air Quality

As per the Central Pollution Control Board (CPCB) Notification issued (November 2009) for National Ambient Air Quality standards, the average

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[40] i) Rourkela Government Hospital (RGH), Rourkela, ii) Sub-Divisional Hospital, Bonai, iii) Community Health Centre (CHC), Subdega, iv) CHC, Hemagiri, v) CHC, Rajgangpur, vi) CHC, Badagaon, vii) M/s Vesaj Patel Hospital and Research Centre, Rourkela, viii) M/s Astha Mother and Child Care Hospital, Rourkela, ix) M/s Community Welfare Society Hospital, Rourkela, x) M/s Rajasthan Seva Sadan, Rourkela, xi) M/s Shanti Memorial Hospital, Rourkela and xii) M/s Hitech Medical College and Hospital, Rourkela

[41] i) RO, OSPCB, Rourkela, ii) RO, OSPCB, Jharsuguda, iii) Chief District Veterinary Officer (CDVO), Sundargarh, iv) Chief District Medical and Public Health Officer (CDM&PHO), Sundargarh and v) Deputy Director, Factory and Boiler, Rourkela

annual standard of Particulate Matter (PM)[42] of size less than 10 microns (PM_{10}µg/m^3) in air is 60 µg/m^3 and the average annual standard of Particulate Matter of size less than 2.5 microns ($PM_{2.5}$µg/m^3) in air is 40 µg/m^3.

Scrutiny of records revealed that the RO, OSPCB, Rourkela had been monitoring Ambient Air Quality (AAQ) at six stations[43] in three towns and industrial areas in Sundargarh district under National Air Quality Monitoring Programme (NAMP). The OSPCB had analysed 7,238 AAQ samples during 2016-20, wherein average PM_{10} value remained high during all the years and ranged between 65 µg/m^3 (108 *per cent*) and 207µg/m^3 (345 *per cent*) against standard parameter of 60µg/m^3. Similarly, the average $PM_{2.5}$ value ranged between 42µg/m^3 (105 *per cent*) and 63 µg/m^3 (158 *per cent*) against the standard parameter of 40µg/m^3.

Audit observed that 2,440 pulmonary cases were detected in the year 2019-20 in the district of Sundargarh as compared to the total 1,301 reported cases in all other 29 districts of the State. High concentration of pollutants in ambient air is one of the reasons for such higher pulmonary cases in the district. Further, during 2016-19, 61,698 patients had undergone treatment for Silicosis[44] in the district due to excess presence of silica dust in the air owing to higher $PM_{2.5}$ and PM_{10} levels. Audit observed that the high concentration of pollutants in the ambient air was due to pollution caused by different industries in the district.

The Government did not furnish (May 2022) any specific reply to the above audit observation.

3.2.2 Air pollution by industries

3.2.2.1 Scrutiny of records of RO, OSPCB, Rourkela revealed that M/s Dalmia Cement (Bharat) Limited is an 'A' category industry[45] having its plant located at Rajgangpur (a town situated in Sundargarh District). As per Section 21 of Air (Prevention and Control of Pollution) Act, 1981 and conditions of the Consent to Operate (CTO) issued by OSPCB stipulate that the industry had to comply with prescribed standards of 34 effluents and 12 air pollutants including four stack emission[46] pollutants so as to keep the CTO valid.

Test check of monthly AAQ monitoring reports of the industry revealed that only five air pollutants including one stack emission pollutant were monitored. Also, 34 effluents and remaining seven air pollutants including three stack

42 The concentration of an air pollutant is given in micrograms (one-millionth of a gram) per cubic meter air or µg/m^3.

43 1) RO, OSPCB, Rourkela, 2) IDL Police Out-post, Sonaparbat, Rourkela, 3) Odisha Industrial Development Corporation (IDCO) Water Tank, Industrial Corporation, Kalunga, 4) Government Hospital, Kuanrmunda, 5) Dalmia Institute of Scintific and Industrial Research, Rajgangpur and 6) Government Hospital, Bonai

44 Silicosis is a type of pulmonary fibrosis, a lungs disease caused by breathing in tiny bits of silica, a common mineral found in sand, quartz and many other types of rock.

45 Industries having investment more than ₹50 crore and mining projects dealing with Coal, Bauxite, Iron, Manganese, Limestone, Dolomite and Chromites come under category 'A'

46 Stack emissions are those gases and solids that come out of the smokestack after the incineration process.

emission pollutants were not monitored. The average levels of PM_{10} and $PM_{2.5}$ as per Rajgangpur monitoring station under NAMP were much higher during the period 2016-20 varying between 92 to 149 $\mu g/m^3$ (153 to 248 *per cent*) of PM_{10} and 36 to 58 $\mu g/m^3$ (90 to 145 *per cent*) of $PM_{2.5}$ than the prescribed standard of 60 $\mu g/m^3$ and 40 $\mu g/m^3$ respectively.

Test check of records revealed that in respect of this industry, despite OSPCB's instructions, the RO:

(i) did not find out the cause of occurrence of high concentration of PM_{10} noticed in May 2019;

(ii) did not initiate any action against the industry for non-collection of wastes in closed chamber to prevent air pollution;

(iii) did not conduct enquiry regarding air pollution due to emissions from contaminated coal, limestone and life threatening chemicals causing respiratory diseases; and

(iv) did not investigate the non-operation of electrostatic precipitator and discharge of effluent water to natural resources and private cultivated land.

Further, the industry established and operated a conveyor system over municipal main road from mines to plant site since 2011 without obtaining Consent to Establish (CTE) from OSPCB. Operation of the conveyor belt for transportation of mineral from mines without CTE from OSPCB remained unnoticed for a long period from 2011 to 2020 which was a lapse on the part of RO for enforcement of the relevant Acts.

In reply, the Government stated (May 2022) that M/s Dalmia Cement was an industry which was granted CTO with industry specific water and pollutant parameters. It almost complied the specific condition along with compliance of pollutant parameters. However, the reply was not acceptable as the industry did not monitor all the prescribed parameters to keep the CTO valid.

3.2.2.2 As per Section 21 of Air (Prevention & Control of Pollution) Act, 1981, no person shall, without the previous consent of the State Board, establish or operate any industrial plant in an air pollution control area.

Test check of records of RO, Jharsuguda revealed that in Hemgiri Block of Sundargarh District, three coal mines[47] of M/s Mahanadi Coal Fields Limited had valid CTOs during 2016-20 for production of coal and operation of Subdega Railway Siding (M/s Basundhara (W)) with the stipulation to adhere to the CTO conditions. However, the units had violated 12 consent conditions persistently as detailed in ***Appendix - III***.

The units had not installed Continuous Ambient Air Quality Monitoring System (CAAQMS) and Internet Protocol (IP) cameras with data transfer facility to OSPCB server.

[47] M/s. Kulda, M/s Garjan Bahal and M/s Basundhara (W) Open Cast Projects

Two mines (M/s Kulda and M/s Garjan Bahal) failed to maintain AAQ standard components of Respiratory Particulate Matter (RPM) and Suspended Particulate Matter (SPM) of PM_{10} level during 2016-21 ranged from 220 to 320 µg/m^3 and 348 to 724 µg/m^3 against norm of 250 µg/m^3 and 500 µg/m^3 respectively.

Neither did the mines comply with the directions of OSPCB (February/ September 2018) regarding violation of CTO conditions nor any action was taken by the RO (May 2022).

In reply, the Government stated (May 2022) that show-cause notices were issued to the three Mines. However, after it was pointed out by Audit, three CAAQMS in Basundhara- Garjanbahal area and IP cameras at various points in Kulda and Garjanbahal OCP were installed with connection to SPCB server for transfer of data for monitoring.

3.2.3 Inspection and sampling of air pollutants from industries

As per OSPCB circular (June 2015), the RO was required to conduct inspection of the industrial units at least once in six months and sampling had to be done every month with respect to Category 'A' units (Industries and Mines).

Scrutiny of records of 21 out of 93 Category 'A' units in the jurisdiction area of RO, OSPCB, Rourkela and Jharsuguda revealed that against the requirement of 168 inspections and 1,008 samplings during 2016-20, the RO conducted only 84 inspections and 75 samplings resulting in shortfall of 84 inspections and 933 samplings respectively as detailed in the ***Appendix-IV*.**

Though OSPCB called for explanation (October 2019) from the RO regarding the shortfall in conducting inspection and samplings, RO did not provide to Audit the reply which was sent to OSPCB. Further, the RO monitored only one air pollutant (PM_{10}) against the required 12 air pollutants, 34 effluent pollutants and four stack emission pollutants during 2016-20.

In reply, the Government admitted (May 2022) that inadequacy of monitoring was due to limited resources and manpower. PM_{10}, $PM_{2.5}$, SO_2, NO_2, Ammonia and Ozone in AAQ were being monitored in six monitoring stations of Rourkela and the monitoring report were being sent to CPCB on monthly basis. However, the Government failed to monitor all the air pollutants and effluents as required under the provisions of Notification.

3.3 Water Pollution

As per Section 2 (e) of Water (PCP) Act, 1974, water pollution means contamination or alteration of the physical, chemical or biological properties of water by such discharge of any sewage or trade effluent or any other liquid, gaseous, or solid substance into water which render such water harmful or injurious to public health or environment. Under the Act, OSPCB is responsible to plan a comprehensive programme for prevention, control and abatement of water pollution and advising the State Government on matters relating to pollution of water. Furthermore, according to Section 24 (iii) of Odisha Municipal Corporation Act, 2003, the Rourkela Municipal Corporation (RMC) with an area of 53.29 sq km is responsible for treatment and disposalof sewage under its jurisdiction. Similarly, the ULBs are primarily responsible for setting up of Sewage Treatment Plant (STP) and discharging of treated sewage effluents either into surface water bodies or on land with prior CTO from OSPCB. The OSPCB pursued (February 2018/ December 2019) the ULBs for 100 *per cent* treatment of sewage by establishing STP as of March 2020 in pursuance to Hon'ble NGT orders.

As per information furnished by the Superintendent, Sub-Divisional Hospital (SDH), Bonai to Audit, it was seen that there were 1,100 renal cases handled during 2016-20 at SDH, Bonai due to use of contaminated water of River Brahmani, as Bonai is situated at downstream of Rourkela Municipal Corporation (RMC) and Rourkela Steel Plant (RSP). The reasons for such water pollution have been analysed in the subsequent paragraphs.

3.3.1 Water pollution by industry and Municipal Corporation

3.3.1.1 Scrutiny of records revealed that the Rourkela Steel Plant was granted (October 2017) CTO by OSPCB under Water (PCP) Act, 1974, which was valid up to March 2018. As per the conditions of CTO, the industry was to comply with the conditions to keep the CTO valid. One of the CTO conditions was to provide timeline and cost estimate for complete recirculation of lagoon[48] overflow effluent, to ensure Zero Liquid Discharge[49] (ZLD) within one month from the date of issue of CTO. However, without complying with the condition, the industry discharged untreated surface runoff from different units of the plant to lagoon through Guradihi Nullha main outfall of RSP and lagoon outflow was discharged to river Brahmani degrading the water quality at its downstream since July 2016.

Despite violation of the consent conditions, CTO was renewed during March 2018 till March 2019 with the stipulation that the industry had to furnish time bound action plan towards implementation of ZLD. It also stipulated for submission of estimated cost by April 2018 for timely completion so as to prevent degradation of water quality of river Brahmani. The OSPCB issued (July 2019) show cause notice to the industry for high concentration of fluoride in the river Brahmani and directed (August 2019) for implementation of ZLD by December 2020. However, the CTO was renewed regularly although the industry failed to implement ZLD system (January 2022). Due to non-implementation of ZLD by RSP, there was high concentration of fluoride at five outlets/ outfalls[50] ranging from 2.6 mg/l (130 *per cent*) to 17 mg/l (850 *per cent*) against prescribed standard of 2.0 mg/l. Similarly, in Biological Oxygen Demand (BOD) outlet, concentration of cyanide was 3.6 mg/l (1,800

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48 Water body earmarked to contain liquid effluent.

49 Zero Liquid Discharge is a recirculation system of the treated effluent which shall be constructed by RSP to avoid discharge of effluent to Brahmani river and maintain Zero discharge of liquid effluent.

50 Out fall No. 3 (Blast Furnace (BF), Coke oven and by-product effluent); Out fall No.-1 (Outlet of Calcining Plant - 2, Steel Malting Shop-2, & Sinter Plant - 2); Biological Oxygen Demand outlet; Clarifier outlet of BF -5 and Clarifier outlet of BF - 4)

per cent) against prescribed standard 0.2 mg/l which contributed high concentration fluoride in Guradihi Nullha ultimately polluting river Brahmani. Hence, levels of fluoride concentration in river Brahmani at Panposh downstream (Deogaon), Rourkela downstream and Guradihi Nullha was increased against the tolerance limit for surface water of 1.5 mg/l during 2018-20. Despite OSPCB persuasion since March 2018 the RSP did not implement the ZLD by May 2022. No penal action was taken for non-compliance.

In reply, the Government stated (May 2022) that RSP had completed installation of Sewage Treatment Plant at out fall No. 7 and cold trial and testing were in progress. The BOD plant would be completed by 31 August 2022. The delay in implementation of ZLD was not acceptable as concentration of fluoride (130- 850 *per cent*) and cyanide (1,800 *per cent*) was much higher in five outlets of RSP. The levels of fluoride concentration in river Brahmani at Panposh downstream (Deogaon), Rourkela downstream and Guradihi Nullha was higher against the tolerance limit for surface water of 1.5 mg/l which supply water to various towns of Sundargarh District. OSPCB failed to enforce conditions of CTO and penal provision as per Section 41 of Water (PCP) Act, 1974.

3.3.1.2 Scrutiny of records of RMC and RO, OSPCB, Rourkela revealed that all the four ULBs[51] of the district failed to implement the directions of OSPCB (February 2018 and December 2019) and discharged untreated sewage into rivers causing pollution as discussed below:

(i) The RMC area was having population of 3,09,689 with 69,609 Households (HHs) as per Census 2011 and generated sewage of 40 million litres per day (MLD). Construction of STP of 40 MLD was under progress (January 2021). Commissioning of STP was under trial run and out of 12,000 HHs planned to be covered in the initial phase, only 48 *i.e.* 0.4 *per cent* were connected with sewerage network (January 2021).

Due to non-establishment of STP, RMC had been discharging untreated sewage into the rivers Brahmani and Koel at various discharge points[52] causing water pollution. It was observed from the analysis report on waste water of RO that during August 2016 to October 2017, the levels of Total Suspended Solid (TSS), Oil & Grease (O&G) and Biological Oxygen Demand (BOD) were 220 mg/l (220 *per cent*), 21.5 mg/l (215 *per cent*) and 305 mg/l (1,017 *per cent*) against the prescribed parameters of 100 mg/l, 10 mg/l and 30 mg/l respectively and the samplings for the remaining period from November 2017 onwards were not carried out by the RO. The annual water sampling at upstream (U/s) and downstream (D/s)[53] of rivers Brahmani, Sankh and Koel (2016-19) was significantly deviated in the Total Coliform (TC)[54] values

[51] Rourkela Municipal Corporation (RMC), Sundargarh Municipality, Biramitrapur Municipality and Rajgangpur Municipality

[52] Discharge points of river Brahmani (Tarkera, Balughat and Panposh), Koel (Chhend colony near Kalinga Vihar)

[53] Boneigarh, Panposh U/s and D/s, Rourkela D/s, Rourkela D/s at Attaghat at Biritola, Sankh U/s (Sankh) and Koel U/s (Koel)

[54] Total coliforms include bacteria that are found in water and is influenced by human and animal waste.

ranging from 6,782 to 47,558 MPN/100 ml[55] against the parameter of 5000 MPN/100 ml at all discharge points. The high TC values at upstream and downstream of the rivers were attributed to discharge of untreated domestic waste water/sewage.

The fact of discharge of untreated sewage at Tarkera Ghat, Balughat and Panposh Ghat into river Brahmani and at Pradhan Palli area into river Koel was corroborated by Audit during JPI (06 January 2021).

Photo No.1: River Brahmani at Tarkera Ghat

Photo No.2: River Koel at Pradhan Palli area

In reply the Government stated (May 2022) that RMC was being directed to install STP and stop discharge of untreated sewage at Tarkera Ghat, Balughat and Panposh under violation of Water (PCP) Act, 1974. The reply was not acceptable as despite issuing directions to RMC since last four years, no STP was constructed by RMC which indicates failure of monitoring and lack of commitment on the part of OSPCB.

(ii) Other three ULBs[56] had population of 1,29,815 with 24,369 HHs as per Census 2011. These ULBs did not quantify the generation of waste water and its volumetric discharge, except Biramitrapur Municipality which discharged 3,199 kiloliter per day (KLD) untreated waste water into Brahmanamara Nallah. No STP was constructed by these ULBs resulting in discharge of untreated waste water directly into water bodies and open land. Although one of these ULBs *i.e.* Sundargarh Municipality submitted (June 2020) an application for grant of Consent to Establish (CTE) for establishment of an STP.

There was significant variation in the values of TSS, BOD and O&G as it ranged from 110 to 178 mg/l (110 to 178 *per cent*), 32 to 320 mg/l (107 to 1,067 *per cent*) and 11 to 18 mg/l (110 to 180 *per cent*) during the period from October 2014 to February 2020 against prescribed standards of 100 mg/l, 30 mg/l and 10 mg/l respectively. It was also observed that inspection and sampling of Rajgangpur Municipality was not conducted after December 2018. Thus, achievement of 100 *per cent* treatment of sewage by March 2020 remained unfulfilled as ULBs continued to discharge untreated sewage into water bodies causing water pollution.

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55 MPN/100 ml = Most probable number per hundred milliliters

56 Sundargarh Municipality, Biramitrapur Municipality and Rajgangpur Municipality

In reply, the Government stated (May 2022) that direction was being issued to the ULBs regarding non-achievement of the target for 100 *per cent* treatment of sewage by March 2020. However, the fact remained that ULBs continued to discharge untreated sewage into water bodies causing water pollution. Despite issuing directions to ULBs since the last four years, no STP was constructed by three ULBs which indicates failure of monitoring and lack of commitment to reduce pollution of river water.

3.4 Management of Solid Waste

Solid Waste Management Rules, 2016 issued (April 2016) by the MoEF&CC provide the framework for management of solid waste by the enforcing authority *i.e.*, OSPCB. The Urban Development Department in the State was to prepare a State policy and Solid Waste Management (SWM) strategy as required under the Rules. The local bodies were to prepare a solid waste management plan as per the State policy and Strategy on SWM and have the responsibility of SWM within their jurisdiction. Audit test checked the records of RMC regarding management of solid waste and found the following deficiencies.

3.4.1 Non-preparation of Solid Waste Management Plan and irregular implementation of Strategy

Solid Waste Management Rules require the ULBs to prepare Solid Waste Management Plan (SWMP) within six months from the date of notification of State Policy and Strategy by adopting seven-step process as per Municipal Solid Waste Management (MSWM) Manual framed by GoI.

Scrutiny of records revealed that though GoO notified the Urban Sanitation Policy and Strategy (USP&S) during December 2016, the RMC had not prepared (January 2021) the MSWM plan. The City Sanitation Task Force (CSTF) constituted (June 2017) by RMC approved the City Sanitation Plan (CSP) which was prepared by Sanitation Implementing Agency (SIA) *i.e.* RMC. The deficiencies noticed are discussed below:

- As per the Terms of Reference for the CSTF issued (April 2017) by H&UD Department, the CSTF meeting was to be held once a month. However, only two meetings were held against the requirement of 34 during 2017-20.

- The door to door (D2D) collection of Municipal Solid Waste (MSW) was provisioned in the CSP for 18 out of 40 wards in 2017-18 and no provision was made for 2018-20. Also, in 2017-18 CSP, only 102 Tonne per Day (TPD) was planned to be collected against projected waste generation of 123.7 TPD.

Accepting the Audit observation, the Government stated (May 2022) that report for the years 2016-17 and 2018-19 to 2020-21 were not received by RO, OSPCB, Rourkela. It clearly indicates the failure on the part of department to ensure proper management of Municipal solid waste. However, the department failed to take action on RMC.

3.4.2 Inadequate segregation, collection, storage and transportation of waste

As per para 1.4.5.10 of MSWM Manual and instructions issued (April 2019) by GoO, it was mandatory for ULBs to achieve 100 *per cent* Door to Door (D2D) collection of segregated waste by 30 May 2019. Further, as per Standard Operating Procedure (SOP) (July 2019) on decentralised SWM issued by GoO, RMC finalised (August 2019) requirement of vehicles and staff for 100 *per cent* D2D collection in only seven wards out of the 40 wards. However, all nine Battery Operated Vehicles procured (September 2020) for ₹11.25 lakh, for D2D collection of wastes, were kept idle due to want of manpower. Thus, only 17 *per cent* D2D collection of segregated waste was achieved through means other than the battery operated vehicles, as of January 2021.

In pursuance to the order of Hon'ble NGT issued during January 2019, GoO instructed (April 2019) all districts to ensure 100 *per cent* source segregation in the form of dry and wet waste by 15 June 2019. It was observed during JPI (07 January 2021), that unsegregated waste was delivered by HHs to waste collectors and unloading of the same was done at MSW dumping yard near Biju Patnaik University of Technology (BPUT) due to lack of awareness among both waste generators and collectors.

Photo No.3: Collection of unsegregated domestic waste in Ward No. 34, Diesel Colony

Photo No.4: uploading of unsegregated waste at MSW Dumping Yard near BPUT

Further, during JPI (06 January 2021) at Traffic Chhak, Daily Market area, it was observed that the dumped unsegregated waste at secondary storage was not covered, resulting in littering of waste, foraging by stray animals and spread of foul odour in the surroundings.

In reply, the Government stated (May 2022) that direction was being issued to RMC, Rourkela for not dumping unsegregated waste at secondary storage in public places and violation of Solid Waste Management Rules. Despite issuing of directions, no action was taken by the department to ensure proper implementation of provisions of Rules.

3.4.3 Non-achievement of decentralised system of processing

As per Rules 15 (v) and 22 (7) of SWM Rules and SOP issued by GoO, ULBs are required to set up decentralised waste processing facilities and waste to energy plants by April 2018 to minimize adverse environmental impacts. The

H&UD Department approved (November 2016) setting up of waste to energy plant at Deogaon near Tarkera in Joint Venture mode between RSP and RMC. However, no further action was taken by RMC.

The GoO issued (July 2019) an SOP for establishment of Micro Composting Centres (MCCs) under decentralized SWM with an objective of zero discharge to landfill site. This was communicated (August 2019) to all ULBs to ensure operationalisation of MCCs by December 2019. RMC received (August 2019/ January 2020) ₹11.85 crore from GoO towards construction of ten MCCs and other project components. Even after incurring an expenditure of ₹3.40 crore, although eight MCCs out of ten were constructed by January 2021, none was operationalised (January 2021) for want of electricity, water connection, non-installation of machineries *etc*. One MCC could not be taken up due to non-issue of No Objection Certificate (NOC) by Railway Authority. RMC intimated (July 2020) State Mission Director, Swachh Bharat Mission (Urban) that one MCC at Tarkera was operational, however audit observed during JPI (07 January 2021) that it was not operational.

On being pointed out (January 2021) by Audit, the eight MCCs became operational and generated 53.395 MT of compost till January 2022, out of which 21.395 MT was disposed.

In reply, the Government stated (May 2022) that direction was being issued to RMC, Rourkela and concerned ULBs for adopting decentralised system of processing waste.

3.4.4 Submission of fabricated information of SWM to OSPCB by RMC

Rule 15(zb) of SWM Rules, 2016 prescribe that the ULBs are to prepare and submit Annual Report (AR) to OSPCB by 31 May every year.

RMC did not submit ARs to OSPCB for the years 2016 and 2018 and also did not furnish any reply against show-cause notice issued by OSPCB for non-submission. OSPCB did not take any action as the SWM rules did not provide for any action against the defaulting agencies. In the absence of ARs of RMC, the consolidated report sent by OSPCB to CPCB did not reflect fair view on management of solid waste. Further, it was observed from the AR for the year 2019 that incorrect information such as ‘dumping of waste in authorised site, 100 *per cent* D2D collection, segregation and processing of waste’ was furnished to OSPCB by RMC as discussed in paragraph **3.4.2**. The processing of 2.4 TPD waste as mentioned in the AR 2019 was also not based on facts as no MCC was in operation as of January 2021.

Accepting the Audit observation, the Government stated (May 2022) that steps were being taken for collection of annual report from RMC, Rourkela for 2016-18. It indicates failure of monitoring by the department.

3.4.5 Solid Waste Management by Rourkela Smart City

Government of India had introduced Smart City Mission (June 2015) covering 100 cities in the country, of which, Rourkela (in Sundargarh district) and Bhubaneswar had been identified as smart cities.

The objective of Smart City Mission was to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable development and the idea was to look at compact areas, create a replicable model which will act like a light house to other aspiring cities. The Smart City Mission guidelines provided 10[57] core infrastructure elements which would be completed within the mission period of five years (2015-20). The SWM was one of the core elements out of ten infrastructure elements of a Smart City.

As per the guidelines, implementation of the mission at the city level was to be done by a special purpose vehicle (SPV) created for the purpose. The SPV will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate the Smart city development projects. Accordingly, the Rourkela Smart City Limited (RSCL) was established on 03 October 2016.

As per the guidelines, the smart city proposal (SCP) will consist of strategic action plans for area developments based on the three typologies (a) area improvement (b) city renewal and (c) city extension and at least one city wide (pan-city) initiative that applies smart solutions to the physical, economic, social and institutional infrastructure.

It was observed that though 1,065 tons of solid waste was generated in Rourkela City during the years 2011 to 2020 as reported by OSPCB, no project for SWM was implemented as of March 2021. As a result, the entire solid waste generated was dumped to landfill.

Further, "Swachch Sarvekshan 2021" is a yearly assessment of smart cities under different categories such as cleanliness, hygiene, sanitation, garbage free city *etc.*, by MoHUD. It ranked the Rourkela at 57th with population of 1-10 lakh in garbage free city category.

GoI in January 2018 had lunched a 'Star Rating' system for ULBs, the first-of-its kind initiative in the Country. The programme would rate ULBs from 1 to 5 based upon their efforts to meet the standards set by MoHUD and is expected to make the Cities garbage free. This system was expected to encourage ULBs to adopt clean technologies. Also 'Star Rating' programme would help public to know if the Cities in their vicinity were complying with environmental requirements. Rourkela was the only city to get "One Star" ranking in the State.

[57] 10 core elements of Smart City Mission: i) adequate water supply, ii) assured electricity supply, iii) sanitation, including solid waste management, iv) efficient urban mobility and public transport, v) affordable housing, especially for the poor, vi) robust IT connectivity and digitalisation, vii) good governance, especially e-governance and citizen participation, viii) sustainable environment, ix) safety and security of citizens, particularly women, children and the elderly, and x) health and education

Accordingly, Audit found that initiatives for SWM had not been taken up in Rourkela smart city.

3.5 Management of Bio-Medical Waste

The Bio Medical Waste Management (BMWM) Rules, 2016 were enacted (March 2016) with an objective to improve collection, segregation, processing, treatment and disposal of Bio Medical Waste (BMW). These rules would apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle BMW in any form including hospitals, nursing homes, dispensaries, *etc.* The OSPCB is the designated authority for enforcement of the provisions of these Rules.

As per BMWM Rules, 2016, management of BMW includes segregation of waste at source of generation in colour coded and bar-coded labelled bags/ containers, intramural transportation of segregated waste to central storage area for temporary storage and its treatment and disposal through Common Biomedical Waste Treatment Facility (CBWTF) or captive facility. Audit observed the following deficiencies during test check of records of occupiers[58] and operators[59] in the district.

3.5.1 Inadequate segregation of BMW

As per Rule 8 (2) of BMWM Rules, 2016, each Health Care Facility[60] (HCF) is required to ensure segregation of wastes into Yellow (Human Anatomical waste, soiled waste, and Chemical waste), Red (Contaminated waste[61]), White (Waste sharps including metals) and Blue (Glassware and metallic body implants) containers at the point of generation prior to its storage, transportation, treatment and disposal.

Photo No.5: Taken on 23.02.2021 at SDH Bonai

Scrutiny of records revealed that in District Headquarter Hospital (DHH), segregation of BMW was recorded incompletely in daily reporting register at 19[62] out of 22 wards during October 2017 to April 2019. In Sub-Divisional

58 Occupier means a person having administrative control over the institution and the premises generating bio-medical waste, which includes a hospital, nursing home, clinic, dispensary, *etc.*

59 Operator of a CBWTF means a person who owns or controls a CBWTF for the collection, reception, storage, transport, treatment, disposal of bio-medical waste.

60 Health care facility means a place where diagnosis, treatment or immunisation of human beings or animals is provided.

61 Waste generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags syringes without needle *etc.*

62 Male ward, Female Ward, MD, Labour Room, SNCU, Paediatric ward, Injection room, dressing room, TB Ward, Orthopaedic OT, Dental OT, Eye OT, Infection ward, Blood Bank, Pathological Lab, PPC, ICTC, NRC and General OT

Hospital (SDH), Bonai, waste generated from Post-Partum Care (PPC) unit were kept in 'Red' bin instead of 'White' bin. In case of one sampled private HCF[63], waste was not segregated into category wise colour-coded bins.

Accepting the audit observations, the Government stated (May 2022) that show cause notices for revocation of authorisation under Rule 10 of BMWM Rules, 2016 were issued to the HCFs by OSPCB. However, the fact remains that segregation of waste was not being done properly.

3.5.2 Inadequate interim storage and intramural transportation

Para 2.3.4 and 2.4.2 of Guideline for Management of Health Care Wastes as per BMWM Rules, 2016 stipulate that interim storage of BMW is discouraged in wards/ different departments of HCF, no waste should be stored in patient care area and BMW must be transported through a route which has low traffic flow of patients and visitors.

It was noticed that the wastes were stored inside patient care area and transported through routes with high traffic flow of patients and visitors as observed in case of eight HCFs[64] during JPI on different dates[65].

In reply, the Government stated (May 2022) that show cause notice for revocation of authorisation under Rule 10 of BMW Rules, 2016 was issued to DHH, Sundargarh. However, the reply was silent on the remaining HCFs.

3.5.3 Central Storage of BMW

As per Rule 4 (b) of BMWM Rules, it is the duty of each HCF to make a provision within its premises for a safe, ventilated and secured location for storage of segregated BMW. During JPI in two Government and six private HCFs, it was observed that

(i) In DHH, the Central Waste Collection Room (CWCR) was located adjacent to infection disease ward.

(ii) In SDH, Bonai, drainage from storage and washing area was not routed to Effluent Treatment Plant (ETP) and released to open land.

(iii) Similarly, in two private HCFs[66] and three[67] CHCs, there were no dedicated CWCR and

(iv) In one HCF, the CWCR was located within the patient care area.

In reply, the Government stated (May 2022) that show-cause notice for revocation of authorization under Rule 10 of BMW Rules, 2016 and amendment thereof was issued to the DHH, CHC Rajgangpur, Bargaon and

63 Shanti Memorial Hospital, Rourkela
64 Two Government and six Private
65 On 13-14 February 2020, 03 March 2020 (4), 04 February 2021(2) and 23 February 2021
66 M/s Shanti Memorial Hospital, Rourkela and M/s Vesaj Patel Hospital and Research Center, Rourkela
67 CHC, Rajagangpur, Bargaon, and Hemgiri

Hemgiri. The reply was silent on two private HCFs. However, the department failed to ensure the compliance of provisions of BMWM Rules.

3.5.4 Non-disposal of BMW within prescribed period

As per Para 2.3.1 and 5.2.4 of Guideline for Management of Health Care Wastes issued by CPCB, HCFs need to have valid agreement with Common Bio Medical Waste Treatment Facility (CBMWTF) and to ensure that the operator of CBMWTF collects wastes within specified time and disposes within 48 hours.

Scrutiny of records of four HCFs[68] revealed that the operator of CBMWTF had not collected, transported and disposed BMW within 48 hours and the delay ranged up to 30 days. Audit observed that the reason for such delay was non-inclusion of the conditions in the agreement towards disposal of waste within 48 hours and non-implementation of bar-coding system in violation of guidelines issued by CPCB. Besides, none of the HCFs informed OSPCB regarding non-collection and disposal of BMW within 48 hours, hence, OSPCB did not take any action neither against HCFs nor against operator of CBMWTF.

Due to non-maintenance of proper BMW registers, there was mismatch in quantity reported on generation of waste of 56,841.89 kg by the HCFs and collection of 46,274.56 kg by the CBMWTF during 2019.

In reply, Government stated (May 2022) that show cause notice for revocation of authorisation under Rule 10 of BMW Rules, 2016 was issued to SDH, Bonai, CHC Bargaon, Hemgiri and M/s Rajasthan Seva Sadan, Rourkela. However, the department failed to ensure the compliance of provisions of BMWM Rules.

3.5.5 Non-establishment of bar-coding with GPS system

As per BMWM Rules, 2018, both HCFs and CBMWTF had to establish bar-coding with Global Positioning System (GPS) by 27 March 2019 to monitor proper disposal of BMW.

Scrutiny of records revealed that none of the test checked HCFs (Government and private) established (February 2021) the bar-coding system with GPS. The operator of CBMWTF had established bar-coding system with GPS for only two HCFs (RGH, Rourkela and DHH, Sundargarh) as of January 2021. Subsequently, the Government decided (November 2020) to implement bar-coding system by engaging Odisha Computer Application Centre (OCAC). However, no funds were provided as of April 2021.

Due to non-establishment of bar-coding with GPS system, HCFs and CBMWTF failed to ensure tracking of transportation of BMW and its timely disposal.

[68] SDH, Bonai, CHC Bargaon, CHC Hemgir and M/s Rajasthan Seva Sadan, Rourkela

In reply, the Government stated (May 2022) that show cause notice for revocation of authorisation under Rule 10 of BMW Rules, 2016 was issued to the operator of CBMWTF *i.e.* M/s Mediaid Marketing Services. However, the department failed to ensure the compliance of provisions of BMWM Rules. Further, the Health and Family Welfare Department, Odisha is in the process of implementation of integrated software for barcoding of biomedical waste from the site of generation and tracking down the process from segregation till disposal.

3.5.6 Non-setting up of Effluent Treatment Plant and inadequate testing of effluents from HCFs

Rule 4 (k) of BMWM Rules, 2016 stipulates that the HCFs were to ensure treatment and disposal of liquid waste in accordance with Water (PCP) Act, 1974. However, it was observed during JPI of eight HCFs that one HCF[69] was disposing untreated water into the drainage system due to non-installation of Effluent Treatment Plant (ETP). Other seven HCFs, although installed ETP, were not testing all six parameters of the effluents in the disposed liquid waste.

In reply, the Government stated (May 2022) that RO, Rourkela was instructed to verify the installation and operational status of ETP. Action would be initiated after receipt of compliance report from the RO. Reply of the Government was not acceptable as its responsibility to monitor the compliance of various provisions and non-installation of ETP and partial testing of effluents in remaining seven ETPs clearly indicates lack of monitoring mechanism.

3.5.7 Unfruitful expenditure due to non-operation of incinerators in Veterinary Health Facilities

As per Rule 7(4) of BMWM Rules, the occupiers were required to set up requisite treatment equipment like incinerator for safe disposal of BMW where service of the CBMWTF is not available and obtain authorisation from OSPCB for its operation.

Scrutiny of records of Chief District Veterinary Officer (CDVO) revealed that Directorate of Animal Husbandry & Veterinary Services (AH&VS) delivered (August 2016) 27 incinerators valued at ₹91 lakh to 27 Veterinary Hospitals (VH)/ Veterinary Dispensaries (VD) of the district. Further, ₹6.34 lakh was released (December 2015) towards execution of civil and electrification work for installation. However, no incinerator was operational as of March 2021 for want of three phase power connection rendering the expenditure of ₹97.34 lakh unfruitful. This resulted in burning of bio-wastes in open spaces causing environmental hazard as observed in JPI of VH at Sundargarh (20 February 2020).

After it was pointed out by Audit, the Government stated (February 2022) that out of 27 incinerators, 23 incinerators were made functional. However, four incinerators were not functional as of May 2022. Despite lapse of six years,

[69] Rajasthan Seva Sadan, Rourkela

non-functioning of incinerators indicates lack of monitoring mechanism at department level.

3.5.8 Deficiencies in operation of Common Bio-Medical Waste Treatment Facility

3.5.8.1 As per the agreement (December 2014) between SDH and CBMWTF, cost of collection and disposal included cost of consumable *i.e.* colour coded poly bags. However, scrutiny of records of SDH, Bonai revealed that during the period 2016-21, ₹10.85 lakh was spent by SDH towards purchase of colour coded poly bags for collection of BMW. The cost of procurement was also not deducted from the payment bills of CBMWTF unduly benefitting the operator.

In reply, CDM & PHO, Sundargarh, stated (March 2022) that though the total number of beds in SDH is 50, the actual functional beds ranged from 90 to 112 as per the midnight head count in IPD. Therefore, the supplied polybags were not enough for which extra polybags were purchased as per requirement. The reply is not acceptable since the terms of agreement stipulated that the cost of polybags was to be borne by CBMWTF irrespective of requirement.

3.5.8.2 As per para 5.2 and 5.3 of CPCB guidelines (December 2016), the project proponent of the CBMWTF was required to obtain CTE, CTO and EC.

Scrutiny of records at RO, OSPCB revealed (February 2021) that:

(i) The CBMWTF had not obtained Environmental Clearance, CTE and CTO till October 2020 while operating at RGH Campus.

(ii) It also did not have a standby treatment equipment at its new plant at Amsrang.

(iii) The facility never conducted testing of stack emission and effluent parameters and validation test of autoclave through any NABL[70] approved laboratory.

(iv) The facility at RGH was not inspected by RO, OSPCB during night when the incinerator was operated, owing to which, stack emission measurement was not done and three[71] prescribed parameters were not tested.

After it was pointed out by Audit, the CBMWTF applied for CTO which was granted (March 2021) and testing of stack emission and effluent parameters were being conducted from March 2021.

3.5.9 Inadequate monitoring of disposal of BMW

BMWM Rules, 2016 provide for formation and functioning of District Level Monitoring Committee (DLMC) and Bio-Medical Waste Management

[70] National Accreditation Board for Testing and Calibration Laboratories

[71] Incinerator combustion efficiency, Total Dioxins & Furans and Mercury (Hg) and its compounds

Committee (BMWMC) (at HCF level) to monitor the compliance of the provisions of the Rules and submit its reports once in six months to the OSPCB. Following deficiencies in the functioning of DLMC and BMWMC were noticed:

- There was shortfall (62 *per cent*) in conducting DLMC meetings. As against the requirement of eight meetings, only three were conducted during 2016-20. The DLMC also never submitted its six-monthly report to OSPCB.
- The BMWMC was not formed in three[72] out of 13 test-checked HCFs till date (February 2021). Only 33 meetings were conducted out of 72 required (shortfall of 54 *per cent)* in nine HCFs during 2016-20. None of the HCFs submitted minutes of the meeting to OSPCB along with AR.

After being pointed out by Audit, the Government stated (April 2022) that DLMC meeting had been conducted in the district. However, the Government did not provide (May 2022) any reply on formation of BMWMC. It indicates failure of monitoring mechanism on the part of OSPCB.

3.6 Deficiencies in management of different kinds of wastes

3.6.1 e-Waste Management

As per Rule 9 (2) of e-Waste (Management) Rules, 2016, bulk consumers of electrical and electronic equipment listed in Schedule-I shall maintain records of e-waste generated by them in Form-2 and make such records available for scrutiny by the concerned State Pollution Control Board. Rule 15 of e-Waste (Management) Rules, 2016 stipulates that e-waste should not be stored for a period exceeding 180 days.

The RMC being a 'bulk consumer' maintained e-waste stock register which was not as per prescribed format. Out of 31,151 discarded electrical items, 30,889 were sold (April 2017) to a vendor, which was not an authorised dismantler or recycler under OSPCB.

Further, during JPI (January 2021), it was noticed that 9,158 e-waste items were kept at RMC godown without being channelised to authorised dismantler/ recycler within 180 days in contravention to Rule. In reply, the Government stated (May 2022) that direction had been issued to M/s Kalinga Engineering Services to obtain authorisation and to stop activity for unauthorised collection of e-waste from RMC.

3.6.2 Management of Construction and Demolition Waste

As per Rule 6 (7) of Construction and Demolition Waste Management Rules, 2016, the local authority shall examine and sanction the waste management

[72] CHC, Rajgangpur, M/s Hi-tech MCH, Rourkela and M/s Astha Mother and Child Care Hospital, Rourkela

plan of the generators within a period of one month or from the date of approval of building plan, whichever is earlier from the date of its submission.

Scrutiny of records revealed that RMC did not ensure submission of Construction and Demolition (C&D) waste management plan by the waste generators while approving building plans nor any conditions were imposed in approved plans for management of waste.

Photo No.6 : Ward – 33, Kalinga Vihar,

The RMC did not make arrangements for placing C&D waste collection containers and removal of waste on a regular basis resulting in dumping of waste alongside public road as observed in JPI on 06 January 2021.

Further, database was not prepared till January 2022 for keeping track of the generation of C&D waste and AR was not submitted during 2016-18 to OSPCB.

In reply, the Government stated (May 2022) that direction was being issued to RMC, Rourkela for deficiencies in management of C&D waste. Despite lapse of six years, non-compliance to C&D Waste Management Rules indicates monitoring failure at department level.

3.6.3 Management of Plastic Waste

The Plastic Waste (Management) (PWM) Rules, 2016 were framed (March 2016) with an objective to provide a regulatory framework for management of plastic waste and its application to every waste generator, local bodies, manufacturers, importers and producers. Scrutiny of records revealed (February 2021) the deficiencies in management of plastic waste in the district as discussed below:

- The use of polythene carry bags had been completely banned in the State from 2 October 2018. After gap of 10 months, RMC decided (August 2019) for its enforcement in its jurisdiction by collection of fine from violators. However, it was not enforced effectively by the RMC as it was observed during JPI (13 January 2021) that polythene carry bags were being used for selling/ buying commodities at daily market area.

Photo No. 7: Daily Market Area of Rourkela

In reply, the Government stated (May 2022) that direction had already been issued to all Collectors to implement the ban order. A public notice in this regard had also been published.

- Under Rule 6 of Plastic Wastes Management Rules, 2016, it is the responsibility of local body for development and setting up of infrastructure for segregation, collection, storage, transportation, processing and disposal of the plastic waste either on its own or by engaging agencies. However, RMC had neither set up such infrastructure on its own nor engaged any agencies. As a result, unsegregated plastic wastes mixed with MSW were dumped and disposed in an unscientific manner. Further, as per the consolidated annual report on plastic waste management for the period 2016 - 20 submitted by OSPCB to CPCB, four ULBs[73] of the district did not channelise 7,694.15 ton *i.e.* 100 *per cent* of plastic waste generated during 2016-20, even though there was an authorised recycler in the district.

In reply, Government stated (May 2022) that RMC, Rourkela had been instructed for setting up of infrastructure for segregation, collection, storage, transportation, processing and disposal of the plastic waste either of its own or by engaging agencies. Despite lapse of six years, the department failed to ensure proper disposal of plastic waste.

3.6.4 Management of Hazardous Waste

Rule 3(3) of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 stipulate for effective handling, collection, treatment, storage, utilisation and disposal of hazardous[74] and other wastes. Audit observed the irregularities as discussed in subsequent paras.

3.6.4.1 Absence of integrated plan and non-publishing of inventory of disposal sites

Rule 5 (3) of the above Rules provides that every State Government should prepare an integrated plan for effective implementation of management of hazardous waste. It was, however, noticed that no such plan was framed by the Government till date (March 2021). In absence of integrated plan, there was no coordination between OSPCB and the Department of Industries to monitor functioning of seven authorised recyclers/ co-processors[75] dealing with hazardous waste in the district as of March 2021. The Industries Department did not allocate/ identify any site in respect of these recyclers/ co-processors. Further, contrary to the provisions of Rule 21 and Schedule VII, inventory of all potential or existing disposal sites was not published periodically.

In reply, the Government stated (May 2022) that IDCO had been requested to submit the status of earmarking of industrial space, shed in the existing and

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[73] RMC, Rourkela, Sundargarh, Rajgangpur and Biramitrapur Municiality

[74] Hazardous waste means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances

[75] 1) Jai Maa Durga Industries, 2) N.S Chemicals, 3) Ratna Industries, 4) Shriya Metals and Chemicals, 5) OMM CEE Business, 6) Suraj products limited, and 7) OCL India Ltd. (Dalmia Cement Bharat Ltd.)

up-coming industrial park, estate and industrial clusters for recycling/ processing/ utilisation of hazardous waste and other waste. Despite lapse of six years, the department failed to manage the hazardous waste properly.

3.6.4.2 Submission of Annual Inventory

Rule 20 (3) prescribes that OSPCB would submit an annual inventory to CPCB regarding the quantum of the waste generated, recycled, recovered, utilised, re-exported and disposed of in the State based on Annual Returns submitted by the occupier[76] and operators[77] of the facilities for disposal of hazardous and other wastes.

Scrutiny of records revealed (March 2021) that there are 103 industries in the district generating hazardous waste. It was noticed that there was no uniformity in submission of ARs to OSPCB as it varied from submission by 28 to 84 (27 to 82 *per cent*) industries during 2016-20. Due to non-submission or belated submission of AR by all occupiers and operators, the consolidated annual inventory submitted by OSPCB to CPCB did not present a fair view of quantity of actual hazardous waste generated and disposed in the State.

Further, during 2016-17, 2017-18 and 2019-20, the consolidated generation of hazardous wastes by the industries as submitted in the ARs were 72,616.20, MT, 82,422.45 MT and 87,322.65 MT against the authorised generation of 25551.67 MT, 81553.47 MT and 84384.03 MT respectively. Though hazardous waste generation was on an increasing trend during the period 2016-20, yet no programme was devised and implemented to reduce or prevent the generation of hazardous waste.

In reply, the Government stated (May 2022) that defaulting units were small scale units and the Board had delegated power to the RO, Rourkela for better management of small scale sectors where the deficiency was noticed. Despite lapse of six years, 73 *per cent* of industries had not submitted the ARs and the Government failed to collect AR from industries as provisioned in Rule.

3.7 Conclusion

Audit examined applicable environmental laws in one of the most industrialised districts in Odisha, *i.e.* Sundargarh. Audit observed the following major irregularities, which need immediate action by the Department.

Audit noticed that for the 7,238 AAQ samples analysed in six stations of the district, average PM_{10} and $PM_{2.5}$ values remained high during 2016-20. Due to high concentration of pollutants and silica dust in ambient air, 2,440 pulmonary cases and 61,698 cases of Silicosis were detected in the district. The operation of the conveyor belt without CTE and CTO for almost nine years was a major lapse on the part of RO in enforcement of environmental

[76] Occupier in relation to a factory or premises means a person who has control over the affairs of the factory or premises and includes in relation to any hazardous and other wastes, the person in possession of the hazardous or other wastes. - Rule 3 (21)

[77] Operator means a person who owns or operates a facility for collection, reception, treatment, storage and disposal of hazardous and other wastes. - Rule 3 (22)

law. Two mines failed to maintain AAQ standard components of Respiratory Particulate Matter and Suspended Particulate Matter of PM_{10} level during 2016-21.

There were 1,100 renal cases handled at SDH, Bonai due to use of contaminated water of River Brahmani, which flows near RMC and RSP. Due to non-implementation of ZLD by RSP and discharge of effluents to river Brahmani, there were high concentrations of fluoride at five locations. Due to non-establishment of STP, RMC discharged untreated sewage into rivers Brahmani and Koel causing pollution. No STP was constructed by ULBs resulting in discharge of untreated waste water directly into water bodies and open land. Achievement of 100 *per cent* treatment of sewage by March 2020 remained unfulfilled. Due to want of manpower, 100 *per cent* D2D collection of waste remained unachieved as of January 2021. Although eight MCCs were constructed, they could not be operationalised due to want of electricity, water connection, non-installation of machineries *etc.* even after incurring an expenditure of ₹3.40 crore.

Untreated bio-medical waste was stored upto 30 days without treatment. Due to non-establishment of bar-coding with GPS system, HCFs failed to ensure tracking of transportation of BMW and its timely disposal. None of the incinerators was operational as of March 2021 due to want of three-phase power connection rendering the expenditure of ₹97.34 lakh unfruitful. This resulted in burning of bio-waste in open spaces causing environmental hazard. Unsegregated plastic waste mixed with MSW was dumped and disposed of in an unscientific manner creating environmental issues. Although hazardous waste generation was on increasing trend during the period 2016-20, no programme was devised and implemented to reduce or prevent the generation of hazardous waste.

3.8 Recommendations

- The Government may take appropriate action and fix responsibility on the defaulting implementing agencies for lack of compliance of environmental rules, to keep the industrial air pollutants within the prescribed standards.
- The OSPCB may take appropriate action to ensure that the levels of PM_{10} and $PM_{2.5}$ from the industrial air pollutants remain within the prescribed standards of the Ambient Air Quality to reduce pulmonary and silicosis cases in the district. The polluting industries should be fitted with the best available technology and emission control devices and be brought under rigorous continuous emission monitoring and compliance, in order to reduce pollution.
- The OSPCB may take action against defaulting industries, to ensure compliance to CTE and CTO conditions along with realisation of pollution charges and compensation.
- The OSPCB may pursue the issue of effective treatment of sewage, by establishing Sewage Treatment Plant, with the ULBs.

- The OSPCB may pursue the matter of ensuring Zero Liquid Discharge, to prevent cases of renal diseases in the district, with the Rourkela Steel Plant.
- The OSPCB may ensure preparation of Solid Waste Management Plan and door-to-door collection of Municipal Solid Waste, in all Urban Local Bodies.
- The Government may take necessary action to ensure proper disposal of plastic and C&D wastes and stringent action may be taken against the violators.
- The Government may issue directions to discard the e-waste through authorised dealer. The Government may consider making penal provisions for the ULBs and industries which are not complying with the environmental laws.

CHAPTER IV

Detailed Compliance Audit on State Compensatory Afforestation Fund Management and Planning Authority

CHAPTER IV

FOREST, ENVIRONMENT AND CLIMATE CHANGE DEPARTMENT

4. Detailed Compliance Audit on State Compensatory Afforestation Fund Management and Planning Authority

4.1 Introduction

The Hon'ble Supreme Court of India directed in October 2002 that a 'Compensatory Afforestation Fund' (CAF) shall be created, in which all the monies received from the user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, net present value of forest land, catchment area treatment plan funds *etc*., shall be deposited. CAF was to compensate for the loss of tangible, as well as intangible benefits, from the forest lands, which were diverted for non-forest use. Such funds were to be used for natural assisted regeneration, forest management, protection, infrastructure development, wildlife protection and management, supply of wood and other forest produce saving devices and other allied activities. The Court observed that the fund would not be part of the general revenues of the Union, of the States or part of the Consolidated Fund of India.

The Ministry of Environment and Forests (MoEF) notified the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in April 2004, for the management of the compensatory afforestation fund.

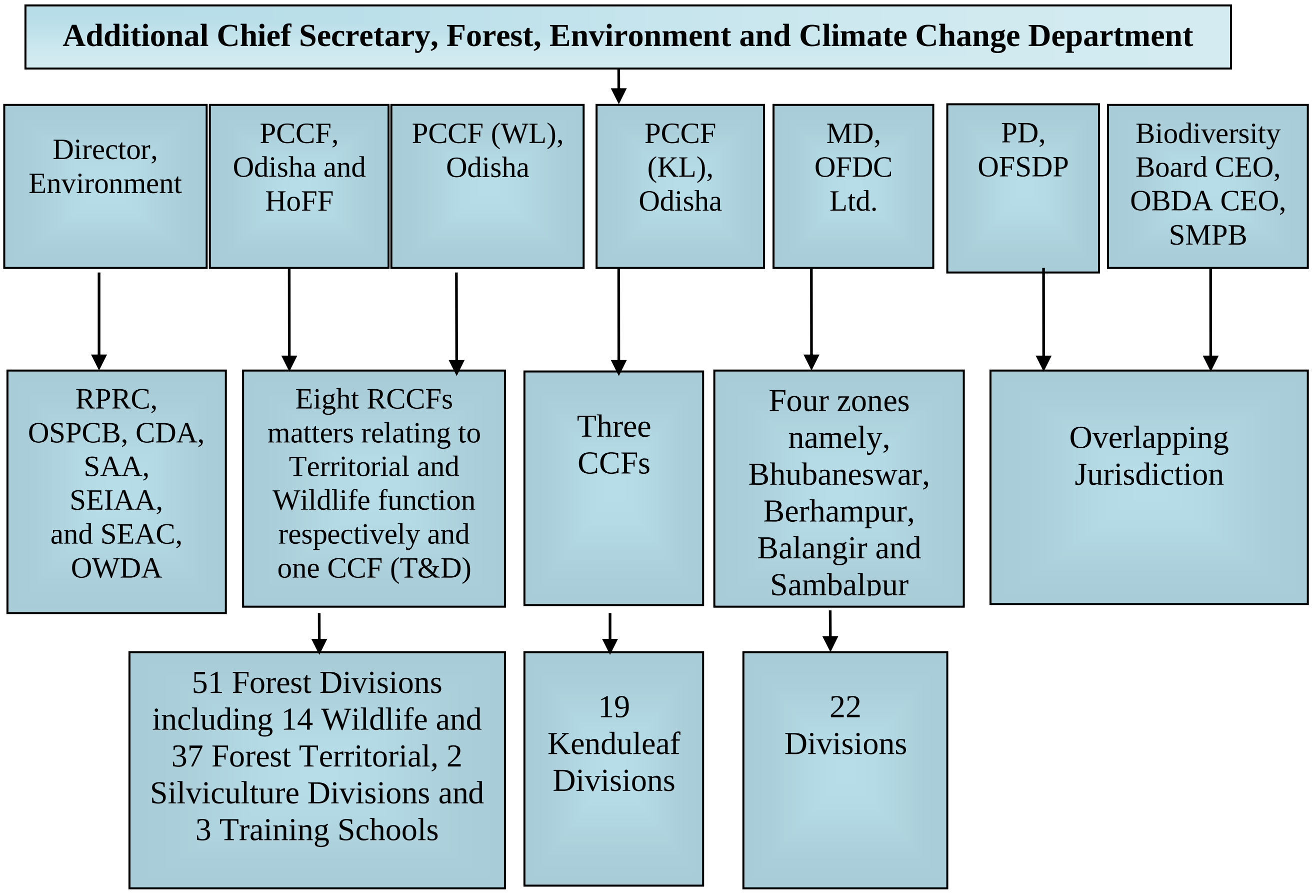
The Hon'ble Supreme Court of India observed in May 2006, that CAMPA had still not become operational and ordered the constitution of an ad-hoc body (known as 'Ad-hoc CAMPA'), till CAMPA became operational. The Hon'ble Court ordered that all monies recovered on behalf of the CAMPA and lying with the various officials of the State Government, were to be transferred to the Ad-hoc CAMPA. It also directed audit of all the monies received from the user agencies, on behalf of the CAMPA and the income earned thereon. The auditor was to be appointed by the Comptroller and Auditor General of India.

The audit of Compensatory Afforestation in India was taken up, as per the aforesaid order of the Hon'ble Supreme Court and reference thereon from the MoEF, in January 2012. It was also directed to centrally pool the money recovered on behalf of the said Authority, lying with the States and Union Territories, into an Adhoc CAMPA constituted for the purpose, till the State CAMPA became operational. The State CAMPA was constituted in Odisha (September 2018), for receipt and utilisation of CAMPA funds from the above account.

The State CAMPA is intended as an instrument to accelerate activities for the preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. The State CAMPA, under the Forest, Environment and Climate Change (FE&CC) Department of the Government of Odisha, presently receives monies collected from user agencies, towards compensatory afforestation (CA), additional compensatory afforestation, penal compensatory afforestation; Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980.

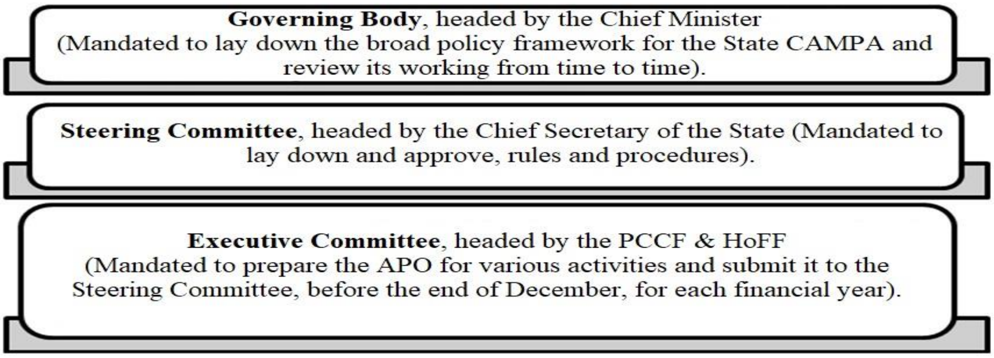
4.1.1 Organisational Setup

The organizational set up of the FE&CC Department is as follows:



The Forest Department comprises of 08 circles, 51 forest divisions (37 Territorial divisions and 14 Wildlife divisions), 03 training and development divisions, 02 Silviculture divisions, Dy. Director, Nandankanan Zoological Park, Forest Resources Survey (FRS) Division, Cuttack and Odisha Forestry Sector Development Project (OFSDP). There are 3,781 beats, under 1,068 Sections, in 293 Ranges, to execute the field level works.

The State CAMPA functions through a three-tier committee hierarchy, as detailed below:



The Steering Committee and Executive Committee are also responsible for monitoring and utilisation of the State CAMPA fund, approving the APO, and for ensuring proper auditing of both the receipt and expenditure of funds.

4.1.2 Audit Objective

The main audit objectives were to assess whether:

❖ the annual planning process for implementation of schemes for compensatory afforestation, conservation and protection of protected forests and collection of user charges from the user agencies, was efficient;

❖ the plantation activities under CAMPA and mandatory conservation measures, such as Compensatory Afforestation (CA), Catchment Area Treatment (CAT) etc., had been carried out effectively;

❖ the financial management of the funds was economical, efficient and effective; and

❖ an effective monitoring mechanism was in place.

4.1.3 Audit Criteria

The Audit findings are benchmarked against the following criteria:

- The Compensatory Afforestation Fund Act (CAF), 2016 and the Compensatory Afforestation Fund (CAF) Rules, 2018
- Forest (Conservation) Act, 1980, Odisha Forest Plantation Manual (OFPM), 1977, Odisha Forest Department Code (OFD), 2020, Code of Management Plan Procedures (CMPP), 1990, Odisha Forest Sector Vision**,** 2020, National Forest Policy (NFP), 1988 and Wildlife Protection Act, 1972
- Provisions of Odisha General Financial Rules (OGFR), Odisha Treasury Code (OTC), Procurement Guidelines and Finance Department Notifications
- India State of Forest Reports (ISFRs), by the Forest Survey of India, Scheme guidelines and approved Cost Norms
- Annual Activity Reports and other reports of the Department, Working Plan(s)/ Scheme(s)and CAMPA Annual Plan of Operation(s) (APOs) and
- Physical/ financial targets/ norms, fixed by the Government/ PCCF (O) & HoFF.

4.1.4 Scope of Audit and methodology

The Detailed Compliance Audit (DCA) was conducted during June to November 2022, to assess the functioning of the State CAMPA, along with the inflow of funds to the Ad-hoc CAMPA, through test-check of CAMPA records of the Nodal Officer, State CAMPA and 20 Divisional Forest

Officers[78] (DFOs) and four other units[79] out of total 60 field units, covering the period from 2019-20 to 2021-22. The units were selected through the stratified random sampling method, based on the expenditure incurred on the CAMPA fund. The audit period, audit objectives, audit criteria and scope, were discussed in an Entry Conference, held on 27 October 2022, with the FE&CC Department. The audit findings were discussed with the FE&CC Department, in an Exit Conference held on 28 March 2023 and the replies have been suitably incorporated in the Report.

This DCA followed the "Result Oriented Approach", to verify the forestry and infrastructural activities, such as Subsidiary Silvicultural Operation (SSO) activities, water bodies and culverts and to check the survival percentage of the plantations through the "Top Down" approach, starting from the Forest Department in the Government of Odisha, to field sites at the forest beat level. Accordingly, the audit methodology included the scrutiny of policy and planning documents related to the State CAMPA fund; checking of the system of allocation, release and utilisation of funds; examination of records, such as Net Present Value (NPV), Compensatory Afforestation (CA), Catchment Area Treatment Plan (CATP), infrastructure development, protection, Subsidiary Silviculture Operation (SSO) activities and Plantation database, Registers and Journals, cash accounts, store account, nursery records *etc*., and joint physical Inspections (JPI) of plantation sites, to check the survival percentage of plantations and of assets created under CAMPA.

Audit findings

The audit findings include deficiencies in the formation of State CAMPA, system of diversion of forest land, preparation of Annual Plan of Operation (APO), collection of NPV, Compensatory Afforestation (CA), conditional works, deficiencies in the system of accounting of CAMPA funds and monitoring of activities, as detailed in the succeeding paragraphs.

4.2 Planning

4.2.1 Deficiencies in formation of State CAMPA

As per paragraphs 10(1), 14 and 15 of the State CAMPA guidelines, issued (July 2009) by the GoI, the State Government had to establish the State CAMPA in the State and to constitute three committees for functioning of the State CAMPA, *viz*. (i) Governing Body (GB) at the Apex level (ii) Steering Committee (SC) and (iii) Executive Committee (EC).

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[78] DFOs: Athagarh, Baliguda, Bargarh, Berhampur, Bhadrak (W/L), Bonai, Boudh, Deogarh, Dhenkanal, Jeypore, Kalahandi (N), Keonjhar, Khariar, Nayagarh, Nabarangpur, Rairakhol, Puri (W/L), Rayagada, Sundargarh, Shimilipal Tiger Reserve (North)

[79] State Silviculturist Centre, Forester's Training School, Nandankanan Zoological Park and Odisha Forestry Sector Development Project

Scrutiny of records (June 2022) of the FE&CC Department revealed that the State CAMPA had been constituted on 29 September 2018[80] and the State Government had also reconstituted (September 2018) the above three committees for functioning of the state CAMPA. Hence, the State CAMPA was constituted in Odisha after a delay of nine years from the date of notification of CAMPA guidelines by the GoI. As such, the directives of the Hon'ble Supreme Court could not be complied with, which led to absence of a permanent institutional mechanism of management for utilization of the funds collected by the State.

In reply, the Government stated (March 2023) that, three committees had been constituted in the year 2009. The reply was not acceptable as the State CAMPA was constituted during September 2018 with full functions and powers of Governing body and other committees.

4.2.1.1 Non-functioning of the Governing Body

As per Section 17(1)(i) and (ii) of the CAMPA Act, 2016, the Governing Body (GB), at the highest level, was to lay down the broad policy framework for the functioning of State CAMPA and to review its working from time to time. Section 17(2) of the Act stipulates that the GB shall meet at least once in six months. Audit noticed that the GB had neither laid down the policy framework, nor has it reviewed the working of the State CAMPA, as of June 2022, as the GB had not held any meeting since its constitution *i.e.* from September 2018. As such, in the absence of the broad policy framework and regular review, the working of the State CAMPA remained directionless and unreviewed.

While accepting the audit observation, the Government stated (March 2023) that action was being initiated to convene the Governing body meeting.

4.2.1.2 Non-convening of meetings by Steering Committee and Executive Committee

As per Section 18 (2) and 19 (2) of the CAMPA Act, 2016, the Committees should meet at least once in three months. The Steering Committee and the Executive Committee had to prepare the APOs and lay down/ or approve rules and procedures for the functioning of the State CAMPA. Audit observed that the Steering Committee had conducted only three meetings and the Executive Committee had conducted only two meetings, against the requirement of 12 meetings of each committee, during 2019-22. Thus, supervision of utilisation of funds and progress of projects, out of the CAMPA funds, could not be monitored, defeating the purpose of the existence of these committees.

In reply, Government stated (March 2023) that three executive committee and three steering committee meetings were held during 2019-22. However, the fact remained that, against the requirement of 12 meetings of each committee,

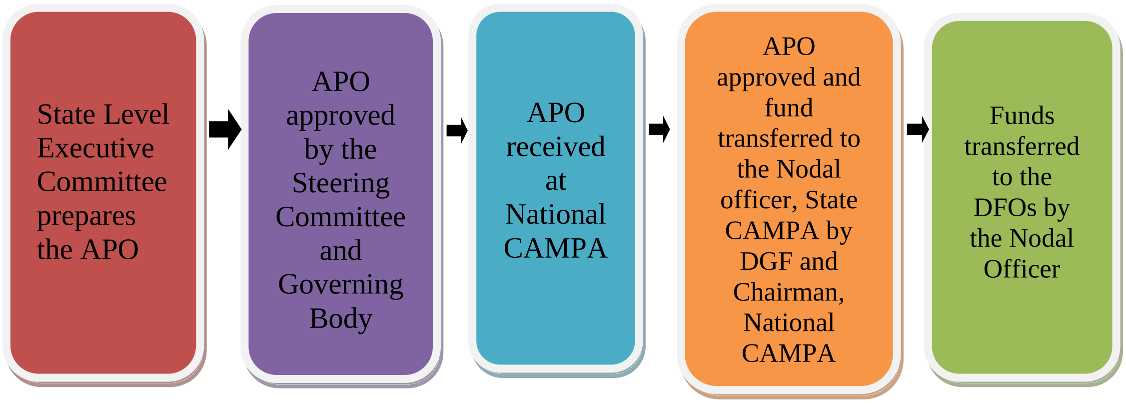
[80] Vide Notification No-21066/F&E dated 29 September 2018. The final notification dated 29 September 2018 supersedes the earlier five notifications of FE&CC Department in the matter of constituting/ reconstituting of the Steering committee and the Executive committee of the State CAMPA

the records indicated that, only three meetings of steering committee and two meetings of executive committee were held.

4.2.2 Non-approval of Annual Plan of Operations by the Governing body and delay in submission of APOs

As per Rule 36 of CAF Rules, 2018, the State CAMPA shall prepare its budget after receiving the site-wise proposals from the field units for the next financial year, showing the estimated receipts and expenditure in Form-VI, based on the APO prepared and approved by the GB. That APO is to be forwarded to the State Government and Central Government in each financial year by 31 December. The detailed flow of funds is given in the following Chart:

Chart 5: Fund flow chart



4.2.2.1 Status of submission of APO to National CAMPA and receipt of funds during 2019-22

The year-wise details of submission of APOs and release of funds by National CAMPA, for the years 2019-22, are given in **Table-4.1**.

Table- 4.1: Delay in submission of APO to the National CAMPA and receipt of funds thereof, during 2019-22

Financial Year	Date of submission by EC	Date of approval by SC	Period of delay in preparation of APOs	Date of submission to/ approval by GB	Date of Submission to the National Authority, CAMPA	Period of delay in submission of APOs	Date of receipt of funds from National CAMPA
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
2019-20	06.12.2018	20.12.2018	No delay	Not submitted	21 January 2019	20 days	21 June, 15 Oct 2019
2020-21	28.01.2020	11.02.2020	27 days	Not submitted	20 April 2020	109 days	08 May, 02 July, 02 September 2020
2021-22	20.11.2020	07.01.2021	No delay	Not submitted	20 March 2021	78 days	19 August, 09 November 2021 and 03 February 2022

Source: Information supplied by the CEO, State CAMPA

From the above Table, the following irregularities were observed:

(i) The Steering Committee bye passing the authority of GB, had submitted the APOs to the National Authority, CAMPA without approval from the GB, with delays ranging from 20 to 109 days.

(ii) The funds were released by the National CAMPA, to the State authority in the middle of the financial years, after the planting period of June and July was over, although the APOs were not approved by the GB. The above irregularities had affected the utilisation of funds in the field units. Resultantly, the planned activities could not be carried out effectively, as discussed in the subsequent paragraphs.

4.2.2.2 Wasteful expenditure due to improper formulation of APO

Scrutiny of records of the PCCF (WL) revealed that Aided Natural Regeneration (ANR) plantation had been done at a cost of ₹15 lakh, over 95 ha in five[81] Reserve Forests (RF) under the Site Specific Wildlife Conservation Plan (SSWCP) in two WL Ranges of Bamra (WL) division, during FY 2015-16. However, provisions of funds for maintenance, for the 2nd and 3rd years, during financial years 2016-17 and 2017-18, for these plantations had not been made under CAMPA APO 2015-16 and 2016-17. The DFO surrendered the amount of ₹34.42 lakh allotted for maintenance of these plantations during 2020-21, as the survival rate was only 7.5 *per cent*, due to non-maintenance during financial years 2016-17 to 2019-20. This rendered the expenditure of ₹15 lakh towards the first two years of planting operations wasteful as well as failure to achieve the intended objective of the plantations.

In reply, the Government stated (March 2023) that the plantations were being undertaken in wild elephant habitat and were damaged due to wild elephant movement. The reply was not acceptable as the survival rate of plantation was 7.5 per cent due to non-maintenance.

4.2.3 Delay in formation of Land Bank for afforestation activities

As per Sections 2.1 and 2.3 of the Forest (Conservation) Act, 1980, Compensatory afforestation (CA) is one of the most important conditions for diversion of forest land for non-forest purposes. The purpose of CA is to compensate the loss of 'land by land' and loss of 'trees by trees'. CA is to be raised on suitable non-forest land, equivalent to the area proposed for diversion, or on degraded forests equal to, twice the area of land diverted, at the cost to be paid by User Agency (UA), within three years of final approval.

Scrutiny of records of the FE&CC Department revealed that the (then) State Forest Department[82] had decided (1998) to constitute a task force in each district, comprising of the Collector and the territorial DFOs, for expediting the work of identification of non-forest Government land (Abad, Ajogya and Anabadi land) and degraded forest lands borne in Government Khatas, for formation of a land bank for CA. Further, the Odisha Space Application Center (ORSAC) had designed (February 2022) and commissioned a web-GIS application, for identification and selection of degraded revenue forest

[81] Kahapani RF, Kurnimunda RF, Addl Kansar RF, Badrama RF (under Bamara WL range) and Kendumunda RF (under Khasuni WL range)

[82] Later renamed as Forest, Environment and Climate Change Department

lands[83], which could be used for CA, in the State. However, ORSAC had done only a tentative identification and selection of degraded revenue forest land, in 13 forest divisions[84], out of 51 divisions, across 30 districts of Odisha, on pilot basis, which was far behind the target for creation of a Land Bank to execute plantation activities. This indicated that the Department could not gather land information to create a Land Bank, for the last 24 years which was one of the reasons for non-achievement of CA targets as discussed in Paragraph 4.4.

While accepting the audit observation, the Government stated (March 2023) that all sorts of efforts were being made to achieve the target.

4.3 Collection of statutory levies towards NPV and cost of CA

The Net Present Value (NPV) of forest land diverted for non- forest purposes was to be recovered from the user agencies, for undertaking forest protection, other conservation measures and related activities. Similarly, Compensatory Afforestation (CA) was one of the most important requirement/conditions for prior approval of the Central Government for diversion of forest land for non-forest purposes and the purpose of CA was to compensate the loss of 'land by land' and loss of 'trees by trees'. Observations on collection of statutory levies towards NPV and cost of CA have been discussed in following sub-paragraphs.

4.3.1 Status of diversion of forest land and collection of NPV

As per Section 2 of the Forest (Conservation) Act, 1980, read with the orders of the Hon'ble Supreme Court of India issued in November 2002, forest land could be diverted for non-forest activities, with the approval of GoI and on payment of the Net Present Value (NPV) of forest land and other allied charges.

As per the information furnished by the PCCF & HoFF, Odisha, the year-wise diversion of forest land and collection of NPV, are shown in **Table – 4.2**. It was observed that 6,101.21 hectares of forest land had received Stage II approval[85] for diversion, in 70 cases, during 2019-22.

Table-4.2: Details of year-wise diversion of forest lands and collection of NPV during 2019-22

Financial Year	Number of cases which got final/Stage-II approval	Area of forest diversion (in ha)	NPV collection (₹ in crore)
1	***2***	***3***	***4***
2019-20	23	3,067.98	**67.16**
2020-21	29	1,839.29	**139.06**

83 The revenue lands recorded as forest on which the provision of Forest (Conservation) Act, 1980 are applicable.

84 Angul, Athamallik, Jeypore, Jharsuguda, Kalahandi (N), Karanjia, Keonjhar, Khorda, Koraput, Phulbani, Rourkela, Sambalpur and Sundargarh

85 There are two stages of approval. Stage-I in which the conditions are stipulated to be complied by the UAs and Stage-II for use of diverted forest land.

Financial Year	Number of cases which got final/Stage-II approval	Area of forest diversion (in ha)	NPV collection (₹ in crore)
2021-22	18	1,193.94	**93.89**
Total	**70**	**6,101.21**	**300.11**

4.3.2 Irregularities in the realisation of NPV

4.3.2.1 Non-realisation of differential NPV

As per MoEF&CC Notification[86] (January 2022), new rates of NPV were to be applicable to all proposals of forest land diversion, that had been granted Stage-I/ in-principle approval, after 6 January 2022. The new rates of NPV were also to be applicable prior to 6 January 2022, where, even after a lapse of 5 years, Stage-II/ final approval had not been granted, after Stage-I/ in-principle approval.

Scrutiny of records of 20 test-checked DFOs, in six DFOs[87] it was revealed that nine cases involving 1,864.59 ha of forest land, diverted for non-forestry activities (mining, irrigation and highways), had been pending for Stage-II/ final approval, for more than five years, as on 6 January 2022, due to non-submission of compliance to the conditions stipulated in the Stage-I/ in-principle approval. The UAs had deposited the NPV at old rates, instead of the revised rates resulting in short realization of NPV of ₹88.40 crore, as detailed in ***Appendix - V***.

Accepting the audit observation, the Government stated (March 2023) that two UAs had already deposited the differential NPV in CAMPA account and rest of the UAs would deposit the same before submitting the Stage-I compliances. However, the Government may take necessary steps to recover all the differential NPV from the remaining UAs.

4.3.2.2 Non-levy of interest amount of ₹4.22 crore on belated payment of NPV

As per Rule 8 (C) of the Forest Conservation (Rules), 2003, the UA shall, within thirty days of receipt of demand note from the DFO, make payment of compensatory levies. Further, the Central Empowered Committee (CEC), constituted by the Hon'ble Supreme Court, ordered (May 2010) that the mining lease holders, who do not pay the NPV within a period of 30 days from the date of demand raised by the concerned Divisional Forest Officer (DFO), will not be allowed to continue mining, till the payment of NPV along with interest. The FE&CC Department (May 2013) prescribed the rate of interest at nine *per cent* per annum, for delayed payment of NPV, for diversion of forest land for mining purposes.

Scrutiny of forest land diversion records in three divisions[88], revealed that, based on the In-Principle/ Stage-I approval of MoEF & CC, the DFOs had raised demands (between February 2017 and November 2021), against 21 mines lease holders to deposit the NPV amounts, within 30 days from the date

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[86] No.5-3/2011-FC (Vol-I) dated 19 January 2022
[87] DFOs, Berhampur, Boudh, Deogarh, Keonjhar, Nayagarh, and Sundargarh.
[88] Sundargarh, Bonai and Keonjhar

of the demands, for diversion of 4,490.406 ha of forest land. The lessees had deposited (between September 2018 and March 2022) the NPV of ₹299.78 crore, with delays ranging from 14 days to 573 days. Neither had the DFOs demanded, nor had the lessees deposited the interest, for belated payment of NPV, resulting in non-realisation of interest of ₹4.22 crore, as detailed in ***Appendix - VI***.

In reply, the Government stated (March 2023) that interest on belated payment of NPV was not applicable for such cases. The reply was not acceptable, as the interest amounts were to be realized for belated payment of NPV, for the diversion of forest land for mining purpose, as per the directions issued by the Government (May 2013), based on the Hon'ble Supreme Court judgement.

4.3.3 Non-realisation of cost of CA from UAs

Scrutiny of records, in five divisions[89], revealed that demand notices of ₹28.43 crore had been raised against 14 UAs, to deposit the cost of CA, avenue/ dwarf[90] plantations and Site Specific Wildlife Conservation Plan (SSWCP), towards diversion of forest land of 971.70 ha, for non-forestry activities, as per In-Principle/ Stage - I approval during 2019-22, as detailed in ***Appendix-VII***. Despite issuance of repeated demand notices by the DFOs, the UAs had not deposited the same, with delays ranging from one year to four years. The absence of penal provisions for non-payment of cost of CA, prevented the department from taking any action for recovery of outstanding amount of ₹28.43 crore from the UAs.

Accepting the audit observation, the Government stated (March 2023) that, the DFOs had been instructed to serve demand notices to the UAs to deposit the cost of approved SSWCP.

4.4 Execution of Compensatory Afforestation and other Conservation measures/ Conditional works

As per para 2.1 of the guidelines issued (March 2019) under the Forest Conservation Act (FC Act) 1980, CA is one of the most important conditions, while approving proposals for diversion of forest land for non-forest purposes. Further, as per para 2.3 (iii) of the above guidelines, CA was to be done over an equivalent area of non-forest land, or it could be carried out over degraded forest on twice the area diverted. While according to Stage-II approval, the MoEF&CC stipulates that CA should be taken up within a period of three years from the date of issue of approval and maintain it thereafter, in accordance with the approved plan.

[89] Divisions: Bargarh, Bonai, Boudh, Keonjhar and Sundargarh

[90] Avenue plantation: Plantation along the roads; Dwarf plantation: Plantation of short height trees, generally under the transmission lines

4.4.1 Non-achievement of the Compensatory Afforestation target

Scrutiny of records of the PCCF & HoFF revealed that, against the target for CA of 77,745.78 ha, due from the initiation year of 1980 to March 2020[91], only 70,749.81 ha of CA could be achieved. CA of 6,995.97 ha could not be achieved, although more than three years had elapsed.

Accepting the audit observation, the Government Stated (March 2023) that efforts were being made to achieve the CA target.

4.4.2 Irregularities in the implementation of APO: 2021-22

Scrutiny of records of the CEO, State CAMPA, revealed that, against a physical target of 95 ha bald hill plantation and 380 ha bamboo plantation, for which ₹1.57 crore had been allotted to the DFO, Paralakhemundi division, under CAMPA-APO 2020-21. However, there was actual achievement of only 10 ha bald hill plantation and 170 ha bamboo plantation by incurring an expenditure of ₹65.66 lakh and the balance funds amounting to ₹91.55 lakh had been surrendered. Subsequently, during APO 2021-22, the DFO executed the remaining physical target of 210 ha bamboo plantation and 85 ha bald hill plantation, without approval of the competent authority, through diversion of funds amounting to ₹64.11 lakh, by savings from other plantations[92] planned for the year 2021-22 and protection activities which was indicator of gross financial indiscipline.

Accepting the audit observation, the Government Stated (March 2023) that show-cause notice was issued to the DFO, Paralakhemundi and RCCF, Berhampur, and the same was pending at their level.

4.4.3 Non-execution of Compensatory Afforestation, due to land encroachment

Scrutiny of records of the Rayagada division revealed that 233.34 ha of non-forest land had been identified in four[93] villages, for undertaking CA activities. Although the land had been mutated in favour of DFO, Rayagada, physical possession of 87.23 ha had not been handed over by the Tahsildar, due to encroachment by local people. Even after a lapse of four years of the grant of Final approval of land diversion (February 2018), CA had not been executed on identified area of 87.23 ha.

In reply, the DFO, while admitting the above facts, stated that the Tahasildar, Kashipur had been requested to evict the encroachers from the said land. However, the fact remained that the department could not execute CA in time, in violation of the mandatory conditions stipulated under the forest clearance. No reply was offered by the Government.

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91 As per stipulated conditions of Stage-I approval, CA should be taken up within three years of diversion of forest land, hence data upto 2019-20 has been checked.

92 ANR, ANR Maintenance and Bald Hill Plantation

93 Village Adatikiri, Adajore, Jodamba and Guamurka under the Kashipur and Tikiri Ranges

4.4.4 Non-revision of wage rate for cost of the Regional Wildlife Management Plan

As per GoO notification (December 2005), Wildlife Management Plan (WLMP), was to be funded at the cost of mining lease holders who had been allowed diversion of forests in their lease-hold areas with stipulations thereof by MoEF, GoI.

The department had revised the cost for implementation of WLMP, on the basis of revised wage rates, six times during the period 2005-18. The cost was raised from ₹15,000 per ha (December 2005) to ₹82,000 per ha (October 2018). Keeping in view the upward revision of wage rates, the cost norm of WLMP was to be revised from October 2018 onwards.

Audit observed that the rate of implementation of the Regional Wildlife Management Plan (RWLMP) had not been revised since 30 October 2018, even though the wage rate had been revised from ₹280 to ₹326 per manday, from 2018 to 2022. The cost for implementation of the RWLMP should have been revised on a periodic basis, as per the modified wage rates. Non-revision of RWLMP rates, resulted in short realization of ₹84 lakh, from six UAs, in diversion of 1,875.69 ha, during 2019-22, as detailed in ***Appendix-VIII***.

In reply, the Government stated (March 2023) that the necessary proposal had been submitted for revision of the cost of RWLMP. However, the revision of cost will be with prospective effect and the wage rate had not been revised since 2018 owing to which there was a short realization of ₹84 lakh from UAs.

4.4.5 Non-execution of conditional works of elephant underpass/ overpass by UA

As per conditions stipulated in approvval of diversion of forest land for upgradation of Highways and Railways, the UAs shall provide under pass (UP)/ over pass (OP) /reptile under pass (RUP) in forest areas.

Scrutiny of records of 20 forest divisions revealed that in five divisions[94], 22 elephant UPs, four OPs and 86 RUPs, were to be constructed by the UAs, as of March 2022, as stipulated in Stage – I/ II approvals. Even after a lapse of two to four years of the Stage-II approvals, 10 elephant UPs were still under progress and 12 UPs had not been started. Similarly, four OPs had also not been started and 86 RUPs had not been constructed under the jurisdiction of the DFO, Bonai.

Further, in the Keonjhar division, site-specific conditions, such as creation of alternate habitat/ home for avifauna, fencing, protection, gap planting and Soil Moisture Conservation (SMC) activities for restocking and rejuvenating the degraded open forests, erection of boundary for the mining lease and safety zone, by erecting reinforced cement concrete pillars, *etc.*, had not been complied with, by the UAs. Non-compliance with the conditions specified in the Stage-I/ II approvals led to causes of elephant deaths in core forest areas. Audit observed that the concerned DFO did not take necessary action for

[94] DFO Athagarh, Bonai, Dhenkanal, Nayagarh and Rairakhol

compliance of the Stage-I and Stage-II approval conditions. No correspondence in this regard with the UA was found on record.

Accepting the Audit observation, the Government stated (March 2023) that all the DFOs had been instructed to issue directions to the UAs for construction of UPs/ OPs and RUPs without further loss of time. However, the fact remained that even after lapse of two to four years of final approval, the targeted UPs/ OPs and RUPs could not be constructed which led to loss of lives of wild animals.

4.4.6 Non-notification of Reserve Forest/ Protected Forest, on completion of CA

The FE&CC Department had to notify the non-forest land, on which CA was to be executed, as Reserve Forest (RF)/ Protected Forest (PF). In the event of non-notification, the land would not come under the administrative control of the Department and necessary protection/ afforestation, under the FC Act, cannot be initiated.

Scrutiny of CA records of 20 forest divisions, revealed that, in nine forest divisions[95], against 12,667.37 ha of forest land, diverted in 85 cases, between 1983 to March 2022, to the UAs, an area of 11,533.57 ha of non-forest land was to be provided with the ownership of Forest Department. Out of these 85 cases, 72 cases, involved 9,828.01 ha of land, which had been mutated in favour of the forest department and 13 cases involved 890.70 ha of land, which had not been mutated, as of March 2022. However, notification had not yet been issued, for declaring the above CA of 10,718.72 ha (9828.01 ha + 890.70 ha) of land as Reserve Forest (RF)/ Protected Forest (PF). Therefore, the provisions of the FC Act, 1980, for the purpose of management of RF/ PF, could not be applied therein.

The DFOs stated that the correspondence was under process with CCF (Nodal), FE&CC Department and the revenue authorities. The reply was not acceptable as the notifications for RF/PF had not been issued since 1983.

No reply has been offered by Government (March 2023).

4.4.7 Application of insufficient measures in controlling Forest fire incidents

Rule 283 (14) and (15) of the OFD Code, 2020, prescribes that the Forest Ranger/ Forester/ Forest Guard is responsible for controlling forest fires under his jurisdiction or adjacent jurisdictions. Any forest officials, who may see smoke rising anywhere in or near the forest, are to immediately collect such aid as is immediately available and proceed, in person, to the spot. It is the duty of fire watchers to constantly patrol the fire lines in their beats, to keep them entirely free from inflammable material and to prevent the carrying or making of fire, within or in the vicinity of the protected area.

As per the fire point of the Forest Survey of India (FSI), it was noticed that 41,888.3 ha of forest area had been damaged in 86,794 fire incidents during 2019-22. Out of these, only 65,298 (75 *per cent*) incidents had been responded to, leaving 21,496 unattended. The year-wise number of fire

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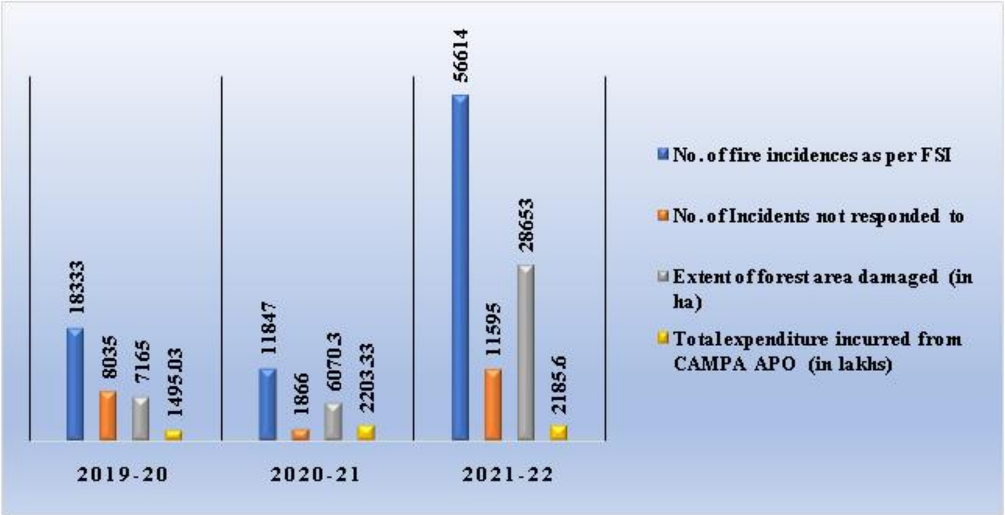
[95] DFOs: Keonjhar, Baliguda, Bargarh, Berhampur, Bhadrak (WL), Bonai, Jeypore, Khariar and Rayagada

incidents, responses to forest fires, forest area damaged and expenditure incurred towards the firefighting mechanism, are detailed in **Chart-6**.

Chart 6: Year-wise number of fire incidents, forest area damaged and expenditure incurred towards firefighting mechanism



(*Source: MODIS/ SNPP*[96] *satellite sensors*)

From Chart-6, it is apparent that though ₹58.84 crore had been spent out of CAMPA APOs during 2019-22, on forest firefighting management, the number of fire incidents had increased by 209 *per cent* and the extent of forest area damaged had increased by 300 *per cent*, in 2021-22, as compared to 2019-20. However, the incidents which were not responded to, had declined by 77 *per cent* from 2019-20 to 2020-21 and increased by 44 per cent in 2021-22 (as compared to 2019-20). This implied that although the department had responded to a greater number of forest fire incidences, it could not control the number of such incidences and the extent of forest area damaged. Thus, despite incurring expenditure towards firefighting management, the damage of forest area has increased, which is likely to adversely impact the biodiversity, ecology and environment.

Accepting the Audit observation, the Government stated (March 2023) that forest fire hazards are unavoidable in Odisha and satellite based remote sensing technology and GIS tools had been effective in better prevention and management of forest fires.

4.5 Fund Management

4.5.1 Status of State CAMPA expenditure

As per the information furnished to Audit by the CEO, State CAMPA, the year-wise details of funds demanded and received by the State CAMPA, from the National CAMPA and the funds further released to the DFOs/ field units, *vis-à-vis* the expenditure incurred during 2019-22, towards CAMPA activities, are given in **Table-4.3**.

[96] Moderate Resolution Imaging Spectroradiometre/ Suomi National Polar – Orbiting Partnership

Table-4.3: Details of funds demanded, received and allocated by the State CAMPA and expenditure incurred during 2019-22

(₹ in crore)

Financial Year	Annual Plan Operations (funds proposed)	Funds received from the National CAMPA Authority	Funds released to field units	Funds utilised	Funds utilised (in *per cent*)	Funds surrendered by field units
1	*2*	*3*	*4*	*5*	*6*	*7*
2019-20	618.52	610.56	597.07	556.33	93.17	40.74
2020-21	803.65	773.39	709.35	674.99	95.16	34.36
2021-22	903.03	901.03	887.19	843.12	95.03	44.07
Total	**2,325.20**	**2,284.98**	**2,193.61**	**2,074.44**	**94.57**	**119.17**

(Source: Records of CEO, CAMPA)

It was seen from the above Table that State CAMPA did not release the entire amount received from the National Authority, to the field units, during the above period. Similarly, the field units could not utilise the entire grant received from the State CAMPA, with the utilisation ranging from 93 to 95 *per cent*. As such, the APOs were not prepared as per the requirements of field units.

In reply, the Government stated (March 2023) that during implementation, certain difficulties like unsuitable land, local problems *etc.*, were noticed. The reply was not acceptable as these factors could have been taken into consideration while preparing the APOs.

4.5.2 Non-achievement of component-wise physical and financial targets

The component-wise details of physical and financial targets of activities, under the APOs: 2019-22 and the corresponding achievements, are detailed in **Table 4.4**.

Table 4.4: Component-wise physical and financial targets, achieved against APOs, during 2019-22

Sl. No	Component	Physical target (in ha)	Achievement (in ha)	Percentage of achievement	Financial target (₹ in crore)	Achievement (₹ in crore)	*Percentage* of achievement
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*
1	CA, PCA	13,962	12,748	91.30	192.09	140.29	73.03
2	Regeneration of bamboo forest	3,12,600	2,17,951	69.72	52.62	51.30	97.49
3	Bamboo plantations	4,465	3,980	89.14	28.62	25.17	87.95
4	ANR Plantation	95,940	95,265	99.3	401.50	375.80	93.6
5	Bald hill plantation	2,316	2,256	97.41	63.36	56.23	88.75
	Total	**4,29,283**	**3,32,200**	**77.38**	**738.19**	**648.79**	**87.89**
6	Raising of seedlings (in numbers)	6,04,35,000	3,70,35,000	61.28	140.82	121.38	86.19

(Source: Records of CEO, CAMPA)

Table 4.4 indicates that only 77 *per cent* of the plantation activities planned, were achieved, despite availability of funds of ₹89.40 crore (₹738.19 crore-₹648.79 crore), during the above years. Further, against the spending of 86.19 *per cent* of the funds available, the physical achievement was only 61.28 *per cent*.

In reply, the Government stated (March 2023) that the implementing divisions expressed difficulties in execution with cost and the cost norm was revised. Accordingly, the physical target was revised. However, the fact remained that achievement of targets, as per the APOs, was inadequate.

4.5.3 Status of annual accounts of State CAMPA

4.5.3.1 Non-finalisation of annual accounts of State CAMPA

As per Rule 16(3) of the State CAMPA guidelines, 2009, the State CAMPA shall maintain proper accounts and other relevant records and prepare an annual statement of accounts, in such form, as prescribed in consultation with the Accountant General concerned. The C&AG issued directives in May 2012 that the uniform format of accounts, prescribed for the Central Autonomous Bodies, should be adopted for the State CAMPA and the maintenance of accounts should be on accrual basis. The accounts of the State CAMPA were to be audited by C&AG, through the Accountant General, under Sections 27(1) and (2) of the CAMPA Act, 2016.

Scrutiny of records at CEO, CAMPA, revealed that five C&AG empaneled Chartered Accountant (CA) firms had been issued work orders (August 2018), for the preparation, compilation and authentication of the annual accounts of the State CAMPA, in the double-entry accounting system, from FY 2009-10 onwards. The scheduled date of completion of the task was six calendar months. Remuneration was fixed at the rate of ₹60,000 plus GST per forest division and ₹1.50 lakh plus GST per year for preparation of accounts of the State CAMPA. A provision for delay penalty, at 0.15 *per cent* per day, to be deducted from the payable amount, was also made in the work order.

Further, it was revealed that CA firms had already been paid ₹3.42 crore for the assigned work, but the annual accounts for the period 2009-18 could not be finalized, due to non-availability of range cash books, monthly accounts and bank passbooks. The APO of 2016-17 was closed in the financial year 2018-19. Accounts relating to the FYs 2017-18 to 2021-22, were not assigned to the CA, due to non-completion of accounts by the State CAMPA**,** which violated the State CAMPA guidelines and instructions of the C&AG. The accounts of the State CAMPA and allied offices could not be audited by the CA firms due to non- completion of accounts. Further, the accounts of the State CAMPA could not be audited by C&AG, due to non-submission of the accounts in time. In addition, the penal provision could not be enforced, due to laxity on the part of the department.

Government stated (March 2023) that the CA firms were instructed to prepare the annual accounts, as per the instructions of the Accountant General. The reply was not acceptable as the accounts were not audited since 2009-10.

4.5.3.2 Delay in submission of monthly CAMPA accounts and non-preparation of annual statement of accounts in prescribed format

As per section 288 of the Accounts Code Vol. III, monthly cash accounts need to be submitted by the DDO, by the 5th of every succeeding month, to the Accountant General.

Scrutiny of the records of 20 forest divisions revealed that in 17 divisions[97], the divisions had submitted their monthly accounts belatedly, with delays ranging from one day to 1,264 days, during 2019-22. Non-submission of cash accounts, in due time, is a serious lapse on the part of the DDO and in contravention of the aforementioned rules. Due to non-closing of cash books in due time, possibilities of improper adjustment in the internal accounts by post-dated entries in the cash books, could not be ruled out.

The Government stated (March 2023) that necessary steps had been taken for timely submission of the monthly accounts. However, the fact remained that, there was delay in submission of monthly accounts and its future compliance is subject to actual implementation.

4.5.3.3 Non-remittance of balance amount from CAMPA Accounts to State CAMPA Fund

CEO, State Authority, CAMPA, instructed (8 April 2021) all Divisional Offices to close all the CAMPA related annual cash book accounts and remit the residual available funds, allotted for APOs and the interest earned thereon, to the State CAMPA accounts, by 15 April 2022 positively, and report compliance to the CEO, State CAMPA.

Scrutiny of bank accounts and cash books relating to the CAMPA APOs, for the period 2019-22, revealed that there was an unspent amount of ₹2.63 crore, including interest related to 10 divisions, lying unremitted to the State CAMPA. This was in violation of the above directions. Further, the possibility of mis-utilisation of funds could not be ruled out.

The Government stated (March 2023) that all the divisions had transferred the unutilised funds to the State Authority, CAMPA by March 2023. However, the Divisional Offices did not comply with the instructions of State Authority, CAMPA.

4.5.4 Irregular sanction and expenditure out of CAMPA funds

As per the Rule 5(1)(2) of the CAF Rules, 2018, the monies received on account of the NPV shall be used for ANR[98], AR[99] , silvicultural

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[97] DFOs: Bargarh, Bhadrak WL, Bonai, Boudh, Deogarh, Kalahandi (N), Keonjhar, Khariar, Nayagarh, Nabarangpur, Puri WL, Rairakhol, Rayagada, Sundargarh, State Silviculturist Centre, DD Nandankanan Zoological Park and DD, STR North (WL)

[98] Aided Natural Regeneration: it is a method of enrichment plantation where plantations are aided to grow in the degraded gaps of forest naturally.

[99] Artificial Regeneration: It is a method of afforestation where artificial means to develop the plantation are involved.

operations[100], protections of plantation and forests, SMC[101] of forest, establishment, operation and maintenance of animal rescue centres and veterinary treatment facilities. Further, as per Rules 5 (4) (a to k) of the CAF Rules, 2018, read with Agenda No. 5 of the APO, for the financial year 2019-20, the CAMPA fund shall not be used for the payment of salary; construction of residential and official buildings for officers above the Forest Range Officer; purchase of furniture; office equipment; fixtures, including air conditioners and generator sets, for residences and offices of the State Forest Department and establishments; as well as expansion and up-gradation of zoos and wildlife safaris. As per Explanation 2 of Rule 5 of the CAF Rules, 2018, the monies received towards NPV, deposited in the State fund, shall not be allowed with any other State Schemes that are under implementation from the state budget. Observation on expenditure in deviation to permissible areas have been discussed in following sub-paragraphs.

4.5.4.1 Irregular expenditure towards construction works and non-plantation activities

On scrutiny of records pertaining to APOs 2019-22, in the office of CEO, CAMPA, and selected DFOs, Audit observed that expenditure of ₹56.82 crore had been made, out of CAMPA funds, for construction works and purchase of furniture, as detailed in ***Appendix - IX***. While approving the APO 2019-20, the National CAMPA, *inter alia* restricted the expenditure on vehicles, buildings, general surveys and infrastructure related works out of the CAMPA funds. Audit observed that CAMPA funds of ₹21.67 crore had been utilised for payment towards Differential Global Positioning System (DGPS)[102] survey of forest blocks, software development, salaries and compassionate payments *etc*., as detailed in ***Appendix - X***. As per Rule 5 of CAF Rules, this expenditure of ₹78.49 crore incurred during 2019-22 was not permissible out of CAMPA funds.

In reply, the Government stated (March 2023) that the budget provision was made under CAMPA APO, regarding Odisha Space Application Centre (ORSAC) and Rail India Technical and Economic Service (RITES) Ltd., which was decided in the State Level Steering Committee (SLSC) and payment was released accordingly. The DD, Nandankana Zoological Park (NZP) had been asked to furnish the reasons for utilization of funds for up-gradation of NZP instead of maintenance of rescue centre. The replies were not acceptable, as the above items of expenditure were not allowed under Rule 5 of the CAF Rules, 2018, as well as the instructions of National CAMPA.

[100] Silvicultural operations means clearance of weed, cutting of climber, high stump cutting, singling of shoots to enhance forest growth and establish new forest stands and wildlife habitat.

[101] Soil moisture conservation: It is a technique to minimize the amount of water lost from the soils.

[102] Differential Global Positioning System: It is an enhancement to the Global Positioning System (GPS) which provides improved location accuracy. DGPS is widely used in surveying applications like recording of points, setting up of ground control points, staking out and various other applications. DGPS is based on satellite technology. it determines its positions from the relative location of other satellites.

Further, Audit test-checked the records of plantations and cash accounts of 11 forest divisions[103] and found that out of the plantation funds released according to the cost norms, ₹76.69 lakh had been diverted and spent towards non-plantation activities, such as purchase of symphony cooler, DG set *etc*., violating the above CAF Rules, as detailed in ***Appendix -XI***.

The Government stated (March 2023) that action was being initiated on the matter through concerned implementing DFOs.

4.5.5 Diversion of CAMPA funds

4.5.5.1 Ama Jangala Yojana

Explanation 2 of Rule 5 of the CAF Rules, 2018, stipulates that mixing of the monies received towards NPV, shall not be allowed with any other state schemes, under implementation from any other budget, either for capital or spill over works.

The Ama Jangala Yojana (AJY) is a flagship programme of the Government of Odisha, implemented through the Odisha Forestry Sector Development Society (OFSDS), in 30 Territorial and Wildlife Divisions of the State, through 7,000 Vana Surakshya Samitis (VSSs) and Eco Development Committees.

Scrutiny of records of the CEO, State CAMPA, revealed that an amount of ₹248.06 crore[104] had been diverted from CAMPA funds for APOs 2019-20 to 2021-22, to AJY, in the name of convergence with State's flagship scheme. This was in violation of explanation 2 of Rule 5 of the CAF Rules, 2018, as the AJY scheme is a flagship programme of the State Government to be implemented through the State budget.

The Government stated (March 2023) that it was insisted upon flow of funds under CAMPA towards implementation of AJY. The reply was not acceptable, as utilisation of the CAMPA funds was to be regulated in accordance with CAMPA Rules and its use in the AJY, which was a State flagship programme, was irregular.

4.5.5.2 Distribution of Seedlings to other State schemes

Scrutiny of records of nine DFOs[105] revealed that 47,84,180 seedlings had been raised between 2019-22 at a cost of ₹8.13 crore. Out of the above, 15,45,945 seedlings had been distributed/ utilised in other plantation schemes like the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Odisha Forestry Sector Development Project (OFSDP), Green Mahanadi Mission (GMM) and Increasing Green cover, for which ₹3.42 crore was diverted from CAMPA, in violation of CAMPA Rules, as detailed in ***Appendix - XII***. Reasons for this diversion were not found available on records.

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[103] Deogarh, Nayagarh, CEO, CAMPA, Bargarh, Rayagada, Similipal (N) WL, Nandankanan, Bhadrak (WL), Khariar, Boudh and State Silviculturist, Bhubaneswar

[104] 2019-20: ₹81.57 crore, 2020-21: ₹65.34 crore and 2021-22: ₹101.15 crore

[105] DFOs, Bargarh, Bhadrak (WL), Bonai, Boudh, Deogarh, Keonjhar, Khariar, Nayagarh and Rayagada

The Government stated (March 2023) that seedlings raised under CAMPA had been used in other schemes and the DFOs have been asked to submit a report on utilisation of seedlings raised under CAMPA. The reply was not acceptable as utilisation of the seedlings, raised under CAMPA through CAMPA funds, for other plantation schemes, amounted to diversion of CAMPA funds, which was in violation of CAF Rules, 2018.

4.5.5.3 Disallowed vouchers in CAMPA accounts

As per Rule 346 (1) of the Odisha Forest Department Code (OFD) 2020, If a voucher is withheld from incorporation in the divisional accounts, on account of inaccuracies, or owing to suspicion of fraud, the explanation of the Range Officer (RO) and the officer who has disbursed the amount mentioned in the voucher, should be obtained. The DFO, after due consideration of the explanation, is to pass an order about its incorporation, in part or in full, or he may order disallowance of the voucher. The disallowed amount is then to be recovered from the person who has disbursed the voucher.

Scrutiny of the CAMPA Annual Cash Book accounts of four DFOs[106], revealed that, 102 vouchers, amounting to ₹23.53 lakh, were disallowed by the DFOs, between January 2020, and March 2022 as detailed in ***Appendix-XIII***. However, the said amount had not been recovered from the errant persons till date of audit (August/ September 2022).

Accepting the audit observation, the Government stated (March 2023) that steps were being taken for recovery of the disallowed amount from the concerned staff.

4.5.5.4 Execution of civil works and purchase of material, without undergoing the tender process

As per Rule 109 of the OFD (Amendment) Code, 2020 and Notification[107] of the Finance Department, GoO, invitation to tenders, by advertisement, should be used for procurement of goods/ works of estimated value of ₹ five lakh or above, to ensure competitive bidding, efficiency and transparency.

Scrutiny of the cash accounts and the building register of CEO, State CAMPA and selected divisions, revealed that 13 divisions had executed civil works, amounting to ₹13.23 crore. Out of which tender was invited by one division[108] only, for civil work of ₹51.75 lakh and the tender was cancelled due to non-submission of requisite documents by the participating bidders. Subsequently, the said work was executed without retendering. The remaining 12 divisions had executed the civil works without inviting tender. Further, 10 divisions had purchased different materials amounting to ₹3.91 crore under the CAMPA APOs: 2019-22 without, following advertised tender procedure. Even though the value of each work was more than ₹ five lakh, all the works and purchases had been made without tender process as detailed in ***Appendix-XIV***. The divisions executed these works through departmental

[106] Bargarh, Boudh, Keonjhar and Nayagarh
[107] No. Codes-27/2011/4939/F dated 13 February 2012
[108] Bhadrak Wildlife Division

method and procured goods without undergoing the tender process, which was in violation of the above codal provision.

Accepting the audit observation, the Government stated (March 2023) that the works had been executed departmentally as per the previous practice and further construction works would be executed through tender process henceforth.

4.6 Unfruitful expenditure out of CAMPA funds

4.6.1 Unfruitful expenditure on SSO, due to non-working of bamboo coupes

As per Rule 6 of the National Working Plan Code, 2014, Forest Management Planning must provide for sustainable management of forests and its biodiversity, as enshrined in the National Forest Policy, encompassing the ecological (environmental), economic (production) and social (including cultural) dimensions. The prescriptions in the Working Plan included Subsidiary Silvicultural Operations (SSO), in the Bamboo coupes[109], to provide conducive conditions for the growth of species. The Working Plan adopted a systematic cutting cycle of four years, which is the optimum and suitable cycle for commercial exploitation of Industrial/ Salia bamboo. Odisha Forest Development Corporation (OFDC) Ltd. is the sole departmental forest contractor entrusted with work of sale/ auction of different forest products of the Forest Department. All bamboo coupes are delivered to the OFDC Ltd. for harvesting and selling of bamboo.

Scrutiny of records, in the selected divisions, revealed that, in 13 forest divisions[110], SSO had been undertaken for 162 bamboo coupes, under CAMPA APOs of 2014-18, comprising 1,83,076.50 ha of degraded forest

Photo No. 8: Bamboo coupe of Rairakhol

land, for harvesting in four-year cycles with expenditure of ₹34.03 crore, which were to be worked by OFDC, during 2019-22, as detailed in

109 'Coupe' is defined as a felling area, usually one of an annual cutting series. Each cutting series has been divided into four annual coupes, i.e A, B, C and D. The coupe, in each felling series is to be worked on rotation.

110 DFOs Baliguda, Bargarh, Berhampur, Bonai, Boudh, Deogarh, Jeypore, Kalahandi (N), Khariar, Nayagarh, Rairakhol, Rayagada, and Sundargarh

Appendix-XV. However, OFDC surrendered 129 bamboo coupes for being uneconomical and only 33 coupes had been harvested i.e 20 *per cent* of total coupes undertaken for SSO work.

The reasons for surrender of bamboo coupes remained unreviewed and were not brought to the notice of the higher authorities. Thus, due to non-harvesting of 129 bamboo coupes, the expenditure of ₹27.10 crore, on SSO, was unfruitful.

In reply, the Government stated (March 2023) that, the bamboo coupes have been heavily degraded because of unsystematic removal of bamboo by local inhabitants and due to the inaccessible hilly terrain of the region, the bamboo coupes, which were taken by OFDC, could not be worked out properly. The reply was not acceptable, as the plantation under SSO works had been undertaken with an expenditure of ₹34.03 crore, in the same difficult and inaccessible hilly terrain.

4.6.2 Unfruitful expenditure in research project funding

Scrutiny of records of the PCCF (WL) and State Silviculturist, Bhubaneswar, revealed that 18 research proposals, for studies relating to habitats, ecology, biology, nesting *etc.*, in the State of Odisha had been assigned to different Institutions/ persons, at a project cost of ₹1.91 crore, during 2017-22. The research papers were to be completed between seven months to three years. Out of the above project cost, ₹1.65 crore had been released to the concerned persons and institutions, from CAMPA APOs (NPV) of 2015-21, as detailed in ***Appendix -XVI***. However, the final research papers/ reports had not been submitted to the concerned authorities as of July 2022. The Department had also not pursued the matter of timely completion of the assigned research projects. Due to non-completion of research projects, the desired purpose of study of ecology could not be achieved, despite incurring an expenditure of ₹1.65 crore.

Accepting the audit observation, the Government stated (March 2023) that the Principal Investigators had been asked to complete the projects and submit the final report early.

4.6.3 Short deduction of Tax at source, on payments made to service providers

As per Section194J of the Income Tax (IT) Act, 1961, tax at source (TDS), at the rate of 10 *per cent*, is to be deducted from the amount paid by way of fees for professional services, where such amount exceeds thirty thousand rupees.

Scrutiny of the cash books/ accounts of CEO, CAMPA, revealed that TDS of ₹7.67 lakh had been deducted, instead of ₹35.63 lakh (calculated at the rate of 10 *per cent* on the total payment of ₹3.56 crore, to seven service providers). This had resulted in the short realisation of TDS, amounting to ₹27.96 lakh, as detailed in ***Appendix -XVII***.

In reply, the Government stated (March 2023) that TDS short deducted would not be possible to recover from the service provider at this point. The reply was not relevant as the TDS was not recovered as per IT Act *ab initio.*

4.7 Protection, Monitoring and Evaluation

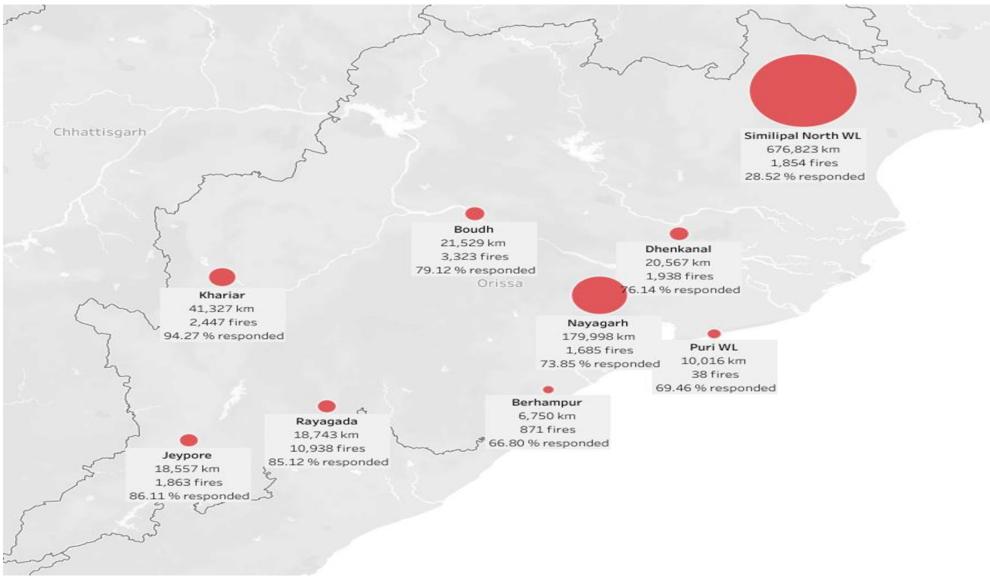
4.7.1 Deficiency in forest foot patrolling

The FE&CC department issued (March 2016) notification for forest patrolling on foot, as a step towards protection of forests and wildlife and enrichment of the forests of the State. Foot patrolling, by forest officials, in the field, at various levels, is monitored by the PCCF & HoFF, Odisha, through its website. Criteria for the minimum number of days of foot patrolling, required to be undertaken by forest officials, from the Forest Guard level to the RCCF level were also stipulated in the said notification.

Scrutiny of records, in selected divisions, revealed that, in nine divisions[111], against the target of 18,22,356 km of foot patrolling, fixed by the DFOs on the basis of number of days fixed under the notification (March 2016), only 8,63,532 km (57 *per cent)* had been covered by the staff of the concerned units, during the period 2019-22, as detailed in ***Appendix-XVIII.***

Further, as per the data available on the Odisha Forest Management System (OFMS)[112] portal, the shortfall in foot patrolling, in kilometers, and the corresponding fire incidents, were analysed by Audit. As shown in **Figure 1**, there were higher number of forest fire incidents and lesser *per cent* of fire incidents attended as a general trend, in the divisions where the shortfall in foot patrolling was high.

Figure 1: Odisha map showing the shortfall in foot patrolling, in nine divisions, and the corresponding number of forest fire incidents (as per FSI) and *percent*age of fires incidents responded to by the department



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111 DFOs, Berhampur, Boudh, Dhenkanal, Jeypore, Khariar, Nayagarh, Puri (WL), Rayagada, and STR North (WL)

112 Odisha Forest Management System is an application used by the FE&CC department to generate consolidated reports on progress of nursery, afforestation, soil working and moisture conservation activities.

Accepting the audit observation, the Government stated (March 2023) that foot patrolling would be monitored and improved. However, the fact remained that, due to inadequate foot patrolling, monitoring of forest fires, encroachment of forest area, poaching, illicit felling, Wildlife depredation[113], *etc*., could not be avoided.

4.7.2 Non-functioning of VHF communication system

Audit test checked the four divisions[114] where incidents of elephant deaths were high and observed that 106 Very High Frequency (VHF) Towers/ Stations and 282 mobile Walkie-Talkie and handsets, were installed during 2019-22 for communication among the forest staff, in dense forests. Out of the above, 52 towers (49 *per cent*) and 92 (33 *per cent*) walkie-talkies, were not functioning. Non-functioning of the VHF towers and walkie-talkies, not only affected the communication among the forest staff in dense forests, but also rendered unfruitful the expenditure of ₹49.42 lakh incurred on their purchase.

In reply, the DFOs stated (September/ October 2022) that the VHF towers and portable walkie-talkies had been damaged due to lightning and steps would be taken to repair the same. However, the fact remained that communication among the forest staff, for forest protection, had got affected. No reply was furnished by the Government (February 2024).

4.7.3 Ineffective protection to Elephants

'Elephant' is listed under Schedule-I of the Wildlife Protection Act, 1972, which accords the maximum protection to the species. In Odisha, app-based monitoring, through the Integrated Wildlife Management System (iWLMS)[116], Web Geometric Information System (GIS) portal[117], Drones and Bulk Short Message Service (SMS)/ Early warning system, are widely used for tracking the elephant movement in various divisions. A 24 x 7 control room, at the office of the PCCF(WL), monitors all data uploaded in the app and scrutinises the information received from the field units and other sources. Protection related infrastructure, hired vehicles and other logistics, are provided round the year, to facilitate staff/ squads to carry out regular patrolling. In case of elephant deaths, "Guidelines for Transparency in Elephant Post Mortem", issued by MoEF & CC, GoI, should be adhered to, in respect of process of the post-mortem, patrolling *etc.*, to determine the cause(s) of such death. Offenders, in case of un-natural

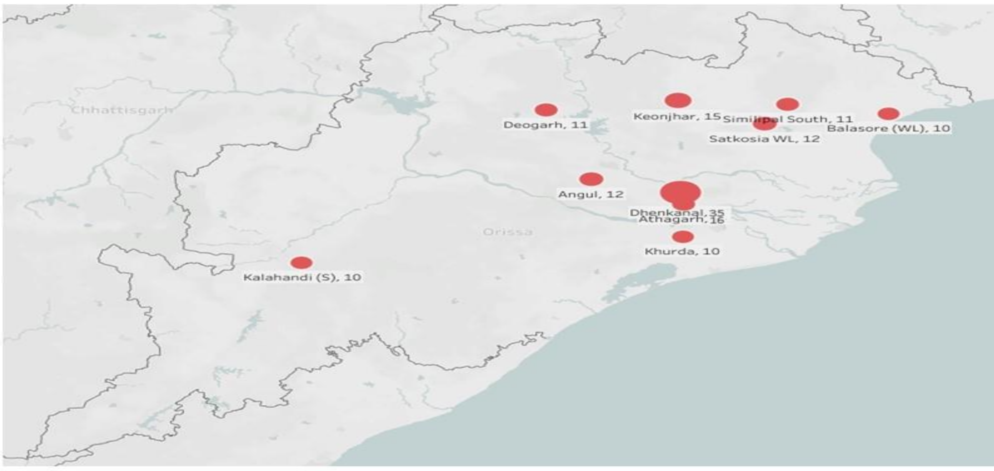
QR code link to a video[115] uploaded by Audit on the elephant poaching in Dhenkanal and Athagarh Forest Divisions

[113] Acts that cause severe damage or destruction to wildlife
[114] Athagarh, Bargarh, Dhenkanal and STR North (W/L)
[115] Some of the images may be disturbing, viewer discretion may be exercised.
[116] It facilitates GIS based wildlife information for all the sanctuaries and wildlife units in the State.
[117] It enables wildlife management officials to monitor and visualise wildlife movement and habitat limitations.

deaths due to poaching, poisoning, deliberate electrocution *etc*., should be arrested within 48 hours of the detection of the death cases.

Scrutiny of records, at the office of PCCF & HoFF, revealed that, 239 elephant death cases had been reported, in 37 divisions, during 2019-22. The divisions where the highest number (10 or more than 10) of elephant deaths had been reported, during 2019-22, are shown on the map of Odisha, in **Figure 2** below.

Figure 2: Forest divisions in Odisha with the highest number of elephant deaths during 2019-22.



Further, checking of the case records of elephant deaths, in two divisions[118], revealed that 51 elephant death cases had been reported during 2019-22, due to accidents (2), electrocution (9), poaching (6), diseases (28), infighting (3) and natural death (3), as shown in **Table-4.5**.

Table 4.5: Elephant deaths in two divisions during 2019-22

Sl. No.	Division	Elephant deaths during the last three years			Total
		2019-20	2020-21	2021-22	
1	DFO, Dhenkanal	16	6	13	35
2	DFO, Athagarh	2	4	10	16
	Total	**18**	**10**	**23**	**51**

As can be seen from the Table, the number of elephant deaths had increased in the Athagarh division, during the last three years. In Dhenkanal, the number of cases was more than double of the Athagarh cases, during the last three years. Further, the figure of unnatural deaths of elephants, was 16 times the figure of natural deaths which was a matter of concern.

Further, during scrutiny of records relating to the measures adopted in these two divisions for elephant protection, the following deficiencies were noticed:

4.7.3.1 Inadequate protection measures and inaction by authorities

Six elephants had died due to poaching during 2019-22. On scrutiny, Audit observed various contributing factors, such as deficit in foot patrolling in the forest area as per the Odisha Forest Management System (OFMS) data; non-utilisation of trap cameras at proper places; deployment of elephant squads;

[118] Dhenkanal and Athagarh

lack of weapons; *etc*. Further, the DFOs had not taken any action against the field staff, for lapses in reporting of the incidents of poaching and the poachers. Deficit in foot patrolling was also noticed in the locations where cases of elephant deaths had been reported, due to electrocution caused by illegal hooking[119] and sagging lines[120], in the Dhenkanal Division during 2019-22, as shown in **Table- 4.6**.

Table- 4.6: Elephant deaths due to electrocution in the Dhenkanal Division during 2019-22

Sl. No.	Place of reporting of death	Date of Death	Date of foot patrolling by field staff during 2019-2022
1	Kadla	12.06.2019	No
2	Kadampal	16.09.2019	No
3	Anlakata	21.11.2019	30.05.2019
4	Gurilo	15.01.2020	07.10.2020 and 24.01.2021
5	Patharakhamba	25.09.2020	No
6	Benipathara	01.12.2020	No
7	Gobindaprasad	06.06.2021	No
8	Kantamela	24.07.2021	No
9	Kapilash elephant rescue centre	29.01.2022	No

It is evident from the Table that out of the nine locations, no foot patrolling was conducted in seven locations during the period of three years.

In reply, the Government stated (March 2023) that to check electrocution deaths, various measures had been put in place in coordination with Energy Department.

4.7.3.2 Deficit in cattle immunization programme for protection of wildlife from diseases

Domesticated animals, reared near sanctuaries and zoo areas, pose a risk of transmission of contagious diseases to wild animals, through physical contact, common watering points, lack of preventive vaccination of susceptible domesticated animals etc.

Scrutiny of records in six Ranges[121], under the Athagarh and Dhenkanal divisions, revealed that immunization programmes had been undertaken during 2019-22 towards which provision of ₹ 3.65 lakh was made in APOs 2019-22, out of which, an expenditure of ₹2.44 lakh had been found to be booked. However, the Range Officers could not produce any records regarding immunization, to Audit, due to which, Audit could not ensure whether the amount had been utilised for the intended purpose.

Accepting the Audit observation, the Government stated (March 2023) that the concerned DFOs were being asked to produce all records in support of immunization programme to Audit.

[119] Connection of bare conductor, from the transmission line to the ground, in the forest
[120] Low hanging high voltage power transmission cables
[121] Narsinghpur (East), Narsinghpur (West), Khuntuni, Badamba, Mahabirod and Dhenkanal

4.7.3.3 Non-production of photographs and videos in relation to elephant deaths

Various cameras are used in Reserve Forest/ wildlife habitat fields, to monitor the difficult access areas. Despite installation of various cameras, DFO, Athagarh, had not produced any photographs and videography, in relation to elephant deaths and post-mortems as requisitioned by Audit. However, DFO, Dhenkanal, produced some photographs and videos in which, human (authorised or unauthorised) images were missing which indicated that, no system of safe preservation the photographic evidence was devised and implemented. Improper monitoring through cameras, defeated the very purpose of their installation.

Accepting the audit observation, the Government stated (March 2023) that the DFOs concerned were being asked to produce all available photographs and post-mortem reports relating to elephant death.

4.7.4 Non-functional monitoring and evaluation mechanism for forestry activities

As per Rule 12 (6) of OFD Code 1979, the CCF would thoroughly inspect the office of each Conservator under his charge, at least once a year and send the inspection note for information of Government, as soon as the inspection is completed. He would also inspect the office of at least two DFOs in a year. Further, Rule 3 (h) of the CAF Rules, 2018, provides for independent concurrent monitoring and evaluation and third party monitoring of various works undertaken from State funds.

On scrutiny of records, Audit observed that, out of the provision of ₹15 crore[122] in the CAMPA APOs, for monitoring and evaluation, during 2019-22, only ₹44 lakh had been utilised for the purpose of Monitoring and Evaluation (M&E), during 2021-22. However, no evaluation/ inspection report was produced to Audit for scrutiny. Hence the utilisation of funds for monitoring and evaluation, could not be verified by Audit and no expenditure had been incurred during 2019-21. This indicated lack of an effective mechanism for concurrent monitoring and evaluation of forestry activities, including plantations to assess the growth and survival percentage of plantations undertaken under CAMPA.

In reply, the Government stated (March 2023) that an internal vigilance wing was created under PCCF(M&E) and 3rd party evaluation of the CAMPA activities were carried out regularly. The reply was not acceptable as the no evaluation/ Inspection reports were furnished to Audit.

4.7.5 Joint Physical Inspection of Plantations

As per Rule 2.98 of the Code of Management Plan Procedure (CMPP), 1990, plantations after three years of planting with survival of 60 *per cent* and above can be termed as 'successful', between 40 to 60 *per cent* as 'partially successful' and less than 40 *per cent* survival should be termed as 'failed plantation'.

[122] Five crores in each of the APOs, for the period 2019-22

Audit conducted joint physical inspection (JPI), in 12 divisions[123], of 34 plantation sites (3,234 ha), wherein plantation had been carried out during 2016-22. Out of these 34 plantations, 13 plantations (1,225 ha) had 'failed', with survival rates ranging from 7 to 36 *per cent* and five plantations (733 ha) had been 'partially successful', with survival rates ranging from 42 to 56 *per cent*, rendering the expenditure of ₹5.38 crore, incurred on the failed/ partial successful plantations unfruitful, as detailed in ***Appendix - XIX***.

Accepting the Audit observation, the Government stated (March 2023) that action would be taken against the erring staff.

4.7.6 Non/Incorrect uploading of information on e-Green Watch

e-Green Watch, developed (2013) by MoEF&CC, GoI, is an integrated e-governance portal, for automation, streamlining and effective management, of processes related to plantation and other forestry works, by State Forest Department (SFD), under the supervision of CAMPA. It presents data in real time and is accessible to all stakeholders and the public at large, with the objective of monitoring and tracking the performance of utilisation of CAMPA funds.

Scrutiny of the records of 11 divisions[124] revealed that, out of 1,897 activities executed under CAMPA funds during 2019-22, only 832 (44 *per cent*) activities had been uploaded on e-green watch, without uploading the corresponding expenditure, photographs, satellite images *etc*. Hence, the objective of transparency and accessibility of information to stakeholders, could not be achieved.

In reply, the Government stated (March 2023) that all the plantation activities in Odisha had been monitored through OFMS website, again updating the same in the e-green watch portal was a heavy burden on the field staff. However, all activities were not uploaded in e-green watch portal as per above guidelines.

4.8 Best Practices

- **The Odisha Forest Management System (OFMS)**, a web based and role-based application, was developed during 2016, for online capturing and monitoring of the forest and wild life related activities, undertaken under CAMPA funding. The application was developed and maintained by the Forest Information Technology and Geomatics Centre (FITGC), Odisha, in technical collaboration with the Odisha Space Application Centre (ORSAC).

There are 25 modules for selection/ survey/ implementation/ monitoring of different activities, aimed towards better forest protection management and the web application was further upgraded during 2021. To control/ monitor all the above activities, Geomatics and other Information Technology (IT) infrastructure had been installed and configured with the servers of FITGC. The beat-wise forest cover change detection, and afforestation activities, were

[123] Bargarh, Berhampur, Bhadrak WL, Bonai, Boudh, Deogarh, Kalahandi (N), Keonjhar, Khariar, Nayagarh, Rairakhol and Rayagada

[124] Berhampur, Bonai, Boudh, Deputy Director, Nandankanan, Jeypore, Kalahandi (N), Keonjhar, Nabarangpur, Puri (W/L), Rayagada and STR North (W/L)

monitored through the OFMS web portal. Further, OFMS helps to capture and monitor the assets created under CAMPA, like nurseries, plantations, water bodies, buildings *etc.* It offers selection of sites and makes evaluation easier for higher authorities, besides helping in real-time forest fire management.

All forestry activities, foot patrolling, forest fire management, infrastructural activities, were to be uploaded in the OFMS portal, for better management of the department.

Though the system is an ideal solution, proper training and initiative to use it, may reap good results in future.

- **Geo-referencing of Forest Land (GRFL)**, an initiative of the FE & CC Department, GoO, was taken up during 2017 for geo-referencing of all kinds of forest lands (reserve forests, protection forests, revenue forests and deemed forests). The objective was to prepare forest cadasters for the entire State, as per the directives of the Hon'ble Supreme Court of India, using DGPS, GIS and Remote Sensing. In this regard, a standard operating procedure was notified in July 2017. The geo-referencing of forest land was started during June 2019 by ORSAC and it is to be completed by June 2023.

The project aims to prepare geo-referenced forest land records, of about 61,991 sq. km. of forest land, *i.e.* 39 *per cent* of the State's geographic area, duly reconciled and integrated with the revenue land records, on a cadastral scale. The GRFL project had completed 12,692 sq. km. of Notified and Revenue forests, in 13 forest divisions and geo-referencing of another 18,007 sq. km. of forest land was under progress in 15 forest divisions. The geo-referencing of the remaining 31,000 sq. km (appx.) forest is to be completed by 2024. The initiative is expected to help in pre-evaluation and timely grounding of developmental projects involving forest land. It is also expected to help in the identification of degraded revenue forest lands, for the compensatory afforestation land bank, which has huge significance for obtaining timely forest clearances for developmental projects. This is also expected to facilitate efficient forest conservation in Odisha and facilitate an objective and timely assessment of the forest rights of tribal communities.

4.9 Conclusion

The State CAMPA was constituted to accelerate activities for compensatory afforestation, management and protection of forests and wildlife, development of infrastructure and other allied works.

The Detailed Compliance Audit (DCA) was conducted during June to November 2022, to assess the functioning of the State CAMPA, along with the inflow of funds to the Ad-hoc CAMPA, covering the period from 2019-22.

The State CAMPA was constituted in the State, with a delay of nine years from the date of notification of CAMPA guidelines, by the Government of India (GoI).

As the database of degraded forest and non-forest land was not available with the Department, targets for Compensatory afforestation programmes under CAMPA were not achieved within the stipulated period of three years. In nine cases of diversion of forest land, for which Stage-II/ final approval was pending for more than five years, the Department did not realise Net Present Value (NPV) of ₹88.40 crore at the revised rates.

There has been a shortfall in the achievement of the compensatory afforestation target by 6,995.97 ha, for diversion of forest land, since the enactment of the Forest Conservation Act, 1980, till date.

The conditional works under forest clearance, such as elephant underpasses/ overpasses, reptile underpasses, were either under progress, or had not been undertaken by the user agencies, even after two to four years after Stage-II approval.

The number of forest fire incidents increased by 209 per cent and the extent of forest area damaged increased by 300 per cent in 2021, compared to 2019, despite expenditure of ₹58.84 crore for fire protection, out of CAMPA funds.

Out of the total funds of ₹2,284.98 crore received from CAMPA, the State CAMPA failed to utilise the assistance of ₹210.54 crore during 2019-22.

The annual accounts of State CAMPA could not be finalized since inception, i.e., from 2009 to till 2022. An amount of ₹56.82 crore was irregularly utilised out of the State CAMPA funds for construction works. An amount of ₹248.06 crore was diverted from CAMPA funds to Ama Jangala Yojana.

There were 51 elephant death cases recorded in the Athagarh and Dhenkanal divisions from preventable causes, due to deficiency in forest foot patrolling, improper utilisation of trap cameras, and other protection measures.

The Monitoring and Evaluation wing of the State Forest Department (SFD) did not plan or undertake any monitoring or evaluation activities, during 2019-22.

4.10 Recommendations

The Government may consider:

- expediting the process of formation of a GIS-based Land Bank, in order to consolidate the database of non-forest lands and degraded lands identified in lieu of diversion of forest lands, for taking up of compensatory afforestation works, in a timely manner.
- timely preparation and approval of the Annual Plan of Operations, by the Governing Body.
- prompt disposal of Stage- II approvals cases which have been pending for more than five years, as well as recovery of the differential cost of NPV from the user agencies.
- to install an effective mechanism for timely recovery of the cost of CA from the UAs.
- assessing the viability of bamboo regeneration, before taking up the Subsidiary Silviculture Operation (SSO) and taking effective measures for successful commercial exploitation.

- incurring expenditure for infrastructure activities, strictly as per CAMPA guidelines.
- early finalisation of accounts and maintenance of accounts records as per rules.
- enhancing foot patrolling, for forest fire protection and wildlife protection.
- installing effective mechanism to ensure timely construction of elephant underpass/ overpass/ reptile underpass in the forest areas, by the user agencies.
- fixing responsibility for the unnatural deaths of elephants due to reasons like accidents, poaching, electrocution etc.
- establishing comprehensive and effective internal mechanism, for concurrent monitoring and evaluation of forestry and infrastructural activities, undertaken under CAMPA.

CHAPTER V

Detailed Compliance Audit on Construction of North - South Corridor – Biju Expressway

CHAPTER V

WORKS DEPARTMENT

5. Detailed Compliance Audit on "Construction of North- South Corridor - Biju Expressway"

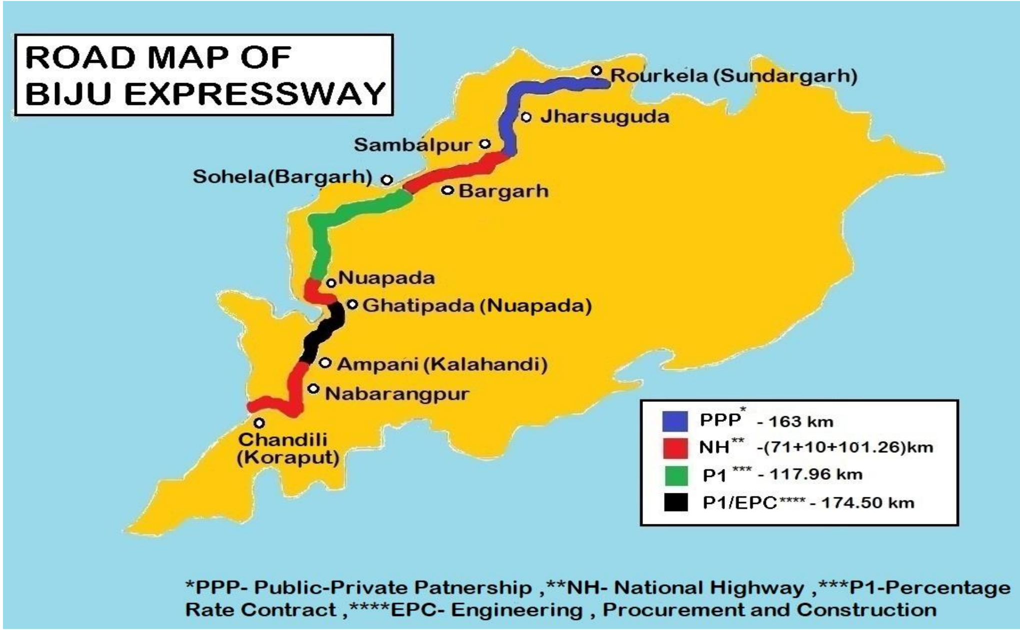
5.1 Introduction

Odisha has a road network of a total length of 30,637.90 km consisting of National Highways, State Highways and District Roads. These roads carry the bulk of the traffic and are the principal carrier of economic activities. Odisha Works Department takes care of the construction, improvement and maintenance of these roads. There has been a conscious effort to develop roads of Odisha under various schemes. In order to mitigate the isolation of the important commercial centres/ towns of Koraput, Balangir, Kalahandi (KBK) districts and other border districts, it was proposed to develop an economic corridor by providing an expressway connecting Rourkela to Jagdalpur of Chattisgarh covering eight Districts[125] of the State. After Cabinet approval (August 2015), North-South Corridor namely "Biju Expressway" (BEW) was notified (September 2015) to develop a four-lane road of 637.72 km.

5.1.1 Project proposals and present status

Proposal for construction of a four-lane North-South Corridor was submitted (August 2014) by the Chief Engineer (CE), DPI & Roads for according approval of the Engineer-In-Chief (EIC) and Secretary to Government, Works Department.

Map No. 1: Route map of Biju Expressway with mode of execution



[125] (i) Sundargarh, (ii) Jharsuguda, (iii) Sambalpur, (iv) Bargarh, (v) Nuapada, (vi) Kalahandi, (vii) Nabarangpur and (viii) Koraput

The BEW was approved in principle by the Government of Odisha (GoO) on 1 September 2014. Details of the BEW road stretch, mode of execution and the present status are given in **Table No. 5.1** below:

Table No. 5.1: Details of stretch, length, mode of execution and status of the road as of March 2021

Sl. No.	Stretch of road	Length (Kms)	Scheme/Mode of execution	Nature of Road	Present Status
1	*2*	*3*	*4*	*5*	*6*
1	Rourkela-Sambalpur	163	Public Private Partnership (PPP) with Viability Gap Fund (VGF)	Four lane roads	Completed
2	Sambalpur to Sohela	71	National Highways Authority of India (NHAI)	Four lane roads	Completed
3	Sohela to Nuapada	117.96	Central Road Infrastructure Fund (CRIF)/ State Plan (SP) on percentage contracts[126]	Two lane and four lane roads	In progress
4	Nuapada to Ghatipada	10	NHAI	Two lane roads	Completed
5	Ghatipada to Ampani	174.50	CRIF/ NABARD/ SP on percentage and EPC contracts[127]	Two lane and Four lane roads	In progress
6	Ampani to Jagdalpur	101.26	NHAI	Two lane roads	In progress
	Total	**637.72**			

(Source: data as furnished by the Department)

Out of the total length, 182.26 km[128] of National Highways (NH) were improved by NHAI[129]/ MoRTH. The PPP mode project (163 km- Rourkela to Sambalpur), an existing two lane road, was awarded (November 2013) to a Concessionaire[130] for ₹1,292.56 crore for improvement to four lane with paved shoulders and concession period of 22 years including three years of construction period which formed part of BEW. The State Government approved the remaining 292.46 km of BEW from Sohela to Ampani excluding Nuapada to Ghatipada during 2015-16 for construction and completion by 2020 for a cost of ₹3,630 crore under various schemes as given in the Table above. The Department had incurred an expenditure of ₹1,191.05 crore for two lane and four lane roads from Sohela to Ampani (March 2021). The State Government instead of comprehensively developing BEW with four lanes, executed two lanes under various schemes and then ventured to convert the road into a four-laned one and encountered issues on land acquisition, alignment of roads and bridges, change in pavement specifications *etc.*, as detailed in subsequent paragraphs.

5.1.2 Audit objectives and criteria

The objectives of this Detailed Compliance Audit were to assess whether (i) the planning process including survey and investigation was adequate; (ii) the

126 Award of work on percentage basis over the estimated cost of the project

127 Engineering, procurement and construction (EPC) contract

128 Sambalpur to Sohela (NH-53) for 71 km four lane road, Nuapada to Ghatipada (NH-353) for 10 km two lane road and from Ampani to Boriguma (NH-26) - Boriguma--Jagdalpur (NH-63) for 101.26 km two lane road

129 National Highways Authority of India/ Ministry of Road Transport and Highways

130 L&T Sambalpur-Rourkela Toll Way Limited

financial management of projects was prudent, the tendering process was transparent and execution of the projects was economical and efficient; and (iii) the quality control mechanism and monitoring system of projects were adequate and effective.

The main sources of Audit Criteria were the (i) GoO Guidelines and orders, Scheme guidelines/ Circulars and Instructions of Government of India (GoI) issued from time to time; (ii) Detailed project reports, standard specifications and contract conditions; (iii) Indian Road Congress Guidelines/ MoRT&H specifications/ Bureau of Indian Standards/ State Schedule of Rates and Analysis of Rates; (iv) Odisha Public Works Department Code and (v) Terms and conditions of Concession Agreement/PPP agreement.

5.1.3 Organisational structure, Scope and Methodology of Audit

Works Department is headed by the Commissioner-cum-Secretary to Government. The field formation of Department has one Engineer-in-Chief (Civil), seven CEs, 20 Superintending Engineers (SEs) who are responsible for the administration and general professional control of the public works within their Circles. The Executive Engineers (EEs) at the Divisional level are the executive heads of the administrative units of the Department. There are 76 EEs in charge of Public Works Divisions in the State.

Audit was conducted from August to December 2021 through test check of all seven Roads & Buildings (R&B) Divisions involved in BEW road works covering the period from 2016-17 to 2020-21. Of these, three R&B Divisions[131] were involved in execution of non-PPP works and four R&B Divisions[132] were involved exclusively in land acquisition for PPP project and utility shifting. Besides, SE, Northern R&B Circle, Sambalpur and Engineer-in-Chief (Civil), Bhubaneswar were audited for collection of information on tender finalisation, agreements and instructions issued thereon. The Audit methodology adopted included document analysis, scrutiny of works agreements, response to audit queries, issue of preliminary observation memos (POMs), photographic evidence and examination of reports and records of executing agencies. Joint Physical Inspection (JPI) of roads was also conducted to verify the conditions of roads executed. Entry Conference was held (24 August 2021) with the Commissioner-cum-Secretary to GoO, Works Department explaining the audit objectives and criteria being used to assess the BEW projects. The Audit findings were discussed in the Exit Conference held on 23 May 2022 and replies of the Government have been suitably incorporated in the report.

5.2 Construction of Roads under PPP project

5.2.1 Planning Process

It is essential to plan and implement PPP projects efficiently and meticulously and without pitfalls. In this context, it would be useful to recount the features and requirements for the successful completion of a PPP project.

[131] Bargarh, Kalahandi and Khariar

[132] Jharsuguda, Rourkela, Sambalpur-I and Sundargarah

The Empowered Committee on Infrastructure[133] in its meeting (June 2008) cleared the Rourkela-Sambalpur Road as economically viable and to be executed under PPP mode based on the report of the consultant[134] with equity Internal Rate of Return (IRR) of 14.6 *per cent.* As per the norms of the Committee Report a bid under PPP mode is acceptable if equity IRR is up to 18 *per cent* and if equity IRR exceeds 18 *per cent*, the project needs to be executed on EPC mode of contract. The prescribed norms were adopted from the recommendations of Mr. Chaturvedi Committee report (2009) constituted by GoI.

Subsequently, the consultant had submitted a feasibility report (June 2012) with total project cost of ₹1,292.56 crore wherein the consultant had arrived at equity IRR of 21.66 *per cent* duly recommending for EPC mode of contract. However, the PPP project was approved (September 2013) by the High Level Clearance Authority[135] of the State in accordance with the Empowered Committee Report of June 2008.

The infrastructure project of construction of Rourkela- Sambalpur Road (SH-10) from Reduced Distance[136] (RD) 00 to 163 km was taken up on Build, Operate and Transfer (BOT) basis and awarded to a Concessionaire in November 2013 for 22 years including construction period of three years. The bid was invited for ₹1,292.56 crore with maximum admissible VGF of 40 *per cent*. The bidder/ concessionaire was selected with payment of 36 *per cent* VGF rounded off to ₹465.30 crore as per the agreement, with GoI share of ₹258.51 crore for construction period and State share of ₹206.79 crore to be paid for maintenance.

The Government stated (March 2022) that the proposal had been reviewed and accepted by the statutory authorities of the Central and State Government for implementation under PPP mode. The reply was not acceptable since the equity IRR was more than 18 *per cent*, the project should have been executed under EPC mode of contract instead of PPP mode of contract.

5.2.1.1 Undue benefit to Concessionaire on inflated project price

➢ Article 11.2 and 11.4 of the Concessionaire Agreement (CA) stipulate that the cost of shifting of utility, leveling of trees and measures for safeguarding environment shall be borne by the Government.

[133] Empowered Committee comprised of Chief Secretary, Development Commissioner-cum-Additional Chief Secretary and heads of the Departments of Housing & Urban Development, Revenue, Commerce & Transport, Energy and Works. The committee was to prioritise, approve shelf of projects, sanction, authorize expenditure for PPP projects and recommend projects for Viability Gap Funding

[134] M/s. Price Waterhouse Coopers (PWC) was the consultant. The department had engaged the consultant during 2008 with an agreement value of ₹3.47 crore.

[135] Chief Minister of Odisha is the Chairman of High level Clearance Authority constituted for clearance of PPP projects.

[136] Reduced distance means the length of the road reduced to that extent from the starting point.

Audit noticed that the consultant had submitted the DPR estimating the project cost at Schedule of Rates (SoR) 2011 price which included cost of ₹176.18 crore towards social and utility shifting cost as well as ₹10.25 crore towards environment cost. To arrive at the tender cost of ₹1,292.56 crore during 2012-13, five *per cent* of social and utility shifting cost plus environment cost was added towards escalation. As per concessionaire agreement the above two items of works were to be executed by the Department. Hence, the project cost should have been reduced by ₹195.75 crore including five *per cent* escalation charges (₹176.18 crore + ₹10.25 crore + 5 *per cent*). Non-reduction of the expenses on works excluded from the concessionaire's responsibility resulted in undue benefit to concessionaire.

As against the actual bidding price of ₹918.41 crore, project cost of ₹1,292.56 crore was considered by the Department. As concessionaire has claimed 36 *per cent* VGF, the amount of VGF should have been pegged at ₹330.63 crore instead of ₹465.30 crore. Thus, due to preparation of faulty DPR without considering above components, excess VGF of ₹134.67 crore was paid to concessionaire.

Due to inflated estimates, the concession period was enhanced by six years. As per Concessionaire's assessment, the concessionaire would collect revenue of ₹4,876.38 crore from the general public which would include net additional profit of ₹2,322.19 crore in six years.

The Government stated (March 2022) that the total project cost for a PPP project was derived as the sum of civil construction cost, contingencies, cost for independent consultant, escalation and finance cost and interest for the period of construction. However, the reply is silent regarding payment for utility shifting and Environment cost to the concessionaire by the department.

➢ Estimates for improvement to four lane under PPP mode of the Rourkela-Sambalpur road, being a State Highway, should have been prepared based on State SoR and Analysis of Rates (AoR).

Scrutiny of records revealed that the consultant had prepared the estimates as per MoRT&H specifications with adoption of State SoRs for labour, materials, hire charges of machineries and equipment. The consultant adopted overhead charges at eight *per cent* and contractor's profit at 10 *per cent.* Over and above the overhead charges, the total centage[137] provided was 18.8 *per cent* for road works, 37.50 and 43 *per cent* for structure works and miscellaneous works, respectively, against 10 *per cent* admissible for all works as per State SoR. Thus, excess provision of centage inflated the project cost by ₹94.92 crore as detailed in **Table No. 5.2**.

[137] *Percentage* of estimated cost (item cost) of the project

Table No. 5.2: Details of extra cost on contractor's profit and overhead charges

Sl. No.	Description of works	Total cost (₹ in crore)	Total centages provided (MoRT&H)	Centages admissible (State SoR)	Excess centages	Extra cost (₹ in crore)
1	*2*	*3*	*4*	*5*	*6*	*7*
1	Road works	668.75	18.8	10	8.8	58.85
2	Structure Works	114.15	37.5	10	27.5	31.39
3	Miscellaneous works	14.17	43	10	33	4.68
Total						**94.92**

(Source: Information collected by Audit)

Similarly, other irregularities are discussed below:

➢ As per SoR, 2012 the hire charges of motor grader[138] were ₹1,545 per hour for spreading 200 cum of earth. However, the output was taken as 100 cum per hour and 50 cum per two hours for earth work in road embankment and sub-grade respectively. By adopting under rated output of motor grader, the cost was inflated by ₹9.85 and ₹64.92 per cum. For execution of earth spreading of 20.94 lakh cum in embankment and 21.23 lakh cum in sub-grade/shoulder, the cost was inflated by ₹15.84 crore during the years 2014 to 2018.

➢ As per the DPR, the rate of burrow earth was provided as ₹138 per cum whereas the fly ash was provided at the rate of ₹291 per cum for construction of embankment and sub-grade. The consultant provided 4.19 lakh cum of fly ash instead of burrow earth for execution of embankment and sub-grade without attributing any reason leading to extra project cost of ₹6.41 crore.

➢ In the detailed estimates, the rate of bitumen, was ₹45,737.02 per MT whereas in the AoR, the rate of bitumen was ₹52,670.15 per MT. Use of 26,841.13 MT of bitumen for execution of 1.30 lakh cum of Dense Bituminous Macadam (DBM) and 1.19 lakh cum of Bituminous Concrete (BC) resulted in extra project cost of ₹18.61 crore.

➢ The AoR of turfing was calculated at ₹19 per square meter (sqm). But for calculating the project cost, the rate was taken as ₹112 per sqm without assigning any reason, leading to inflation of project cost by ₹7.26 crore for execution of 7.81 lakh sqm.

➢ Non-utilisation of 6.84 lakh cum of excavated earth in construction of embankment inflated the estimated project cost by ₹4.58[139] crore.

Thus, total civil construction cost of project was inflated by ₹178.40 crore as detailed in the **Table No. 5.2 and Table No. 5.3**.

[138] Murrum and earth spreader for creating smooth and flat surface.

[139] 6.84 lakh cum x (₹138 is the cost of burrow earth per cum - ₹71 cost of utilisation of excavated earth per cum) = ₹4.58 crore

Table No. 5.3: Details of extra cost paid in excess of rate admissible

Sl. No.	Brief description of item	Quantity	Rate taken (In ₹)	Rate admissible (In ₹)	Extra cost per unit (In ₹)	Total extra cost (₹ in crore)
1	*2*	*3*	*4*	*5*	*6*	*7*
1	Spreading of earth in construction of road	20.94 lakh cum	18.35	8.50	9.85	2.06
2	Spreading of earth in construction of sub-grade and in shoulder	21.23 lakh cum	73.42	8.50	64.92	13.78
3	Utilisation of fly ash instead of earth	4.19 lakh cum	291	138	153	6.41
4	DBM/BC	26,841.13 MT	52,670.15	45,737.02	6,933.13	18.61
5	Turfing	7.81 lakh sqm	112	19	93	7.26
6	Non-utilisation of excavated earth	6.84 lakh cum	138	71	67	4.58
	Total					**52.70**
	Total of Table 5.2 and 5.3					**147.62**
	7.5 *per cent* contingency on construction cost					11.07
	Total					**158.69**
	One *per cent* preparation cost					1.59
	Total					**160.28**
	6 *per cent* escalation					9.62
	Total					**169.90**
	Further addition of 5 *per cent* escalation					8.50
	Grand Total					**178.40**

(Source: Information collected by Audit)

As detailed above, the overall bidding price was inflated by ₹374.15 crore. Thus, as against the actual bidding price of ₹918.41 crore, project cost of ₹1,292.56 crore was considered by the Department. As concessionaire has claimed 36 *per cent* VGF, the amount of VGF should have been pegged at ₹330.63 crore instead of ₹465.30 crore. Thus, preparation of faulty DPR without considering above components, excess of ₹134.67[140]crore towards VGF to concessionaire was paid**.**

In reply, the Government stated (March 2022) that the project proposal had been submitted to the PPPAC Department of Economic Affairs for availing 20 *per cent* VGF through MoRTH for which the estimate has been prepared by the consultant as per Ministry of Surface Transport (MoST) Data Book. The reply is not acceptable since the Project was a State Highway of the State Government, the State SoR/AoR should have been adopted.

5.2.1.2 Excess provision of concession period

The concession period was based on the total cost of the project and the total return to be received thereon. For the project cost of ₹1,292.56 crore the concession period was provided for 22 years. If the cost of the project had been reduced to ₹918.41 crore, the concession period would have been reduced proportionately to 16 years. As such, due to inflated estimates, the concession period was enhanced by six years. As per Concessionaire's assessment submitted to the Department, the concessionaire would collect

[140] Total VGF sanctioned ₹465.30 crore – VGF admissible ₹330.63 crore = ₹134.67 crore

revenue of ₹4,876.38 crore from the general public which would include net profit of ₹2,322.19 crore in six years which would be unduly benefiting the concessionaire.

The Government stated (March 2022) that the proposal had been reviewed and accepted by the statutory authorities of the Central and State Government for PPP. As per the recommendations of the Empowered Committee, the concession period of the PPP project was fixed based on the capacity of the project road for better financial returns. However, the concession period to the concessionare should have been fixed in accordance with the cost of the project, incurred by the concessionare and not on the basis of the life or capacity of the road.

5.2.1.3 Undue benefit of VGF to the Concessionaire

Scrutiny of records revealed that the consultant had prepared the feasibility report including the detailed cost estimates at 2011 price level. The consultant calculated the expected Passenger Car Unit (PCU) would be more than 60,000 in the year 2035. As such, the consultant suggested for concession period to be 22 years taking into account the project commencement in the year 2013. Accordingly, the MoU was signed in 2013 with concession period of 22 years.

The consultant recommended that the project is viable without Government support and the concessionaire may incline for sharing of revenue. Despite such recommendations of consultant, the basis on which the bid was invited with the Government support *i.e* provision of VGF and without revenue sharing, was not provided to Audit for scrutiny. In spite of request during entry conference and subsequent reminders (January and February 2022) to provide all records connected to PPP mode contract, the department did not provide the relevant records relating to deliberations of the Government in this regard except DPRs. In the absence of such base records, Audit could not vouchsafe the reasonability of grant of VGF to concessionaire.

Accepting the factual position, the Government stated (March 2022) that the proposal had been reviewed and accepted by the Statutory Authorities of Central and State Government for PPP. The reply is not tenable since the reasons for not accepting the consultant’s recommendations for EPC mode of contract were not made available to Audit.

5.2.1.4 Avoidable expenditure due to change of scope of work

Para 3.2.7 of the OPWD Code stipulates that the proposal for work should be structurally sound and the estimates should be accurately calculated based on adequate data. Further, para 3.4.10 (i) stipulates that on every estimate submitted to the Chief Engineer for sanction, the Divisional Officer should certify that he has personally visited the spot and prepared the estimates using the sanctioned schedule of rates and provided for the most economical and safe way of executing the work. Article 16 of the Concessionaire Agreement (CA) stipulates that if any Change of Scope (CoS) during execution of work (additional work) was allowed, the cost thereof was to be reimbursed to the concessionaire by the Government. Further, Article 16.3.2 stipulates that if any CoS during execution falls within a limit of 0.25 *per cent* of the total cost, it was to be borne by the Concessionaire. Any excess amount was to be reimbursed by the Government.

Test check of records revealed that the Department had executed an agreement for ₹137.57 crore under CoS in November 2016 for completion of 24 new works within the construction period. Had the department carried out proper survey and investigation, the above works would have been included in original scope and only 36 *per cent* amounting to ₹49.53 crore would have been payable by the Government towards VGF leading to saving of ₹88.04 crore.

In reply, the Government stated (March 2022) that provisions of OPWD Code are applicable for non-PPP projects and particularly where the proposals are technically accepted by competent authority. Since it was a PPP project, the concessionaire was expected to prepare the DPR and execute the work as per the standards set forth in the CA. Further, the Government stated that the views of Audit were noted and appropriate action would be taken care of while effecting payment to the concessionaire. The reply was not based on facts, since the Government had appointed a consultant for preparation of the DPR of the PPP project at a cost of ₹3.67 crore to submit the report to Government. Before according the approval to the DPR, the Government should have made proper survey and investigation of the items to be included in the DPR so that all the requirements were met.

5.2.1.5 Undue benefit to the Concessionaire

During checking of estimate for four laning with paved shoulders of Rourkela – Sambalpur from km 00 to km 163 of two Rail Over Bridges (RoBs) at km 18.270 and km 28.534 under the CoS work, it was noticed that for providing structural steel for steel girder the rate taken by Independent Engineer (IE) was ₹1,32,541.40 per MT whereas as per State AoR the item rate was ₹73,498 per MT. Thus, the item rate was enhanced by ₹59,043 per MT for execution of 494.56 MT of two RoBs which resulted in an undue benefit of ₹2.92 crore to the Concessionaire.

Photo No. 9: Rail Over Bridge

Accepting the factual position, the Government stated (March 2022) that the views of Audit were noted and action would be taken.

5.2.2 Execution under PPP mode

5.2.2.1 Non-construction of Flyover Bridge

Para 3.2.7 of the OPWD Code stipulates that the estimate for work should be accurately calculated based on adequate data.

The PPP project and NH- 49 crossed at RD 53 km (Prasanna Panda chowk, Jharsuguda). In order to divert the heavy traffic and for smooth flow of traffic in the above crossing a fly over bridge was included as per recommendation of Safety Consultant. The cost of the bridge was estimated as ₹26.59 crore as per DPR under CoS during 2016. Due to non-shifting of utilities by the department, the bridge could not be constructed (October 2021) by the Concessionaire. Due to delay in execution, the Independent Engineer (IE)[141] submitted a revised estimate for ₹37.58 crore. Thus, non-execution of flyover with the original estimate not only caused additional costs of ₹10.99 crore but also deprived public of free flow of traffic.

Accepting the factual position, the Government stated (March 2022) that the views of Audit were noted and action would be taken. However, the fact remains that departmental failure in timely shifting the utilities resulted in delay and additional costs in execution of the project.

5.2.2.2 Non-dismantling of boundary wall led to non-construction of service road

Photo No.10: Boundary Wall of Thelkoli HS

As per the DPR, the boundary wall of Thelkoli High School was to be dismantled for construction of 1.36 km of service road at RD 38.67 km (June 2012). Under CoS ₹1.25 crore was paid towards cost of boundary wall and land to School authority (May 2013). On JPI (September 2021) of the site along with the departmental Engineers, it was found that the boundary wall of the school was yet to be dismantled by District Administration. As the required land was not acquired and the structures were not demolished, the service road could not be constructed. Thus, the Department failed to provide service road facilities to the people although the PPP project had been completed since March 2018 and toll was being collected.

Accepting the factual position the Government stated (March 2022) that the views of Audit are noted and necessary action would be taken. However, the fact remained that the service road could not be constructed.

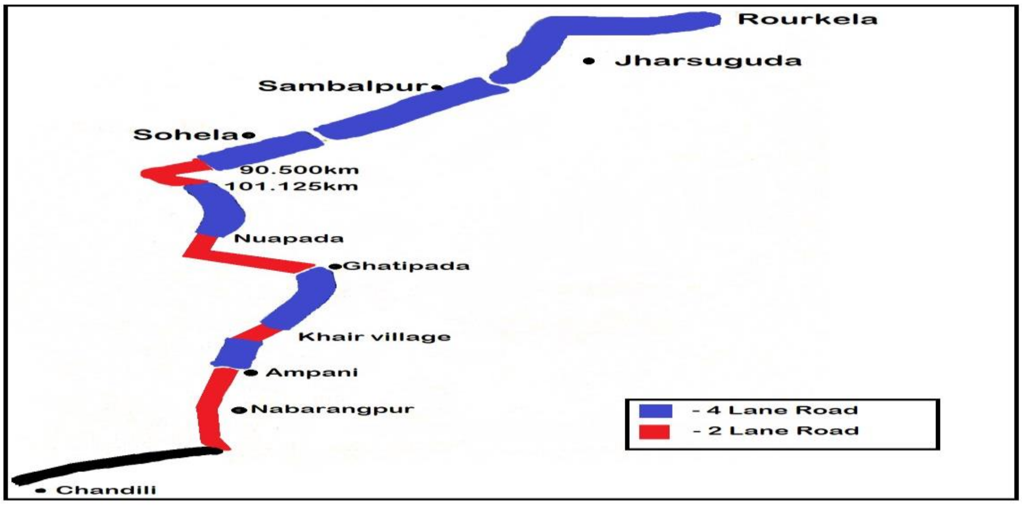
[141] Outsourced consultant engaged by the Department for supervision, quality monitoring, *etc.*

5.3 Construction of Roads under Non-PPP mode

5.3.1 Planning under Non-PPP mode

5.3.1.1 Planning of Biju Expressway from Sohela to Ampani

Proposal for construction of a four-lane North-South Corridor (Biju Expressway) was mooted during August 2014 by the Chief Engineer (CE), DPI & Roads and sought approval of the EIC and Secretary to Government, Works Department. Accordingly, GoO had provided in-principle approval (September 2014) to BEW.



The road from Sohela to Ampani was approved as a four-lane Express Way of 292.46 km and targeted for completion by 2020. Although, the entire project was approved as a four-lane road, the department had taken up Sohela to Nuapada as four-lane road and Ghatipada to Ampani as two-lane road between August 2014 and August 2018 for completion between July 2015 and September 2019. The two-lane road from Ghatipada to Ampani was almost completed for ₹403.74 crore except two km stretch near Khair village and the approach road to a bridge over river Indra as of December 2021.

Before completion of the two-lane road of 174.50 km from Ghatipada to Ampani, it was taken up for improvement as a four-lane road between July 2021 and October 2021 at a cost of ₹501.78 crore (for completion by March 2023). The department had taken up the project in piecemeal basis though the project was approved for improvement as four-lane in a comprehensive manner resulting in various lapses in planning process as discussed in subsequent paragraphs.

5.3.1.2 Improper planning led to wasteful expenditure

The work of widening and strengthening of Sinapalli-Dharamgarh[142] road and Ghatipada - Ampani[143] road pavement width from 3.75 m to 7 m was awarded

[142] RD 0.00 to 2.00 km
[143] RD 16 to 24 km

to a contractor in August 2014 for ₹19.98 crore for completion by July 2015. During execution of work, the EIC-cum-Secretary, Works Department and CE (DPI & Roads) visited (September 2014 after in principle approval of the BEW) the site of the road and suggested to increase the pavement width to 7.25 m from 7 m and change the alignment by one meter towards left so that the road could be utilised as a part of BEW. The construction of the road was redesigned from RD 14.35 to RD 24 km with change of alignment as per suggestion of the EIC-cum-Secretary. The work was completed and the contractor was paid ₹21.91 crore in August 2017.

Further, improvement of two lane to four lane of BEW from RD 104.650 to 140 km under Ghatipada - Ampani was taken up under EPC mode in July 2021 for completion by January 2023. During JPI (December 2021) it was noticed that the entire road of 9.65 km was not utilised for improvement of the two-lane road to four lane road under BEW as the existing road was not in alignment with the new four lane road. The estimates of the EPC contract included the above portion for improvement from two lane road to four lane road. The road was not planned properly even after inspection by higher technical Authorities. Despite instructions of EIC-cum-Secretary, the design of the road was not made properly so that the road could be utilised during widening. Thus, poor planning in regard to execution of the road resulted in wasteful expenditure of ₹21.91 crore.

The project for construction of road from Ghatipada to Ampani was approved as four lanes. However, department had taken up this road as two lanes (2014 - 2018). Even before completion of this road, it was again taken up for four laning in 2021, indicating lack of foresight in planning. Further, poor planning in regard to execution of the road, resulted in wasteful expenditure of ₹21.91 crore.

In reply, the Government stated (March 2022) that the road was a single lane road with inadequate width and insufficient crust which was proposed to be widened. There was only provision for improvement of existing crust without changing the alignment. During construction of two-lane road, the alignment was considered as per the traffic at that period of time.

The reply is not acceptable as the Department failed to foresee the changes in alignment for improvement to four lane road.

5.3.1.3 Extra expenditure due to improper survey of bridge work

Para 3.4.10 (i) of OPWD Code stipulates that estimate should be prepared in most economical manner. Further, it stipulates that on every estimate submitted to the Chief Engineer for sanction, the Divisional Officer should certify that he has personally visited the spot and prepared the estimates using the sanctioned schedule of rates and provided for the most economical and safe way of executing the work.

Scrutiny of records revealed that the widening and strengthening of a two-lane road *i.e.* Dharamgarh- Ampani road from RD 28.86 to RD 41.31 km under Ghatipada to Ampani road including a bridge of 130 m length at RD 32.35 km over river Mudra (left side)[144] was technically sanctioned for ₹29.14 crore (includes cost of bridge ₹3.47 crore) by CE (DPI & Roads) in August 2016. The work was awarded to a contractor for ₹25.92 crore being 11.05 *per cent* less than the amount put to tender. The road work was in progress and the contractor was paid ₹28.38 crore as of April 2021.

Photo No.11 Construction of Bridge over River Mudra

Test check of the deviation statement revealed that the contractor had not executed the bridge as the alignment of road could not be executed for want of land. The allocated amount was only utilised for construction of the road from two lane to four lane by claiming additional work/ extra quantities on the road works. Audit found that this was as per the revised plan (January 2017) submitted by EE, wherein construction of the bridge was excluded from that work and tenders were called for the bridge work separately. In the revised plan, length of the bridge was increased from 130 m to 188 m with 672 m approach road. The bridge work was approved by CE (DPI & Roads) for ₹8.96 crore in September 2018. The work was awarded for ₹9.85 crore being 9.99 *per cent* excess over the estimated cost and the work was in progress (December 2021). If proper survey and investigation was done before initial estimation, the bridge could have been designed to be of 188 m length and the approach road could have been included. Hence, these works could have been executed with the original work at the contract price which was 11.05 *per cent* less than the estimated cost. Accordingly, the bridge with approach could have been executed for ₹7.96 crore. Thus, inadequate survey and investigation led to execution of the bridge through a separate contract resulting in extra cost of ₹2.12 crore including GST. Also, after execution of this bridge with approach, the road work of approximately 500 meters length costing ₹86 lakh already executed would render wasteful.

In reply, the Government stated (March 2022) that the road work was to be executed after purchasing land from private land owners and accordingly work was to progress. The proposed high level bridge could not be progressed due to some land disputes and the scope of the bridge was excluded. However, the reply was not acceptable as the work was awarded before acquisition of land required for construction of bridge. As such the bridge could have been executed as per the original tender rate without involving extra cost.

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[144] Two lane road from Ghatipada to Ampani was on the left side and two-lane road from Ampani to Ghatipada was on the right side across river Mudra.

5.3.1.4 Irregular payment towards cost of structures

It was observed that the District Compensation Advisory Committee in its meeting held on 6 May 2016 valuated three plots[145] of Saradhapali village with structure at ₹1.15 crore. Accordingly, the SE, Bargarh (R & B) Division paid ₹1.15 crore to two beneficiaries on 15 July 2016 which included the cost of structures for ₹1.13 crore. It was noticed that the departmental *Amin*[146] engaged for the acquisition of land, had erroneously demarcated the plots with structures in the month of February 2016. Fresh demarcation was done in the presence of the field officials and found that the structures were not present on those plots. Hence, SE requested (January 2017) the beneficiaries for refund of the amount. The amount had not been refunded till November 2021. Thus, erroneous demarcation of alignment of land by *Amin* led to irregular payment of ₹1.13 crore. Connivance of the *Amin* with the land owners for submitting incorrect information could not be ruled out.

In reply the Government stated (March 2022) that it had proposed to construct service road at Saradhapali village on both sides of BEW by acquiring 5 m extra length and the three plots will come under 5 m extra land. The excess amount would be adjusted by acquiring the same land. The reply was not acceptable since the payment was made for the structures which were not existing in the plots acquired for BEW. The Government also did not take any action against the persons responsible.

5.3.1.5 Works taken up in deviation to IRC code

Indian Road Congress (IRC) specifies design procedure for all types of roads. The works were executed in deviation to IRC specifications leading to extra expenditure of ₹89.78 crore as detailed in the following **Table No. 5.4**.

Table No. 5.4: Statement showing issues in deviation to IRC Code

Sl. No.	Nature of discrepancies	Impact on discrepancies
1	IRC-37-2012 stipulates for provision of 150 mm GSB for roads with MSA[147] five and CBR[148] eight.	The estimates of 15 works with CBR value eight and MSA five provided 200 mm GSB against 150 mm leading to excess provision of 2.09 lakh cum resulting in avoidable extra expenditure of ₹36.08 crore. In reply, the Government stated (March 2022) that views of Audit were noted and needful action would be taken care of.
	Similarly, as per IRC the required thickness of BM was 50 mm for CBR eight and MSA five.	In Ghatipada-Sinapalli – Dharamgarh - Ampani road against the requirement of 50 mm BM, 75 mm BM was provided for 5805.60 cum in the road from RD 0.0 to 2

[145] Plot No. 563, 565 and 566 of Saradhapali village

[146] Amin is a group 'C' level Government official responsible for measurement and evaluation of land and structures.

[147] Million standard axle

[148] California bearing ratio of the road

Sl. No.	Nature of discrepancies	Impact on discrepancies
		km and from RD14 to 24 km leading to excess provision for 1,935.20 cum resulting in avoidable extra expenditure of ₹1.35 crore. In reply, the Government stated (March 2022) that views of Audit were noted and needful action would be taken care of.
2	Para 7.1 of IRC specifies the pavement composition of road that consists of Sub-grade, Granular Sub-Base (GSB), Granular Base (GB) in the form of Wet Mix Macadam (WMM) and Bituminous Surfacing (BS) in the form of Bituminous Macadam and Semi Dense Bituminous Concrete. Para 5.1 of IRC specifies that the sub-grade of the top 500 mm of the embankment is made up of selected soil or stabilized soil. As such the sub-grade was to be constructed with soil.	Four works provided for laying of 1.01 lakh cum of sand and morrum admixture for ₹4.76 crore in the sub-grade instead of soil which was unwarranted and resulted in extra expenditure of ₹3.22 crore. In reply, the Government stated (March 2022) that views of Audit were noted and needful action would be taken care of.
3	IRC stipulates that the required width of GSB would be 0.45 m extra on either side than the required pavement width of 7 m for two lane road as such the required width of GSB for two lane road is 7.9 m.	Construction of 16 works provided 10.68 m to 13.95 m width of GSB against the required width of 7.9 m leading to execution of 2.55 lakh cum of excess GSB resulting in extra expenditure of ₹44.05 crore. In reply, the Government stated (March 2022) that views of Audit were noted and needful action would be taken care of.
4	The work of widening and strengthening of Sohela - Nuapada Road from RD 60.00 km to RD 80.50 km was technically sanctioned for provision of 50 mm BM for 6,741 cum.	Check of Measurement Books revealed that the contractor had provided 50 mm to 175 mm BM for 16,251.30 cum leading to excess execution of 9,510.3 cum for ₹5.08 crore at ₹5,342.82 per cum. The deviations were approved by CE without recording reasons. In reply, the Government stated (March 2022) that views of Audit were noted and needful action would be taken care of.

5.3.1.6 Works taken up in deviation to OPWD code

Para 3.4.10 (i) of OPWD Code stipulates that estimates should be prepared in most economical manner and should be based on SoR and AoR. Deviation to the SoR/AoR led to extra expenditure of ₹52.52 crore as detailed in the **Table No. 5.5**:

Table No. 5.5: Statement showing issues in deviation to OPWD Code

Sl. No.	Nature of discrepancies	Impact of discrepancies
1	The SoR provided two types of rates for transportation of all types of materials in cum (volume-wise) and another rate for transportation of earth, WMM and GSB in MT (weight-wise). The Department had provided transportation cost of earth and WMM in MT but for GSB the transportation cost was provided in cum. The rate of transportation cost including 10 *per cent* towards loading and unloading was ₹2.75/ 2.39 per MT per km for pre GST/post GST period respectively.	Construction of 30 works taken up under BEW provided for transportation of 11.98 lakh cum of GSB for ₹57.76 crore (in cum) against the transportation cost of ₹21.19 crore in MT leading to undue benefit of ₹36.58 crore to the contractors. No specific reply was furnished by the Department.
2	The SoR provided the hire charges of motor grader as ₹1,545/ 1,343.48 per hour for spreading 200 cum of earth for pre GST/ post GST period respectively.	Construction of 11 works executed under BEW provided for construction of sub-grade using 15.18 lakh cum of burrow earth adopting hire charges of motor grader for spreading 100 cum of earth instead of 200 cum resulted in extra expenditure of ₹1.07 crore. No specific reply was furnished by the Department.
3	The lead distance provided should be shortest. The EE had also certified that the estimate was prepared in most economical manner and was satisfied with the survey and investigation made.	Eight works provided for execution of GSB, WMM, BM and SDBC utilising 9.51 lakh cum of stone products with lead distance ranging from 32 to 80 km against actual availability of stone products at a distance ranging from 10 to 60 km leading to extra lead of 7 to 48 km Provision of excess lead led to extra expenditure of ₹11.86 crore. No reply was furnished by the Department.
4	The construction of road work involved construction of embankment, sub-grade, GSB, WMM, BM and SDBC. The total quantity of materials required for construction of road was calculated taking the cross section of the alignment in which the road was to be constructed. The requirement of earth for embankment and sub-grade was to be calculated after deducting the quantities required for GSB, WMM, BM and SDBC.	Construction of six roads involved utilisation of 27.33 lakh cum of various types of materials of which GSB, WMM, BM and SDBC for 3.87 lakh cum was utilised. As such, 3.87 lakh cum should have been deducted from the total quantity to calculate the required quantity of burrow earth. But 3.87 lakh cum was not deducted from the quantity of burrow earth leading to undue benefit of ₹3.01 crore. In reply the SE accepted the observation and stated that the deduction of road crust would be made during final bill. However, the recovery needs to be ensured.

WMM: Wet Mix Macadam**, GSB:** Granular Sub-base**, BM:** Bituminous Macadam**, SDBC:** Semi Dense Bituminous Concrete

5.3.2 Execution under Non-PPP mode

5.3.2.1 Extra cost on unwarranted excess width of median

Para 2.5.1 of IRC: SP: 84-2014, Manual of specifications and standards for four laning stipulates that the width of median was to be 2.5 m in built area. It was noticed that construction of Sohela-Nuapada road for 117.96 km was awarded in 14 contracts between December 2015 and November 2018 for completion between December 2017 and August 2019. In all the road contracts, the median[149] of the road as provided in the DPR was ranging from 0.6 m to 2.5 m. In five packages of road contracts, median was constructed as per original design and in other nine packages of road contracts construction of median was done ranging from 3.5 to 6.0 m. Due to increase in median width, the quantity of burrow earth was increased from 9.16 lakh to 20.30 lakh cum leading to unwarranted extra expenditure of ₹15.13 crore.

In reply, the Government stated (March 2022) that the works were executed in different periods depending on the availability of land. The median was also provided with 0.6 m to 1.5 m in different packages as per availability of land. Further, it was stated that in order to prevent encroachment of acquired private land, median was constructed with excess width. The reply was not acceptable, since there was no justification for acquiring excess land and construction of excess width of median to prevent encroachment.

5.3.2.2 Unwarranted increase in height of road led to extra expenditure

Estimates of 11 works involving 518 Cross Drainage (CD) works were provided for construction of road from Ghatipada to Ampani with utilisation of 33.77 lakh cum of burrow earth. During execution of road works, the quantity of burrow earth used was increased to 53.62 lakh cum. The increase in quantity was attributed to increase in Full Reservoir Level (FRL), increase in height of Cross Drainage (CD) works and change in alignment. As per the DPR, the consultant had prepared the estimate by conducting survey and investigation and hydrology particulars, and hence there was no justification for further increase in FRL and change in alignment of the road. Besides, there was also no justification for increase in height of CD works of the roads in absence of requirement. As such provision of excess quantity of earth for 19.85 lakh cum in deviation to the DPR quantity was unwarranted and led to avoidable extra expenditure of ₹25.99 crore.

No reply was furnished by the Department.

5.4 Delay in completion of road projects

- **Road projects constructed under PPP mode**: The PPP mode project of 163 km from Rourkela to Sambalpur an existing two lane road, was commenced from July 2014 for improvement to four lane with paved shoulders. The concession period of 22 years including three years of

[149] Median means a narrow strip of land or concrete between the two sides of a large road, separating the vehicles moving in opposite directions.

construction period which formed part of BEW was to be completed by July 2017. However, the road construction work was delayed by nine months and completed by March 2018 due to delay in land acquisition for which the objective of construction of North – South Corridor – Biju Express way was not achieved in time.

- **Road projects constructed under Non-PPP mode**: The road from Sohela to Ampani was approved as a four-lane Express Way of 292.46 km and targeted for completion by 2020. Although, the entire project was approved as a four-lane road, the department had taken up Sohela to Nuapada as four-lane road and Ghatipada to Ampani as two-lane road between August 2014 and August 2018 for completion between July 2015 and September 2019. The two-lane road from Ghatipada to Ampani was almost completed except two km stretch near Khair village and the approach road to a bridge over river Indra as of December 2021.

  Before completion of the two-lane road of 174.50 km from Ghatipada to Ampani, the Department had awarded the work for improvement to four-lane road between July 2021 and October 2021 for completion by January and March 2023. The department had taken up the project in piecemeal basis though the project was approved for improvement as four-lane in a comprehensive manner. The project could not be completed in time due to improper planning of road, non-acquisition of land, improper survey of bridge work, change of scope of work and delay in finalisation of design of the bridge. As such the completion period has already been delayed by three years.

5.5 Tendering process

5.5.1 Acceptance of fake securities led to non-recovery of Government dues

Para 3.5.20 of OPWD Code stipulates that each contractor is required to deposit one *per cent* of the estimated cost as earnest money while offering tender and one *per cent* as initial security at the time of acceptance of tender. Further, Para 12 of the Detailed Tender Call Notice (DTCN) stipulates that the successful bidder who has quoted less bid price than the estimated cost put to tender shall have to furnish additional performance security. This would be the exact amount of differential cost *i.e.*, estimated cost put to tender minus quoted amount. This security should be in the form of Demand Draft/ Term Deposit Receipt pledged in favour of EE of concerned division. Para 2 (b) (i) of the Agreement stipulates that in case of default in execution of work, penalty at 20 *per cent* of the cost of left-over work was to be recovered from the contractor.

Scrutiny of records revealed that three works[150] under BEW were awarded to a contractor for ₹118.24 crore during 2016-17 for completion during 2018-19. The contractor executed the work valuing ₹37.88 crore as of March 2018. During execution of work the CE (DPI&Roads) directed the EEs to verify the

[150] (i) Widening and strengthening of Sohela-Nuapada road from RD. 80/00 to 101/125 km, (ii) RD. 101/125 to 117/955 km and (iii) Sinapalli-Ghatipada road from RD. 69.950 to 92.674 km

authenticity of the securities deposited by the contractor. On verification, it was found that securities submitted by the contractor were fake which was under investigation by the vigilance authority. In view of the above irregularities, the Government accorded approval for rescission of contracts under clause 2 (b) (i) of the agreement between November 2017 and March 2018. Although the contracts were closed, the penalty under clause 2 (b) (i) of the contract, *i.e.* 20 *per cent* of the value of leftover work amounting to ₹16.07 crore was not recovered from the contractor.

Further, it was revealed that the balance works of ₹80.36 crore was awarded for ₹94.64 crore between April and May 2018 for completion between May and August 2019. Thus, failure of the EEs, (R&B) Division, Bargarah and Khariar to check authenticity of the securities submitted by the bidder before award of work, which warranted recession of contract led to avoidable extra expenditure of ₹14.28 crore.

Accepting the factual position, the Government stated (March 2022) that the recovery proposal of the rescinded contract was recommended to the higher authority for approval. After approval, the amount would be recovered and credited to Government account. However, the reply was silent regarding extra expenditure on execution of balance works.

5.5.2 Undue benefit to contractor due to adoption of different rates of bitumen

Para 3.4.10 (i) of OPWD Code stipulates that estimates should be prepared in the most economical manner. As such the tender should have been invited with current SoR and the cost of materials should be taken as per current market rates. The estimates of two packages of Sohela - Nuapada road[151] were sanctioned by the CE (DPI & Roads) in December 2014 and another two packages[152] were sanctioned in February 2015. The tenders of all the four packages were accepted in a single Tender Committee meeting held in September 2015 and the works were awarded to three contractors. Agreements were executed between December 2015 and January 2016.

Scrutiny of estimates of the works revealed that the price of Bitumen was taken as ₹45,168.32 per MT for the works technically sanctioned during December 2014 and ₹36,394.88 per MT[153] for the works technically sanctioned in February 2015. There was a difference of ₹8,773.44 per MT in the rates adopted for the tenders of works accepted in the same tender committee meeting in September 2015. No reasons for the variation were found on record. The works technically sanctioned during December 2014 provided for execution of 18,477 cum of DBM and 9,895 cum of BC utilizing 2,978 MT of Bitumen. Due to adoption of different rates of Bitumen, undue benefit of ₹2.61 crore (₹8,773.44 x 2,978 MT) was extended to the contractors.

151 W/s of Sohela Nuapada road from RD 0 to 16.65 km and from RD. 18 to 30 km
152 W/s of Sohela - Nuapada road from RD 30 to 47 km and from RD. 49 to 60 km
153 W/s of Sohela-Nuapada from RD 30 to 47 and from RD 49 to 60 km

In reply, the Government stated (March 2022) that the tenders were finalised based on the estimated cost put to tender and these being percentage rate of tender and competitive one, therefore the cost of bitumen had little effect on the finalisation of the cost. The reply was not acceptable since this being percentage rate contract, any increase in cost would be directly passed on to the contractor. Thus, non-reduction of the cost of bitumen led to undue benefit to the contractors.

5.6 Deficiencies in Land Acquisition

5.6.1 Extra cost due to delay in land acquisition

As per Section 23(1) 1-A and 23(2) of Land Acquisition (LA) Act, 1894, in addition to the market value of the land, the amount of 12 *per cent* per annum plus the compensation of 30 *per cent* on such market value of land and 20 *per cent* establishment charges will be charged thereon as per the orders of the District Collector.

- Scrutiny of records revealed that the valuation for land acquisition of 42.41 acre in Panchupada village of Rourkela-Sambalpur road was made (June 2011) for ₹3.29 crore by the Land Acquisition Officer[154] (LAO), Jharsuguda and the total cost of land would have been ₹5.61 crore after adding solatium, interest and establishment cost thereon. However, LAO delayed the LA process owing to which the payment could not be made (January 2014) although the department had deposited the required amount with the LAO. As a result, the LAO made revaluation of the land as per amended LA Act, 2013 and the cost of the land was enhanced (June 2014) to ₹35.89 crore leading to extra cost of ₹30.28 crore. The payment of ₹27.80 crore was made and 41.167 acres of land was acquired as of October 2021. Thus, the failure of the department to monitor the LA at proper level led to not only delay in LA and extra cost of ₹30.28 crore but also delayed the completion of the PPP project.

In reply, the Government stated (March 2022) that the views of Audit have been noted and necessary action would be taken.

- Scrutiny of records revealed that the EE, Jharsugada submitted (June 2011) the requisition to LAO for acquisition of 81.43 acre of land in nine villages[155]. The LA was completed by 2013 as per LA Act 2007 and after completion, it was noticed (April 2015) by EE that 43 plots of total 2.85 acre and 19 structures were erroneously left out during LA. However, department purchased the land with structures for ₹11.64 crore with 100 *per cent* solatium between January 2015 and February 2016 directly from the land owners as per revised LA Act, 2013 against

[154] Prior to enactment of the Right to Fair Compensation and Transparency in Land Acquisition and Resettlement Act 2013, Government of Odisha, under clause 'C' of Section 3 of Land Acquisition Act, 1894 (Act 1 of 1894), used to appoint the Land Acquisition Officer for each district.

[155] 1. Umbekela, 2. Kherwal, 3. Brundamal, 4. Gadamal, 5. Beherapat, 6. Panchapada, 7. Saletikra, 8. Durlaga and 9. Tangarpali

30 *per cent* admissible as per LA Act 2007 leading to extra cost of ₹3.84 crore which could have been avoided with proper planning.

Accepting the factual position, the Government stated (March 2022) that payment has been made as per revised LA Act. The reply was not acceptable as the process of land acquisition was delayed for which the extra cost was paid.

5.6.2 Extra cost due to delay in payment to the beneficiaries

As per LA Act, 2007 and the clarification issued (January 2009), the beneficiary is entitled for receipt of an amount equivalent to cost of land plus 30 *per cent* solatium and 12 *per cent* additional compensation within one year. During the course of assessing additional compensation, it is required to calculate the additional market value on day-to-day basis and payment should be made accordingly.

It was noticed that due to delay in payment by the LAO beyond one year ranging up to 547 days, the division had made payment of additional compensation for 53 structures related to 13 villages of Rourkela – Sambalpur road that ranged between 15.18 and 18 *per cent*, total amounting to ₹2.21 crore.

Accepting the factual position, the Government stated (March 2022) that the additional compensation was paid to the beneficiaries due to delay in finalisation of alignment and subsequent acquisition of land by the LAO. However, the fact remains that the Department failed to monitor and pursue the land acquisition for early settlement of compensation.

5.7 Financial management of project

The department incurred (June 2021) an expenditure of ₹955.77 crore on the PPP project and created a liability of ₹41.50 crore for payment of various claims as recommended by the IE. The financial irregularities noticed by Audit are discussed as follows:

5.7.1 Non-recovery of Advance

Article 16.3.1 of the Concessionaire Agreement (CA) of the PPP project stipulates that 20 *per cent* of the cost of CoS was to be paid as advance. Accordingly, the Department paid advance of ₹27.51 crore in December 2016 to the concessionaire. As of September 2021, an amount of ₹13.27 crore was still pending for recovery. In addition, ₹82.98 crore was paid to concessionaire for the works executed for ₹71.37 crore up to March 2018 leading to excess payment of ₹11.61 crore.

Further, it was noticed that the IE recommended for payment of the last RA bill without GST as the works were awarded during pre-GST period. However, ₹1.65 crore was paid by the department towards GST leading to inadmissible GST payment.

Accepting the factual position the Government stated (March 2022) that based on the request of concessionaire as per provisions of CA, amount of ₹27.51

crore was paid as advance, out of which an amount of ₹14.82 crore was adjusted and the balance amount of ₹12.69 crore is yet to be recovered. The reply was silent towards the excess payment of ₹ 11.61 crore and inadmissible GST payment of ₹ 1.65 crore.

5.7.2 Non-receipt of cost of work under reduction in change of scope

Article 16.6.1 of the CA stipulates that 80 *per cent* of the amount under reduction in CoS was to be deposited by the concessionaire if the concessionaire did not execute any construction work due to negative CoS.

It was noticed that the cost of the project was ₹1,292.56 crore against which the concessionaire had executed work for ₹1,274.36 crore and the IE issued completion certificate in March 2018. Thus, as there was reduction in CoS of ₹18.20 crore, 80 *per cent* of this should have been deposited by the concessionaire. However, the Department had not taken any action for realisation of the amount (September 2021).

Accepting the factual position, Government stated (March 2022) that the views of Audit are noted and necessary action would be taken. However, the fact remains that the amount was not realised even after a period of four years.

5.7.3 Inadmissible GST payment

It was observed that the work of widening and strengthening of Ampani-Dharamgarh Road from RD 11.81 to RD 28.87 km was technically sanctioned by Chief Engineer (DPI & Roads) in April 2017 for ₹49.50 crore. The work was awarded to a contractor in December 2017 for ₹41.05 crore with the condition that the awarded cost was inclusive of GST. Violating the above stipulated condition, the SE paid differential GST of ₹61 lakh resulting in inadmissible payment. Similarly, SE paid differential amount of tax of ₹71 lakh in two other works of Ampani - Dharamgarh road awarded in December 2016 in addition to the normal agreement rate.

Thus, payment of GST of ₹1.32 crore in violation to the tender acceptance order as well as without recasting it with reference to the reduced rate of materials led to inadmissible payment to the contractors.

In reply, the Government stated (March 2022) that the estimate was of pre-GST regime whereas the work executed mostly after introduction of GST. So as per instructions of the GST guidelines, differential payment to be made or recovered, has been done. Final calculation would be made and differential cost would be adjusted or recovered during final payment. However, the reply was not acceptable since the tender acceptance letter issued on 22 November 2017 (*i.e.*, after introduction of GST) clearly stated that the accepted bid was inclusive of GST.

5.7.4 Non-recovery of cost of work executed for Rail over Bridge

As per Ministry of Railways Notification (January 2008), the construction of Rail over Bridge (RoB) was to be taken up with the mutual understanding of

State Government and Railways. The cost of execution of work excluding the cost of land was to be shared by both the parties.

Scrutiny of records related to Rourkela- Sambalpur road under PPP mode revealed that three RoBs were constructed under concessionaire agreement for ₹17.20 crore and subsequently, in CoS of the works ₹22.31 crore was incurred towards increase in length of RoBs. It was noticed that the works had been executed without mutual understanding between Railways and GoO as per notification of January 2008 *supra*. The Department had not made any correspondence for sharing of 50 *per cent* of the cost amounting to ₹19.76 crore leading to unwarranted burden on GoO.

Accepting the factual position, the Government stated (March 2022) that the views of Audit were noted and action would be taken.

5.7.5 Non-execution of roadside plantation

It was noticed that the department deposited, between January 2016 and September 2018, an amount of ₹20.42 crore with the Forest Department towards plantation of roadside trees in three Divisions[156]. While plantation had not been done on the roadside, the department also did not take any steps for recovery of the deposited amount (December 2021).

Accepting the factual position, the Government stated (March 2022) that action was being taken to obtain the utilisation certificates from the Forest Department. However, the reply was not acceptable as the department had not taken any steps either for roadside plantation or to recover the deposited amount.

5.8 Quality control mechanism and monitoring of BEW projects

5.8.1 Deficiency in quality control of PPP project

Internal control and monitoring are prerequisites to ensure economy, efficiency and effectiveness besides preventing the executants from indulging in fraudulent activities. Lapses noticed in this regard for the works executed under PPP mode of contracts are discussed below:

5.8.1.2 Lack of quality assurance

Article 23.1 of the CA stipulates that the Government shall appoint a consulting Engineering Firm as IE within 90 days from the date of the execution of CA and will continue for three years. Article 13.2 of the CA stipulates that the IE shall inspect the project highways at least once in a month and submit the report of defects and deficiencies with particular reference to the scope of project. As per Article 13.3.1 of CA, the concessionaire was to carry out tests as specified by the IE and with a sample size not exceeding 10 *per cent* of the quantity and number of tests prescribed by IRC. In the event of any test results conducted under this clause establish

[156] R&B Division, Bargarh, Khariar and Kalahandi

any defects or deficiencies in the construction works, the concessionaire shall carry out remedial measures and furnish a report in this regard to the IE.

Test check of records in Audit revealed that though the concessionaire started the work in November 2013, IE was appointed in February 2015 after a year and three months. During this period no such tests were conducted by any of the Departmental Engineers in the absence of IE.

Photo No.12 : Pothole at RD 38.240 km of

JPI of the road (September 2021) revealed a number of potholes and water logging in the approach to fly over near Government High School, Karamdihi of Rourkela – Sambalpur road. Besides, the earthen shoulder was not maintained as per the DPR and the entire road side was covered by weeds.

Similarly, the test reports for three months during February 2016 and July 2016 submitted by the IE revealed that out of 4,708 tests of the works conducted, in results of 1,261 tests (*27 per cent*), defects in works were pointed out. But no report in support of the defects rectification by the concessionaire was submitted to the department which showed the failure of the department in quality monitoring of the PPP project.

Accepting the factual position, the Government stated (March 2022) that the views of Audit were noted and needful action would be taken. However, the fact remained that the maintenance work of the road was not taken up by the concessionaire, causing public inconvenience in the meantime.

5.8.1.3 Non-provisioning of safety measures

(i) Non-construction of standard traffic aid post

Article 20.1 to 20.4 of the CA stipulates that (i) the concessionaire shall put in place safety measures on the project highway in accordance with applicable laws, and subject to the supervision and control of the State Authorities. (ii) Construction of traffic aid post at each toll plaza and a building of 25 square metres of plinth area should be handed over to the Government. Further, (iii) the concessionaire shall provide one vehicle with chauffeur for round the clock patrolling at its own expenses. In the project cost, ₹30 crore was provided for Highway Traffic Management System.

During JPI (September 2021), it was noticed that in the toll plazas at RD 17.025 km and 71.853 km, the traffic aid posts buildings were constructed with plinth area of five sq mtr as against 25 sq mtr stipulated in the CA. Besides, no vehicle was there for patrolling round the clock. This showed that the Department failed to monitor compliance of the terms and conditions related to traffic safety measures as stipulated in the CA. This resulted in undue benefit to the concessionaire.

Accepting the factual position, the Government stated (March 2022) that the views of Audit were noted and needful action would be taken.

(ii) Non-construction of medical aid post

Article 21.1 and 21.2 of the CA provide that concessionaire should construct one medical aid post in each of the toll plaza to provide medical aid during operation period and one ambulance was to be provided round the clock. The concessionaire shall also construct the building as prescribed by the State Medical Department and two residential buildings in each of the toll plazas.

During JPI (September 2021) at RD 17.025 km and 71.853 km of the PPP project, it was noticed that small rooms indicating medical aid post were constructed at the entrance of the plazas. However, neither first-aid materials nor personnel to administer medical aid were available there. Besides, no residential quarters were constructed for the medical aid personnel as prescribed in the CA. Thus, due to poor monitoring by the departmental officers, health aid centres were not constructed by the concessionaire in any of the toll plazas, depriving medical aid during exigencies.

Accepting the factual position, the Government stated (March 2022) that the views of Audit were noted and needful action would be taken.

(iii) Non-Provisioning of FASTag in toll plaza

As per para 10.4.10 of IRC:SP-84-2014 Guidelines, in four lane road, the concessionaire was to make provision for Electronic Toll Collection (ETC) in respect of four toll lanes at their own cost. In order to reduce traffic congestion in toll plazas, GoI introduced FASTag in all toll plazas from January 2020 so that there would be free flow of traffic without waiting for movement. Despite such provision in the IRC, the concessionaire had not provided electronic toll collection system (FASTag), as a result, the tax payers were deprived of getting the free traffic flow in the toll plazas defeating the very purpose of improving the road to four lanes under PPP mode.

It was noticed that no FASTag system was introduced (October 2021) in all three toll plazas. However, for installation of FASTag, the concessionaire claimed ₹1.45 crore (February 2021) under CoS which was unwarranted.

Accepting the factual position, the Government stated (March 2022) that the views of Audit were noted and needful action would be taken.

5.8.1.4 Non-monitoring of works during maintenance of road

As per conditions of the contract, the CoS work should have been completed within the completion date of the PPP project. Although more than three years have elapsed, the CoS works could not be completed. It was noticed that no monitoring meeting was held with the contractor for completion of CoS works. Since there was no clause for levy of penalty in the work order, the concessionaire did not execute the works in time. Further, the IE had submitted his monthly report of April 2021 to the Department with recommendation for repair and maintenance of 54 defective/ damaged patches in various reaches, but the concessionaire had not rectified these patches despite VGF of ₹168.02 crore was paid by the Department for maintenance of the road. Thus, payment was made by the Division without undertaking the

O & M work by the concessionaire as per the obligation under the agreement which led to undue benefit to him.

Photo No.13: RD 22.6 km of Sambalpur-Rourkela road

Photo No.14: Crack in BC at RD 73.300

During JPI (September 2021) of over bridge at Shyam Metallics, Jharsuguda, it was noticed that there were cracks/rutting in the road due to non-maintenance by the concessionaire. Besides, the defects as pointed out by IEs in the monthly report of March 2021 still persisted. There were a number of rutting, cracks and pot-holes developed in the road within three years of completion which shows the poor workmanship. The Department, however had not taken any action against the concessionaire for non-maintenance of the road.

The SE stated (September 2021) that IE has been appointed for administering the concessionaire’s agreement on behalf of the client and the Nodal Officer is monitoring the Expressway and the VGF was released as per clause 25.3.2. The reply was not acceptable since the concessionaire had not maintained the road as required under CA as seen in photographs. Besides, the department had not instructed the concessionaire to take up the O&M work on receipt of the report from IE. This shows that there were lapses in monitoring of O&M work.

5.8.2 Supervision and Quality monitoring of Sohela – Ampani road

The GoO had decided for supervision of EPC contracts through Authority Engineer[157] and Percentage Rate Contracts[158] (P1) through Supervision Consultant and Departmental Engineers. For supervision and quality monitoring of the BEW executed under P1, one consultant was engaged in three packages between October 2016 and August 2018 as detailed in the **Table No. 5.6**.

[157] Authority Engineer (AE) is appointed by the Department to supervise the work including design, measurement and quality test of the work and submit the bill to the department for payment. He is responsible for any defect in the work.

[158] Percentage rate contract where the contractor will quote only in percentage either excess or less on overall value of work.

Table No. 5.6: Statement showing engagement of consultants

Sl. No.	Phase	Details of work	DoC/ SDoC	Payment made (₹ in crore)
1	Package-I	Supervision Consultancy for widening and strengthening of existing road to four lane carriage way from Sohela to Nuapada from 0/000 to 117/955 km including the Bridges, Minor Bridges and Culverts having two lane length of 235.91 km under Biju Expressway.	14.10.2016 / 13.10.2021	8.13
2	Package-II	Supervision Consultancy for Widening and strengthening of Sinapali- Ghatipada road from 49/090 to 92/674 km (43.58 km) in the district of Nuapada and Ampani- Dharmagarh road 0/000 to 11/812 and 28/855 to 41/305 km (24.262 km) in the district of Kalahandi.	15.07.2017 / 14.04.2019	3.02
3	Package-III	Supervision Consultancy for Widening and strengthening of Sinapali- Ghatipada road from 00/000 to 49/090 km (49.09 km) including Indra Bridge, Dharmagarh- Sinapali road from 0/00 to 16/05 km (16.05 km) and 25/00 to 41/90 km (16.90 km) including Tel Bridge and Ampani-Dharmagarh road from 11/81 to 28/86 km (17.05 km) in the district of Kalahandi.	02.08.2018 / 01.07.2020	3.41

(Source: Information collected by Audit)

Photo No. 15: Patch work at RD 137.64 km of Ghatipada - Ampani road

In Package-I, agreement was drawn for five years including the defect liability period for 117.96 km road. Further, though the contract completion period was October 2021, the consultant left the work in October 2020 without completion during the contractual period on the plea that different agencies executed the work in different reaches. However, the penalty at the rate of 10 *per cent* of left over work was not assessed and recovered from the consultant.

In respect of two other packages the supervision consultant was engaged only for construction period for 167 kms. In second package, although the consultancy period was over, most of the reaches had not been completed. Besides, the consultant did not provide any consultancy service for 18 km of road work and two bridge works over river Mudra and river Tel. Despite non-appointment of consultant, the works were in progress under direct supervision of the departmental engineers. As such appointment of consultant for supervision of P1 contract work was unwarranted and led to avoidable expenditure of ₹14.56 crore.

Following deficiencies were noticed during three JPI of roads conducted between November and December 2021.

- It was noticed that in a patch from RD 0.0 to 11.81 km of two lane road (new four lane road from RD 104.65 to 140 km), although the design life of the road was 15 years, the bituminous work was substandard for which the contractors executed patch works in the bituminous portion which indicated that the department did not monitor the execution work properly.

- Although the design life of the road was 15 years, the entire reach from RD 60 km to RD 80 km of Sohela – Nuapada road was found deteriorated. Further, the road was not constructed with proper slope as the gradient was not proper. As such, proper supervision of the project was doubtful.

Photo No. 16 : RD 65 km of Sohela-Nuapada road

Accepting the factual position, the Government stated (March 2022) that the views of Audit were noted and needful action would be taken. However, the fact remained that the department had not monitored and supervised the execution work properly for which the condition of roads deteriorated within a period of 10 and 35 months from their execution respectively.

5.8.3 Non-completion of bridges due to delay in receipt of design

Construction of three bridges were awarded for ₹37.30 crore between December 2017 and June 2020 for completion between June 2019 and December 2021. The works were not completed and the contractors were paid an amount of ₹24.04 crore till December 2021 on receipt of part design. The contractors had neither completed the work within the contractual period nor applied EOT for further execution of the works beyond the contractual period. The SE had also not issued any show cause notice to the defaulting agencies to expedite the progress of the works. The completion of the bridges was delayed inordinately ranging from one to 31 months. Thus, the BEW completion by March 2020 could not be achieved due to poor monitoring at higher level.

Accepting the factual position, the Government stated (March 2022) that the views of Audit are noted and needful action would be taken.

5.9 Conclusion

The BEW project with four lanes was not visualised in a comprehensive manner. Works were executed in a piecemeal manner under different schemes and the State Government attempted to fit the executed roads into the BEW project. Due to this, issues on land acquisition, alignment of roads and bridges, change in pavement specifications *etc.*, were observed. Non-consideration of the recommendation of the Consultant taking into account the prevailing equity IRR as 21.66 *per cent*, rendered the State Government to award the road project of Rourkela-Sambalpur in PPP mode with VGF instead of EPC mode. Preparation of faulty DPR and non-reduction of cost of utility shifting and forest clearance led to excess provision of ₹134.67 crore towards VGF to the concessionaire. If the cost of the project was to reduce to ₹918.41 crore, the concession period should have been reduced proportionately to 16 years. Due to inflated estimate and consequent enhancement of the concession period by six years, the concessionaire would collect revenue of ₹4,876.38 crore from the general public including a net profit of ₹2,322.19 crore as per concessionaire assessment. Had the Department carried out proper survey and investigation, the change of scope of 24 works would have been included in the original scope, and 36 *per cent* of ₹137.57 crore amounting to ₹49.53 crore only was payable by the Government towards VGF leading to saving of ₹88.04 crore. Delay in LA process and not effecting timely payment to the beneficiaries led to revaluation of the land as per amended LA Act, 2013 resulting in extra cost of ₹30.28 crore. A number of patches of rutting, cracks and pot-holes were found on the road within only three years of completion of the road which shows poor workmanship. The Department, however, has not taken any action against the concessionaire for non-maintenance of the road.

The construction of the road from RD 0.0 to 2.00 km and from RD 16 to 24 km of Sinapalli-Dharamgarh road was not planned properly leading to poor execution of road for improvement to four-lane resulting in wasteful expenditure of ₹21.91 crore. Erroneous demarcation and alignment of land with structures led to fraudulent payment under SE, Bargarh (R&B) Division. Failure of the department to check authenticity of the securities submitted by the bidder before award of work led to recession of contract which led to avoidable extra expenditure of ₹14.28 crore.

5.10 Recommendations

The Government may:

- plan infrastructure projects comprehensively to achieve desired objectives and to avoid disorganised execution.
- need to reassess the possibility of reducing the period of toll collection at three toll plazas in Rourkela – Sambalpur Road in view of inflated costs as pointed out in Audit.
- ensure authenticity of the securities deposited in the form of Demand Draft/ Term Deposit Receipt by the successful contractors and strengthen other internal controls.
- fix responsibility on the persons responsible for receiving fake securities from the contractor which led to non-recovery of Government dues.
- consider recovering the following amounts:
  - Excess payment of ₹134.67 crore towards VGF to concessionaire due to preparation of faulty DPR.
  - Balance advance amount of ₹12.69 crore.

- Amount for reduction in change of scope ₹14.56 crore.
- Amount for sharing of 50 *per cent* cost of work executed for three Rail over Bridges, amounting to ₹19.76 crore.

CHAPTER VI

Detailed Compliance Audit on Odisha State Road Projects

CHAPTER VI

WORKS DEPARTMENT

6. Detailed Compliance Audit on Odisha State Road Projects

6.1 Introduction

With a view to removing transport bottlenecks in targeted transport corridors, for greater investment and economic and social development activities in the State, the Odisha State Road Project (OSRP) was implemented in two phases by the Odisha Works Department (OWD) with World Bank loan assistance.

The Government of Odisha (GoO) entered into a loan agreement with the World Bank (WB) during January 2009. The estimated cost of project was ₹1,431.19 crore (US$ 322.5 million) and the WB loan and State Government Share was ₹953.24 crore and ₹477.95 crore respectively. The initial project period was for five years (2009-14) and it was extended upto June 2016.

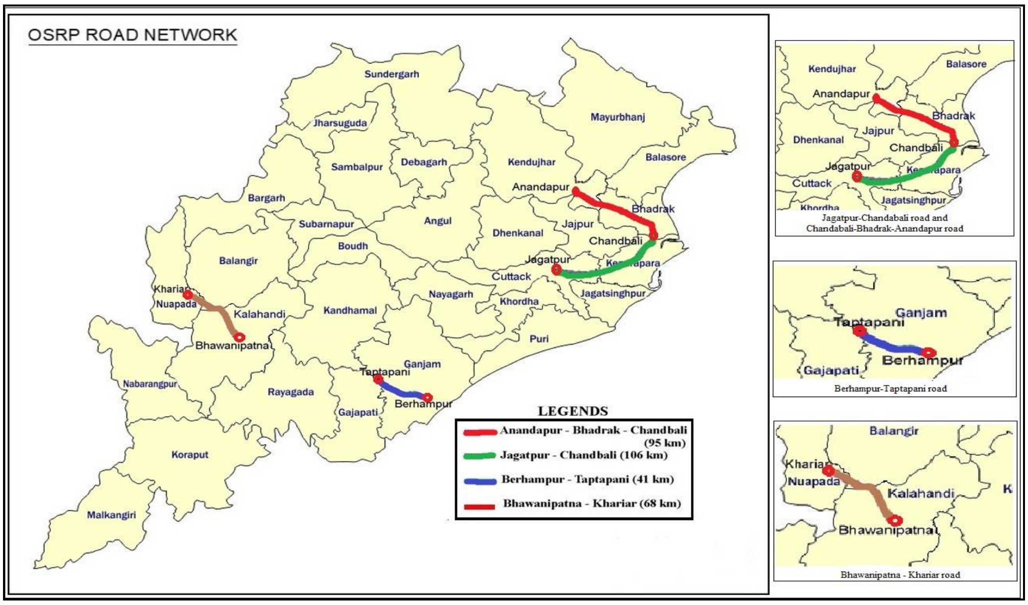
The project comprised of two components: (a) Road Corridor Improvement Component and (b) Public Private Partnership (PPP), for enabling policy and institutional development, and the implementation support component. The evaluation for 461 km of six individual roads of the project was done (August 2008) as a whole but the number of roads and the road length was reduced to four roads and 310 km (January 2013) due to reduction of project scope. This was mainly due to implementation delays, change in the Government policy, and dropping of some roads for other programs. The expenditure of the projects was regulated through the State budget and reimbursement claims were subsequently submitted to the World Bank.

Due to slow progress of implementation, the World Bank loan was closed (June 2016), by which time only 150 km of road could be completed, which was 33 *per cent* of the initial target of 461 km. Thereafter, the balance funding of the project had to be met out of the Budget Provisions under State plan. Thus, OWD could use World Bank loan of ₹419.12 crore (upto June 2016) against the agreed amount of ₹953.24 crore and 56 *per cent* of the original WB loan could not be disbursed.

In the project appraisal document, the design standards adopted for the upgrading component of the project were consistent with the specifications for state highways, as per Indian standards, to cater for traffic flow over the next 20 years.

The following four roads were covered under OSRP, viz. i) Bhawanipatna – Khariar (68 km), ii) Chandabali - Bhadrak - Anandapur (95 km), iii) Berhampur -Taptapani (41 km) and iv) Jagatpur-Chandabali (106 km).

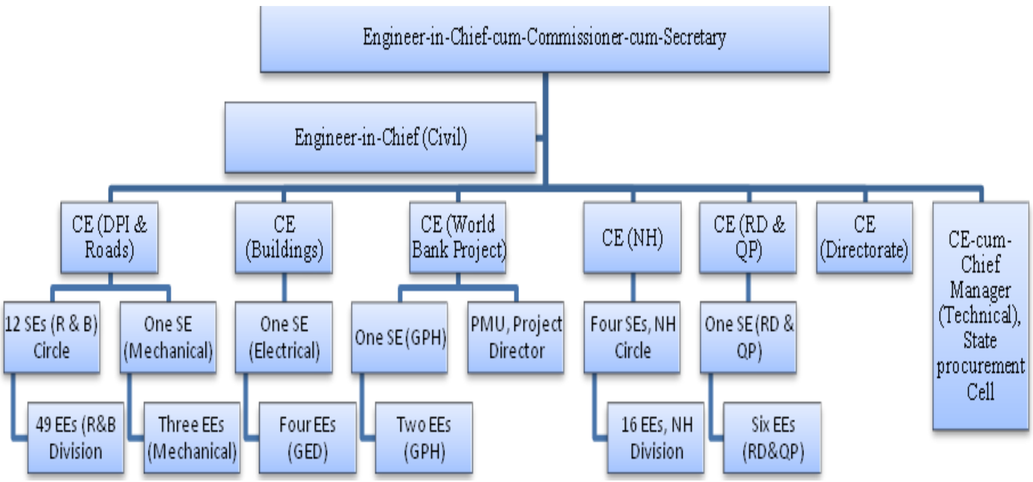
Map 3: Map showing the location of the roads developed under OSRP



6.1.1 Organisation Structure

The Odisha Works Department (OWD) is headed by the Engineer-in-Chief-cum-Commissioner-cum-Secretary to Government. It has one Engineer-In-Chief (Civil), seven Chief Engineers and 20 Superintending Engineers, who are responsible for the administration and general professional control of the public works of the Department, within their Circles. At the Divisional level, the Executive Engineers are the executive heads of the Administrative Units of the Department. There are 80 Divisional Officers in charge of Public Works Divisions in the State. For OSRP, a Project Management Unit (PMU) was established in OWD since 2005, to handle the preparation and to manage the implementation of the project during the execution stage. The PMU is headed by the Chief Engineer (World Bank Project) and assisted by six Executive Engineers (EEs) and one Divisional Forest Officer (DFO). The four roads covered under the project were completed (April 2021) and presently the respective divisions are looking after the maintenance of the project roads.

Organogram of Odisha Works Department



6.1.2 Audit Objectives and criteria

The objectives of this detailed compliance audit were to assess whether the planning process, including survey and investigation, for construction of road projects was efficient; financial management of the project was prudent; tendering and execution of project was carried out, ensuring economy, efficiency and effectiveness; and the monitoring mechanism of project was adequate and effective.

The Audit Criteria for this audit were sourced from: (i) World Bank Guidelines and orders, Scheme guidelines/Circulars and Instructions of the Government of India/Government of Odisha, issued from time to time (ii) Detailed project reports, standard specifications and contract conditions (iii) Indian Road Congress Guidelines/MoRT&H specifications/ Bureau of Indian Standards / State Schedule of Rates and Analysis of Rates (iv) Odisha Public Works Department Code and Manual (v) Terms and conditions of World Bank Loan Agreement and works agreements (vi) Project Appraisal Document of the World Bank (vii) Finance Manual of OSRP (viii) Odisha Budget Manual 1963 and (ix) Inspection Notes of higher authorities etc.

6.1.3 Scope of Audit and Methodology

The Detailed Compliance Audit was conducted from May to September 2022, through the test-check of records of six Roads & Buildings (R&B) Divisions[159], three General Electrical Divisions[160] and PMU, out of 25 implementing units, covering the period 2017-22, and all 14 packages of the project were test-checked by Audit. The units were selected through the stratified random sampling method, basing on activity-wise expenditure incurred. The Audit methodology adopted included document analysis, scrutiny of works agreements, responses to audit queries, issue of preliminary observation memos (POMs), photographic evidence and examination of reports and records of executing agencies. Joint Physical Inspection (JPI) of roads was also conducted, to verify the conditions of the roads executed. An Entry Conference was held on 09 June 2022 with the Principal Secretary to GoO, Works Department, explaining the audit objectives and criteria being used to assess the OSRP. The audit findings were discussed with the Principal Secretary to GoO, Works Department, in the Exit Conference, held on 21 March 2023.

Audit Findings

6.2 Planning

6.2.1 Non-approval of the Odisha State Road Sector Policy

The project appraisal document (August 2008) stipulated adoption of a road sector policy by December 2011. This policy was to be prepared based on the recommendations of the road sector institutional development study, conducted by OWD. The road sector policy, *inter alia*, required to include the Axle Load Control Policy, funding for road maintenance and implementation strategy.

[159] R&B Division, Bhadrak, Cuttack – II, Kendrapara – II, Ganjam – I, Kalahandi and Khariar
[160] General Electrical Division (GED) – I, Bhubaneswar, GED - II, Cuttack and GED – IV, Sunabeda

The policy aimed to provide connectivity with reduced cost of travel, improved opportunities and improvement in the quality of life of the people of Odisha. Although the implementation of OSRP had started during 2008-09, after a lapse of five years, a draft road sector policy, namely 'The Odisha State Road Policy 2014', was prepared, considering the needs of the State for next decade. The State Level Empowered Committee (SLEC) advised (May 2014) OWD to circulate the draft road sector policy to all stakeholders, before forwarding it for taking approval of the Cabinet for legislative action.

Audit observed that, though the draft policy has been prepared during 2014, it was still pending (November 2022) for approval from the Government. As the policy had not been approved, the State axle load control policy and a dedicated road maintenance fund could not be created for institutional development support, to improve the road sector of GoO. Thus, failure to evolve a road sector policy, despite a lapse of more than eight years, resulted in lack of planning towards improvement of the road sector.

In reply, the Government stated (March 2023) that the Road Sector Policy was submitted (June 2014) to the Government. However, the fact remains that despite lapse of more than eight years the approval of the policy by Government is still pending.

6.2.2 Inadequate survey and investigation led to preparation of defective detailed project reports

The OWD had engaged (November 2005) a consultant[161] for preparation of the feasibility and Detailed Project Report (DPR), for four roads of the OSRP, at a cost of ₹4.68 crore. Survey and investigation were carried out and the reports were submitted during April to November 2007. Based on the DPRs, estimates were prepared and works were tendered / awarded between November 2008 and December 2013. Scrutiny of records revealed the following deficiencies in the preparation of DPRs:

6.2.2.1 Due to inadequate survey and investigation, during the execution of works, the scope of many works was changed. Audit found that, out of 1,103 items of works in four roads, the department could estimate the correct quantities only in 43 items, i.e 3.9 *per cent*. There were increases in the quantities of 225 items and 471 items had decreased. Moreover, 315 items had to be deleted and 49 new items were included. Increase in quantities varied up to 80.68 times of the original value envisaged in the estimates, as detailed in ***Appendix-XX***, which was indicative of the poor quality of DPRs.

In reply, the Government stated (March 2023) that the original DPRs for the works were prepared by the consultants in the year 2007. During the course of execution of the work, considering the site requirement and revision of plan and profile, the estimates were recasted with deletion of few items and inclusion of new items. The reply is not acceptable as the contracts were terminated multiple times which clearly indicates that Department failed to assess the site conditions which resulted in wide variation in items of works.

[161] Consulting Engineers Group Ltd., Jaipur

Had the survey and investigation been done properly during preparation of the DPR, wide variations in the item of works would have not occurred.

6.2.2.2 Para 6.3.16 of the OPWD Code Vol-I stipulates that extra items of work are those which are not covered under the original agreement for the execution of a work and consist of new and/ or substituted items.

Audit reviewed all 14 packages and observed that the contractors had quoted lesser rates in respect of eight packages, which ranged between (-) 3 and (-) 15.3 *per cent* of the estimated cost put to tender. During execution, the scope of works was changed[162] due to defective DPRs. Therefore, extra items were added and supplementary agreements were drawn at the post-tender stages, at the current Schedule of Rates. As a result, the department could not avail the discount/ rebate[163] of the original agreement and incurred excess expenditure of ₹2.73 crore, as detailed in ***Appendix -XXI***. Thus, change in the scope of works and defective DPRs led to loss to the State exchequer, in the form of non-availment of discount/rebate.

In reply, the Government stated (March 2023) that the variations in the shape of quantities and items were due to actual site conditions and design. The fact, however, remained that, had the survey and investigation been done properly during preparation of the DPR, wide variations in the item of works would have not occurred and the loss to State exchequer, in the form of non-availment of discount/ rebate, could have been avoided.

Thus, wide variation in most of the items of the works due to inadequate survey and investigation of roads resulted in avoidable excess expenditure and the works were delayed and suffered from time and cost overruns. However, no action had been taken by the department against the consultant for the defective preparation of DPRs.

6.2.3 Avoidable extra expenditure due to deficient planning

Audit observed the following avoidable extra expenditure due to defective planning of the project:

6.2.3.1 Para 3.7.4 of the OPWD Code Vol-I stipulated that no work should be commenced on land which has not been duly made over by a responsible Civil Officer.

Scrutiny of records at the PMU and Bhadrak R&B Division, revealed that the work of the Chandabali -Bhadrak-Anandpur Road had been awarded (November 2008) for completion by August 2011. The contract was terminated (November 2012), as the progress of the work was slow, mainly due to shortage of stone aggregates, at the sources specified in the bid documents and delay in handing over of site, due

[162] Change of design of culvert at post tender stage, provision for new culvert, change of width of roads, provision of two lane in the estimate was revised to four lane during execution, change of specification in the accordance with IRC provision, the quantities provided in the estimates were not précised estimated as per site requirement, expansive clay water logged stretches which were not foreseen during DPR were found at different stretches during execution.

[163] Reduction in offer price of the item rate of works contracts

to non-acquisition of land. The first contractor left the work in November 2012. Thereafter, the department took one year in awarding (November 2013) the balance of the work, to another contractor, for completion by January 2016. Meanwhile, in order to make the road trafficable, the EE, Bhadrak (R&B) Division, executed maintenance work of ₹2.87 crore.

As the department had failed to provide the site in time and ensure sufficiency of stone aggregates, in the quarries identified in the DPR, and due to delay in award of balance work, the division incurred additional expenditure of ₹2.87 crore on immediate repair and maintenance of the road.

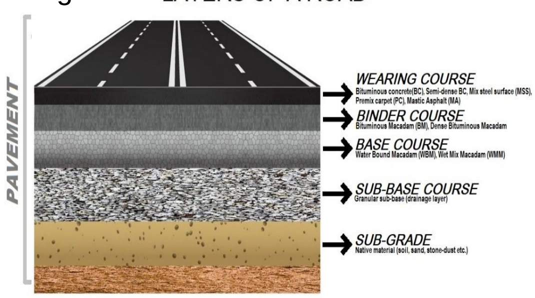
Thus, the failure of the Department in planning the project properly resulted in an extra expenditure of ₹2.87 crore, which could have been avoided.

In reply, the Government stated (March 2023) that due to non acquisition of land, the work could not be executed by the original contractor and the contract was terminated (November 2012). After termination, the award of balance work took more than one year, during which, the road was required to be maintained for smooth plying of traffic. The reply is not acceptable as it indicates lack of planning to assess the pre-requisites for project implementation. Further, the OWD failed to acquire the required land till termination of the contract, though PMU was established since 2005 for management of the project.

6.2.3.2 Para 3.4.10 of the OPWD Code Vol-I requires that estimates be prepared in the most economical manner.

Scrutiny of records at the PMU revealed the scope of work "Construction for widening and strengthening of existing carriageway to two lane road from Jagatpur to Nischintakoili[164]" included, *inter-alia,* 63,822 cum of Granular Sub Base (GSB), using crushed stone aggregates. After execution of 23,613 cum of GSB, the use of slag in GSB was allowed (November 2016), due to non-availability of crushed stone aggregates**,** for the remaining work.

Image No. 1 : LAYERS OF A ROAD



The provision for construction of GSB with stone aggregates, instead of crushed slag, had inflated the item rate of GSB by ₹293 per cum, as the use of slag in GSB was cheaper. The preparation of estimates, without checking the availability of required material, indicated poor planning. Audit also observed that, while preparing the estimates, crushed slag in GSB could have been included, instead of crushed stone aggregates, and the extra expenditure of ₹69 lakh could have been avoided.

[164] Km 0/000 to Km 25/000 part of the Jagatpur-Chandabali road

Provision of high-cost material had been made in the estimates, despite the availability of cheaper material. Thus, the failure of the department in regard to planning and preparation of estimates in an economical manner, led to avoidable extra expenditure of ₹69 lakh.

In reply, the Government stated (March 2023) that, during preparation of the estimates, the availability and suitability of crushed slag, for use in GSB, was not known to the Department. The reply is not acceptable, as IRC specifies that slag is one of the materials for use as GSB. Further, it was also available in a nearby plant at Choudwar.

6.2.3.3 Para 4.2.1.5 of IRC-37-2001 specification stipulates that sub-grade soil[165] should have a California Bearing Ratio (CBR)[166] of 2 *per cent*. Where the CBR value of the sub grade is less than 2 *per cent*, the design should be based on subgrade CBR value of 2 *per cent* and a capping layer of 150 mm thickness of materials, with a minimum of CBR of 10 *per cent,* is to be provided, in addition to the sub-base.

Audit observed from the DPRs of the eight roads that the CBR value of the sub grade soil was between six and 10 *per cent*. The DPRs were stated to be in compliance with the IRC guidelines, hence, capping layer of sand was not required. Further, the thickness of the Sub-Base[167] (GSB), Base course[168] (Wet Mix Macadam) (WMM) and Wearing Course[169] (Bituminous Macadam) (BM) and (Semi Dense Bituminous Macadam) (SDBC), as required in terms of the IRC, had been provided in the above roads. The unwarranted provision of 11.21 lakh cum capping layer of sand, with 500 mm sand, in addition to the required thickness of GSB, at rates ranging between ₹286 and ₹700 per cum, in the estimates of the eight roads, was in contravention of the IRC specifications. This had resulted in extra expenditure of ₹43.51 crore, as detailed in ***Appendix - XXII*.**

In reply, the Government stated (March 2023) that due to scarcity of borrow earth with minimum CBR value of 10 *per cent*, it was considered to use sand in the embankment as capping layer. The reply is not acceptable as OWD used sand in the embankment as capping layer in addition to borrow earth.

6.2.4 Lack of adequate planning led to time and cost overruns

Para 37 of the Project Appraisal Document (PAD) for OSRP, highlighted that pre-construction activities, including land acquisition, resettlement and rehabilitation of affected persons, clearing of trees, and shifting of utilities, are common factors that delay project implementation. To avoid such occurrences, all pre-construction activities, as noted above, in respect of 25 *per cent* of civil

[165] Sub-grade is the native material underneath a constructed road pavement. It is also called formation level.
[166] California Bearing Ratio (CBR) test is a penetration test used to evaluate the subgrade strength of roads and pavements.
[167] Sub-base is the layer of aggregate material laid on the sub-grade, on which the base course layer is located.
[168] Base course in pavements is a layer of material in an asphalt roadway, racetrack, riding arena, or sporting field. It is located under the surface layer consisting of the wearing course and sometimes an extra binder course.
[169] Wearing course is the upper layer in roadway, airfield, and dockyard construction.

work contracts of each road under OSRP, should be reasonably completed, before award of contracts.

Scrutiny of records at the PMU revealed that the project, consisting of widening and strengthening of four roads, which were divided into five packages, was originally scheduled to be completed between November 2010 and March 2016, at a cost of ₹725.44 crore. Due to delays in the acquisition of land, rehabilitation and resettlement process and non-shifting of utility services etc., the contracts were terminated (September 2011 and June 2017). The works were subsequently retendered in 14 packages, which were completed between August 2016 and April 2021, at a cost of ₹963.80 crore, as per the details given in the **Table 6.1** below:

Table 6.1: Details of road packages

(₹ in crore)

Sl. No.	Road	Original agreement cost	Original completion period	No. of Packages retendered	Actual date of completion	Completion cost	Delay in months
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Bhawanipatna-Khariar	105.51	August 2011	3	August 2016	158.29	60
2	Chandabali-Bhadrak-Anandapur	216.23	August 2011	5	April 2021	316.35	116
3	Berhampur-Taptapani	81.97	November 2010	2	August 2016	108.18	69
4	Jagatpur-Kendrapara-Chandabali	321.73	March 2016	4	May 2019	380.98	38
	Total	**725.44**		**14**		**963.80**	

The above table indicates that, due to lack of adequate planning, contracts had to be terminated and the project had suffered cost overrun of ₹238.36 crore (32.86 *per cent*), while the time overrun ranged between 38 and 116 months.

In reply, the Government stated (March 2023) that, due to delay in land acquisition, resettlement and rehabilitation process, utility shifting, cutting of trees etc., the original contracts had been terminated and the works had been retendered. The reply is not acceptable, as, in deviation to the provisions of the PAD, the Department had awarded the works before completion of about 25 *per cent* of all pre-construction activities of civil work contracts, which had resulted in termination of contracts, multiple times.

6.2.4.1 Change of scope, due to delay in shifting of utilities

The work of shifting of utility services of two roads[170], at a cost of ₹6.78 crore, was awarded between February 2009 and May 2011, for completion by November 2009 and September 2011. After incurring expenditure of ₹5.84 crore, the contractor could not complete the work, due to non-availability of land, encroachment by unauthorized buildings and opposition from the public for non-settlement of their land acquisition issues. Hence, the scope of the work was changed, with revised alignment for shifting of utilities and the balance works of ₹94 lakh were completed between March 2016 and March 2017, at a cost of ₹4.28 crore, with delays ranging from six to seven years. Thus, lack of proper planning resulted in delay in completion of work, for more than seven years, apart from avoidable extra expenditure of ₹3.34 crore.

[170] 1) Berhampur – Taptapani and 2) Jagatpur-Chandbali

The Government did not furnish any specific reply (March 2023) to the audit observation.

6.2.4.2 Avoidable extra expenditure on consultancy services

The construction supervision works of the packages were awarded between November 2013 and February 2015, to a consultant (LEA Associates South Asia Pvt. Ltd.), at a cost of ₹20.16 crore, for completion by May 2016. As the civil works of all the packages could not be completed within the stipulated period of completion, due to delay in land acquisition, termination of contracts for slow progress of work, retendering of works *etc*., the consultancy period had to be extended twice, *i.e*. up to December 2019, for ₹38.21 crore, and upto June 2021, for ₹39.31 crore, respectively, resulting in avoidable extra expenditure of ₹19.15 crore.

In reply, the Government stated (March 2023) that the delay in completion of project was due to delay in land acquisition, rehabilitation and resettlement of Project Affected Persons (PAPs), shifting of utilities and felling of trees which involved inter-departmental activities. The reply is not acceptable as the OWD should have properly coordinated with other Departments for timely completion of the project.

Thus, non-approval of the State Road Sector Policy, inadequate survey and defective DPRs, resulted in excess expenditure of ₹310.65 crore, which could have been avoided.

6.3 Financial Management

6.3.1 Allotment *vis-à-vis* expenditure for the project

Rule 46 of the Odisha Budget Manual, 1963, stipulates that, while preparing the budget estimates, the aim must be to make the estimates as accurate as possible, as well as not to over-estimate and show large savings at the end of the year. Hence, budget estimates have to be prepared on realistic basis.

Check of records at the PMU revealed that, during the period 2017-22, ₹531.85 crore had been allocated in the budget for expenditure in OSRP, out of which the department had spent ₹474.03 crore, as detailed in **Table 6.2**.

Table 6.2: Details of budget allocation and expenditure incurred

(₹ in crore)

Financial Year	Budget Allocation	Expenditure	Surrender/ lapse	*Percentage* of surrender/ lapse
1	*2*	*3*	*4*	*5*
2017-18	229.35	229.35	0	-
2018-19	150.00	150.00	0	-
2019-20	75.00	64.51	10.49	13.98
2020-21	47.50	19.04	28.46	59.91
2021-22	30.00	11.13	18.87	62.90
Total	**531.85**	**474.03**	**57.82**	

The above Table indicates that the allotted funds had not been utilised fully and the percentage of surrender/lapse of funds was on an increasing trend, from 13.98 *per cent* to 62.90 *per cent* during the past three years from FY 2019-20 to FY 2021-22, and, in particular, almost 50 *per cent,* during the last two years. Thus, the budgets for the project had not been prepared on a realistic basis, which had resulted in surrender of funds, in contravention of the provisions of the budget manual.

In reply, the Government stated (March 2023) that budget allocation could not be utilised due to deficiencies on account of land acquisition and utility shifting which were the responsibilities of other departments. The above reply indicated lack of coordination among the various departments owing to which the project suffered.

6.3.2 Excess expenditure towards land acquisition, resettlement and rehabilitation

As per the PAD of OSRP, 6.3 *per cent* of the total cost had been allotted for Land Acquisition (LA), Resettlement and Rehabilitation (R&R) and Utility Shifting work. The total expenditure of OSRP since 2008-09 was ₹1,400.39 crore (March 2022). Para 37 of the PAD further stipulated that all pre-construction activities including land acquisition, resettlement and rehabilitation of affected persons, shifting of utilities and clearing the trees, for about 25 *per cent* of civil work contracts should be ready before contract award.

Audit observed that the expenditure towards LA, R&R and utility shifting was to be ₹88.22 crore (6.3 *per cent* of ₹1,400.39 crore), against which the OWD had incurred expenditure of ₹198.44 crore (14.17 *per cent* of the total cost). Thus, deviation from the PAD norms and delay in the land acquisition process had resulted in excess expenditure of ₹110.22 crore.

In reply, the Government stated (March 2023) that the excess expenditure had been incurred due to increase in LA rates, increase in the number of project affected persons, non-religious community property resources and increase in the quantum of work in shifting of utilities at the prevailing estimates received from different departments. The reply was not acceptable, as ensuring the availability of land was the prior requirement for award of contract. Delay in land acquisition and finalisation/award of tenders resulted in not only delaying the project but also payment of higher costs for land. However, all other factors, as stated in the reply, should have been considered while preparing the DPRs.

6.3.3 Non-disbursal of loan by the World Bank, due to slow progress of work

Scrutiny of records at the PMU revealed that, although three works[171] had been awarded between September and December 2008**,** not even a continuous stretch of five km could be made available to the contractors, for one and half years from the date of award of the contract**.**

In view of the continued unsatisfactory project implementation, the World Bank (WB) had suspended the loan, from May 2011 to October 2012. During the period of suspension, WB had not disbursed the loan amount, to the extent of ₹48.37 crore. Thus, the failure of the Department to initiate timely action for

[171] Bhawanipatna to Khariar (Package No. OSRP-CW-ICB-Y1-P01), Chandabali-Bhadrak-Anandapur road (Package No. OSRP-CW-ICB-Y1-P02) and Berhampur to Taptapani (Package No. OSRP-CW-ICB-Y1-P03)

completion of the road projects, had resulted in suspension of loan disbursement for these three projects, along with subsequent non-disbursal of loan of ₹48.37 crore, which in turn, had affected the implementation of the project and also led to extra burden to the State exchequer.

In reply, the Government stated (March 2023) that reconciliation of disbursement has been made and the claimed amount has been fully reimbursed. However, as per claim status of the loan, an amount of ₹48.37 crore still remained undisbursed.

6.3.4 Non-disbursal of rehabilitation grants

To support the livelihood of people who had to be rehabilitated due to OSRP projects, Para 2.8 of the Finance Manual of OSRP envisaged that, for the purpose of payment of rehabilitation "grants" to PAPs, the cheques were to be deposited in a bank account, opened jointly in the name of the concerned PAPs and the concerned Package Manager (Executive Engineer).

Scrutiny of records at the PMU and information furnished to Audit, revealed the following irregularities:

- There were 6,055 identified PAPs, but the Department had deposited ₹38.39 crore towards Rehabilitation Grant (RG), in the joint bank accounts of 5,814 PAPs only. Reasons for non-deposit of RG, for 241 PAPs, were not found available on records.
- Out of the deposited amount of ₹38.39 crore, an amount of ₹31.24 crore had been disbursed and the balance amount of ₹7.15 crore, relating to 3,318 PAPs, had been kept idle, in their joint bank accounts.
- Out of the total 5,814 beneficiaries, 2,496 beneficiaries had been paid full RG and 3,101 beneficiaries had been paid partial RG, with the payments so made, amounting to ₹31.24 crore. The remaining 217 beneficiaries had not been paid any amount out of the RG of ₹2.63 crore, even though the money had been deposited in their joint bank accounts and the roads under the project had also been completed in April 2021.

Thus, an RG amount of ₹7.15 crore, for the resettlement and restoration of livelihood of PAPs, had not been utilised for the purpose, but had remained idle in the joint bank accounts of the concerned PAPs, till July 2022, even after completion of the roads under the project.

In reply, the Government stated (March 2023) that the deposits made in the joint account are as per sanction order and the release of the deposits is as per utilisations. The fact, however, remains that the Government funds remained idle without utilisation or surrender.

6.4 Contract Management

6.4.1 Avoidable extra expenditure of ₹9.10 crore, due to reduced defect liability period

In order to avoid sub-standard execution of work by contractors and to ensure deterrence against indifferent quality of work, MoRTH had prescribed

(November 2010 and April 2012) that the Defect Liability Period (DLP), under the Standard Bidding Document, should be three years from the date of completion, in cases where the bituminous thickness is equal to or more than 40 mm.

Audit noticed that, though all the four roads constructed under the project had been provided with more than 40 mm thickness of bituminous layers, in deviation from the above norms, the DLP had been fixed for only one year from the date of completion of the work. Due to reduction of the DLP, proper quality, in the execution of works by the concerned contractors, could not be ensured by the department. Audit also observed that, due to the poor quality of work, just after expiry of the DLP, these roads had required repair and maintenance, as discussed below.

The four road works under OSRP had been completed and handed over to the department between June 2016 and April 2021, after rectification of the defective works, within the DLP. Audit observed that, just six months after the expiry of the DLP, six Divisional Officers[172] had incurred expenditure of ₹9.11 crore towards improvement work, renewal coat of surface with SDBC, special repair works and thermo-plastic painting of the roads, during the period from November 2020 to September 2022, in 131 agreements, as detailed in ***Appendix - XXIII***. If the DLP of three years had been adopted in the contracts, the repair works would have been done at the expense of the contractors. As such, due to provision of reduced DLP, avoidable extra expenditure of ₹9.11 crore had to be incurred by the department**.**

In reply, the Government stated (March 2023) that the terms and conditions of the contracts for the works executed under OSRP were as per FIDIC[173] forms of the contracts. If DLP period would have been increased to three years, the contractors would have loaded the expenditure thereon in their offer. The reply is not acceptable as DLP period adopted in the contracts was in violation of MoRT&H norms and due to non-adoption of it, Department had unnecessarily incurred expenditure towards various repair works.

6.4.2 Non-recovery of differential costs from defaulting contractors

As per clause 15.2 (b) of the General Conditions of Contract (GCC), the employer shall be entitled to terminate the contract, if the contractor abandons the work or otherwise plainly demonstrates the intention of not to continue performance of his obligations under the contract. Under clause 15.4 of the GCC, if the contract was terminated under clause 15.2, the employer has to recover any losses and damages incurred by the employer and any extra cost of the works from the contractor.

[172] Superintending Engineer, Bhadrak, Cuttack-II, Kendrapara-II, Ganjam-I, Khariar and Kalahandi

[173] FIDIC is a French language acronym for Fédération Internationale Des Ingénieurs-Conseils, which means the international federation of consulting engineers. FIDIC publishes international contracts and business practice documents which are used globally.

Scrutiny of records at the PMU revealed that two works[174] had been awarded (December 2008) for ₹321.74 crore, for completion by August 2011. On the contractor's request, Extension of Time (EOT) had been granted (between March 2011 and April 2012), for a further period of more than two years (799 days) and the period for completion had been extended up to November 2013. However, the contracts were terminated (November 2012) by the OWD, under clause 15.2, due to slow progress of the work. The concerned contractors had executed these works at a cost of ₹86.28 crore and completed only 10 km (6.13 *per cent*) of the roads. The balance works were retendered and awarded (between January 2013 and November 2013) to other contractors, for ₹367.54 crore.

The original contractors preferred five[175] different claims during 2012, before the Dispute Redressal Board (DRB). In respect of two claims, the DRB issued decision in favour of the contractors. OWD went to Arbitration, under clause 20.6 of the conditions of the contract and the Arbitration Tribunal also passed judgment in respect of one claim in favour of the contractors, for payment of ₹6.49 crore towards the differential amount on execution of the GSB item of work.

Meanwhile, the contractors approached (December 2016) the Government for reconciliation of their claims. The Amicable Settlement Committee determined (November 2017) that ₹35.23 crore was payable to the contractors. However, the OWD did not recover the differential cost of ₹132.08 crore[176], arising out of retender of the balance work, as per the provisions of Clause 15.4 of GCC and released the contractors dues. Non-realization of the differential amount from the defaulting contactors, resulted in loss to the State exchequer. It is pertinent to mention that the Law Department had advised the OWD to ensure that the State exchequer does not suffer any loss by settling the disputes and, if this happens, to fix responsibility on the officers who are at the helm of affairs. Audit found that, despite non-recovery of ₹132.08 crore from contractor, arising out of retender of the balance work, no responsibility had been fixed on the concerned officers.

In reply, the Government stated (March 2023) that the amount has been released as per the reports of the Settlement Committee. The reply is not acceptable as the differential cost arising out of retender of the balance work was not recovered as per the provisions of Clause 15.4 of GCC.

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[174] (i) Widening and strengthening of existing carriage way to two-lane road from Bhawanipatna to Khariar (Km 2/000 to Km 70/000 of SH-16) (Package No. OSRP-Y1-P01)
(ii) Widening and strengthening of existing carriageway to two-lane road for Chandabali-Bhadrak-Anandpur road (km 0/0 to km 45/0 of SH-9 and km 0/0 to 50/0 km of SH-53) under Orissa State Roads Project – Package No OSRP-CW-ICB-Y1-P02

[175] Claim 1 - Differential amount on execution of GSB item of work
Claim 2 - Reimbursement of labour cess recovered.
Claim 3 - Against the imposition of delay damages for non-completion of Section-I
Claim 4 - Challenging the Termination of the contract
Claim 5 - Compensatory claims due to prolongation of the work on account of non-availability of hindrance free site.

[176] Original awarded cost: ₹321.74 crore, Value of work executed: ₹86.28 crore, Value of balance work left ₹321.74 crore - ₹86.28 crore = ₹235.46 crore, Awarded cost of balance work ₹367.54 crore, Differential cost ₹367.54 crore – ₹235.46 crore = ₹132.08 crore.

6.5 Project execution

6.5.1 Incorrect adoption of lead charges resulted in excess payment of ₹38.32 crore

Para 3.4.10 of the OPWD Code Vol-I stipulates that the estimates for a work should be prepared adopting the sanctioned schedule of rates (SoR) and providing the most economical and safe way of execution of the work.

Scrutiny of records at the PMU revealed that, due to incorrect adoption of lead charges, the estimates were inflated, leading to undue benefit to the contractors, as discussed below:

6.5.1.1 The estimates of the balance work of Chandabali-Bhadrak-Anandapur road *inter alia* provided for transportation of stone products, for execution of roads. Audit observed that, in the estimates, the lead distance from the Baghudi quarry had been provided (February 2013) for 67 km, whereas, in the original estimates prepared during FY 2007-08, a lead distance of 43 km had been provided for the same quarry. Adoption of excess lead distance of 24 km resulted in excess expenditure of ₹164.86 per cum. Thus, excess provision for 1,76,896 cum stone products had resulted in excess expenditure of ₹2.92 crore.

In reply,the Government stated (March 2023) that excess lead was considered as there was scarcity of stone in the quarry. The reply is not acceptable as Department did not furnish any evidence regarding scarcity of stone in the said quarry.

6.5.1.2 As per Notes - 4 below Chapter XIII (Road Works) of the State Analysis of Rates (AoR)[177], in case of items where wet mix plant is used, the total distance for transportation of material from the quarry to the mix plant site plus the mix plant to the work site should not exceed distance from the quarry to the worksite.

Estimates in regard to 11 road works, were sanctioned (between September 2008 and August 2016), by the CE, WB Project, for ₹1,342.14 crore. The works were awarded at a cost of ₹1,359.20 crore, for completion between November 2010 and May 2018 and were completed by April 2021.

The above works *inter alia* involved transportation of 11.02 lakh cum of stone products, from quarries to a mixing plant, for preparation of WMM, DBM and BC and from the mixing plant to various work sites. For the above works, the allowable costs for transportation were from the quarry to the mixing plant and from the mixing plant to the work sites.

Audit observed that the estimates provided for lead charges, for distances ranging from 9 to 123 Km, for transportation of stone products, from the quarry to the work sites. Additional provision of undue lead charges, for transportation from the mixing plants to the work sites, had been included in the item rates, for distances ranging

[177] OWD published AoR, 2006, prescribing admissible cost elements to be considered, to arrive at the items rate of various works.

from 7 to 24 Km. These additional provisions were in violation of the State AoR. These extra lead charges (between ₹71.28 to ₹208.14 per cum) from the mixing plant to various work sites, which had been included in the item rates, had inflated the estimated cost by ₹13.04 crore, as detailed in ***Appendix - XXIV.*** Award of work based on these inflated estimated costs had resulted in extra costs for the works and undue benefit to the concerned contractors.

In reply, the Government stated (March 2023) that the estimated rates do not have any impact on the cost of the project as the cost of the project is determined on the basis of accepted contract value. However, the fact remains that preparation of inflated estimates and comparison of bids with such inflated estimates had resulted in extension of undue benefit to the contractors.

6.5.1.3 Estimates for another three roads[178] had been sanctioned (March 2013 and July 2015) by the CE, WB Project, for ₹406.99 crore. The works had been awarded between December 2013 and January 2016, at a cost of ₹375.72 crore, for completion between March 2016 and June 2017. The works were completed between April 2018 and May 2019 and the contractors were paid ₹379.38 crore.

Audit observed from the above estimates that the lead, provided for transportation of sand, had ranged between 15 and 22 km. However, as per the quarry chart of the Jagatpur-Duhuria road[179], the admissible lead for sand had ranged between 10 and 14 km. The excess provision of lead for the above three road works, ranging between 5 and 8 km in the estimates, had inflated the costs for transportation of 10.29 lakh cum of sand and had resulted in undue benefit of ₹6.08 crore to the concerned contractors, as detailed in ***Appendix - XXV.***

In reply, the Government stated (March 2023) that the bidders were not provided with the estimated item rates. The bidders offer the rates from their own assessment. However, the fact remained that preparation of inflated estimates and comparison of bids with such inflated estimates had resulted in extension of undue benefit to the contractors.

6.5.1.4 For three packages of Chandabali-Bhadrak-Anandapur road, i.e. Bhadrak to Anandapur (balance work), Bhadrak to Pirahat and Pirahat to Chandabali, the lead provided in the estimates for moorum[180], was from Chenapadi/ Dhenka, i.e. 40 km, 55 km and 78 km to the sites, respectively. However, as per the indicative quarry chart of the above roads, the shortest lead for moorum was 17 km, 48 km and 71 km, respectively. As such, the lead charges for moorum should have been ₹266.80, ₹552 and ₹706.90 per cum, but ₹379.50, ₹602.90 and ₹752.40 per cum had been provided in the estimates, which had led to excess

[178] (i) Widening and strengthening of existing carriageway to two-lane road from Jagatpur to Nischintakoili (Package No. OSRP-CW-ICB-P04A1) (ii) Widening and Strengthening of existing carriageway to two-lane road from Nischintakoili to Duhuria (Package No. OSRP-CW-ICB-P04A2) and (iii) Widening and Strengthening of existing carriageway to 2-lane road from Duhuria to Chandabali (Package No-OSRP-CW-ICB-P04B)

[179] Part of Jagatpur-Chandabali road

[180] It is a mixture of minerals, organic matters, gravels, rock particles *etc*. Moorum is used in plinth filling, road pavements, backfilling in trenches, footing pits, *etc*.

provision of ₹112.70, ₹50.90 and ₹45.50 per cum, respectively. Thus, the estimates, for transportation of 3.63 lakh cum of moorum, were inflated and had resulted in extra expenditure of ₹2.37 crore, leading to undue benefit to the concerned contractors, as detailed in ***Appendix - XXVI.***

In reply, the Government stated (March 2023) that average lead for moorum had been considered in the estimates depending upon the availability of material at the quarry. The reply was not acceptable as the Department did not furnish any recorded evidence in support of non-availability of material at the nearest quarry.

6.5.1.5 Item 35 of Chapter XIII in AoR 2006, provided for construction of embankment, with approved material obtained from borrow pits, with all lifts and leads, as well as transportation of this material to the concerned site, by mechanical means, within a lead of five km. Further, Clause 111.3 of the Technical Specifications of the OSRP bid documents stipulated that the contractor was to operate strictly in adherence to the Borrow Area[181] Management Plan.

Audit observed the following in this regard:

- For transportation of borrow earth of 7.75 lakh cum, for construction of embankments of five roads, the sanctioned estimates had adopted lead distances between 10 and 68 km, instead of five km (as specified in AoR) and provided excess lead rates between ₹33.58 and ₹227.68 per cum, in the estimates.
- As per the conditions of the contract, the contractors needed to submit the borrow area management plan, before execution of the borrow pit, for prior approval of the project authority. The contractors were also required to submit a copy of their agreements with the farmers, for lifting of borrow earth from their fields. However, the contractors had not submitted any such plans depriving the project authorities of verification of the distance between source of earth and the work sites.

Thus, provision of lead of 10 to 68 km, instead of five km, without any supporting evidence from the contractors, had resulted in inflated estimates and undue benefit of ₹13.91 crore to the contractors towards transportation of 7.75 lakh cum of borrow earth, as detailed in ***Appendix - XXVII***

In reply, the Government stated (March 2023) that the burrow areas were identified and accordingly the actual lead to the work site was considered. The reply was not acceptable as the Department did not furnish any recorded evidence in support of identification of burrow area before preparation of estimates.

Thus, incorrect adoption of lead charges in the estimates had led to extra expenditure of ₹38.32 crore.

[181] Borrow area means the area from which material is excavated to be used as fill material in another area.

6.5.2 Avoidable extra expenditure due to non-adoption of State SoR/AoR

Audit observed avoidable extra expenditures due to non-adoption of State SoR/AoR as discussed below:

6.5.2.1 Para 3.4.10 of the OPWD code stipulates that the estimates for a work should be prepared by adopting the State SoR. Further, the State SoR allows overhead charges at the rate of 10 *per cent,* up to October 2013, and, thereafter, at the rate of 7.5 *per cent* each, towards contractor's profit and overhead charges, totaling to 15 *per cent*.

Scrutiny of records at the PMU revealed that the estimates in regard to 13 roads had been sanctioned for ₹1,610.06 crore, by CE, WB Projects, during September 2008 to March 2016. The works had been awarded for execution between November 2008 and November 2016, for ₹1,572.78 crore, for completion between November 2010 and May 2018. These works had been completed during June 2016 to April 2021.

Audit observed that the estimates for 13 road works had provided eight *per cent* towards overhead charges and another 10 *per cent* thereon for contractor's profit, as per the MoRTH data book. Thus, these charges worked out to 18.8 *per cent* on the work components. This was not in order, as there was no stipulation in the WB norms, for adoption of the MoRT&H data book, in cases of States that had their own SoR and AoR for road works.

Adoption of the MoRT&H data book, instead of the State SoR for the above road works, resulted in extra *percentages* on account of overhead charges and contractor's profit, which inflated the project costs, leading to undue benefit of ₹69.54 crore to the contractors, as detailed in ***Appendix - XXVIII***.

On this being pointed out in Audit, the Government stated (March 2023) that the estimated cost of the works had been arrived at, for comparison of the bids, with reference to the bid amounts for the purpose of approval of the tenders submitted by the bidders, with their own assessment. However, the fact remained that preparation of inflated estimates and comparison of bids with such inflated estimates had resulted in extension of undue benefit to the contractors.

6.5.2.2 Estimates, in regard to widening and strengthening of five roads, to two-lane roads, were sanctioned between July 2015 and October 2017, by CE, WB Projects, for ₹426.70 crore. The works were awarded at a cost of ₹424.56 crore, for completion between June 2017 and February 2019. All of them were completed (between January 2018 to April 2021) and the contractors were paid an overall amount of ₹396.15 crore.

Audit observed that, in the above estimates, against the requirement of 22.50 tonne of 60/70 penetration grade of bitumen[182], for taking output

[182] Bitumen 60/70 is a standard Penetration Grade of Bitumen, typically used as a Paving Grade Bitumen suitable for road construction.

of 191 cum, as per AoR, 24.30 tonne of CRMB[183] had been provided. Accordingly, the rate of BC had been inflated between ₹247.48 and ₹358.58 per cum. Execution of 35,036.70 cum of BC, with excess provision of CRMB, in deviation from the AoR, had led to avoidable extra cost of ₹1.17 crore, as detailed in ***Appendix - XXIX***.

In reply, the Government stated (March 2023) that the estimates were prepared by taking the quantity of CRMB as per fifth revision of MoRTH specification. The reply is not acceptable as non adoption of SoR in preparing the estimates resulted in avoidable extra expenditure.

6.5.2.3 Para 3.4.10 of the OPWD Code stipulated that estimates should be prepared in the most economical manner. The SoR provided for the hire charges of motor grader[184] as being ₹1,545 per hour, for spreading 200 cum of earth.

Scrutiny of records at the PMU revealed that in the estimates of 13 works, the outturn capacity of a motor grader had been taken as 100 cum per hour, with hire charges of ₹1,545 towards grading and leveling of earth, in the construction of embankment and sub-base. Adoption of these hire charges, for spreading of 100 cum, instead of 200 cum, had inflated the estimated cost towards grading and leveling of 28.75 lakh cum of earth, for the above works by ₹2.75 crore, as detailed in ***Appendix - XXX***. Award of works based on these inflated estimates had resulted in extra costs for these works and undue benefits of ₹2.78 crore being passed to the contractors.

Photo No. 17: Representative image of motor grader

In reply, the Government, stated (March 2023) that the bidders had not been provided with the estimated rates of different items and had quoted their rates against each item based on their own assessment. The reply was not acceptable, as the total estimated cost of the works had been put to tender and the rates quoted by the bidders had been finalized by comparing the bid prices with the estimated costs. Consequently, due to the inflated estimated costs, the bidders had been unduly benefited.

6.5.3 Undue benefit to contractor, due to adoption of higher rates

The estimates and agreement for the work 'widening and strengthening of existing carriageway to two-lane from Bhawanipatna to Khariar[185], had provided for the construction of embankment and sub-grade, with approved material from borrow areas. For execution of 1,49,647 cum of earth on

[183] Crumb Rubber Modified Bitumen (CRMB) is hydrocarbon binder obtained through physical and chemical interaction of crumb rubber with bitumen and some specific additives.

[184] A grader, also commonly referred to as a road grader, motor grader, or simply a blade, is a form of heavy equipment with a long blade used to create a flat surface during grading.

[185] Km 2/0 to km 70/0 of SH-16

embankment, the rate was ₹160 per cum and for execution of 2,14,827 cum of borrow earth on sub-grade, the rate was ₹175 per cum.

Examination of records at the PMU revealed that in spite of the rates for the above items being available in the original agreement (July 2013), a supplementary agreement (December 2018) had been entered into, at higher rates of ₹176.60 and ₹224.20 per cum, instead of ₹160 and ₹175 per cum, respectively. Against the final bill for the above work, payment had been made for excavation of 1,93,171 cum for construction of embankment, and 93,762 cum for construction of sub-grade and earthen shoulder, at higher costs, resulting in extra expenditure of ₹78.18 lakh.

Reason for adoption of higher rates, in the supplementary agreement, were not found available on records. Excavation of earth work at the higher rates had resulted in avoidable extra expenditure of ₹78.19 lakh and undue benefit to the concerned contractor.

In reply, the Government, stated (March 2023) that as the executed quantity was more than 25 *per cent* of the quantity stipulated in the contract and the value of the deviated quantity had exceeded one *per cent* of the initial contract price, as per the provisions of conditions of the contract, the unit rates for these two items had been adjusted and approved. The reply was not acceptable as increase in the executed quantity by more than 25 *per cent* itself indicated that the estimated quantity had not been assessed on realistic basis, which resulted in avoidable extra expenditure.

6.5.4 Undue benefit to the contractor on inflated rate of variation items

During execution of the work of Bhadrak to Pirhat road[186], a change of scope was necessitated at the post-tender stage, as approved (December 2017) by the CE, WB, due to scarcity of moorum and high moisture content. Hence, providing of sub-grade with crusher stone dust, for a quantity of 8,539.83 cum, at the rate of ₹1,588.70 per cum, was included in the scope of the work, as a variation item.

Audit observed that the basic cost of crushed dust, as per the SoR (post-GST) rate, was ₹83.81 per cum, but the basic cost was taken as ₹340 per cum. The Engineer-in-Chief (EIC) suggested (January 2018) adoption of the Bagudhi stone quarry, which was nearest to the work site, i.e. at a distance of 62 km from the middle of the package. However, the lead distance was taken as 100 km from Chadeidhara quarry. By taking into considering the SoR and the shortest lead for the stone dust, the rate for the item came to ₹1,019 per cum, which was lower by ₹569.70 per cum compared to the rate allowed to the contractor for the variation item.

Allowing a higher rate for execution of the variation item of 8,539.83 cum, resulted in undue benefit of ₹48.65 lakh to the contractor.

In reply, the Government stated (March 2023) that the unit rate for the item has been made as per GCC which is reasonable for execution of the work. The reply is not acceptable, as higher cost of material than provided in SoR and

[186] Part of Chandabali-Bhadrak-Anandapur road

lead charges for longer distance was adopted for arriving at the unit rate of the item.

6.6 Monitoring and evaluation

The Project Appraisal Document of the project emphasised that a system be evolved to monitor and evaluate the progress of project activities in a timely manner and also assess the performance, to estimate the project impact and results. Deficiencies in this regard noticed in audit, are discussed in the following paragraphs.

6.6.1 Lack of adequate internal control mechanism

As per Para 7.2 of the Finance Manual of the project, internal controls need to be exercised at various levels, to ensure the accuracy and reliability of financial transactions, to detect arithmetical mistakes, errors, cases of wrong classification, abnormal transactions and variations in the budget etc., with checks and balances at various levels. As per Para 1.5 of Financial Manual, OWD Engineers of the concerned R&B Division, had to review the works. Further, the duty of the PMU was to monitor the work of contractors and supervision consultants and also oversee the implementation. The PMU was also required to finalise the memorandum of payments, make payments to the contractors and maintain the register of work, contractor's ledger and all other records required under the OPWD Code.

Scrutiny of records at the PMU revealed certain instances of lack of adequate internal control, as discussed below:

6.6.1.1 Appendix-II of the OPWD Code stipulates that (i) Register of check measurement should be maintained and (ii) measurement of work should be done by Superior Officers. The Divisional Officers are required to check and measure 10 *per cent* of the works, costing more than ₹2 lakh, to ensure the accuracy of the measurements recorded by the subordinate officers. Audit, however, noticed that the PMU had failed to maintain check measurement register for the works executed and had also not made any entry in regard to the measurements so checked, in the measurement books produced to Audit, although this was required under the OPWD Code.

In reply, the Government stated (March 2023) that there was no provision in the contract for check measurement by the OWD engineers. The reply is not acceptable as absence of such provision violated the provisions of OPWD code.

6.6.1.2 PMU, while scrutinizing (December 2016) the final bill of work for the Bhawanipatna-Khariar road (balance work), found that the contractor had been paid ₹5.30 crore, for items of the works which had not been executed by him, but had been executed by the previous contractor. The CE, DPI&R, directed (July 2018) that the excess payment be treated as interest bearing advance and that the same be recovered with interest, at the rate of 18 *per cent* from the date of such payment, from the present contractor.

Audit, however, observed that the excess payment had been recovered (March 2021) without interest, despite clear instructions in this regard. Audit further observed that, despite detection (December 2016), the excess payment had been recovered (March 2021) only after a delay of 51 months (without interest). The interest recoverable worked out to ₹4.05 crore (from the date of detection, as the date of actual payment could not be traced from the records produced to Audit). This had resulted in loss of ₹4.05 crore to the State exchequer and undue benefit to the contractor, by the same amount.

In reply, the Government stated (March 2023) that there was no provision in the contract to levy interest on any excess payments. The fact, however, remained that due to excess payment the contractor was unduly benefited, but, no responsibility was fixed on any official for such excess payment.

6.6.1.3 False claims for ₹46 lakh were made by a contractor, during the period April 2013 to April 2015, while executing the work "Widening and strengthening of existing carriage to two-lane road from Berhampur to Taptapani" and payment thereagainst was made, due to lack of proper monitoring of the work executed. However, the same was recovered during May 2015 to September 2015. Further, the same contractor, for the above work, had previously altered the financial documents, by mixing the information of the machines which he had already possessed, with the details of machines procured by him out of the interest-free equipment advance of ₹9.69 crore, paid during March 2013 and June 2014. The amount was recovered on percentage basis, from September 2013 to February 2016. The above fraudulent practices were detected only during May 2015, i.e. after nearly two years. This indicated lack of adequate monitoring on the part of department, in detection of such practices. No action was taken against the person responsible for authorizing such irregular payments.

In reply, the Government accepted (March 2023) the factual position and stated that the excess payment had been recovered from the contractor and for fraudulent practice, the WB had also debarred the contractor for three years from participating in any WB project.

6.6.1.4 Similarly, in case of the work 'widening and strengthening of existing carriageway to two-lane for Chandabali-Bhadrak-Anandapur road works (balance work)', the concerned contractor had made false claims of ₹17.37 lakh, to obtain financial benefits. Acting upon a complaint, CE, WB Projects constituted an Enquiry Committee. In the Enquiry Committee Report, the committee observed that the payment for the work of temporary diversion roads at seven locations had been made to the contractor though the works had not been executed and this action had been supported by the Resident Engineer (a key professional staff of the consultant). The Enquiry Committee recommended recovery of the entire amount of ₹17.37 lakh, paid for the above work and suitable action against the contractor and the concerned RE. This indicated that the OWD had neither verified, nor measured/ check measured the concerned works, before certifying the claims, although this was required to be done. The inspection notes of the OWD engineers were not made available to Audit.

In reply, the Government stated (March 2023) that the excess amount had been recovered and the Consultant had removed the Highway Engineer (a key professional staff of the consultant) and Resident Engineer. The reply was not acceptable, as the Department had not taken any action against the contractor for making the fraudulent claim.

6.6.1.5 The contract of the work "Widening and strengthening of existing carriage way to two-lane road from Bhawanipatna to Khariar[187]" was terminated (November 2012), due to slow progress. The balance work was awarded (August 2013) to another contractor. During survey by the second contractor it was noticed in the works carried out by the first contractor, that DBM work had not been carried out at many stretches and the GSB and WMM executed by him were damaged. Hence, work was redone, at a cost of ₹1.32 crore. This indicated the failure of supervision by both the supervision consultant and the OWD Engineers of the concerned (R&B) divisions apart from avoidable expenditure.

In reply, the Government, stated (March 2023) that the previous contractor had stopped execution of the work, much before the contract was terminated. There was a gap of one and half years from the actual abandonment of work by the previous contractor and execution of the balance work. The exposed sub-grade and granular layers, without adequate crust and bituminous layer, were prone to damage. Technically, no traffic should be allowed to ply over such exposed surfaces, as they could lose their compactness, thereby reducing their strength. Due to movement of heavy traffic on the incomplete surface, for a long period, the road had got severely damaged and was redone. The reply was not acceptable, as the authorities did not act promptly for completion of work and prevention of damage to the incomplete surface. The extra cost incurred due to abandonment of the work had not been recovered from the defaulting contractor.

6.6.2 Joint Physical Inspection of the quality of Roads

As per the DPRs of all four projects under OSRP, the roads had been designed for 20 years. To assess the quality and maintenance of the roads, Joint Physical Inspection (JPI) of the four roads under OSRP, was conducted (August 2022) by the Audit team, along with departmental officials. Audit noticed the following instances of damage on these road stretches, which had been completed between June 2016 and April 2021.

[187] 2/000 km to 70/000 km of SH-16

(A) Bhawanipatna - Khariar Road: The works had been completed between June 2016 and August 2016, with Defect Liability Periods (DLPs) between June 2017 and August 2017. It was seen that there were depressions in the CD approach[188] at Km 6/000 and Km 8/000. There were also a series of potholes, along with several surface cracks[189]. Despite the road having been repaired with renewal coat at Km 26/000 to Km 27/000 km in FY 2021-22, depressions were noticed at Km 26/125 and Km 27/000. Also, there were crocodile crack[190], as well as linear and surface cracks, at Km 5/000 to Km 20/000, Km 46/000 to Km 48/000, Km 58/000 to Km 59/000 and km 63/000. There were depressions at four bridge approaches, from Km 27/000 to Km 30/000 and the approaches were damaged and weak. Depressions and water logging were noticed in CD approaches, at Km 41/000, along with shoulder depression, at Km 54/000 and Km 69/000.	 **Photo No. 18: Depression at Km 26/125**  **Photo No. 19: Damaged and weak approaches of 4 bridges**
(B) Chandabali – Bhadrak - Anandpur Road: The work had been completed between June 2019 and April 2021, in five packages with one year DLPs, between June 2020 and April 2022 in accordance with the date of completion of each package. There were potholes on the road surface near Ichhapur, at Km 6/650. Also, there were linear and crocodile cracks on these BC surface, on LHS and RHS, at Km 30/000 to Km 35/000, along with pothole in SDBC, on the roof slabs of the box culverts.	 **Photo No. 20: Liner and crocodile crack from Km 30/000 to Km 35/000**  **Photo No. 21: Pothole in SDBC on the roof slab of the box culvert**

[188] The approach road of cross drainage structure

[189] At Km 15/000 to Km 26/000, Km 38/000 to Km 43/000, Km 46/000 to Km 48/000, Km 51/000 to Km 52/000, Km 63/000 to Km 66/000 and Km 69/000

[190] Interconnected cracks are called crocodile cracks.

(C) Berhampur-Taptapani Road: The work had been completed in August 2016, with DLPs upto August 2017. There were potholes on the road surface, at Km 5/000 to Km 8/000, Km 10/000 to Km 11/000, Km 16/000 to Km 18/000, Km 39/000, Km 42/000 to Km 45/000 and Km 49/000. Linear, crocodile cracks and surface cracks were also seen on the road, at Km 10/000 to Km 11/000, Km 20/000 to Km 21/000 and Km 27/000 to Km 28/000.	 **Photo No. 22 : Potholes and surface cracks at Km10/000 to Km11/000**
(D) Jagatpur-Duhuria-Chandabali Road: The works were completed between July 2018 and May 2019, with DLPs between July 2019 and May 2020. There were potholes on the road surface, at Km 0/500 to Km 1/000, Km 37/000 to Km 49/000, Km 54/000 to Km 55/000, Km 57/000 to Km 58/000, Km 62/000 to Km 63/000, Km 66/000, Km 67/000, Km 69/000 and in the SDBC, on the roof slabs of the box culverts. Linear and crocodile cracks were seen on Cement Concrete, on LHS of the road, at Km 20/000 to Km 21/000, Km 53/000 to Km 55/000. There were base depressions, at Km 57/000 to Km 58/000. The level of the berm of the road was higher than the level of carriage way/paved shoulder and earth was overlapping on the paved shoulder of the road surface. Surface cracks and potholes, in the cement concrete road, at the stretch between Km 10/000 to Km 15/200, were found to have been repaired with Bituminous Concrete, indicating the poor quality of the work.	 **Photo No. 23: Pothole and cracks at Km 45/200**  **Photo No. 24: Base depression at Km 57/000 to Km 58/000**

The above facts indicated that the quality of the roads had not been ensured by the department, during construction of the roads. As a result, potholes, linear and crocodile cracks, surface cracks and surface depressions had developed on the road surface, just after the expiry of DLP, although the roads were stated to have been designed for 20 years. It was noted that MoRTH had stipulated the DLP as three years from the date of completion. However, OWD had fixed the DLP as only one year, leading to poor quality of works, apart from extra financial burden to the State, as discussed in **Paragraph 6.4.1** *ibid*, as repair and maintenance was being carried out by the Department, even within three years of completion.

In reply, the Government stated (March 2023) that the quality of the constructions has been duly tested and certified by the consultant. The reply is not acceptable since the damages on the roads, just after expiry of DLP of one year, indicates poor quality of works.

6.6.3 Inadequate convening of the State Level Empowered Committee

The Project Appraisal Document stipulated that the OWD would formulate the State Level Empowered Committee (SLEC), and ensure that the SLEC provided the overall direction and exercises the governance authority for the project. As such, the SLEC was required to meet regularly, from the beginning to the completion of the project.

Audit observed that, though the WB loan had been sanctioned in April 2009, the first meeting of the SLEC had been held in February 2011, after nearly two years from the implementation of the project. SLEC meetings were held 21 times till June 2017. Although the project works had continued till April 2021, no meeting was held between June 2017 and April 2021. Further, the gaps between two subsequent meetings ranged from 11 days to 344 days.

Thus, absence and delays in conducting the meetings adversely affected the decision making process, which impacted on the quality of project implementation and resulted in non-disbursal of ₹48.37 crore by the World Bank to the OWD, poor quality of roads, instances of excess payment etc.

In reply, the Government stated (March 2023) that after closure of WB loan the project was executed out of State Fund. Hence, no meetings of SLEC were convened. The reply is not acceptable, as the Project Appraisal Document's stipulations for the successful execution of the project works, formation of SLEC had no linkages with the funding arrangements. However, absence of SLEC impacted the quality and monitoring of project implementation, adversely.

6.6.4 Lack of third party quality monitoring

As per the PAD, third party quality monitoring was to focus primarily on quality aspects, including the adequacy of design, execution of work by contractors, adequacy of supervision and quality enforcement arrangements.

Scrutiny of records at the PMU revealed that the OWD had engaged (June 2011) NIT, Rourkela, for independent third party review of the quality assurance system, for a period of one year (June 2011 to June 2012) with a payment of ₹37.39 lakh. As per the agreement, the NIT was required to submit two quality audit reports, apart from the inception report. Audit observed that ₹17.17 lakh had been paid (August 2012) up to submission of the inception report only. No further activities by the NIT were found to be on record. OWD had failed to obtain quality assurance from any independent third party. The lack of third party quality monitoring led to failure in ensuring quality, as discussed in the above paragraphs. Had third party quality monitoring been conducted, poor quality construction could have been detected during the implementation stage itself.

In reply, the Government stated (March 2023) that as there was no objection on the quality of the works, the OWD did not feel to engage any third party monitor. The reply is not acceptable as in deviation to the PAD norms, the project was executed without engagement of third party quality monitor.

6.6.5 Evaluation of project outcomes

As per the project completion report of WB, out of 16 revised indicators for evaluating the project, six indicators[191] were fully achieved, six[192] were partially achieved, one[193] was not achieved and three[194] were not assessed. WB rated the outcome performance as "moderately unsatisfactory" and the overall performance of the OWD as "unsatisfactory".

Further, as per Para 50 of the PAD**,** at least three user satisfaction surveys had to be conducted, during the project period, to assess the perception of road users, about the performance of the road sector conditions and services in the State. Though the roads under the project had been completed during (June 2016 to April 2021), such surveys were not conducted by the OWD. The roads under the project were completed with state plan funds, after closing of the WB loan. As per para 49 of the PAD, the results framework was to be the main instrument for monitoring and evaluation of the achievement of the PDO and outcome indicators.

However, no such evaluation in regard to achievement of the project indicators/targets, was made by the department. The WB rating of overall poor performance of the Odisha Road Project, could affect WB assistance for future developmental programs.

In reply, the Government stated (March 2023) that as WB discontinued the loan, the balance works were completed out of the State Fund and thereby no review on indicator performance was made. The reply indicates the indifference of the authorities towards monitoring the quality of work and outcomes thereof.

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[191] (i) Right to Information (RTI) Compliance Ratio of PMU was maintained at 100 *per cent* (ii) Environment Management Plan (EMP), including bio-diversity management measures were implemented (iii) Percentage of project-displaced households and/or business were enabled to reestablish their shelter and/or business (iv) One road identified for PPP was concessionaire to the private sector (v) Milestones in Governance and Accountability Action Plan and Institutional Strengthening Action Plan were met and (vi) Road Safety Action Plan was put in place.

[192] (i) Vehicle speed in project corridors increased by 36 *per cent* (ii) The Odisha Works Department (OWD) efficiency and transparency improved through (a) the operation and maintenance arrangement for Core Road Network (CRN) put in place (b) core business functions were made operational (c) the OWD met right to information (RTI) disclosure requirements and implements the Governance and Accountability Action Plan (GAAP) (iii) 461 Km of State highways were widened and upgraded (iv) Road Asset Management System (RAM) Road Safety (RS) and Environment and Social (ES) Management functions were made operational in the OWD (v) Improved Road Policy and Legislative Framework was prepared and was in the process of adoption by the GOO and (vi) Sustainable road maintenance financing options were developed.

[193] Vehicle Operating costs in project corridors to be reduced by 15 *per cent.*

[194] (i) Favourable response by firms about the condition of the road corridors improved under the project (ii) Improvement in the road User Satisfaction Index and (iii) Improvement in the Network Congestion Indices

6.7 Conclusion

With a view to removing transport bottlenecks in the targeted transport corridors of the State, the OSRP was implemented with World Bank Loan assistance. A Detailed Compliance Audit of the project was conducted with the objectives of assessing whether the planning process for construction of road projects was efficient; financial management of the project was prudent; tendering and execution of project was carried out, ensuring economy, efficiency and effectiveness; and the monitoring mechanism of project was adequate and effective.

The State Road Sector Policy was pending approval of Government for more than eight years, resulting in lack of guidance, coordination and prioritisation. Due to defective preparation of DPRs without adequate survey and investigation, the scope of the works under OSRP had to be changed time and again, delaying project execution and undue benefits to contractors. Non-approval of the State Road Sector Policy, inadequate surveys and defective DPRs, resulted in excess expenditure of ₹310.65 crore, which could have been avoided. Due to poor implementation, World Bank loan of ₹48.37 crore was suspended, resulting in extra burden to the State exchequer. Delays in land acquisition, resettlement and rehabilitation of affected persons and shifting of utilities, resulted in delays in completion of works, apart from frequent termination of contracts. The project suffered from cost and time overruns and the department had to incur avoidable extra expenditure on maintenance of the road in order to make the road trafficable.

The financial management of the project was not consistent with stipulated norms/standards and codal provisions. Non-utilisation of allocated funds, within time, resulted in surrender of ₹57.82 crore, during 2019-22. In particular, more than 50 *per cent* of the funds being surrendered during the last two years, was indicative of imprudent financial management.

Preparation of inflated estimates, by providing excess lead charges, inadmissible overhead charges and erroneous hire charges, resulted in extension of undue benefits to the contractors. Delays in completion of the project necessitated extension of consultancy services, resulting in extra avoidable expenditure.

There was laxity in the monitoring of the project, due to the lackadaisical approach of the department. SLEC meetings were not conducted regularly, which affected quality planning and implementation of the project. Lack of adequate internal controls led to false claims, sub-standard execution and slow progress of the project. Though the roads had been designed for 20 years, there were a number of patches of rutting and cracks in the roads, within three years of completion (as noticed during joint physical inspection), which indicated lack of adequate monitoring by the department. Lack of third party monitoring led to failure in ensuring quality. Further, non-conduct of road user satisfaction surveys, after completion of the roads under the project, led to non-evaluation of project outcomes.

6.8 Recommendations

The Government may consider:

- immediate approval of the Odisha State Road Sector Policy, for better guidance, effective coordination and implementation of various road projects.
- preparation of DPRs on the basis of site surveys and investigation, for effective implementation of projects. Responsibility may also be fixed on officials who are responsible for preparation of defective DPRs.
- completion of pre-construction activities, as per project norms, before commencement of project works, to ensure timely completion of projects.
- adoption of a defect liability period of three years under the Standard Bidding Documents, as per norms prescribed by MoRTH.
- strengthening of the contract management mechanism, to avoid extra expenditure and undue benefit to the contractors.
- recovery of ₹132.08 crore from contractors, in case of two works arising out of retender of balance works, as per clause 15.4 of GCC and fixing responsibility on the officials who were involved in this case.
- initiating investigation at an appropriate level to detect connivance of departmental officers with the contractor.
- strengthening of the monitoring mechanism, for efficient planning and implementation of road projects.

CHAPTER VII

Compliance Audit Observations

CHAPTER VII

7. Compliance Audit Observations

Compliance audit of Departments of Government and their field formations brought out several instances of lapses in management of resources. These have been discussed in the succeeding paragraphs.

COMMERCE AND TRANSPORT (TRANSPORT) DEPARTMENT

7.1 Non-realisation of motor vehicles tax and additional tax from Goods Carriages

Regional Transport Officers failed to realise Motor Vehicles tax of ₹4.64 crore and penalty upto ₹9.28 crore from 3,081 defaulting vehicle owners.

As per Sections 3, 3A, 4(1) and 10 of the Odisha Motor Vehicles Taxation (OMVT) Act, 1975, motor vehicles tax and additional tax, due on every motor vehicle, used or kept for use, has to be paid in advance, at the rates prescribed for different classes of vehicles, as per taxation Schedule I of the Act, as amended (21 November 2017), unless exemption from payment of such tax has been allowed for the period covered under 'off-road undertaking'[195]. As per Section 13(1) of the Act, read with Rule 9(2) of the OMVT Rules, 1976, if the taxes were not paid within two months after expiry of the grace period of 15 days from the due date of payment, the registered owner, or the person having possession or control thereof, shall, in addition to payment of tax due, be liable to pay penalty, which may be extended up to twice the tax due. Further, as per the instructions of State Transport Authority (February 1966), Regional Transport Officers (RTOs) were required to issue demand notices, within 30 days from the expiry of the grace period for payment of tax. In case of default, Tax Recovery Certificates (TRCs) were to be issued, within a period not exceeding 30 days from the date of service of the demand notice, for payment of the amount.

Audit analysed (December 2020 and March 2022) the VAHAN[196] database, with the taxation records of 26 out of total 35 RTOs, relating to the period 2019-21, and observed that the owners of 3,081, out of 1,63,800 goods carriages, pertaining to 16 RTOs[197] had not paid Motor Vehicles (MV) tax and additional tax, during 2019-21. On verification of the off-road registers maintained at the RTOs, it was observed that these vehicles have not been exempted, under off-road undertakings, under Section 10(1) of the OMVT

[195] An undertaking given by the owner of the vehicle, to the RTO, under Section 10(1) of the OMVT Act, 1975 and prior permission obtained from him, for not plying the vehicle for a temporary period and for not to pay tax for the said period.

[196] VAHAN is an application software which has been assigned to cater to all requirements for registration of vehicles and collection of taxes by the Transport Department.

[197] Bargarh, Balasore, Balangir, Bhubaneswar-I, Bhubaneswar-II, Gajapati, Ganjam, Jagatsinghpur, Jharsuguda, Kalahandi, Mayurbhanj, Nuapada, Rayagada, Sambalpur, Sundargarh and Talcher

Act. Since, the periods of delay involved in all these cases were more than two months, maximum penalty of twice the tax due, was also leviable. Details of MV Tax and penalty of these 3,081 vehicles, are given in the **Table No.7.1** below.

Table No. 7.1: Non-realisation of motor vehicles tax and additional tax from Goods Carriages

(₹ in crore)

Sl. No.	Number of RTOs	Types of vehicles	Number of vehicles	Amount of tax not realised	Maximum penalty leviable	Total
1	16	Goods Carriages	3,081	4.64	9.28	13.92

(Source: Information collected by Audit)

Though VAHAN software allows the RTOs to generate tax defaulter lists, at any point of time, the concerned RTOs had neither issued demand notices, nor had they taken any action against the defaulting vehicle owners, for realisation of tax and penalty thereon. This resulted in non-realisation of MV tax and additional tax of ₹4.64 crore. Penalty upto ₹9.28 crore, could also have been levied on the defaulters as detailed in the ***Appendix - XXXI***.

In reply, the RTOs stated (December 2020/ March 2022) that steps would be taken to issue demand Notice/ TRCs for realisation of MV Tax and penalty from the defaulters. The matter was intimated to the Government (January 2022/ December 2022). Their reply was awaited (February 2024).

A similar observation had been incorporated in the Audit Report (Revenue Sector) 2019-20, but action on the same is yet to be taken/ intimated.

7.2 Short levy of Motor Vehicles Tax

Motor Vehicles tax including additional tax of ₹1.16 crore and penalty of ₹23.26 lakh was short realised from the owners of 4,373 vehicles due to adoption of old rate of taxes.

Under Section 4-A of the Odisha Motor Vehicles Taxation (OMVT) Act, 1975, read with Explanation-I thereto, One Time Tax (OTT) is payable/leviable, in regard to Motor Cycles/ Mopeds, Motor Cars (including Jeeps), which have been registered on or after 21 November 2017 and are used personally/ kept for personal use, as specified in Schedule III to the Act, 'calculated on the cost of the vehicle prevalent on the date of its first registration'. As per Gazette Notification dated 21 November 2017, read with revised Notification dated 27 July 2018, the OMVT Act was amended, enhancing the tax rate on cost of vehicles, the cost of which did not exceed ₹5 lakh, to 6 *per cent*; costing above ₹5 lakh and upto ₹10 lakh, to 8 *per cent*; costing above ₹10 lakh and upto ₹20 lakh, to 10 *per cent*; and costing above ₹20 lakh, to 12 *per cent*, from the old uniform rate of 5 *per cent* of the cost of the vehicle. Under Section 13 of the OMVT Act, 1975, read with rule 9 of the OMVT Rules, 1976, a penalty not exceeding 20 *per cent* of the tax due, is to be levied, for failure to pay the tax.

Audit test-checked (between December 2020 and March 2022) the VAHAN database pertaining to the year 2017 to 2021, in regard to registration and payment of Motor vehicles tax, by newly registered personal vehicles, i.e. Cars and Motorcycles/ Mopeds *etc*. and verified the registration records at 25[198] (plus two ARTOs under RTOs) out of total 35 RTOs. Audit observed that 4,373 out of the 12,28,276 vehicles registered at these 25 RTOs, between 22 November 2017 and 31 March 2021, who had applied for registration and paid tax on or after appointed date i.e. 21 November 2017, at the lower rates prevalent prior to the date of notification. These RTOs had not verified the tax collected, before approving the final registrations and had not noticed the fact of short-realisation, till the date of audit. The possibility of lack of input controls in the VAHAN database cannot be ruled out. Thus, MV Tax of ₹1.16 crore along with penalty of ₹23.26 lakh could not be realised. The RTO-wise details are given in the ***Appendix - XXXII***.

After this was pointed out in audit, the RTOs stated that the differential tax had been entered in Audit Recovery Module of VAHAN and demand notices had been issued. However, no action taken for finding the reasons of short realisation or to fix the responsibility was reported (as of March 2023). The audit observation has been made on the test checked RTOs, the department needs to analyse the data in all remaining RTOs and take necessary action to realise the revenue.

The matter was brought to the notice of the Government of Odisha during May 2022/ January 2023. Their reply was awaited (February 2024).

FOREST, ENVIRONMENT AND CLIMATE CHANGE DEPARTMENT

7.3 Non-disposal of Red Sanders wood

Blockage of Government revenue due to non-disposal of Red Sanders wood of ₹349.70 crore.

The Department of Forest, Environment, and Climate Change (FE & CC), Government of Odisha (GoO), made an offer (December 2018) to the Odisha Forest Development Corporation Limited (OFDC Ltd.), for harvesting and marketing of Red Sanders (RS) trees, which had been uprooted/ half broken/ top broken, in the Paralakhemundi Forest Division of Gajapati district, during super cyclone “Titli” in the year 2018. The Board of Directors of OFDC Limited approved (22 December 2018) the proposal for harvesting and marketing of RS Wood. Further, Government of India (GoI) notified (October 2021) a relaxation in the export policy, allowing export of 810.19 MT of RS Wood, in log form, which had fallen due to the cyclone and instructed finalisation of modalities for export of the said quantity, within 12 months from the date of notification. Later, (November 2022) the time limit was extended by GoI upto 6 October 2023.

[198] RTOs, Angul, Balasore, Barbil, Bargarh, Bhubaneswar-I including ARTO Khurda, Bhubaneswar II, Chandikhol, Cuttack, Dhenkanal, Gajapati, Ganjam, Jagatsinghpur, Kalahandi, Kendrapara, Keonjhar, Mayurbhanja including ARTO Rairangpur, Nabarangapur, Nuapada, Phulbani, Puri, Rayagada, Rourkela, Sambalpur, Sundargarh and Talcher

GoO constituted (January 2022) a committee of eight members, under the Chairmanship of Additional Chief Secretary, FE & CC Department, to facilitate global e-tender/ e-auction sale and other aspects of tender process, for disposal of RS wood. A technical committee was also constituted (January 2022), under the Chairmanship of the Regional Chief Conservator of Forests (RCCF), Berhampur, to: (i) oversee the fashioning/ re-measurement/ grading/ lot formation inside the campus of central godown at Berhampur and (ii) visit Andhra Pradesh, for acquiring knowledge on the process of grading of RS and modalities followed by the Andhra Pradesh Forest Development Corporation (APFDC) Limited, for harvesting and marketing of RS wood.

Scrutiny of the salvage case records of RS wood, at the Divisional Forest Office (DFO), Paralakhemundi, revealed (February 2022) that the Divisional Manager, Berhampur (C) Division, had identified 810.19 MT of salvage RS wood, from the Paralakhemundi Forest Division, which had been lying un-disposed since 2018, in the central godown at Berhampur. Out of this, 503.24 MT, 232.59 MT, 23.63 MT and 50.73 MT were of grade 'A', 'B', 'C' and ungraded quality, respectively. The Technical Committee, in their Report (February 2022) had submitted the average rate per MT for different qualities of RS in terms of Indian rupees. Accordingly, the value of grade 'A', 'B' and 'C' RS wood, works out to ₹347.92 crore as detailed in the **Table-7.1** below.

Table 7.1: Detailed calculation of value of RS

Grade	Quantity in MT	Latest year of average rate	Average rate per MT (in ₹)	Value (₹ in crore)
A	503.24	2020-21	57,18,824	287.80
B	232.59	2018-19	24,48,280	56.94
C	23.63	2017-18	13,44,588	3.18
Total	**759.46**			**347.92**

Similarly, the value of the balance 50.73 MT of ungraded RS worked out to ₹1.78 crore[199], at the rate of ₹350 per kilogram, as per the rate recommended (December 2004) by the department, for sandal wood. Although considerable time had already lapsed since salvage of these cyclone effected RS wood, the department had not taken any action for their disposal. The prolonged storage of RS wood was not only fraught with the risk of deterioration in quality, but also in quantity due to shrinkage.

Thus, inordinate delay in disposal of RS wood resulted in blockage of revenue of ₹349.70 crore. This indicated lack of effective and timely action by the Department, in disposal of RS wood.

On this being pointed out, the Divisional Forest Officer (DFO) stated (February 2022) that the RS wood would be disposed of after permission from competent authorities, such as Convention on International Trade in Endangered Species of Wild (CITES), Director General of Foreign Trade (DGFT) and Government etc., to obtain higher revenue. The reply was not tenable, as GoI had already accorded permission for disposal of RS wood, with the stipulation that the modalities for export be finalised within 12

199 50,733 kg x ₹350 = ₹1,77,56,550

months from the date of notification, which the department failed to avail of. The salvaged RS wood remained un-disposed, resulting in deterioration in quantity, quality and blockage of Government revenue, as of November 2022.

The matter was brought to the notice of the Government (November 2022); reply was awaited (as of February 2024).

7.4 Non-levy of interest on belated payment of Net Present Value

Interest of ₹95.69 lakh was not levied, as the User Agency had paid the Net Present Value belatedly.

As per Section 2 of the Forest (Conservation) Act, 1980, read with the orders of Hon'ble Supreme Court of India, issued in October 2002, the Net Present Value (NPV) of forest land, diverted for non-forest purposes, is also to be recovered from the user agencies (UA), for undertaking forest protection, other conservation measures and related activities. NPV is recoverable in all cases, where diversion was approved on or after 29 October 2002, as also for the cases for which in-principle (Stage-I) clearance was granted before 29 October 2002 and final (Stage-II) approval was granted subsequently.

Further, the Central Empowered Committee (CEC), constituted by the Hon'ble Supreme Court, had ordered (May 2010) that the mining lease holders, who do not pay the NPV within a period of 30 days from the date of demand being raised by the concerned Divisional Forest Officer (DFO), will not be allowed to continue mining, till the payment of NPV, along with interest. The Forest & Environment Department, GoO (May 2013), prescribed the rate of interest as nine *per cent* per annum, for delayed payment of NPV.

Scrutiny of forest land diversion records at DFO, Sambalpur, revealed (December 2021) that forest land of 192.626 ha and 845.561 ha, in the Sambalpur and Jharsuguda Forest Divisions, respectively, had been diverted in favour of M/s Neyveli Lignite Corporation Limited (NLC India Ltd.), for an Opencast Coal Mining Project. The in-principle (Stage-I) approval had been accorded on 03 July 2018 and final (Stage-II) approval on 28 March 2019, by the Ministry of Environment, Forests and Climate Change (MoEF & CC). The DFOs had issued (between 13 August and 03 September 2018) demand notices to the UA, for payment of NPV at the prescribed rate of ₹6,26,000 per ha, amounting to ₹64,99,05,062[200].

Audit noticed that, against the time limit of 30 days for payment of NPV, the UA had deposited the NPV amount on 28 November 2018, after delays of 56 days and 76 days, from the dates of demand. However, interest of ₹95.69[201] lakh, at the prescribed rate of nine *per cent*, for delayed payment of NPV, had neither been demanded by the concerned DFOs, nor had it been deposited by the UA, and the said amount, towards interest on NPV, had remained unrealised from the UA, till date (as of October 2022).

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200 In respect of DFO, Sambalpur (192.626 ha X ₹6,26,000 = ₹12,05,83,876) and for DFO, Jharsuguda (845.561 ha X ₹6,26,000 = ₹52,93,21,186)

201 (₹12,05,83,876 x 9 / 100) / 365 x 76 = ₹22,59,709 plus (₹52,93,21,186 x 9 / 100) / 365 x 56 = ₹73,08,983

On this being pointed out by Audit, the Government stated (October 2022) that, the order of the Hon'ble Supreme Court (May 2010) is applicable for the leases covered under I.A. No. 2746-2748 of 2009 and not for this project. The reply was not acceptable as the order of the Hon'ble Supreme Court was applicable for all leases, wherein the NPV, for diversion of forest land, had been deposited belatedly.

7.5 Non-disposal of Timber and Poles

Divisional Forest Officers failed to take timely action for disposal of timber, poles and firewood, which resulted in blocking of revenue of ₹88.37 lakh.

The Government of Odisha (GoO), Forest, Environment and Climate Change Department, had instructed (August 2005) the Principal Chief Conservator of Forests and Head of Forest Force (PCCF&HoFF) that timber and other forest produce, seized in undetected (UD) forest offence cases, be disposed of, either by public auction or by delivery to the Odisha Forest Development Corporation Limited (OFDC), within two months from the date of seizure, in order to avoid loss of revenue and deterioration in quality and consequent value reduction on account of prolonged storage. It fixed the rates of royalty on timber, for the financial year 2020-21, in September 2021.

Test-check of records (2019-20 to 2021-22), pertaining to 30 forest divisions[202], revealed that 24,324.70 cubic feet (cft.) of timber (logs and sized), 6,667 poles and 1,304.33 quintals of firewood, seized during 2015-21, against 1,676 UD forest offence cases, were lying undisposed. Audit observed that, as per the rates fixed by Government, the value of the above material worked out to ₹88.37 lakh, as detailed in ***Appendix - XXXIII.*** Thus, lack of effective and timely action by the Departmental authorities, including the Range officers (ROs) and Divisional Forest Officers (DFOs), had resulted in blockage of revenue, to the extent of ₹88.37 lakh.

The matter was brought to the notice of the Government during November 2022; reply was awaited (February 2024).

HOUSING AND URBAN DEVELOPMENT DEPARTMENT

7.6 Idle expenditure on construction of modern meat shops

Non-allotment of 29 meat shops led to idle expenditure of ₹1.78 crore and consequent loss of revenue of ₹55.02 lakh.

Rule 3 of Prevention of Cruelty to Animals (Slaughter House) Rules, 2001 stipulates that no person shall slaughter any animals within a municipal area except in a slaughter house licensed by the concerned authority. Further, Section 562 of the Odisha Municipal Corporation Act, 2003 provides that

[202] Boudh, Balangir, Keonjhar, Deogarh, Angul, Bonai, Cuttack, Paralakhemundi, Rayagada, Rourkela, Phulbani, Athagarh, Sundargarh, Rairangpur, Jharsuguda, Khordha, Baripada, Baliguda, Ghumsur (N), Dhenkanal, Ghumsur(S), Baragarh, Subarnapur, Bamra (WL), Balasore (WL), Sunabeda (WL), Berhampur, Keonjhar (WL), Puri (WL) and Satakosia (WL)

there shall be complete ban on roadside slaughter of any animal in the corporation areas. As per para 3.2.7 of the OPWD code, before taking up the project, a detailed estimate should be prepared based on feasibility of the project. As per the financial sanction order (March 2016), Bhubaneswar Municipal Corporation (BMC) should ensure transparency in process of allotment of shops in market complex so that the allotment is made to the right beneficiaries. As per terms and conditions of allotment of property Notification (November 2015), all the properties were to be allotted by mode of lottery or auction in a transparent manner to the eligible applicants, who had successfully registered and applied as per conditions of the brochure subject to the provisions of Bhubaneswar Development Authority Property (Management and Allotment) Regulations, 2015.

Scrutiny of records at BMC revealed (January 2021) that in the review meeting of Food Processing industries held on 12 August 2014 under the chairmanship of Chief Secretary, Government of Odisha (GoO), it was decided to construct 30 modern meat shops. Administrative approval was accorded (May 2016) by the Government for construction of 30 modern meat shops for ₹3.78 crore including cost of equipment. Audit observed that the civil works of the meat shops were awarded (November 2016) at the cost of ₹2.70 crore for completion by November 2017. Due to shortage of land, the civil works of 29 shops were completed (February 2018) with payment of ₹1.78 crore. During December 2017, the City Engineer requested the Deputy Commissioner (DC), Revenue to take necessary steps for allotment of meat shops. Though applications for allotment were sought for by publishing in local newspapers, no application was received. Accordingly, BMC made a survey and published (July 2018) a list containing name of 16 meat vendors. The Bhubaneswar meat vendors Association raised objections and demanded (August 2018) further construction of 271 meat shops as 300 meat vendors were in BMC. This indicated that the survey of BMC was faulty. BMC also did not initiate measures for issue of trade licenses for 29 shops and resolve the issue to allot 29 shops to venders as of November 2021.

i) The Slaughter House rules stipulate that slaughtering of an animal can be done only in a licensed slaughter house and the Odisha Municipal Corporation Act also bans all roadside slaughter of any animal in the corporation areas. In the instant case, while there were 300 meat vendors, the shops available for allotment were only 29.

ii) During Joint Physical Inspection (JPI) of the two market sites with Asst. Engineer, BMC (on 12 January 2021 and 24 November 2021), it was revealed that out of the 29 modern meat shops, 17 modern meat shops at Unit-IV had been completed with all equipment. It was further observed that, although the civil construction works had been completed for the 12 modern meat shops at Ghatikia, the mechanical instruments and equipment, as agreed by Government, had not been supplied.

Photo No.25 - Modern meat shop at Unit – IV Market

Photo No.26 - Modern meat shop at Ghatikia

Thus, due to failure of BMC to resolve the issue and finalise the list of beneficiaries for allotment of 29 meat shops led to idle expenditure of ₹1.78 crore besides paving way for illegal slaughtering within the Municipal Area. Consequently, BMC also sustained loss of revenue of ₹55.02 lakh towards rents as of November 2021.

The matter was intimated to the Government during March 2022. Their response was awaited (February 2024).

7.7 Undue benefit to the contractors

Excess provision for rates of Ductile Iron pipes in laying of water supply distribution systems in seven municipalities led to undue benefit to contractors for ₹1.05 crore.

Para 3.4.10 of Odisha Public Works Department (OPWD) code provides that while submitting the estimates, the Divisional Officer should append a certificate stating that the estimates for the work were prepared in most economical manner using sanctioned Schedule of Rates (SoR). Clause 31(a) of the contract agreement provides that in case of any price variation due to increase in price of steel, cement, bitumen and pipes after submission of tender, reimbursement of the differential cost are to be made by the Executive Engineer (EE) with prior approval of tender accepting authority and in case of decrease in prices of cement, steel, bitumen and pipes, recovery shall be made by concerned EE from the contractor immediately.

Scrutiny of records (November 2021) at Public Health (PH) Division No. II, Cuttack under Housing and Urban Development Department (H&UDD) revealed that for seven works of extension of pipelines for distribution of water in uncovered areas[203] in four Municipalities[204], estimates were technically sanctioned by Superintending Engineer (SE), PH Circle, Cuttack for ₹11.78 crore between July and September 2017. As the Ductile Iron (DI) K7 pipe was a non-scheduled item, the Engineer-In-Chief (EIC), PH, Odisha approved (July 2017) the rates of DI K7 pipes of 100 mm, 150 mm and 200 mm (Ø)[205] at ₹928, ₹1,325 and ₹1,661 per meter, respectively. The EE adopted these rates while preparing the estimates taking ₹1,077.87, ₹1,538.99

[203] Areas where water supply pipeline networks were not in place.

[204] i) Jajpur Municipality, ii) Vyasanagar Municipality, iii) Jagatsingapur Municipality, and iv) Paradeep Municipality

[205] Diameter

and ₹1,937.38 per meter for 100 mm, 150 mm and 200 mm (Ø) pipes, respectively including 7.5 *per cent* of overhead charges (OHC) and contractor's profit (CP) each and one *per cent* labour cess on basic cost[206]. The works were awarded between December 2017 and March 2018 for ₹11.20 crore for completion between May 2018 and July 2018. The works were in progress (September 2021) with payment of ₹10.58 crore to the contractors.

Further, it was revealed that the rates were again revised and approved (October 2017) by EIC (PH), Odisha as ₹786.40, ₹1,122.90 and ₹1,413.60 per meter for 100 mm, 150 mm and 200 mm (Ø) of DI (K7) pipes respectively after introduction of Goods and Service Tax (GST). Accordingly, the rates were to be fixed at ₹913.40, ₹1,304.75 and ₹1,641.90 per meter after adding OHC/CP and labour cess. Since the rates of DI (K7) pipes were decreased, the SE, PH Division should have recovered the differential cost from the contractors as per Clause 31(a) of the contract. The SE made payments to the contractors as of September 2021, without recovering the differential cost of pipes. For laying of 41,075.50 meter of 100 mm (Ø), 14,563 meter of 150 mm (Ø) and 1,816 meter of 200 mm (Ø) pipes which resulted in an excess payment and undue benefit to the contractors of ₹1.05 crore as detailed in ***Appendix- XXXIV***.

In reply, the SE stated (November 2021) that the rates of non-scheduled items had been approved by the Engineer-in Chief (PH) considering the lowest market rates. The reply of the SE was not acceptable since differential cost of DI (K7) pipes should have been recovered by the SE as per the Clause 31(a) of the contract as the cost of pipes were decreased after introduction of GST.

The matter was intimated to the Government during March 2022. Their reply was awaited (February 2024).

7.8 Avoidable extra expenditure

Shifting of underground reservoir from Balugaon to INS Chilika for water supply project led to laying of excess pipelines resulted in avoidable extra expenditure of ₹5.16 crore.

Para 3.2.7 of the OPWD code stipulates that while obtaining technical sanction it should be ensured that proposal is structurally sound and that the estimate is accurately calculated and based on adequate data and such sanction will be accorded by the competent authority. For acquisition of land, Para 3.6.3 stipulates that when the land is required for public purposes, the officer in charge of public works should in the first instance, consult the Collector of the district and obtain from him the fullest possible information as to the probable cost of the land per acre. Para 3.7.4 also stipulated that no work should be commenced on land which has not been duly made over to PWD by a responsible civil officer.

Scrutiny of records of Executive Engineer (EE), Public Health (PH) Division, Bhubaneswar revealed that the Administrative approval (AA) was accorded (September 2013) for ₹40.86 crore for water supply to Balugaon and Banapur Notified Area Council (NAC) from Salia reservoir. The work comprised of

[206] Basic cost is the cost approved by the EIC, PH and the overhead charge and Contractor's profit.

establishing a distribution system of rising main[207] from treatment plant to Banapur and Balugaon Under Ground Reservoirs (UGR) at ₹16.31 crore. The estimate of the work was technically sanctioned (May 2013) by the Chief Engineer (CE), Public Health (PH) (Urban), Odisha for ₹41.06 crore. The scope of the work provided for construction of two underground reservoirs (UGR) at Balugaon and Banapur and for supplying water to the NACs by laying of pipe line for 20.473 km which included line from treatment plant to UGRs and from main distribution point to Balugaon and Banapur UGRs respectively. As per the DPR, the sites were suitable for construction of UGRs at Banapur and Balugaon. The AA and DPR of the work provided for ₹50 lakh to be paid for land acquisition for the above water supply projects.

Audit observed that scope of work for laying of rising main from treatment plant to Banapur and Balugaon UGRs was changed midway during execution (July 2017). Without attributing any reasons, the proposal for change in location for UGR from Chilika to Balugaon was sanctioned (March 2018) by the CE, PH, (Urban) Odisha. Instead of the work of installation of UGR at Balugaon, it was installed near INS Chilika with revised scope for laying of pipeline for 28.142 km[208] instead of 20.473 km[209]. The revised work was technically sanctioned (July 2017) by CE, PH (Urban) for ₹17.04 crore which comprised of rising main from treatment plant to Banapur and Balugaon UGRs. The work was awarded (July 2017) for ₹16.64 crore being 2.36 *per cent* less than the estimated cost put to tender for completion by April 2018. The work was completed (March 2018) with payment of ₹17.11 crore being 2.78 *per cent* excess over the agreement value with construction of UGRs at Banapur and INS Chilika and laying of pipe line for 28.142 km for the above UGRs.

Audit noticed that as against 20.473 km of laying of pipe line for the water supply project from treatment plant to UGRs, the SE laid the pipe lines for 28.142 km to INS Chilika instead of originally proposed route to UGR at Balugaon. This resulted in excess laying of 7.669 km pipe with an avoidable extra expenditure of ₹3.36 crore. Further, due to shifting of UGR from Balugaon to INS Chilika, the department had to lay a pipeline from Chilika to Balugaon which was avoidable. On repeated request by Audit for producing records pertaining to laying of new pipeline from INS Chilika to Balugaon, the department furnished estimates and agreements connected to the pipeline works costing ₹1.80 crore.

During joint physical verification (October 2021), it was found that a new distribution pipeline was laid alongside of old NH-5 from INS Chilika to Balugaon NAC. The revised rising main sketch was as follows:

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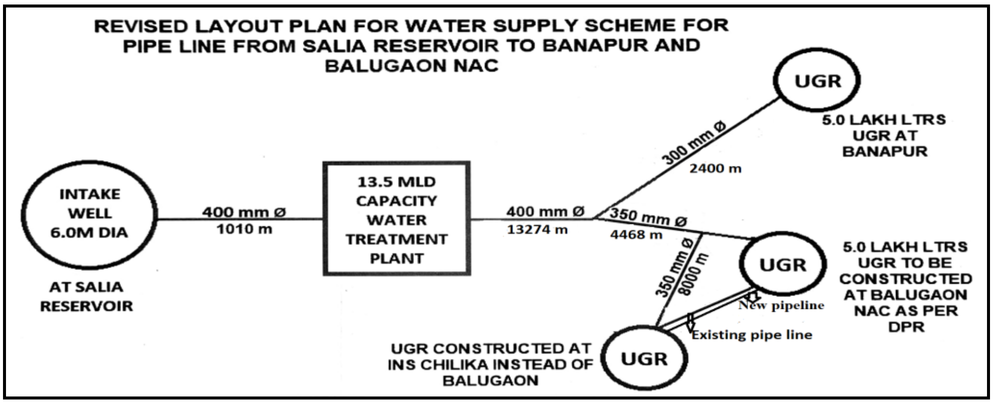
[207] Rising main is pipeline carrying water from pump to storage tank.

[208] Laying of pipeline of 28.142 km = 400 mm for 13.274 km, 350 mm for 12.468 km and 300 mm dia MS pipe for 2.400 km

[209] Laying of pipeline of 20.473 km = 400 mm for 13.177 km, 350 mm for 1.325 km and 300 mm dia MS pipe for 5.971 km



Thus, change of scope of work midway without valid reasons, resulted in avoidable extra expenditure of ₹5.16 crore (₹3.36 crore + ₹1.80 crore) in laying of water supply pipelines.

In reply, the SE stated (January 2022) that the land which was initially selected for construction of reservoir was within the paddy field and would fully submerge during rainy seasons. Due to submergence, construction of reservoir was not possible and ground water table was found to be at a higher level. There was also no approach to the site for which the site was considered unsuitable for construction of reservoir. As the land was available near INS Chilika and suitable for construction, UGR was shifted to INS Chilika.

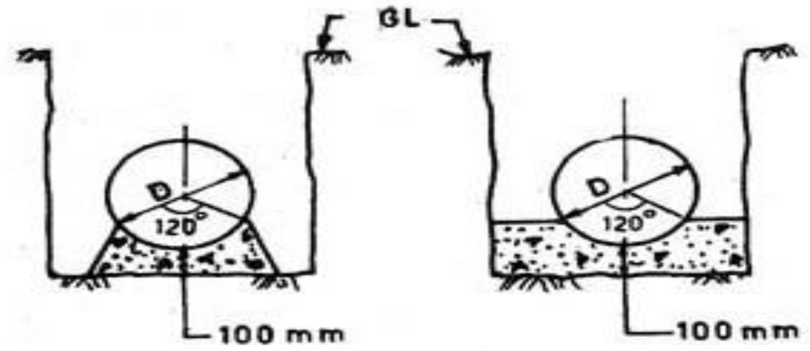
The reply was not acceptable since the revised estimate did not disclose the reason for change in scope of the work for shifting of the UGR from Balugaon to INS Chilika. Besides, the reply of SE was contradictory to the assurance given by the then EE (May 2013) confirming the suitability of land in Balugaon for UGR after survey and investigation and estimating the work accordingly, for technical sanction. Moreover, the SE could not provide any documentary evidence for non-availability of suitable land at Balugaon. Further, SE stated that the water supply to Balugaon NAC was conveyed through existing pipeline which was factually incorrect as a new pipeline had been laid alongside the old pipeline which was passing through paddy fields. This was already confirmed during the course of joint physical verification by Audit and officers of the Department (October 2021). Despite this lapse which resulted in avoidable expenditure, no action was taken against the concerned officers.

7.9 Wasteful Expenditure

Construction of pedestals for a water supply project, without obtaining permission from the Department of Water Resources (DoWR) led to change in the scope of work, rendering expenditure of ₹91 lakh wasteful.

Paragraph 3.4.10 of the OPWD code stipulates that the estimate for a work should be prepared in the most economic manner. Paragraph 2.2.62 of the OPWD code envisage the particular attention of the Sub-divisional Officer for timely and careful field survey and investigation; preparation of plans and estimates, including revised estimates, for all works to be done in his

Subdivision. As per Paragraph 4.2.1 of IS 5822:1994[210], where rock or boulders are encountered during laying of a pipeline, the trench is to be trimmed to a depth of at least 100 mm below the level at which the bottom of the barrel of the pipe is to be laid and it is to be filled to a like depth, with lean cement concrete, or with non-compressible material (like sand of adequate depth), to give a curved seating, as shown in the drawing below.



Source: IS 5822:1994, Code of Practice for laying of Electrically Welded Steel Pipes for Water Supply.

As per uniform guidelines for granting Right-of-Way (ROW) on Government land, issued (February 2014) by the Revenue & Disaster Management Department, Government of Odisha, for obtaining ROW permission, for laying underground pipelines shall file application, before the Competent Authority. The officers authorised by different administrative departments to file requisition for alienation of Government land under the Odisha Government Land Settlement Act, 1962 will be declared as the designated officers.

Scrutiny of records of the Water Corporation of Odisha (WATCO), Cuttack, revealed that the Engineer-in-Chief (EIC), Public Health (PH)-Urban, Odisha, had technically sanctioned (June 2016) a drinking water supply project "Improvement of Water Supply to Cuttack Town (Phase-I B)" for ₹22.06 crore. The work was awarded (July 2016) to a contractor on a lump-sum contract (turnkey basis), with an agreement cost of ₹22.06 crore, for completion by July 2018. Subsequently, the estimates were revised (November 2021) to ₹33.35 crore. The agency had executed the work and had been paid ₹30.20 crore (as of June 2022).

Audit observed that, considering the condition of the site, the H&UD Department had allowed (November 2017) an additional work of ₹5.55 crore which included construction of RCC pedestal[211] for laying of MS pipeline from intake well to water treatment plant (WTP). The land was under the possession of the Department of Water Resources (DoWR). However, H&UD Department did not obtain permission from DoWR. Further, the Executive Engineer (EE), PH Division No-1, Cuttack, had applied (February 2018) for

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[210] Code of Practice for laying of Electrically Welded Steel Pipes for Water Supply issued by Bureau of Indian Standards (BIS).

[211] RCC pedestal is a compression element provided to carry the loads from supported elements like columns, statues etc. to footing below the ground.

permission from DoWR for laying of 1,300 mm dia MS (Mild Steel) pipeline, from the proposed intake well site near Chahata to the Mahanadi Bridge site at Sector - 12 of the Cuttack Development Authority (CDA). While accorded permission (August 2019), DoWR had stipulated that the pipelines be laid underground, sufficiently away from the toe of the flood protection embankment-cum-ring road at the extreme end of the land, so that the Hydraulic Gradient (HG) line[212] in the countryside would not be disturbed. The Superintending Engineer (SE), PH Circle, had submitted revised estimates (July 2019), to EIC, PH, Odisha, amounting to ₹27.53 crore, due to change in the scope of work, which included concrete block against RCC pedestals.

Despite the condition laid down by DoWR, to ensure laying of underground pipelines, the EE, PH Division No. I, Cuttack, drawn up (December 2019) a supplementary agreement of ₹2.62 crore with the agency, which included construction of RCC pedestal for ₹1.02 crore to be used above the ground. The agency had constructed RCC pedestals for laying of MS pipeline of a cost of ₹91 lakh, as of January 2020, which was unwarranted and had led to wasteful expenditure.

The General Manager (GM), WATCO, Cuttack, stated (February 2022) that 109 concrete blocks were constructed for the pedestals which were utilised as RCC blocks without construction of new blocks. The reply was not acceptable, since the GM had executed the supplementary agreement for construction of RCC pedestals, despite the stipulation of the DoWR that underground pipeline be laid.

The matter was brought to the notice of the Government, in January 2023; reply was awaited (February 2024).

STEEL AND MINES DEPARTMENT

7.10 Non-realization of dead rent and consequential interest

Failure to raise demand for levy of dead rent and consequential interest from non-working mines, resulted in non-realization of revenue of ₹2.06 crore.

Section 9(A) of the Mines and Mineral (Development and Regulations) Act, 1957, stipulates that the holder of a mining lease shall pay to the State Government, every year, dead rent[213] at such rate, as may be specified, for the time being, in the third schedule, for all the areas included in the instrument of lease. Further, as per Section 64(A) of the Mineral Concession Rules, 1960, the State Government may charge simple interest, at the rate of 24 *per cent* per annum, on any rent due to that Government, under the Act, from the sixtieth day of the expiry of the date fixed by the Government for payment of such rent, until payment of such rent is made.

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[212] A line joining the points of highest elevation of water in a series of vertical open pipes rising from a pipeline in which water flows under pressure.

[213] Dead Rent means the minimum amount payble in a year by the person granted with a mining lease under these rules irrespective of the fact as to whether or not he operates/ could operate the area fully or partly.

Scrutiny of mining lease records (March 2022) of the Deputy Director of Mines (DDM), Sambalpur, revealed that Mahanadi Coalfields Limited (MCL) had acquired (May 1973) four mining leases[214]. Production of coal, in these mines, had been stopped and all the four mines had remained non-working, since various dates[215] ranging from 24 September 1999 to 11 August 2015. As such, the MCL was required to pay dead rent on these non-working mines from the date of stoppage of production. It was, however, observed that, instead of collecting dead rent from the due dates, the DDM had raised demand for dead rent only for the period starting from January 2020 onwards. The dead rent along with interest, payable by the lessee, worked out to ₹2.06 crore as detailed in the ***Appendix-XXXV***.

After this was pointed out by Audit, the DDM raised (June 2022) demand notice for ₹2.04 crore calculating the interest upto December 2021 against the lessee. The demanded revenue was yet to be collected (March 2023).

7.11 Non-realisation of additional amount and short realisation of royalty on sale of coal

Failure to realise additional amount from OCPL and incorrect assessment of royalty on the sale of coal, resulted in non/ short realisation of Government dues of ₹19.88 crore.

A. Non-realisation of additional amount

Section 8 (5) of the Mines and Minerals (Development and Regulation) (MMDR) Amendment Act, 2021, stipulates that, any lessee may, where coal is used for captive purpose, sell such coal, up to fifty *per cent* of the total coal produced in a year, after meeting the requirement of the end use plant linked with the mine, in such a manner as may be prescribed by the Central Government and on payment of such additional amount as specified in the Sixth Schedule. The Central Government may, by notification in the official gazette and for reasons to be recorded in writing, increase the said percentage of coal that may be sold by a government company. As per the Sixth Schedule of the said Act, the lessee, in addition to royalty, is required to pay additional amount, equivalent to the royalty payable. The above amendment came into force with effect from 28 March 2021.

Scrutiny of records (March 2022) of the Deputy Directors of Mines (DDM), Rourkela and Sambalpur mining divisions, revealed that the Ministry of Coal, Government of India (GoI) had allotted the Manoharpur coal block, under the Rourkela mining division, in favour of M/s Odisha Coal and Power Limited (OCPL), in August 2015 and the Talabira II and III coal mines, under the Sambalpur mining division, in favour of M/s Neyveli Lignite Corporation (NLC), in May 2016. In the case of Manoharpur coal block, the coal was to be utilised by another State Government Public sector undertaking, *viz.* Odisha Power Generation Corporation Ltd. (OPGC). In the case of Talabira II and III coal mines, the coal was to be utilised for captive consumption. Subsequently, due to delay in operation of OPGC power plants, which were to be served by

[214] Orient Colliery, New Gandaghora Colliery, Gandaghora Colliery and IB River Colliery
[215] Orient Colliery (26 November 2014), New Gandaghora Colliery (11 August 2015), Gandaghora Colliery (30 November 2013) and IB River Colliery (24 September 1999)

the Manoharpur coal block and availability of excess coal at the Talabira II & III coal mines, GoO granted permission to OCPL (December 2019) and NLC (September 2020) to sell the excess produced coal to M/s Mahanadi coalfield Limited (MCL).

Audit observed that the lessees *viz.* OCPL and NLC, had sold 26,70,020 MT of coal to MCL, during the period 28 March 2021 to 30 September 2021. As such, they were required to pay additional amount of ₹48.40 crore on such sale.

After this was pointed out by Audit in March 2022, NLC deposited (June 2022) the additional amount of ₹33.77 crore. However, in respect of OCPL, DDM, Rourkela, had not taken any steps (March 2022) to realise the additional amount of ₹14.63 crore, as detailed in ***Appendix-XXXVI***. Both the lessees were paying the additional amount from October 2021 onwards, regularly.

B. Short-realisation of royalty

Coal production from the Manoharpur coal block commenced from October 2019. However, sale of coal, from the blocks/ mines, to the power plant (OPGC), could not be made by OCPL, on account of delay in construction of the required rail transport system, due to land acquisition issues. GoO allowed (December 2019) OCPL to sell the produced/ excess coal to M/s Mahanadi Coalfields Limited (MCL). After obtaining the necessary permission from GoO, OCPL signed an agreement (December 2019) with MCL, for sale of the produced/ excess coal from the Manoharpur Coal Block. The agreement stipulated that MCL would purchase coal from OCPL at the *power price*[216] and sell the same to its customers at the *non-power price*[217], as notified by Coal India Limited time to time. Royalty on OCPL coal was to be charged, from MCL, on *power price* and MCL was to collect royalty from its customers at *non-power price*. OCPL was to deposit the royalty collected from MCL with GoO and MCL was to deposit the differential royalty, between the *non-power price* over *power price,* as OCPL had already charged royalty from MCL on the *power price*, at the time of sale to MCL. As per notification (May 2012) of the Ministry of Coal, the rate of royalty on coal was to be 14 *per cent ad-valorem* on the price of coal, as reflected in the invoice, excluding taxes levied and other charges.

Further, as per section 9C (4) of the MMDR Amendment Act, 2015, the holder of a mining lease shall pay a sum equivalent to two *per cent* of the royalty to the National Mineral Exploration Trust (NMET). As per Rule 9 (2)(b) of Odisha District Mineral Foundation Rules, 2015, all holders of major mineral leases shall pay, in addition to royalty, 10 *per cent* of the royalty as contribution towards DMF, if the lease has been granted through auction. Scrutiny of records (March 2022) of DDM, Rourkela, revealed that MCL had sold 22,45,782 MT of coal received from OCPL, to its customers, at *non-power price,* during the period December 2019 to March 2021. However, it did not deposit the differential royalty, between the *non-power price* over the *power price*, on the quantity of coal sold. The differential royalty and

216 The rate of coal charged on sale to power sector.

217 The rate of coal charged on sale to non-power sector. The non-power price is higher than the power price.

contribution to District Mineral Foundation Fund and National Mineral Exploration Trust, on the aforesaid quantity of coal sold by MCL, at the *non-power price*, worked out to ₹5.25 crore, as detailed in ***Appendix-XXXVII***.

Thus, failure to realise additional amount on the sale of coal and short realisation of royalty, resulted in non-recovery of Government dues, amounting to ₹19.88 crore.

The matter was intimated to the Government during November 2022. Their reply was awaited (February 2024).

TOURISM DEPARTMENT

7.12 Irregular excess payment to foreign company

Non-deduction of Tax at Source, on payment made to foreign company, resulted in irregular excess payment of ₹23.50 lakh to the Odisha Tourism Development Corporation.

Under Section 195 of the Income Tax (IT) Act, 1961, any person responsible for paying amounts to a foreign company, shall, at the time of payment of such amounts to the payee, deduct income tax thereon, at the rate of 20 *per cent* of the payable amount.

Scrutiny of records (August 2021) of the Tourism Department showed that, with the objective of promoting Odisha Tourism, the Department of Tourism, Government of Odisha, had entered into an agreement (July 2018), with a foreign company, *viz*. TripAdvisor Singapore Pte. Ltd. (TripAdvisor), for hosting of advertising content, as provided by the department, on the internet web-portal of TripAdvisor. Para 5 (a) of the agreement stipulated that the department would be invoiced by TripAdvisor on a monthly basis and the department could deduct, from the amounts payable to the TripAdvisor any withholding income tax amounts, as required by local laws, and remit the same to local tax authorities.

TripAdvisor promoted Odisha Tourism on its internet web-portal for a period of six months, from August 2018 to January 2019, and raised (September 2018 to February 2019) invoices on monthly basis, for a total amount of ₹94 lakh. While sanctioning (November 2019) the amount, the department directed M/s Odisha Tourism Development Corporation Ltd. (OTDC) to release the sanctioned amount, on behalf of the Department, as payment from the Government Treasury, to a foreign account, was not possible. As per the IT Act, OTDC was required to deduct tax at source (TDS), at the rate of 20 *per cent* of the total bill amount of ₹94 lakh, *i.e.*₹18.80 lakh, remit the same to the IT Department and make the balance payment of ₹75.20 lakh to TripAdvisor. However, OTDC paid (January 2020) ₹94 lakh to TripAdvisor, without deducting TDS.

Subsequently, OTDC submitted (February 2020) a proposal of ₹1.18 crore, which included ₹94 lakh towards payment made to TripAdvisor and TDS of ₹23.50 lakh[218], at the rate of 20 *per cent* to the department, for reimbursement.

[218] (₹94,00,000/80 x 100) x 20 *per cent* = ₹23,50,000

The department paid (May 2020) ₹1.18 crore to OTDC, without analysing the terms and conditions of the agreement.

Thus, owing to non-deduction of TDS from the total bill amount, in contravention of the terms of the agreement and the IT Act, irregular excess payment of ₹18.80 lakh was made to TripAdvisor, which resulted in excess payment of ₹23.50 lakh to OTDC which was a gross failure on the part of department.

Accepting the Audit observation, the Government stated (December 2022) that TripAdvisor had been asked for refund of the excess amount, paid to it, towards Income Tax.

WORKS DEPARTMENT

7.13 Undue benefit to contractors

Excess payment to contractors in deviation from Schedule – H of Engineering, Procurement and Construction Contracts led to undue benefit of ₹11.29 crore to contractors.

Schedule - H of the Standard Engineering, Procurement and Construction (EPC) contract prescribed by Ministry of Road Transport and Highways vide circular dated 28.11.2018 provides the *pro rata* payment for execution of different items of road works like earth work, Sub-base (GSB), Base course (WMM) and wearing course.

Scrutiny of records at three Public Works Divisions[219] revealed the following irregularities.

i) The work of widening and strengthening of existing single lane to two lane with paved shoulder from 246.100 to 292.164 and from 307.934 km to 314.130 for a length of 51.146 km road with other ancillary works like bridges, culverts *etc*., of NH 53 was awarded (October 2015) for ₹152.92 crore for completion by July 2017. The agency had completed 41.437 km of road with payment of ₹130.06 crore as of July 2019. The balance road work for 9.709 km could not be completed due to non-acquisition of private land for 15.67 ha as of March 2022. The Schedule -H of the contract provided for *pro-rata* payment for construction of 51.146 km road. Hence, for the constructed road of 41.437 km, ₹76.93 crore was payable as detailed in **Table No.7.2**:

Table No. 7.2: Details of *pro-rata* cost payble to contractor

(₹ in crore)

A	Total cost of the project (as per contract agreement)	152.92
B	*Less* Cost of other works (21.46 *per cent*) (Service roads, Slip roads, Toll plazas, Roadside drains, retaining wall *etc*.)	32.32
C	Net cost of Road Work (A-B)	120.60
D	*Less* Cost of ancillary works of Road (21.35 *per cent*)	25.64

[219] i) NH Division, Pallahara ii) Sundargarh R&B Division and iii) NH Division, Berhampur

	(Widening and repair of culverts, new culverts and minor bridges)	
E	*Prorata* cost of the total road of 51.146 kms. (C-D)	94.96
F	Cost of the Road work executed (41.437 kms.) (94.96 crore/ 51.146*41.437)	76.93
G	Amount paid for road work	80.28
H	Amount payable for road work	76.93
I	Amount paid in excess	3.35

(Source: Information collected by Audit)

As indicated in the above table, the EE paid ₹80.28 crore to contractor for execution of 41.437 km road against admissible amount of ₹76.93 crore excluding culverts, minor bridges and other ancillary works leading to excess payment of ₹3.35 crore**.** The contract was foreclosed (May 2019) by the CE, NH, Odisha for want of land acquisition. The performance security was refunded (May 2019) to the contractor. As such, possibility of recovery of excess payment made to the contractor was remote.

The Government stated (May 2022) that the Schedule "H" appended to the agreement had two distinct and independent sub-items such as widening and strengthening of existing road for 48.636 Km and new two lane re-alignment bypass for 2.51 km. As such, payment for executing 41.437 km was made to the agency taking the total agreement quantity as 48.636 km for ₹80.28 crore. Moreover, as per the contract agreement the agency was entitled for a termination payment at 10 *per cent* of the value of work left unexecuted due to foreclosure. But as per the instruction of the Ministry, the agency had submitted an undertaking not to claim the said termination amount which sums up to ₹3.34 crores.

The reply was not tenable, as the payment should have been released on *pro-rata* basis for 41.437 km out of 51.146 km. Since *pro-rata* payment as provided in Schedule - H of the agreement was not invoked, excess payment of ₹3.35 crore led to undue benefit to the contractor. Whereas, the matter of submission of undertaking for not claiming termination amount is concerned, that was a separate issue and should not have been negotiated/adjusted by making payment for the unexecuted work.

ii) In another work for widening of two lane road to four lane road from Bankibahal to Kanika Railway siding in Sundargarh district for ₹199.36 crore, the scope of work provided for execution of nine meters carriageway width (including paved shoulders) in each side. It was observed that the contractor had constructed 8.75 meters of carriageway width in each side of road resulting in lesser execution of carriage width by 0.25 meter. The pro-rata payment for construction of road proper was 84.33 *per cent* i.e. ₹168.12 crore, however, full payment was made to the contractor. This resulted in undue benefit of ₹4.67 crore to the contractor since EE did not check and measure the work before release of payments to the contractor. Neither any accountability was fixed (May 2021) on the EE responsible for such lapses of supervision, nor was cost reduced for change in scope of work as per Article 13 of the contract.

The Government stated (May 2022) that the design had been made for nine meters carriageway width from the edge of the 'I kerb' to the edge of the paved shoulder. However, during execution, the design of the medium kerb had been changed from 'I kerb' to 'L kerb'. The actual measurement should be inner edge of 'L kerb' which is nine meter from the edge of the paved shoulder.

The reply was not acceptable since the design of flexible pavement and the scope of work in sanctioned estimates and agreement provided for execution of nine meter of carriageway in each side excluding kerb and the carriageway measurement had been certified by the authority engineer for 8.75 meter.

iii) Another work of widening of existing single lane to two lane carriageways with paved shoulder from 118.400 km to 173.400 km (55 km) of NH - 59 was taken up (October 2015) at a cost of ₹237.60 crore for completion by April 2018. The CE, NH, Odisha sanctioned (March 2018) for the above road from 118.370 km to 173.370 km considering the length of 55.850 km instead of 55 km. The length of 850 meter was considered as missing link without any justification. Audit found that two other works[220] on both sides of this stretch were already being executed without any gap and hence, approval of additional length of 850 m was not in order as execution of this additional length was physically not possible. Accordingly, the payment was made to the contractor which led to excess payment and undue benefit to the contractor of ₹2.87 crore.

The Government stated (May 2022) that though the project consists of improvement from 118.400 km to 173.400 km as per the agreement, the work actually started from 118.370 and ended at 174.220 km (total length of 55.850 km).

The reply was not acceptable as the CE, NH had sanctioned (March 2018) the revised scope from 118.370 km to 173.370 km (55 km) and another two works on both sides of this stretch were already being executed without any gap in length, hence, execution of road work from 118.370 km to 174.220 km with additional length of 850 meter against the actual length of 55 km was incorrect.

The Government may fix responsibility on the persons responsible for excess payment made to the contractors and recover the excess amount from the concerned contractors.

7.14 Excess payment to contractor

Excess payment to contractor in deviation to Article 13 of Engineering, Procurement and Construction Contract led to undue benefit of ₹1.43 crore to contractor.

As per Article 13.1.2 and 13.1.3 of Engineering, Procurement and Construction (EPC) contract stipulates that for change of scope (CoS) of work, the contractors were to submit the CoS proposal supported with relevant details and the amount of reduction/increase in contract price to the Authority.

[220] Two agreements were executed for i) Widening and strengthening of existing single lane to two lane carriage way with paved shoulder from km 68.260 mtrs. to km 118.370 mtrs and ii) from km 173.370 mtrs. to km 229.400 mtrs. of NH – 59 on EPC mode

Scrutiny of records at Bhubaneswar R&B Division No. II revealed that the estimates for construction of High Level (HL) Bridge over river Kushabhadra at 12 km of Balakati - Balianta road was technically sanctioned (December 2013) by CE (DPI & Roads) for ₹25.15 crore under State Plan. The scope of work as per sanctioned estimates provided for construction of HL Bridge for 400 meter length. The scope of the work was revised by the Executive Engineer (EE) at tendering stage for construction of 380 meter length Bridge. The EE did not reduce the estimated cost despite reduction of length of the bridge. The work was awarded (November 2014) on EPC mode with the agreement cost for ₹28.50 crore for completion by November 2016. The agency had completed the works with payment of ₹28.50 crore by May 2018. Thus, non-reduction of cost of the bridge as per revised scope of work either at tendering stage or after agreement as per article 13 of the contract led to excess payment of ₹1.43 crore including tender premium.

The Government stated (May 2022) that during execution, number of span was increased from 10 to 11 and approach road from 189 meter to 300 meter which necessitated increased cost.

The reply was not acceptable as the scope of work had been reduced during tender process from 400 meter to 380 meter, the estimates should have been re-casted and got approved by CE. Extra payment made to the contractor needs to be recovered and action needs to be taken against the officers responsible for such extra payment.

7.15 Avoidable extra cost due to laxity in survey and investigation

Laxity in conducting survey and investigation led to avoidable extra cost of ₹9.54 crore.

The para 3.4.10 (i) of the OPWD Code envisages that the Divisional Officer[221] should record a certificate that he has personally visited spot and prepared the estimate using the sanction schedule of rates and providing for the most economical and safe way of executing the work while submitting the estimates for technical sanction by SE/CE. Further, Para 3.2.7 of the OPWD code also stipulates that while obtaining technical sanction it should be ensured that proposal is structurally sound and that the estimate is accurately calculated and based on adequate data and such sanction will be accorded by the competent authority. The Superintending Engineer (SE) and Executive Engineer (EE) were to certify the site visit for survey and investigation conducted before preparation of the estimate for the work and technical sanction.

- **Construction of Rail Over Bridge**

The work of "Construction of Rail Over Bridge (ROB) at Kudiary near Jatni at Reduced distance (RD) 454.939 km in between station Retanga and Khurda Road on Howrah–Madras main line" was technically sanctioned (September 2014) by Chief Engineer (Design Planning & Investigation and Roads). The technical sanction of the work was based on the certificate of the EE and SE that they had visited the site and were fully satisfied with the survey,

[221] As per Para 2.2.25 of OPWD Code Vol. I, the Executive Engineer of the division is known as Divisional Officer

investigation and also the plan and design. The work was awarded (July 2015) to a contractor[222] at a cost of ₹38.35 crore for completion by July 2017. The original Detailed Project Report was technically sanctioned with a provision of four spans of 37.24 m length and 9 spans of 37.24 m length with landing of ROB in Sitaram Chhak (Junction) at Khurda side and Kudiary Chhak at Pipili side, respectively.

The local public demanded for shifting the landing of ROB from Sitaram Chhak junction due to traffic density. Further, Dy. Chief Engineer/ Construction- I, East Coast Railway during August 2015 and November 2015 requested the department to consider 51.48 meters span of the railway portion of ROB. This resulted in the need for change in design and estimates. As a result, the progress of the work was delayed. In August 2018, due to disproportionate progress of work, the Department rescinded the original contract after execution of works valuing ₹10.80 crore (28 *per cent*) leaving the value of leftover work at ₹27.55 crore (₹38.35 crore - ₹10.80 crore).

The revised estimates for the balance work (with extension) was sanctioned (November 2018) for ₹63.11 crore (cost increased by 129 *per cent*) with further additions of quantities and extra items. The estimated cost of the work was therefore increased by ₹35.56 crore. The work was awarded (March 2019) to a contractor for ₹71.94 crore (₹64.23 crore plus 12 *per cent* GST) for completion by September 2020 and the work is in progress. Due to change of scope and revision of estimates at post tender stage and award of balance work based on the revised estimates, the agreement cost of the balance work was increased to ₹71.94 crore including tender premium and GST. Audit, however, worked out cost of escalation considering the present design with revised quantity at originally agreed rates. Audit arrived at the cost of the left over work at ₹64.28 crore including tender premium as detailed in ***Appendix-XXXVIII***. Thus, laxity of EE/SE in foreseeing the landing of approach of ROB at a junction with heavy traffic density and without conducting proper survey and investigation resulted in avoidable extra cost of ₹7.66 crore (₹71.94 crore - ₹64.28 crore).

The Government in Works Department accepted (May 2022) that there was possibility of traffic collision due to landing of ROB at Sitaram Chhak. Considering the safety of public and traffic problem, extension proposal of ROB was designed to extend the ROB at Khurda side and was approved by competent authority. The change of alignment and the span length at Railway portion was also increased in the revised estimate.

The reply of the Government is not acceptable as EE/SE failed to consider the possibility of traffic collision due to landing of RoB at Sitaram Chhak. Lack of survey and investigation of construction site resulted in avoidable extra cost and burden to the State exchequer.

- **Construction of two High Level Bridges[223]**

Two bridges at RD 5.080 km and 11.050 km of Dharmasala to Kabatbandha road in Jajpur district were technically sanctioned (May/ June 2016) by the

[222] M/s Panda Infra Projects (India) Private Limited

[223] High Level Bridge is a bridge which carries the roadway above the highest flood level of a channel.

Superintending Engineer (SE), Cuttack R&B Circle, Cuttack for ₹7.20 crore. The works were awarded to a contractor in November 2016 for ₹6.82 crore for completion by October 2017. As per soil investigation report, considering the soil strata, the pile load capacity is derived to ensure structural stability and would be incorporated in the General Arrangement Drawings (GAD). It was also mentioned in the above report that while erection of piles, the executives shall ensure the pile load capacity as per GAD has been fulfilled by conducting safe load test.

During visit (November 2017) of work site, the SE found that out of 68 piles in both the bridges, 50 piles were completed without conducting the pile load tests by the contractor which was supposed to be conducted in the presence of EE/SE. Erection of piles without safe load test[224] would consequently weaken the bridge and possibility of collapse later.

Photo No.27 - Bridge at chainage 5.080 km

Photo No.28 - Bridge at chainage 11.050 km

Due to failure of EE in conducting load test**,** on the direction of the SE, pile load test was belatedly conducted (January 2018) and it was found that the safe load was 162.70 and 130 tonnes against the requirement of 230 and 280 tonnes provided in original GAD for both the bridges at RD 5.080 km and RD 11.050 km respectively. Accordingly, the Chief Engineer (Design) revised (July/ August 2018) the pile arrangements from 32 to 56 for HL Bridge at 11.050 km and from 36 to 40 for HL bridge at 5.080 km along with structural design of the piles.

In the meantime, the stipulated period of completion of the works was over and the contractor opted not to apply for extension of time. The contractor applied (November 2018) for closure of contract after execution of work valued at ₹1.55 crore. The Executive Engineer (EE), Panikoili (R&B) Division, Panikoili submitted (April 2019) the closure proposal for both the bridges to SE, Cutttack (R&B) Circle which was approved in July 2019. The value of left over work was ₹5.28 crore. Hence, completion of 50 piles without conducting safe load test resulted in change in structural design along with pile arrangement and consequent closure of the contract midway.

The revised estimates for the balance portion of both the works were sanctioned (September/ November 2020) by the SE for ₹7.32 crore and were

[224] Safe load test is a process to determine the safe load carrying capacity of the structure/ bridge.

awarded (February/ July 2021) to two contractors for ₹7.28 crore to be completed by November 2021/ June 2022. Due to change of scope and revision of estimates at post tender stage and award of balance work based on the revised estimates, the agreement cost of the balance work was increased to ₹8.16 crore including tender premium/ rebate and GST[225]. Audit, however, worked out the cost variation, had the revised design been finalised within the stipulated completion period and executed by the original contractor with revised quantity at originally agreed rates, the cost of the leftover work with the revised design would have been ₹6.28 crore including tender premium/ rebate as detailed in ***Appendix- XXXIX.***

Audit observed that non-conducting of safe load tests for piles indicates the negligence of engineers which entail fixing of responsibility. Had timely supervision by SE not been done, the bridges would have been constructed without safe load test, consequently weakening of the bridge. Thus, failure of EE/ SE in conducting safe load tests of piles and finalising the design within the contractual period resulted in avoidable extra cost of ₹1.88 crore (₹8.16 crore - ₹6.28 crore). Besides, the construction of HL bridges was delayed by more than three years from the stipulated date of completion of the original works.

The Government stated (May 2022) that the drawing was revised with increase in number of piles from 68 to 96 and the excess expenditure was incurred due to increase of piles in both the bridges. The reply was not acceptable, as per original plan based on pile load capacity, only 68 piles were to be constructed. However, due to failure of the EE, in conducting safe load test of piles resulted in increase the number of piles from 68 to 96 which led to avoidable extra cost on execution through fresh tender.

Thus, had proper survey and investigation of construction site and pile load test conducted as envisaged in the GAD, extra cost of ₹9.54 crore (₹7.66 crore + ₹1.88 crore) on re-tender of ROB and two HL bridges was avoidable. Despite this serious lapse, no responsibility was fixed on the concerned officers.

7.16 Avoidable extra expenditure due to crust failure

Provision of inadequate crust thickness of a heavy traffic/ axle load road, led to crust failure within 16 months and required further overlaying at an avoidable extra expenditure of ₹3.14 crore.

Indian Road Congress (IRC-37:2001/2012) specifies the thickness of pavement depending on the strength of sub grade soil, expressed in terms of California Bearing Ratio (CBR)[226] and on the basis of projected number of commercial vehicles which would ply on the road calculated as Million Standard Axles (msa). IRC also recommended dense bituminous macadam (DBM) binder course for roads designed to carry more than five msa and

[225] HL Bridge at 5.080 km (- 5.11 percentage tender rebate) and HL Bridge at 11.050 km (+ 4.99 percentage tender premium)/ GST at 12 *per cent*

[226] The CBR test is a penetration test used to evaluate the subgrade strength of roads and pavements. The results of these tests are used with the curves to determine the thickness of pavement and its component layers. This is the most widely used method for the design of flexible pavement.

bituminous concrete (BC) wearing course for roads designed to carry more than 10 msa. IRC 82-1982 recommends that a common defect in bituminous surface is the formation of cracks[227]. The cracks are caused by insufficient bitumen layer or excessive overloads by heavy vehicles and the unsuitable condition in the subgrade or lower layer of the pavement. The thickness of the pavement therefore has to be carefully decided as per CBR and msa to avoid the crust failure. Further, Para 6.5 of the IRC 82-1982 recommends for periodical renewal for traffic more than 450 Commercial Vehicles Per Day (CVPD) with surface dressing after three years. According to MoRTH guidelines (September 2002), periodical renewal of a road is expected to last at least for a period of three years and 25 mm of SDBC/BC can be laid for high traffic roads having CVPD more than 1500. BC shall be laid only where the existing surface has BC as wearing course.

Scrutiny of records of Executive Engineer (EE), Rourkela R&B Division revealed that the Chief Engineer (DPI&Roads) had technically sanctioned (May 2014) a road project for improvement of Koira-Dengula-Tensa-Barsuan-Kaleiposh road from 15 km to 24.025 km under State Plan for ₹21.59 crore. The estimates of the above work *inter-alia* provided that the road had soil CBR two to four *per cent* and traffic was 38 msa. Against the total requirement of crust thickness of 805[228] mm as per IRC 37-2001/2012, the EE provided total crust thickness of 650[229] mm. This resulted in inadequate provision of crust thickness by 155[230] mm for such a heavy traffic axles load road having traffic more than ten msa. With this inadequate crust provision, the work was awarded (April 2015) to a contractor for an agreement value of ₹23.53 crore for completion by April 2016 being nine *per cent* excess over the corresponding estimated cost. The above estimate was revised (November 2016) by CE (DPI&R) to ₹23.62 crore with revision of bituminious layer of 75 mm thickness of BM and 40 mm thickness of SDBC for 4,871.80 cum and 2,356.34 cum respectively. The work was completed with payment of ₹23.61 crore with extension upto November 2016.

Audit observed that due to faulty estimation of SDBC instead of BC as per the IRC/ MoRT&H guidelines, the road was not commutable. As per DPR, this road was designed for traffic for 10 years, however, due to poor quality of construction, in less than 16 months, the crust failure and pot holes were detected on road surface during the survey conducted in March 2018. The Superintending Engineer, Keonjhar (R&B) Circle, Keonjhar technically sanctioned (March 2018) for periodical repair of the above road stretches for ₹3.29 crore with further provision for laying of 50 mm thickness of BC for 1,794.33 meter and 25 mm thick mastic asphalt wearing course for 4,936 square meter. The work was awarded (September 2018) with an agreement

[227] As per IRC 82-1982: Cracks on the roads are different types such as i) hair line crack ii) alligator crack iii) longitudinal crack iv) Edge crack, v) shrinkage crack and reflection crack.

[228] 330 mm of Granular sub-base (GSB), 250 mm of Wet Wix Macadam (WMM), 130 mm of Dense Graded Bitumious Macadam (DBM) equal to 185 mm of BM and 40 mm of bituminious concrete (BC)

[229] 300 mm of GSB, 250 mm of WMM, 75 mm of BM and 25 mm of Semi Dense Bituminious Concrete (SDBC)

[230] 30 mm of GSB, 110 mm of BM and lower specification of wearing course of SDBC (that too short by 15 mm) instead of BC

cost of ₹3.14 crore for completion by March 2019. The work was completed with payment of ₹3.14 crore as of September 2019.

Audit further observed that while sanctioning the estimate, CE (DPI&Roads) neither considered the axle load[231] on this road nor the EE had adopted proper design plate[232] as per IRC-37-2001/2012 according to CBR and traffic msa of this road which resulted in crust failure of this road. Thus, due to inadequate provision of crust thickness for granular sub-base and bituminious layer for heavy traffic/ axle road led to crust failure within 16 months and warranted periodical repair and renewal work at a cost of ₹3.14 crore which was avoidable.

The Government stated (May 2022) that to avoid huge initial investment and to account unpredictable growth in mining traffic the flexible part of the crust (BM and SDBC) was decided to be provided on a stage construction basis and hence was designed for a period of three years only from the date of completion of the project.

The reply was not acceptable since despite clear guidelines of IRC, the department failed to construct the crust thickness as per the IRC requirement. Due to this failure, the road which was supposed to function for 10 years as per the DPR, it could not even survive for 16 months. Inadequate crust provision of granular sub-base and bituminous surfacing for traffic for 38 msa traffic led to crust failure and incurred ₹3.14 crore for periodical repair and renewal work within 16 months of its completion. Despite this serious lapse, no action was taken against the concerned officer.

7.17 Non-deduction of voids led to excess payment

Non deduction of voids in gabion box walls led to excess payment of ₹81 lakh to the contractor.

As per para 3.4.10 of OPWD code, the estimate for a work should be prepared in most economical manner. The design calculation sheet for gabion boxes appended to the sanctioned estimate provides that void in gabion boxes[233] was 30 *per cent*. As per IRC 56-2011, gabions and mattresses are used for slope erosion protection with 30 *per cent* voids and the structures offer free drainage providing higher bank stability. IRC-SP-116-2018 also stipulates that voids/ porosity of the filled gabion box shall be around 30 to

Photo No.29 - Use of Gabion Boxes as retaining wall in road works

[231] Axle load refers to the total weight bearing on the roadway for all wheels connected to a given axle

[232] Design plate means the major component in the road construction consisting of different layers of road like sub-base, base and bituminous surface

[233] The gabion mesh boxes or crates provide stability and rigidity to the structure on the backfill. The GI wire mesh also superimpose reinforcement to the structure which gives additional stability. This type of structure is called earth reinforcement retaining wall.

40 *per cent*.

Scrutiny of the records of National Highway (NH) Division, Sambalpur revealed (November 2019) that the work 'Protection of Khad side of Kalinga Ghat from 83.00 km to 93.00 km on NH -157 in the State of Odisha' was awarded (November 2016) for ₹11.56 crore. The work was awarded at 11.61 *per cent* less than the corresponding estimated cost of ₹13.08 crore put to tender for completion by July 2017. As of November 2021, the work was completed with payment of ₹11.28 crore.

As per the agreement, 13,965 cum of gabion boxes were to be executed for ₹5.17 crore with packing of hard granite stone of 200 mm in Polyvinyl chloride (PVC) coated high zinc galvanized steel wire boxes of 6 m x 1 m x 1 m. However, it was observed that appropriate clause was not included in the agreement for deduction of 30 *per cent* of voids from the total executed volume of stone in the gabion boxes to arrive the actual quantity of stone used for packing.

Further, Audit noticed that the agreement quantity of 13,965 cum for gabion boxes was reduced to 7,603 cum as per the deviation statement (January 2018) for ₹2.51 crore. The reduction of gabion box wall was for non-execution of Khad side wall. The agency had executed 6,841.95 cum of gabion box with payment of ₹2.26 crore as of July 2019 without deduction of voids in contravention to technical note appended to the sanctioned estimate and IRC provisions. As such, excess payment of ₹81 lakh was made to the contractor for non-deduction of voids of 2,052.59 cum i.e 30 *per cent* of 6,841.95 cum of gabion wall.

The Government stated (March 2022) that gabion box structures were designed considering porosity of 30 *per cent* as per Clause 6.6 of IRC SP-116-2018 and estimate had been prepared following MoRTH specifications and Standard Data book. The analysis had been prepared taking into account 200 mm stone boulders for six cum quantity in addition to 1.2 cum stone spalls of minimum size 25 mm as per Data Book. In Data book for analysis of rates, no such provision of deduction for voids is mentioned for the said items.

The reply of the Government is not acceptable as IRC-SP-116-2018 stipulates that voids/ porosity of the filled gabion box shall be around 30 to 40 *per cent*. Further, as per the IRC provision, the gabion boxes were to be filled with smaller size of stones to fill up the voids. However, Audit scrutiny revealed that the agreement did not provide any filling of voids with spall of minimum size 25 mm and no separate measurement and payment was also made for use of 25 mm of spall for filling of voids in gabion boxes as required under MoRTH/IRC specifications. Therefore, EE should have deducted the void/ porosity in gabion boxes as the structure of gabion boxes were prepared taking into account only with 200 mm stone boulders as per the agreement.

7.18 Avoidable extra cost for excess provision of bituminous surfacing and granular sub base

Adoption of excess thickness for bituminous surfacing and granular sub base in deviation to IRC provision led to avoidable extra cost of ₹4.35 crore.

Para 3.4.10 of Odisha Public Works Department (OPWD) code stipulates that the estimate should be prepared in most economical manner. Indian Road Congress (IRC-37:2001/2012) specifies the thickness of pavement depending on the strength of sub grade soil, expressed in terms of California Bearing Ratio (CBR)[234] and on the basis of projected number of commercial vehicles which would ply on the road calculated as Million Standard Axles (msa). The thickness of pavement of road is designed to ensure sufficiency of load bearing capacity of the road in accordance with expected traffic. As per Para 4.2.3.1 of IRC-37-2001, the bituminous surfacing consists of either a wearing course[235], or a binder course[236] *plus* a wearing course depending upon the traffic to be carried out. The Dense Bituminous Macadam (DBM) binder course is recommended for roads designed to carry traffic more than five msa. As per the above IRC, the DBM binder course may be preceded by a 75 mm thick Bituminous Macadam (BM) and the DBM layer may be reduced by 55.85 mm due to addition of BM layer.

Scrutiny of records of SE, Sambalpur (R&B) Division No. I and EE, Kalahandi (R&B) Division revealed (September/ December 2021) that the Chief Engineer (DPI & Roads) technically sanctioned the estimates of two road projects (names noted in **Table 7.3)**, for ₹76.76 crore between February and August 2019 under Central Road Fund[237] (CRF) Assistance. The works were awarded between January 2020 and June 2021 for ₹65.26 crore stipulating for completion of the work by September 2021 and December 2022. The works were in progress and payment of ₹49.85 crore was made to the contractors as of December 2021.

Further, scrutiny of records revealed that provision of excess crust thickness was made in deviation to IRC provisions (IRC 37-2001/2012) as detailed in **Table 7.3**:

Table 7.3: Composition of the pavements in widening of roads

Sl. No.	Name of the project	Length	Composition of the pavement		Excess
			As per IRC	As executed	
1.	Widening and strengthening of Talpali Hiraloi Balam Barghat Godhidhipa road (MDR)	1.30 km to 38.00 km (CBR :8 MSA: 5)	GSB 150 mm WMM 250 mm DBM 50 mm BC 25 mm	GSB 200 mm WMM 250 mm DBM 50 mm BC 30 mm	GSB 50 mm BC 05 mm
			Total 475 mm	Total 530 mm	Total 55 mm

[234] The CBR test is a penetration test used to evaluate the subgrade strength of roads and pavements. The results of these tests are used with the curves to determine the thickness of pavement and its component layers. This is the most widely used method for the design of flexible pavement.

[235] The most commonly wearing course are Surface dressing, open graded premix carpet, mix seal surfacing, semi dense bituminous concrete and bituminous concrete.

[236] The binder courses are bituminous macadam and dense bituminous macadam.

[237] As per the CRF guidelines, GoI funding is 100 *per cent.*

Sl. No.	Name of the project	Length	Composition of the pavement		Excess
			As per IRC	As executed	
2.	Widening and strengthening of Mading Pastikudi Deypur road to two lanes with paved shoulders	0 km to 18.953 km (CBR :5 MSA: 17)	GSB 300 mm WMM 250 mm BM 75 mm DBM 34.15 mm BC 40 mm	GSB 300 mm WMM 250 mm BM 100 mm DBM 50 mm BC 40 mm	BM 25 mm DBM 15.85 mm
			Total 699.15 mm	Total 740 mm	Total 40.85 mm

(Source: Information collected by Audit)

As indicated in the table, excess execution of crust thickness of the pavements resulted in extra expenditure of ₹1.48[238] crore and ₹2.87[239] crore.

The Government in Works Department stated (May 2022) that the adopted CBR value of the road was six *per cent* not eight *per cent*. Accordingly, the crust composition 535 mm was provided for road having CBR six *per cent* and msa five. The reply was not acceptable since sanctioned estimates of the above road provided CBR as eight and msa five which was technically sanctioned by the Chief Engineer (DPI & Roads). Further, the Government stated that for wear and tear of the bituminous surface increases exponentially on traffic intensity, it was necessary to provide 50 mm of DBM preceded by 100 mm of BM in the above stretch instead of providing 90 mm of DBM. The reply was not acceptable since IRC provides modification of the DBM binder course to be reduced by 55.85 mm of DBM. Moreover, as per IRC, thickness of 90 mm DBM was required for road having CBR five and traffic msa 17.

7.19 Undue benefit to contractor

Adoption of faulty analysis for calculation of item rates of excavation of foundation in laterite rock inflated the estimated cost by ₹5.83 crore, leading to undue benefit of ₹4.64 crore to the contractor, out of which ₹1.23 crore was recovered from the contractor at the instance of Audit.

Para 3.4.10 of the Odisha Public Works Department (OPWD) Code stipulates that estimate should be prepared in the most economical manner and should be based on the current Schedule of Rates (SoR)/Analysis of Rates (AoR). In the AoR, there was provision for the item of work "Excavation of foundation of laterite rock or any hard rock other than granite or disintegrated rock removed by chiseling including dressing and leveling the bed not exceeding 1.5 m depth and depositing the soil", for which 3.74 man-mulias[240] were required for excavation and transportation, within the initial lead of 50 m. The cost for excavation of laterite rock would be ₹1,169.20 per cum, including 20 *per cent* towards excavation for foundation, 7.5 *per cent* each towards over-head charges and contractor's profit and one *per cent* labour cess thereon. For excavation beyond 1.5 m lift[241], there was provision for additional labour of 4.1 labourers per 100 cum, in the AoR.

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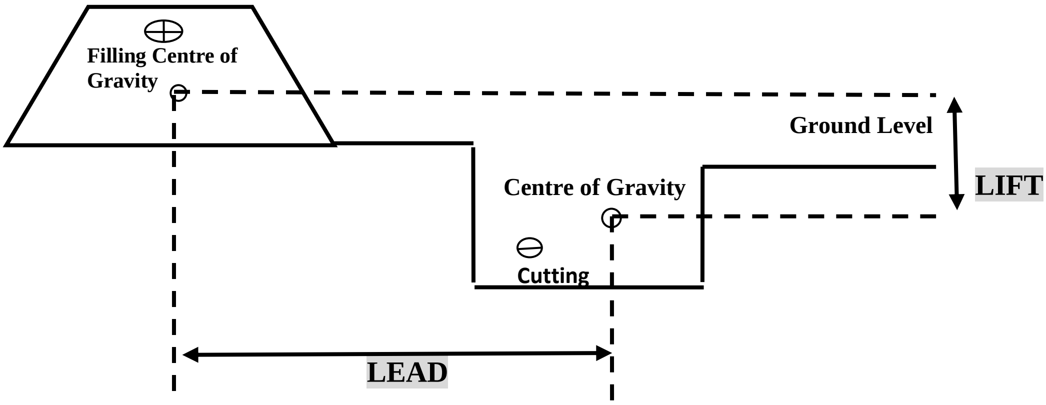
238 For excess GSB provided of 50 mm: (6,287.39 cum X ₹1,725.30 per cum) = ₹1,08,47,633 + for excess BC of 5 mm: (953.19 cum provided X ₹6,871.90 per cum) = ₹65,50,266 = ₹1,73,97,899 less 14.99 *per cent* tender premium = ₹1,47,89,954

239 For excess DBM of 15.85 mm provided: (1,612.58 cum X ₹12,952 per cum) = ₹2,08,86,136 + for excess BM of 25 mm provided: (2,645.24 cum X ₹4,865.20 per cum) = ₹1,28,69,622 = ₹3,37,55,758 less 14.99 *per cent* tender premium = ₹2,86,95,770

240 The male labour is termed as man-mulia in the AoR.

241 Lift means vertical distance for removal with reference to ground level

Image No.2 - Image showing cross section for excavation of earth work



Scrutiny of works estimates and agreements (February 2021), of the Bhubaneswar R&B Division No. II, revealed that the work "Construction of Judicial Court Complex at Bhubaneswar," had been technically sanctioned for ₹ 79.77 crore, by the Chief Engineer (Building), in May 2018. The work was awarded to a contractor for ₹74.73 crore, being 6.32 *per cent* less than the estimated cost in November 2018, for completion by November 2020. The work could not be completed in time and was in progress, with payment of ₹32.89 crore having been made (July 2022). The work *inter-alia* provided for excavation of laterite rock, within the initial lead of 50 m and lift of 1.5 m for 4,664.01 cum at ₹1,169.20 per cum, with one additional lift for 4,664.01 cum at ₹2,237.40 per cum, two additional lifts for 4,198.65 cum at ₹3,305.60 per cum and three additional lifts for 629.80 cum at ₹4,373.80 per cum.

While computing the item rate for extra lift, the EE adopted the above 4.1 labourers per one cum instead for 100 cum in deviation to AoR. During execution of the work, the quantities, as per the first interim deviation Report (December 2019), were increased to 8,396.40 cum, 10,495.50 cum, 10,495.50 cum and 7,871.63 cum, respectively. The increase in quantities was due to decrease in the quantity of excavation of ordinary soil and hard rock.

Further, test-check of estimate of the items of above work revealed that, in the analysis of item rates, the division had incorrectly added the cost of 4.1 labourers per cum, instead of 100 cum, for each additional lift. Due to unwarranted excess provision of labour charges for each additional lift, the estimated cost was inflated by ₹5.83 crore. The undue benefit of ₹4.64 crore, including tender premium and GST, had already been passed on to the contractor (July 2022), as detailed in the **Table 7.4**.

Table 7.4: Extra cost due to faulty calculation of item rate

Sl. No.	Excavation work of laterite rock	Quantity excavated (in cum)	Extra lift	Rate as per AoR (Per cum) (in ₹)	Rate applied (Per cum) (in ₹)	Differential extra rate applied (Per cum) (Col. F - E) (in ₹)	Extra payment (in ₹) (Col 8 = 4 x 7)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*
1	Up to 1.5 m depth	7,742.67	-	1,169.20	1,169.20	-	-
2	From 1.5 to 3 m	7,733.94	1	1,179.88	2,237.40	1,057.52	81,78,778
3	From 3 to 4.5 m	7,733.94	2	1,190.57	3,305.60	2,115.03	1,63,57,532
4	From 4.5 to 6 m	6,206.73	3	1,201.25	4,373.80	3,172.55	1,96,91,139
	Total	**29,417.28**					**4,42,27,449**
	Including Tender premium	Less 6.32 *per cent*					4,14,32,275
	Total Including 12 *per cent* GST						**4,64,04,148**

While accepting the audit comments, the Government Stated (February 2023) that, the bonafide mistake in unit rate for excavation for foundation in laterite rock or any hard rock (other than granite or disintegrated rock) has been rectified by the Technical Committee headed by SE, Central (R&B) Circle, Bhubaneswar (April 2021). Accordingly, the excess payment to contractor amounting to ₹1.23 crore was recovered out of the excess amount of ₹3.23 crore from 10th to 19th RA bill and the balance amount would be recovered from the rest of the RA bills. However, the Government need to ensure the recovery of the excess paid amount and the department to be more vigilant while processing the payments.

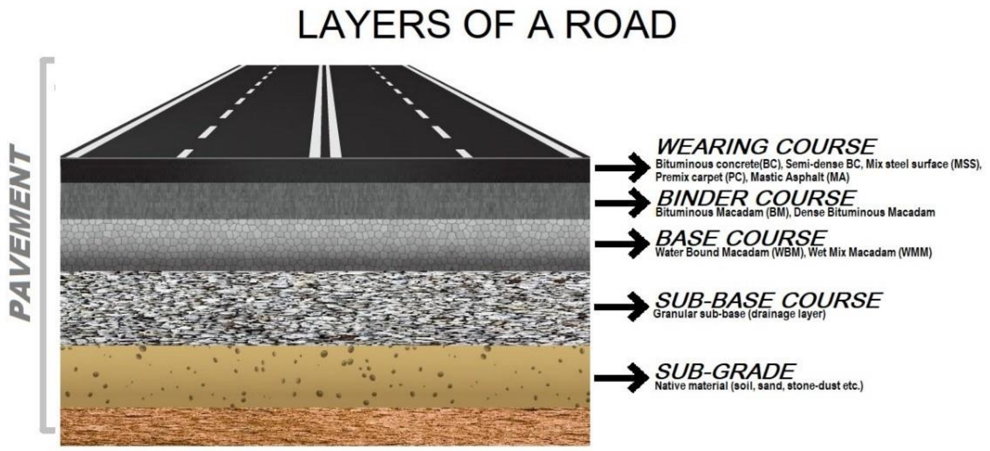
7.20 Wasteful expenditure

Laxity of departmental officers in preparation of estimates for an existing road led to wasteful expenditure of ₹3.54 crore.

Para 3.4.10(i) of the Odisha Public Works Department (OPWD) Code required a certificate that the Divisional Officer had personally visited the spot and prepared the estimate using the sanctioned Schedule of Rates (SoR) and provided for the most economical and safe way of executing the work. The works department follows the specifications of the Indian Road Congress (IRC) for designing new roads, as well as for improvement of existing roads. As per IRC specifications, the pavement thickness of a road depends on the load bearing capacity of the soil, expressed in terms of the California Bearing Ratio (CBR) and also on the basis of the projected number of commercial vehicles which would use the road, calculated as Million Standard Axles (msa). For design of strengthening measures or overlays for existing pavements, the IRC-2001/2012 recommended to follow IRC-81-1997 for Benkelman Beam Deflection Technique (BBDT) or more suitable procedure based on evaluation of properties of pavements layers by Falling Weight Deflectometer (FWD[242]) as per IRC 115-2014.

[242] Falling weight deflectometer. As per IRC 115-2014, Falling Weight Deflectometer (FWD) is an impulse-loading device in which a transient load is applied to the pavement and the deflected shape of the pavement surface is measured.

Scrutiny of estimates and agreements of road works (September 2021) at the R&B Division, Sundargarh, revealed that the work "widening and strengthening of Gopalpur-Chhatisgarh Boarder Road with paved shoulder from 4.700 km to 28.960 km," under the Inter-State Connectivity Scheme, for the financial year 2017-18, financed by the Government of India (GoI), was technically sanctioned for ₹53.80 crore, in March 2018. The work was awarded to a contractor for ₹39.78 crore, in January 2019, for completion by July 2020. The traffic survey of the road was conducted (September 2017) and the design of the crust was prepared according to IRC 37-2012, considering the design traffic as 20 msa and CBR 6, for which the IRC has specified pavement thickness of 260 mm granular subbase (GSB) 250 mm, wet mix macadam (WMM), 90 mm dense bituminous macadam (DBM) and 40 mm bituminous concrete (BC). As the road was an existing road, the Division provided 260 mm GSB and 250 mm WMM in the widening portion and only 100 mm WMM in the existing carriage way and estimates were prepared (December 2017), considering the existing crust thickness as 310 mm without BBDT or FWD test for evaluation of the structural strength of the existing crust.



During execution of work (2019), the existing carriageway was seen to have settled down/ been distressed, forming large depressions, with a number of potholes and the GSB and WMM layer of the road was virtually chipped off from the road surface, due to plying of heavy vehicles on the road. The work was executed for 5.050 km (from 4.700 km to 9.750 km), as provisioned in the DPR, incurring expenditure of ₹3.54 crore and was closed in January 2020. Fresh estimates of rigid[243] pavement for the same road work renamed as "Improvement to Duduka-Gopalpur-Toparia Road to two lane with paved shoulder from 6.206 km to 28.564 km," amounting to ₹146.51 crore was prepared (January 2021) and awarded (July 2021) for an amount of ₹102.65 crore excluding GST, with the construction period of project being 24 months.

In this regard, Audit observed the following irregularities:

- Due to laxity of the departmental officers, the original estimates had been prepared without considering the actual crust thickness of the existing road and the thickness had been certified as 310 mm without any tests being conducted on the existing road.

[243] Rigid pavement road is a cement concrete road.

- As the road surface had failed during the execution of work, a fresh traffic census was conducted (November 2019) and the work was stopped (December 2019).
- As per the Chief Engineer (DPI & Roads) instructions (January 2020), FWD test was conducted and revised estimates were prepared by proposing a Cement Concrete (CC) road, with provision of GSB and Dry Lean Concrete (DLC)[244] in the entire stretch of the road. The work was awarded (July 2021) without foreclosure of the original agreement (September 2021).
- It was observed, during joint physical inspection of site (September 2021) by the Audit team and departmental Engineer, that there was no existing crust and the road was in a distressed condition.

Photo No.30 - Gopalpur-Chhatisgarh Boarder Road

- A road portion, from 4.800 km to 6.206 km, where the work was executed under the Inter-State connectivity scheme, was taken over by the Mahanadi Coal Limited (MCL), as this portion fell under a coal bearing area. MCL was constructing a new four lane bypass road, which starts from 4.700 km and meets at 6.700 km.

Thus, the preparation of faulty estimate, by not considering the actual crust thickness requirement for the existing road, led to wasteful expenditure of ₹3.54 crore.

The Government stated (February 2023) that due to plying of heavy loaded mining vehicles day and night on the road, the existing carriage way was settled down/ distressed forming large depressions with number of potholes. Further Government stated that the Chief Engineer, DPI & Roads inspected the road (January 2020) and observed regarding the inadequate crust provided in original estimate as per the requirement of the new traffic census and instructed to stop the pavement work due to the failure of the road crust. Considering the new traffic census, Sundargarh R&B Division had proposed for construction of four lane road instead of two lane road with concrete pavement under EPC mode, and the work was under progress. The reply was not acceptable as FWD test had not been conducted before preparation of the original estimates for the work due to which, the road was distressed, forming large depressions during execution which led to wasteful expenditure incurred on bituminous pavement.

[244] Dry Lean Concrete: Dry lean concrete (DLC) works as a concrete subbase course over which pavement quality concrete slabs rest

7.21 Excess payment to contractor

Non-reduction of cost of work under negative change of scope of contract led to excess payment of ₹3.71 crore.

As per Article 13.1 of the Engineering Procurement and Construction (EPC) contract format prescribed by MoRTH (March 2019[245]), the authority may modify/ alter the work (change of scope), within a period of six months from the date of commencement of the work. The contractor has to submit the said change of scope of work either involving additional cost or reduction in cost to the authority.

Scrutiny of works estimates and agreements (March 2022) at Ganjam (R&B) Division No.I, Berhampur, revealed that the work "widening and strengthening of Berhampur-Tamana-Chikiti-Surangi-Mandarda Road," from 0.0 to 01.0 km and from 2.0 km to 32.0 km, under the State Highways Development Programme (SHDP), was awarded to a contractor, in May 2014, for ₹43 crore and was to be completed by May 2016. The work was completed (December 2019) and final bill for ₹37.74 crore was paid (February 2020).

From the detailed estimates of the work, it was noticed that, as per the original scope, the contractor had to execute 2,600 m of drain (both sides), in the road portion, from 19.300 km to 21.200 km and 300 m breast wall[246]. Audit noticed that the scope of the work was reduced by 1.9 km[247] during execution of the work. Hence, there should have been a corresponding reduction in the length of the drain by 2,600 m and protection work by 300 m. Further, it was noticed that, in 76 Cross Drainages (CDs) length of 657.45 m had also not been deducted from the total road length as these CDs were constructed separately.

During joint physical verification (JPV) of the road (March 2022), by the Audit team, with the Departmental Engineer, it was noticed that no gabion wall had been provided in both sides of the three reaches of the road length from 20.900 to 21.850 km. The details of original scope of works and works not executed by the agency are given in the **Table No.7.5** below:

Table No. 7.5 : Details of scope of work and non exeuction

Item	Original scope of works for execution	Total cost of work	Works not executed	Total works not executed (In meters)	Cost (₹ in crore)
Gabion wall	1.150 km	2.32	From 20.900 to 21.200 km= 0.300 km (LHS[248]) From 21.200 to 21.850 km = 0.650 km (LHS) From 21.300 to 21.500 km = 0.200 km (RHS[249])	1,150 m	2.32
Breast wall	0.800 km	0.37	From 20.900 to 21.200 km = 0.300 km (RHS)	300 m	0.13
Drain	7.820 km	2.03	From 19.300 to 20.100 km = 1.600 km From 20.200 to20.700 km = 1.000 km	2,600 m	0.67
CD works	657.45 m	0.59	Non-deduction from road length works executed	657.45 m	0.59
	Total	**5.31**			**3.71**

245 Notification No.RW/NH-37010/4/2010-EAP(Printing) Vol.IV dated 05 March 2019
246 A wall at the downstream end of the road known as the breast wall to support and hold the naturally occurring slope of the earth at the hill face.
247 From 19.300 to 21.200 km of road
248 Left Hand Side
249 Right Hand Side

Although, the contractor had not executed the 1,150 m gabion walls, 2,600 m of drain and 300 m of protection wall, the cost of ₹3.12 crore had not been reduced under change of scope of work and non-deduction of 657.45 m length of CDs, (amounting to ₹59 lakh) from the total road length resulting in excess payment of ₹3.71 crore to the contractor as calculated in the table.

The Government stated (February 2023) that under EPC mode of contract, payment was made considering the whole project length as a single unit and the design and engineering responsibilities lies with the EPC contract and detailed quantity, detailed crust thickness for different stretches, type of CD structures and their length *etc.*, under the project was not exactly known during the execution of the agreement. Hence payment schedule was prepared taking the whole project length and any reduction from the road length was done accordingly. The reply was not tenable, since the sanctioned estimates provided details of CD works, to be done in different stretches of the road. Non-deduction of the length of drain and protection wall work in the said portion, the Gabion box work and length of CDs led to excess payment.

7.22 Idle expenditure due to abandonment of work in midway

Improper survey and investigation before commencement of work and adoption of faulty design for a bridge, led to abandonment of road and bridge work, resulting in idle expenditure of ₹1.41 crore.

Para 3.4.10 (i) of the Odisha Public Works Department (OPWD) Code, Volume I, envisages that the Divisional Officer[250] should record a certificate that he/she has personally visited the spot and prepared the estimate using the sanctioned schedule of rates and by providing for the most economical and safe way of executing the work, while submitting the estimates for technical sanction by the Superintending Engineer (SE)/ Chief Engineer (CE). Para 3.2.7 of the OPWD Code also stipulates that, while obtaining technical sanction, it should be ensured that the proposal is structurally sound and the estimates are accurately calculated and based on adequate data. Further, as per Para 3.7.4 of the above Code, no work should be commenced on land which has not been duly made over to PWD by a responsible civil officer.

Scrutiny of records (March 2022) of the Superitending Engineer (SE), Puri R&B Division, revealed that the estimate for the work "Widening of Road from Khandia Bandha to NH by-pass from 0.00 km to 3.500 km" had been technically sanctioned in October 2016, by the Chief Engineer (Design, Planning, Investigation and Roads), for ₹8.87 crore. The work was awarded (December 2016) to a contacting agency, for ₹8.32 crore, being 6.20 *per cent* less than the estimated cost put to tender, with the date of commencement and the stipulated date of completion being 23 December 2016 and 22 February 2018, respectively.

Audit observed that the EE and SE (R&B) Circle, Khordha, certified in the estimates, that they had visited (September 2016) the site and were fully satisfied about the survey and investigation of the work. The work was started (December 2016) according to the agreement. The Assistant Executive

[250] As per Para 2.2.25 of OPWD Code Vol. I, the Executive Engineer of the division is known as the Divisional Officer

Engineer (AEE), Roads Sub-Division No. II, Puri, visited (April 2018) the work site and reported that, during the excavation of the riverbed, for the foundation of the proposed bridge over Musa Nalah, 'huge mud with slushy soil' had come out after a depth of one meter and filled the trench, owing to which further excavation could not be executed. The Department changed the scope of the 'Box Cell Bridge (BCB)[251]' with raft foundation', to a 'High Level Bridge (HL Bridge)[252] with pile foundation'. The agency did not agree to execute the work further, due to non-availability of land for the remaining portion of roads and change of design of the BCB to HL Bridge. As such, the agency, after executing a road portion of only 514 metres where land was available, requested (August 2019) for closure of the contract. The contract was closed (October 2021), with the approval of the Tender Committee, headed by the Engineer-in Chief (Civil), after execution of work costing ₹1.41 crore.

The Superintending Engineer (R&B) Puri intimated to Audit that the road work had to be stopped, as BCB was not technically viable and it needed to be redesigned as a H.L. Bridge with Pile foundation, with enhanced project cost, along with land acquisition for the road portion.

Further, during joint physical verification (March 2022) of the road, Audit observed that only 514 metres of the road, from the end point (NH side), had been completed, with seven meters width. The balance road had not been completed and the HL Bridge over Musa Nalah, in the starting point, had also not been constructed.

Photo No.31: Ucompleted portion of road and bridge of Khandia Bandha to NH by-pass (NH-316)

Photo No.32: Completed portion of road - Khandia Bandha to NH by-pass (NH-316)

Thus, improper survey and investigation of road and adoption of faulty design of BC Bridge (which later on changed to HL Bridge) resulted in abandonment of the work after execution of only 514 metres of road, out of the total road length of 2,304 metres[253]. As such, the intended purpose of having a direct link to Puri Town, from NH 316, by widening of the road with double lane (seven metres) could not be achieved, resulting in idle expenditure of ₹1.41 crore.

[251] A box cell bridge is a tunnel-like structure built under roadways or railways to provide cross drainage from one side to the other parts.

[252] A high level bridge is a bridge which carries the roadway above the Highest Flood Level (HFL) of a channel (including afflux) or the high tide level, with appropriate vertical clearance.

[253] SE, R&B Division, Puri intimated the Additional Chief Engineer (Roads), Bhubaneswar (August 2021) that the length of the road in the title of the project was erroneously mentioned as 0.00 km to 3.50 km instead of 0.00 km to 2.304 km.

The Government stated (February 2023) that the box cell bridge designed with raft foundation was not found to be suitable by the higher authorities due to presence of deposit earth accumulated from storm drainage water discharge. So design of bridge, from raft foundation to pile foundation with construction of high level bridge, had to be changed. The Government further stated that some stretches of existing road required widening involved acquisition of private land. The land acquisition issue was likely to be resolved and also invitation of tender for the balance work was under process. The reply was not tenable, as it did not address the issue of faulty design of the bridge and non-acquisition of private land, which led to abandonment of the work.

7.23 Inflated estimates led to undue benefit to contractors

Incorrect adoption of transportation cost of GSB, on conveyance of material inflated the estimates of road works and resulted in undue benefit of ₹6.26 crore to the contractors.

As per para 3.4.10 of the Odisha Public Works Department (OPWD) Code, estimates should be prepared in the most economical manner. For this purpose, the Divisional Officer has to certify that he has personally visited the site and prepared the estimate using the sanctioned Schedule of Rates (SoR) and provided for the most economical and safe way of executing the work. Chapter III of the SoR provides the rates for conveyance of material on volumetric basis, including for loading and unloading. Further, Chapter IV of the SoR also provides the usage rates of service contract for plants and machinery, for transportation of soil, Granular Sub-base (GSB)[254], Wet Mix Macadam (WMM)[255], Hotmix *etc*., in three methods, i.e volumetric, weighment and per hour basis. As per Chapter IV, the rate for transportation of GSB on volumetric basis is ₹20.87 per km by tipper truck having output of 5.5 cum, i.e at the rate of ₹3.79 per cum. Adding 10 *per cent* towards loading and unloading charges, the cost works out to ₹4.17 per km for one cum.

Scrutiny of estimates in five[256] R&B Divisions revealed that 13 works, of improvement, widening and strengthening of roads, were technically sanctioned by the Chief Engineer (DPI & Roads), for ₹257.88 crore. The works were awarded to contractors for ₹234.14 crore, between April 2017 and June 2021 for completion between February 2018 and December 2022. The works were in progress or had been completed, and the contractors had been paid ₹230.30 crore (August 2022). The works *inter alia* involved 1.39 lakh cum of compacted GSB, for which 1.78 lakh cum loose stone material was required. Payment of transportation charges of ₹10.37 crore had been made in this regard.

For GSB, the transportation cost should have been calculated on volumetric basis, as per Chapter - IV of SoR. Hence, the transportation cost should have ranged from ₹41.70 to ₹504.57 per cum, at lead distances ranging from 10 to

[254] Granular Sub-base: The well-graded material shall be laid in one or more layers as sub-base and upper sub-base (termed as sub-base) as necessary according to lines, grades and cross-sections.

[255] Wet Mix Macadam: Wet Mix Macadam includes laying spreading and compacting clean, crushed, graded aggregate and granular material, premixed with water to dense mass.

[256] Jharsuguda, Kalahandi, Rourkela, Sambalpur and Sundargarh

121 km, and the total transportation cost should have been ₹4.31 crore, for transportation of 1.78 lakh cum of stone material used for GSB as calculated by Audit. However, it was observed that the Divisions had wrongly adopted the transportation cost of materials on volumetric basis, as per Chapter – III of SoR, at rates ranging from ₹193.67 to ₹987.29 per cum, at lead distance ranging from 10 to 121 km, in the estimates instead of adopting the rates ranging from ₹41.70 to ₹504.57 per cum, as per Chapter - IV of SoR. Thus, incorrect adoption of transportation charges on conveyance of GSB, inflated the estimates. Higher estimated cost put to tender resulted in higher bids and award of contracts at higher costs. This led to undue benefit of ₹6.26 crore, including tender premium[257] already passed to the contractors, as detailed in ***Appendix- XL***.

The Government stated (March 2023) that Chapter IV of SoR provides hire charges of plants and machineries, where output of different machineries, unit and rates are mentioned. This chapter is meant for carriage of plant mixed materials, from plant to site, where all materials required for the items are mixed in WMM plant/HM plant and transported for laying. Further, the Government stated that for GSB items there are two types of methods i.e plant mixed method and mix in place method. MoRTH Date Book chapter 4 provides analysis for both plant mix method and mix in place method. The reply was not tenable since Chapter-IV of the SoR does not categorise the rates for transportation of materials by machineries only for plant mix method. Thus, non-adoption of transportation cost as per Chapter IV of the SoR for conveyance of GSB, inflated the estimates and higher estimated cost put to tender resulted in higher bids and award of contracts at higher costs led to undue benefit of ₹6.26 crore to the contractor.

7.24 Avoidable extra expenditure due to provision of excess width of road

Construction of two-lane road with paved shoulders, in deviation from IRC provisions, led to avoidable expenditure of ₹7.30 crore.

Para 3.4.10 of the Odisha Public Works Department Code (OPWD) stipulates that estimates should be prepared in the most economical manner. Para 7.2 of IRC-73-1980[258] stipulates that two-lane roads, having a seven meter wide carriageway with normal earthen shoulders, can cater to traffic upto 10,000 Passenger Car Unit (PCU) per day and roads of intermediate width i.e. having a carriageway of 5.5 meters with normal earthen shoulders, can cater to traffic upto 5,000 PCU per

257 Tender premium refers to the amount of money a bidder quotes that is higher/ lesser than the estimated cost of a project.

258 For purpose of design, the capacity (passenger car units per day in both directions) of different type of roads is calculated basing on Para 7.2 of IRC 73-1980.

day. Para 1.14(b) of IRC-SP-73-2007 recommends that the carriageway may be widened, by providing 1.5 meter wide paved shoulders on either side, when the average daily traffic exceeds 10,000 PCU in plain terrain or 8,000 PCUs in rolling terrain, on the basis of the twelve months' average in an accounting year.

Scrutiny of estimates of two[259] R&B Divisions revealed that the Chief Engineer (CE) (DPI & Roads)[260] had technically sanctioned two road works[261] (September 2016 and August 2019) for ₹62.02 crore and the works had been awarded (June 2017 and May 2020) to contractors for ₹48.66 crore with scheduled completion by September 2018 and June 2021. The estimates provided for execution of two-lane roads of seven-meter width with paved shoulders of 1.5 meters on both sides. The works were in progress, with payment of ₹50.29 crore having been made (January 2022).

Further, it was revealed that the two Divisions had assessed (September 2016 and December 2018) the weekly traffic density data, for the above roads, for determination of PCU and the PCU of the roads had been worked out as 2,394[262] and 4,699[263] per day. Since the PCUs were less than IRC specifications, the roads were not qualified for widening and strengthening to double-lane roads of seven-meter width with paved shoulders. As such, the technical sanctions accorded by CE, (DPI & Roads) were not correct and execution of two lane carriageway with paved shoulder in deviation from the IRC guidelines was unwarranted. Due to provision of paved shoulder, there was unwarranted excess provision of 31,306.20 cum Granular Sub-Base, Wet Mix Macadam, Dense Graded Bituminous Macadam and Bituminous Concrete resulting in extra expenditure of ₹7.30 crore, including tender premium, as detailed in ***Appendix- XLI.***

The Government stated (March 2022) that in respect of Dantiamuhan-Chitrada Road, the road condition was very bad during preparation of Detailed Project Report (DPR) and the existing crust of the road needed considerable improvement to double lane carriage way up to 10 meters to cater to growing traffic density up to 10,000 PCU. In respect of Rangadihi-Phuljhar-Balabhadrapur-Jagdala Dam road, the Government stated that the road passes through mining affected area and to provide the standard support to the road pavement and to provide storm water discharge away from the main lane, the provision of paved shoulder became essential.

[259] R&B Divisions, Keonjhar and Mayurbhanj

[260] Design, Planning and Investigation and Roads

[261] 1) Improvement to Rangadihi Phuljhar Balabhadrapur Jagadala Dam road (ODR) from 18/00 to 28/00 km under district Mineral fund in the distrct of Keonjhar (Keonjhar R&B Division) and 2) Widening & Strengthening of Dantiamuhan-Chitrada road (MDR) to two lane from 0/000 km to 12/000 km (Mayurbhanj R&B Division)

[262] Dantiamuhan-Chitrada road from 0/000 km to 12/000 km

[263] Rangadihi Phuljhar Balabhadrapur Jagadala Dam road (ODR) from 18/00 to 28/00 km under District Mineral Fund in the distrct of Keonjhar

The replies were not tenable, as the IRC guidelines provide for 1.5 meter wide paved shoulders on either side, when the average daily traffic exceeds 10,000 PCU in plain terrain and future traffic growth for 15 years had already taken into consideration, during calculation of msa[264] for the design of crust[265]. However, in these cases the PCUs of the roads were much below i.e, in the range of 2,394 (23.94 *per cent*) and 4,699 (46.99 *per cent*). Hence, provision of two-lanes with paved shoulders, for the aforesaid roads, was unwarranted and led to avoidable expenditure of ₹7.30 crore.

7.25 Avoidable expenditure

Utilisation of high cost sub-base material, despite availability of low cost slag, in the construction of road pavement, led to avoidable expenditure of ₹2.76 crore.

Para 3.4.10 of the OPWD code stipulates that estimate should be prepared in the most economic manner. Para 7.2.1.1 of IRC:37-2012 specifies that the sub-base[266] material may consist of natural sand, moorum, gravel, laterite, kankar, brick metal, and crushed stone, crushed slag and reclaimed crushed concrete/reclaimed asphalt pavement or combinations thereof, meeting the prescribed grading and physical requirements.

Scrutiny of estimates, analysis of rates and RA bills, of the Superintending Engineer (SE), Rourkela (R&B) Division, revealed that three road[267] works had been awarded, between December 2016 and December 2019 at a cost of ₹66.82 crore, for completion between March 2018 and December 2021. Out of these three road works, one work[268] with agreement cost ₹11.54 crore had been completed (March 2018), the remaining two road works were in progress and the contractors had been paid against RA bills of ₹85.24 crore (as of December 2022).

Further, it was observed that the estimates had been prepared by considering the Granular Sub-Base (GSB) (stone product) with lead[269] ranging from 60 to 133 km, for which payments had been made at rates ranging between ₹1,853.82 and ₹2,252.58 per cum. For execution of 29,592.50 cum GSB, for the sub-base of all the three roads, ₹6.20 crore had been paid to the contractors (as of December 2022).

264 Million Standard Axle (MSA) is used for the designing of the pavement. It describes about the number of commercial vehicles that would be occupying the road at the end of the design life of road.

265 Crust means the surface of the road

266 The sub-base is the layer of aggregate materials that lies immediately below the pavement and usually consists of crushed aggregate or recycled materials.

267 (i) Construction of Koida Bypass road from RD 0.0 to 8.00 km (ii) Widening to Tuniapalli Balia road from RD 14.800 to 27.450 km and (iii) Widening to Tuniapalli Balia road from RD 0.00 to 12.050 km

268 Widening to Tuniapalli Balia road from RD 14.800 to 27.450 km

269 Lead is the horizontal distance between the centre of excavation to the centre of deposition.

Audit observed that slag[270] a cheaper substitute of stone products for sub-base, was available free of cost, in the Rourkela Steel Plant site and it had earlier been used as sub-base material, by the same Division, in similar work[271]. The lead distance for slag ranged from 52 to 124 km. In the analysis of item rates of sub-base using slag, the proportion of slag was 90 *per cent* and quarry dust was 10 *per cent*. Considering the above ratio, the cost of the sub-base, using slag, would have ranged between ₹825.93 and ₹1,377.04 per cum. Despite the availability and economical cost of slag, the Superitending Engineer (EE), Rourkela (R&B) division, did not consider slag for use in the sub-base, in the estimates and opted for GSB, deviating from the OPWD code and IRC-37. Thus, the provision of GSB, which was a high-cost material involving extra lead charges in the estimates, instead of slag which was low cost material with lower lead charges, resulted in avoidable expenditure of ₹2.76 crore, on the work executed, (as of December 2022) as detailed in the ***Appendix -XLII.***

The Government stated that (February 2023) NIT, Rourkela was requested to determine the usability of the materials such as slag in sub-grade in construction of road. The report of NIT, Rourkela was not received for which use of slag as sub-base was not taken into consideration for further work. The reply was not tenable, since no feasibility check was required, because, as per IRC-37, slag was an accepted material for use in the sub-base of roads and it was cheaper, compared to stone products, as well as it was used in other road works.

7.26 Undue benefit to the contractor due to invitation of tender at inflated rate

Invitation of tender, at inflated estimated cost, led to undue benefit to the contractor of ₹18.94 crore.

Para 3.4.10 of the Odisha Public Works Department (OPWD) Code Vol. I, stipulates that estimates should be prepared in the most economical manner. Para 3.2.7 of the OPWD code stipulates that, for every work proposed to be carried out, a properly detailed estimate must be prepared for sanction of the competent authority and technical sanction of the estimate must be obtained before the execution of any work.

Scrutiny of estimates and tender files, at the R&B Division No. V, Bhubaneswar, revealed that the General Administration (GA) Department, Government of Odisha (GoO), had approved (September 2013) the construction of a High Rise Multistoried Office Building at Bhubaneswar (Kharvel Bhawan), to be completed within 24 calendar months after award of the work. The Chief Engineer (Buildings) (CE) prepared (September 2013) the estimate, at the rate of ₹35,000 per sqm, for construction of 30,000 sqm, along

[270] Slag is the glass-like by-product left over after the a desired metal has been separated from its raw ore.

[271] Patamunda to Koida road from 0.000 to 8.000 km vide Agreement No.29P1 of 2017-18

with lumpsum provision of ₹22 crore towards site development, planning, external electrification, water supply, sanitation and diesel genset, totaling ₹127.00 crore. Based on the above estimate, the tender was invited (September 2013) for ₹127.00 crore. The contractors submitted (December 2013) their bids, keeping in view the estimated cost of the high rise building, as mentioned in the tender. The financial bids were opened and evaluated (11 February 2014) by the tender committee. The lowest bidder submitted (20 February 2014) the negotiated bid price of ₹123.94 crore, being 2.41 *per cent* less than the estimated cost of ₹127 crore put to tender.

It was, however, revealed that, after invitation of tender, the rate of civil works of the above building work had been modified (14 February 2014), by the CE, to ₹30,000 per sqm. For construction of 30,000 sqm, therefore, the cost of construction worked out to ₹90 crore and total cost worked out to ₹105 crore including the lumpsum provision of ₹15 crore kept for other items of work. However, no corrigendum, for the modified estimated cost of the work, was issued to the bidders after invitation of tender.

Meanwhile, the tender committee meeting, held on 26 February 2014, evaluated the bid, by comparing the bid price submitted by the lowest bidder, with the modified cost of the work (₹105 crore). The accepted amount of ₹123.94 crore was evaluated as being 18.04 *per cent* in excess of the modified estimated cost of ₹105 crore. Reasons for not reducing the tendered amount, either through fresh tender, or through a corrigendum were not found available on record. Thus, the modified reduced rates were not put into effect and the agreement was entered into, based on the original higher estimates of tender. The work was awarded (March 2015) for completion by March 2017. It was subsequently completed (September 2019) and the contractor was paid ₹126.82 crore (April 2019) including service tax of ₹2.88 crore. Hence, laxity on the part of the CE, to prepare the estimates economically, by adopting the applicable rates on realistic basis, in contravention of the OPWD Code, coupled with non-invitation of fresh tenders after modification in the estimated cost, before the commencement of work, resulted in undue benefit to the contractor, amounting to ₹18.94 crore.

On this being pointed out, the Government stated (January 2023) that the departmental estimated cost was only indicative and is required to compare the offers of the bidders, to arrive at the considerable reasonability, for acceptance of the tender. The estimated project cost had got no bearing on the offer quoted by the intending bidders. The reply was not acceptable, as the departmental estimated cost was put to tender for which the bidders had got the scope to quote their rates accordingly, in the form of premium or discount.

FINANCE DEPARTMENT

7.27 Response to Audit

Timely response to audit findings is one of the essential attributes of good governance as it provides assurance that the Government takes its stewardship role seriously.

Accountant General (Audit-II), Odisha conducts periodical inspection of Government departments and their field offices to test check the transactions and verify the maintenance of important accounting and other records as per prescribed rules and procedures. These inspections are followed by Inspection Reports (IRs) sent to the Heads of offices and the next higher authorities. Defects and omissions are expected to be attended promptly and compliance reported to the Accountant General. A half-yearly Report of pending IRs is sent to the Secretary of each department to facilitate monitoring of the audit observations and their compliance by the departments. Apart from the above standing mechanism, Audit Committee Meetings, consisting of representatives of administrative departments, the office of the Accountant General (Audit-II) and representative from Finance Department are also held for settlement of outstanding IRs and paragraphs after detailed deliberation and verification of records.

A review of IRs issued up to March 2022 pertaining to 15 departments showed that 18,309 paragraphs relating to 3,796 IRs were outstanding at the end of June 2022. Of these, 1,584 IRs containing 5,787 paragraphs are outstanding for more than 10 years. Even first replies from the Heads of Offices, which was to be furnished within one month, have not been received in respect of 358 IRs issued up to March 2022 though it was pursued through Apex Committee meetings and the Departmental monitoring committee meetings. Year-wise position of the outstanding IRs and paragraphs is detailed in ***Appendix - XLIII.***

Serious irregularities commented upon in these IRs have not been settled as of June 2022 **(*Appendix - XLIV*)**. Number of paragraphs and amount involved in these irregularities is categorised in **Table No. 7.6**.

Table No.7.6: Category of irregularities, number of paragraphs and amount

(₹ in crore)

Sl. No.	Category of irregularities	Number of paragraphs	Amount
1	Non-compliance with rules and regulations	97	2,045.42
2	Audit against propriety/ expenditure without justification	26	137.32
3	Persistent/ pervasive irregularities	42	669.47
4	Failure of oversight/ governance	2	4.22

(Source: Information collected by Audit)

Audit has objected to recurring issues year on year and conveyed through Audit Reports of the Comptroller and Auditor General of India for initiating remedial measures to prevent its recurrence. Audit observed that inspite of assurance provided by the State Government for remedial measures, the irregularities persist. Few of such persistent irregularities are detailed in ***Appendix - XLV***.

Bhubaneswar
The o2 May 2024

(VISHWANATH SINGH JADON)
Accountant General (Audit-II), Odisha

Countersigned

New Delhi
The 06 May 2024

(GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India

Appendices

Appendix – I

(Refer paragraph 1.7 at page 3)

Statement showing Inspection Reports/ Paragraphs issued up to 31 March 2022 but not settled by 30 June 2022

Sl. No.	Name of the Department	Reports awaiting settlement up to June 2022		Reports awaiting settlement for more than 10 years		Reports to which even first reply has not been received
		Number of Reports	Number of Paragraphs	Number of Reports	Number of Paragraphs	Number of Reports
1	*2*	*3*	*4*	*5*	*6*	*7*
01	MSME	193	917	84	223	50
02	Tourism	42	178	8	9	14
03	Industries	59	214	5	5	5
04	Handlooms, Textiles & Handicraft	88	436	5	8	35
05	Odia Language, Literature & Culture	59	341	20	48	25
06	Steel & Mines	244	779	90	185	61
07	Public Enterprise	6	33	1	2	3
08	Commerce & Transport	757	2,522	310	663	32
09	Works	383	1,372	158	253	1
10	H & UD	547	6,055	296	2,932	20
11	Forest, Environment and Climate Change	542	1,699	248	614	0
12	Science & Technology	31	212	14	62	0
13	Energy	465	1,497	216	482	35
14	Home	245	1,421	52	115	33
15	Law	135	633	77	186	44
	Total	**3,796**	**18,309**	**1,584**	**5,787**	**358**

Appendix – II
(Refer paragraph 2.2.6.1 at page 28)

Deficiencies found in the Grievance Redressal System

(i) the scope contains

(a) configuration of escalation procedure on thumb rule basis or customisable in case of any exemptions for any particular ward depending on the size of its demography,

(b) The system will be capable enough to automatically escalate the grievance to the next level, if it is not resolved in the stipulated time. A flag will be raised in case of such a delay. However, no such scope was developed/ required for the KALIA database.

(ii) The Para 6.3 to 6.13 on Grievance Redressal System and para 7.1 to 7.4 on Grievance MIS was found irrelevant to KALIA Scheme. The descriptions were as follows:

Para No.	Description	Remarks
1	***2***	***3***
6.3	View/ Update Scheme Details	The grievance redressal system did not contains any scheme details /updations.
6.4	Addition of complaint category	There was no such complaint category in the KALIA Grievance Process.
6.5	View/ Update complaint category details	There was no such complaint category in the KALIA Grievance Process.
6.6	Addition of complaint sub category	There was no such complaint sub category (E) & (O) and escalation facility in the KALIA Grievance Process.
6.7	View/ update complaint sub category	There was no such complaint sub category in the KALIA Grievance process like booking of Kalyan Mandap or Townhall as described in the **6.7.14.**
6.8	Addition of event	There were no such information/events to be added in the KALIA Grievance process. The interface shown in **6.8.14** was the example for it.
6.9	View/Update information details	There were no such information/events to be added in the KALIA Grievance Process as described in the **6.9.14** interface with column heading info title, info description and expiry date.
6.10	Addition escalation details	There was no escalation process involved in the KALIA Grievance Process. Rather the KALIA grievance process was a workflow process where GPNO, BNO, DNO approvals were necessary.
6.11	View/Update escalation details	There was no escalation process in the KALIA Grievance Process. The UI-12 the output

Para No.	Description	Remarks
1	***2***	***3***
		shows escalation details of scheme BeMC with complaint category Sanitation and Public Health along with various subcategory with level of escalation which in not related to KALIA Scheme.
6.12	Complaint Registration	The UI 013 interface shows Scheme, complaint category and complaint sub category which is not related to KALIA Scheme.
6.13	Update complaint status	The UI 015 interface shows complaint category as sanitation and public health and the sub category as Anti Malaria Larva Operation, which is not related to KALIA Scheme.
7.1	Complaint category wise report	The interface shows complain category as 'sanitation and public health', 'civil infrastructure', 'street light' *etc*., which are not related to KALIA Scheme.
7.4	MIS Report	The interface at 7.4. shows assigned to as commissioner, junior engineer *etc*., which is not related to KALIA Scheme.

Appendix – III

(Refer paragraph 3.2.2.2 at page 45)

Statement showing violation of consent conditions by three coal mines during 2016-20

Name of Unit	M/s Kulda OCP	M/s Garjan Bahal OCP	M/s Basundhara (W) OCP
1	*2*	*3*	*4*
Date of Inspection	11 June 2016, 04 January 2017, 17 March 2017, 21 February 2018, 06 September 2018, 26 October 2018, 01 March 2019, 20 March 2019, 10 September 2019, 01 March 2020, 12 January 2021.	18 February 2019, 10 September 2019, 02 March 2020 and 11 January 2021	05 October 2016, 05 January 2017, 16 January 2018, 07 March 2018, 28 February 2019, 29 February 2020 and 13 January 2021.
Violation of consent conditions			
1	The unit did not establish mechanised wheel washing system with integration of complete recirculation system at its exit point of quarry or at the coal stockyard resulting accumulation of dust in public roads beyond exit point and fugitive dust problem during plying of vehicles.	Non- providing of instant shower system and Wheel washing facility at the exit point of the quarry or at the coal stock yard with integration of complete recirculation system, though it was stipulated to be completed by September 2020.	Mine had not installed instant water shower system at all exit point of quarry during moving of coal loaded vehicle and at Railway sidings, mechanised wheel washing facility with integration of complete recirculation system so as to prevent generation of dust although there was a time line to complete the same by September 2020.
2	Although the unit installed (11 January 2021) three fog canons out of six at its four stockyards, the same were ineffective because water sprinkling span was inadequate resulting heavy fugitive emission during loading and unloading operation of coal at stockyards.	Non-installation of Fog cannons at stockyards No.2 and No.4 by 31 July 2020 for which there were heavy fugitive dust and smoke near the coal stock yard.	
3	Transporting trucks were not using tarpaulin cover while transporting coal through public road causing dust nuisance.	Transportation of coal in vehicle without tarpaulin covering causing fugitive dust problem and public nuisance.	Tarpaulin covering on coal laden vehicles going outside from stockyard and railway siding were not adequate and proper to prevent dust nuisance during transportation.
4	Adequate dust suppression measures were not taken to prevent generation of dust over the concreate road during transportation of	Non-installation of pressurised water sprinkling facility with rain guns at coal stack yards for dust suppression and firefighting by July 2020 for which there was	Mine had not provided rain guns all along the coal stockyards of mine to deal with fugitive dust and coal fire although there was a time line to complete the same

Name of Unit	M/s Kulda OCP	M/s Garjan Bahal OCP	M/s Basundhara (W) OCP
1	*2*	*3*	*4*
	coal.	heavy fugitive dust and smoke due to spontaneous heating in coal stock yard.	by April 2020.
5	Occurrence of fire /smoke at coal stock yards due to spontaneous heating of coal as mine did not maintain minimum stock of coal.	Occurrences of smoke and fire at coal stock yard No.3 owing to non- taking of precautionary measures.	Occurrence of fire due to spontaneous heating of coal in back filled OB dump due to non-removal of residual coal and at exposed coal faces /benches of the quarry causes smoke nuisance.
6	AAQ parameters (SPM and RPM) measured at a distance of 500 meter from the dust generating sources found increasing and decreasing trend.	Level of AAQ parameters on Respirable Particulate Matter (RPM) PM_{10} and Suspended Particulate Matter (SPM) $PM_{2.5}$ at four locations (11 January 2021) exceeded the prescribed standard of 288-295/250 µg/ m3 and 583-603/500 µg/ m3 respectively.	
7	Though installation of three CAAQMS with data transfer facility to OSPCB server scheduled to be completed by August 2019, two were installed and rest one not installed. But operational status of two installed CAAQMS with transferring of data to OSPCB server was not ensured by RO.	Non-installation of remaining one Continuous Ambient Air Quality Monitoring Station (CAAQMS) out of three with data transfer facility to OSPCB serve for monitoring four AAQ parameters by 30 September 2020.	Non-installation of one CAAQMS with data transfer facility to OSPCB server out of three despite timeline by 30 September 2020.
8	Inadequate maintenance of internal roads with ruts and potholes resulting spillage of coal & consequent generation of fugitive dust.	Due to partly concreting/ black topping of coal transportation roads, there was accumulation of dust and spillage coal resulting fugitive dust problem during plying of vehicles.	
9	Accumulation of dust on roads and road sides and fugitive dust due to transportation of coal from mine through roads of Barpali village and Bankibahal chowk although there was stipulation not to transport coal on the road passing		Due to inefficient cleaning and wetting of the concrete coal transportation roads, there was accumulation of dust on the road resulting fugitive dust problem during plying of vehicles.

Name of Unit	M/s Kulda OCP	M/s Garjan Bahal OCP	M/s Basundhara (W) OCP
1	*2*	*3*	*4*
	through any village as per approved mining plan.		
10	The unit had also not submitted time bound action plan by April 2020 in connection with providing of wind barriers or vertical greenery around coal stockyards, concreting of permanent internal coal transportation roads to prevent accumulation of dust and fugitive road dust problem.	The unit also did not submit time bound action plan to take remedial action on the deficiencies at item No. (i), (ii) and (x) till date of audit as the same was to submit within seven days of issue of consent order (27 March 2020).	
11	The unit has not installed IP Camera connection with OSPCB Server at major dust prone areas of the mine.	The unit did not install IP camera with connection to OSPCB server at major dust prone areas of the mine for monitoring purpose.	
12		The unit did not install electronic display board for displaying of environmental information like AAQ, noise and waste water quality monitoring data for public view.	Electronic display board indicating AAQ, Noise and waste water quality monitoring data installed near project office was non-operational.

Appendix – IV

(Refer paragraph 3.2.3 at page 46)

Statement showing details of Inspection conducted during 2016-20

Sl. No.	Name of the Industries	Validity of CTO	Date of inspection conducted in 2016-20	No. of inspection required during 2016-20	No. of inspection conducted during 2016-20	No. of Inspection shortfall	Date of reporting of sampling during 2016-20	No. of sampling required during 2016-20	No. of sampling conducted during 2016-20	Sampling shortfall
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1	Govindam Project Pvt. Ltd.	31.03.2023	11.02.20 25.01.18 25.01.17	8	3	5	30.01.2018 27.01.2017	48	2	46
2	Jai BalajiJyoti Steel Ltd.	31.03.2023	20.02.2020 23.04.2019 15.12.2017	8	3	5	27.01.2018	48	1	47
3	Kaushal Ferro Metals (P) Ltd.	31.03.2023	16.02.2018 17.06.2016	8	2	6	24.02.2018 17.06.2016	48	2	46
4	Reliable sponge Pvt. Ltd. (MVS)	31.03.2023	7.09.2019 20.01.2018 12.08.2016	8	3	5	17.07.2019 16.08.2016	48	2	46
5	Reliable Sponge (P) Ltd. Jhaliberena	31.03.2023	27.01.2018 26.12.2017 06.09.2017	8	2	6	30.12.2017 080.9.2017	48	2	46
6	Shiv metaliks(P) Ltd.	31.03.2020	07.03.2020 23.03.2018 09.03.2018 23.12.2017 06.09.2017	8	3	5	13.03.2020 15.03.2018 30.12.2017	48	3	45
7	Sponge Udyog (P) ltd.	31.03.2023	06.03.2019 30.01.2018 13.11.2017 03.12.16	8	4	4	31.01.2018 21.11.2017 07.12.2016	48	3	45
8	Sri Balajimetalics Pvt. Ltd.	31.03.2023	08.03.2018 11.12.2017 29.8.2016	8	3	5	20.03.2018 21.12.2017 30.08.2016	48	3	45
9	T.R. Chemicals Ltd.	31.03.2023	17.10.2019 08.03.2019 19.03.2018 27.06.2016	8	4	4	20.03.2018 07.10.2016	48	2	46
10	Utkalmetalics Pvt. Ltd.	31.03.2023	25.11.2019 08.03.2019 29.01.2018 13.11.2017 07.11.2016	8	5	3	04.12.2019 27.10.2018 30.1.2018 21.11.2017 13.02.2017 07.11.2016	48	6	42
11	Vasundhara Metaliks (P) Ltd.	31.03.2020	Record not produced to audit	8	0	8	Record not produced to audit	48	0	48

Sl. No.	Name of the Industries	Validity of CTO	Date of inspection conducted in 2016-20	No. of inspection required during 2016-20	No. of inspection conducted during 2016-20	No. of Inspection shortfall	Date of reporting of sampling during 2016-20	No. of sampling required during 2016-20	No. of sampling conducted during 2016-20	Sampling shortfall
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
12	Vikram Private Ltd.	31.03.2023	14.01.2020 04.11.2019 09.03.2018 28.12.2017 21.12.2016	8	5	3	24.12.2016 30.12.2017 17.03.2018 11.11.2019 16.01.2020	48	5	43
13	Vishal metalik	31.03.2022	07.03.2018 26.12.2017	8	2	6	30.12.2017 09.03.2018	48	2	46
14	Mahavir Ferro Alloys Pvt. Ltd.	31.3.21	01.11.2016 9.01.2017 14.03.2017 16.08.2017 9.02.2018 18.01.2019 01.08.2019 14.10.2019 11.02.2020 21.03.2020	8	7	1	03.11.2016 17.01.2017 190.8.2017 12.02.2018 28.01.2019 6.8.2019 16.10.2019 13.02.2020	48	8	40
15	Swastik Ispat (p) Ltd.	31.3.23	29.03.2017 02.11.2017 03.03. 2018 22.06. 2018 07.07. 2018 31.01. 2019 13.02. 2019 15.05. 2019 11.07. 2019 11.03. 2020 03.03. 2020	8	6	2	10.11.2017 08.03.2018 23.06.2018 09.07.2018 02.02.2019 14.02.2019 16.05.2019 20.08.2019 07.03.2020	48	9	39
16	Suraj Products Ltd.	31.3.23	26.02.2018 06.09. 2018 05.11.2018 14.12.2018 21.02.2019 23.02.2019 08.03.2019 26.03.2019 18.07.2019 09.08.2019 17.09.2019 05.11.2019 30.12.2019	8	5	3	28.02.2018 06.11.2018 08.11.2019	48	3	45
17	Ganesh Metaliks Ltd.	31.3.21	27.07.2016 20.10.2016 12.02.2018	8	7	1	28.07.2016 19.02.25018 13.02.2019	48	4	44

Sl. No.	Name of the Industries	Validity of CTO	Date of inspection conducted in 2016-20	No. of inspection required during 2016-20	No. of inspection conducted during 2016-20	No. of Inspection shortfall	Date of reporting of sampling during 2016-20	No. of sampling required during 2016-20	No. of sampling conducted during 2016-20	Sampling shortfall
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
			27.07.2018 11.02.2019 23.03.2019 13.02.2020				14.02.2020			
18	Dalmia Cement Ltd.	31.3.2021	28-31.12.2018 23-25.02.2019 11-12.06.2019 12-13.02.2020 18.03.2020	8	3	5	03.01.2019 01.03.2019 19.06.2019 17.02.2019 20.03.2020	48	5	43
19	Kulda OCP	31.3.2021	11.06.2016 04.01.2017 17.03.2017 21.02.2018 06.09.2018 26.10.2018 01.03.2019 20.03.2019 10.90.2019 01.03.2020	8	7	1	04.01.2017 21.02.2018 10.09.2018 01.03.2019 11.09.2019 01.03.2020	48	6	42
20	Garjanbahal OCP	31.3.2021	07.03.2018 18.02.1209 10.09.2019 02.03.2020	8	4	4	25.02.2019 04.0320.20	48	2	46
21	Basundhara OCP	31.3.2021	05.10.2016 05.01.2017 16.01.2018 07.03.2018 28.2.2019 29.2.2020	8	6	2	05.01.2017 16.01.2018 07.03.2018 07.03.2019 04.03.2020	48	5	43
	Total			168	84	84		1,008	75	933

Appendix-V
(Refer paragraph 4.3.2.1 at page 73)
Non-realisation of NPV at the revised rates, from user agencies

Sl. No.	Division	Lessee	Forest area diverted (in ha)	Date of approval of Stage-I	Date of completion of five years	NPV rate per ha (in revised rate) (in ₹)	Total value of NPV due (in ₹)	Amount paid (in ₹)	Balance due (in ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1	Nayagarh	Brutanga irrigation project	1524.17	31-08-2010	30-08-2015	14,36,670.00	2,18,97,29,313.90	1,43,12,00,000.00	75,85,29,313.90
2	Keonjhar	Malangtoli Iron Mines of M/s Odisha Sponge Iron Ltd. (OSIL)	269.1698	03-06-2013	02-06-2018	14,36,670.00	38,67,08,176.57	28,96,99,153.00	9,70,09,023.57
3		Raika-Kalaparbat Iron & Mn Mines of M/s Kushleswar Minerals	9.8136	09-07-2015	07-07-2020	11,16,900.00	1,09,60,809.84	71,64,220.00	37,96,589.84
4		Katasahi & Kolha Rudhukela Mines of S. N. Poul	4.2411	01-12-2015	29-11-2020	11,16,900.00	47,36,884.59	30,96,003.00	16,40,881.59
5	Boudh	Executive Engineer, N.H. Division, Deogarh	3.544	26-02-2016	24-02-2021	9,57,780.00	33,94,372.32	22,18,544.00	11,75,828.32
6	Sundargarh	PFC Consulting Ltd.	17.02	27-06-2016	26-06-2021	9,57,780.00	1,63,01,415.60	1,06,54,520.00	56,46,895.60
7	Sundargarh	Mahanadi Coal Fields Ltd.	0.89	18-07-2014	17-07-2019	11,16,900.00	9,94,041.00	6,49,700.00	3,44,341.00
8	Deogarh	Executive Engineer, N.H. Division, Deogarh	19.5808	04-04-2016	03-04-2021	14,36,670.00	2,81,31,147.94	1,83,86,371.00	97,44,776.94
9	Berhampur	Executive Engineer, M.I. Division, Ganjam	16.16	22-01-1999	21-01-2004	9,57,780.00	1,54,77,724.80	93,72,800.00	61,04,924.80
	Total		**1,864.59**				265,64,33,886.56	177,24,41,311.00	88,39,92,575.56

Appendix –VI

(Refer paragraph 4.3.2.2 at page 73)

Non-realisation of interest on delayed payment of NPV, from mining lessees

Sl. No.	Divisions	Lessee	Forest area diverted (in ha)	Amount of NPV (In ₹)	Date of issue of demand notice	Due date of payment	Date of payment	period of delay (in days)	Total interest due, at the rate of 9 per cent per annum (In ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1	Sundargarh	Odisha Coal and Power Limited (OCPL)	15.701	1,26,07,093.00	24-11-2021	23-12-2021	16-03-2022	83	2,58,013.66
2	Bonai	M/s Essar Steel India Limited, Ghoraburhani Sagasahi Iron Ore Block	126.401	11,86,90,539.00	11-04-2019	10-05-2019	19-06-2019	40	11,70,646.41
3	Bonai	Mankarnacha Iron Ore Block by Director of Geology	715.157	3,72,95,438.00	18-05-2020	17-06-2020	14-07-2020	27	2,48,295.66
4	Bonai/ Keonjhar	M/s Kalamang West (Northern Part) Iron Block by Tata Steel BSL Limited	42.608	6,12,13,636.00	10-02-2022	09-03-2022	06-04-2022	28	4,22,625.65
5	Bonai	M/s Patnaik Mineral (Mahulsukha Iron & Manganese)	368.043	27,60,32,250.00	04-08-2020	05-07-2020	16/6/2020	40	27,22,509.86
6	Bonai	M/s JSW steel Ltd	257.451	19,30,88,250.00	08-04-2020	07-05-2020	05-06-2020	29	13,80,713.24
7	Bonai	M/s Yazdani Steel & Power Ltd	155.277	11,64,57,750.00	08-04-2020	07-05-2020	12-06-2020	36	10,33,761.95
8	Bonai	M/s JSW Steel Ltd	82.79	6,20,92,500.00	08-04-2020	07-05-2020	05-06-2020	29	4,44,003.90
9	Bonai	M/s OMC Ltd	86.479	7,99,79,325.00	04-03-2021	02-04-2021	16-04-2021	14	2,76,093.01
10	Bonai	M/s PM Granite Export	35.487	2,66,15,250.00	08-04-2020	07-05-2020	26-06-2020	50	3,28,133.22
11	Keonjhar	M/s JSW Steel Limited, Keonjhar	649.508	48,71,31,000.00	08-04-2020	07-05-2020	11-06-2020	35	42,04,007.26
12	Keonjhar	M/s Serajuddin & Co.	34.39	12,56,77,670.00	02-02-2017	03-03-2017	27-09-2018	573	1,77,56,705.32
13	Keonjhar	M/s Arcelor Mittal India (p) ltd.	228.744	17,15,58,000.00	08-04-2020	07-05-2020	28-05-2020	21	8,88,341.42
14	Keonjhar	M/s Agrasen	75.023	5,62,67,250.00	08-04-2020	07-05-2020	22-06-2020	46	6,38,209.36
15	Keonjhar	M/s Jagat Janani samuels (P) ltd	67.414	5,05,60,500.00	08-04-2020	07-05-2020	24-06-2020	48	5,98,414.68
16	Keonjhar	M/s Kaghvi International (p) ltd	100.006	7,50,04,500.00	08-04-2020	07-05-2020	12-06-2020	36	6,65,793.37
17	Keonjhar	M/s Debabrata Behera	469.109	35,18,31,750.00	08-04-2020	07-05-2020	16-06-2020	40	34,70,121.37
18	Keonjhar	M/s Narbheram power &	70.87	5,31,52,500.00	08-04-2020	07-05-2020	23-06-2020	47	6,15,986.51

Sl. No.	Divisions	Lessee	Forest area diverted (in ha)	Amount of NPV (In ₹)	Date of issue of demand notice	Due date of payment	Date of payment	period of delay (in days)	Total interest due, at the rate of 9 per cent per annum (In ₹)
		steel							
19	Keonjhar	M/s JSW Steel Limited,	514.452	38,58,39,000.00	08-04-2020	07-05-2020	05-06-2020	29	27,59,013.12
20	Keonjhar	M/s Serajuddin & Co.	310.789	23,30,91,750.00	08-04-2020	07-05-2020	12-06-2020	36	20,69,088.41
21	Keonjhar	M/s Arvind Jain	84.707	2,36,14,339.00	27-07-2020	25-08-2020	12-10-2020	48	2,79,490.26
		Total	**4,490.41**	**2,99,78,00,290.00**					**4,22,29,967.65**

Appendix – VII

(Refer paragraph 4.3.3 at page 74)

Non-realisation of the cost of Compensatory Afforestation, from UAs

Sl. No.	Name of the Division	Name of the UAs	No. of cases	Area in ha	Date of demand notice issued	Amount due (in ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*
1	Bargarh	Executive Engineer Padampur	1	5.391	16-02-2022	47,13,200.00
2	Bonai	OMC	1	85.175	22-07-2021	3,51,600.00
3	Boudh	NH Division, Sambalpur	1	7.200	23-05-2022	3,87,900.00
Total			3	**97.766**		**54,52,700.00**
Non-realisation Avenue Plantations						
1	Boudh	NH Division, Sambalpur	1	3.544	17-02-2022	4,59,58,374.00
2	Sundargarh	Mahanadi Coal Field Ltd	1	0.890	05-10-2021	6,12,457.00
3		Odisha Power transimission Corporation Ltd	1	7.102	19-01-2022	22,49,650.00
Total			3	**11.536**		**4,88,20,481.00**
Non-realisation Site Specific wildlife management plan fund from UAs						
1	Bonai	OMM (P) Ltd	1	35.61	05-12-2013	1,66,06,000.00
2		OMC	1	408.87	13-09-2014	3,06,68,000.00
3		OMM (P) Ltd	1	51.48	20-05-2016	1,78,24,000.00
4		JSW Steel Ltd	1	88.52	09-02-2022	7,46,17,300.00
5		JSW Steel Ltd	1	343.38	09-02-2022	3,97,03,300.00
6	Keonjhar	Rungta Mines (0.10 MTPA)	1	5.34	23-06-2018	91,64,640.00
7		Rungta Mines (20 MW)	1	10.18	23-06-2018	91,64,640.00
8		International Minerals and Aryan Iron and Steel	1	28.32	12-05-2014	3,22,29,000.00
Total			**8**	**971.70**		**22,99,76,880.00**
Grand Total						**28,42,50,061.00**

Appendix VIII
(Refer paragraph 4.4.4 at page 76)
Diversion of forest land under the FC Act, 1980 and Compensatory Afforestation

Sl. No.	Division	Lease holder	Area of forest land diversion (In ha)	Date of Stage-I approval	RWLMP fund paid (in `)	Date of payment	Minimum RWLMP to be fixed, as per current wage rates, 82000/280*current wage rate (date of payment) (in ₹)	Balance amount (in ₹) (Col 8 - Col 6)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1	Keonjhar	Dubuna-Sakradihi Mines in favour of M/s Odisha mining corporation Ltd.	**1243.27**	F No.8-26/2019FC dated 06.05.2021	10,92,25,558.00	17.03.2022	11,46,91,657.50	54,66,099.50
2	Keonjhar	Baitarani Iron Ore Mines of Dr. Sarajoni Pradhan	**61.534**	F No.8-58/2008-FC dated 02.04.2009	40,54,614.00	25.11.2019	53,70,160.09	13,15,546.09
3	Keonjhar	Khandbandh Iron Ore Mines of M/s OMC Ltd.	**345.189**	8-46/2018-FC dated 31.01.2019	3,00,37,502.00	13.11.2020	3,06,30,592.48	5,93,090.48
4	Bonai	Construction of approach road from NH-520 to Kamanda Steel Plant of M/s Rungta Mines Ltd.	**1.226**	No.5-ORC389/2019-BHU dt 30.7.2019	1,00,532.00	20.08.2019	1,02,686.26	2,154.26
5	Bonai	Ghorabudani-Segasahi Iron Mines of M/s ArcelorMittal Nippon Steel India Ltd.	**139.165**	F No.8-55/2018-FC dated 6.3.2019	1,14,11,530.00	11.04.2019	1,16,56,062.79	2,44,532.79
6	Bonai	Construction of overhead piped conveyor belt from Kurmitar ML Boundary of OMC Ltd. to new proposed Railway siding	**85.302**	F No.8-113/2000-FC vol III dated 4.2.2021	69,94,764.00	16.04.2021	77,69,184.30	7,74,420.30
		Total	**1,875.69**		**16,18,24,500.00**		**17,02,20,343.41**	**83,95,843.41**

Appendix – IX

(Refer paragraph 4.5.4.1 at page 82)

Amounts used for construction activities

Sl. No.	Details of work executed	Executing Agency	Amount (₹ in crore)	Financial Year of funding
1	***2***	***3***	***4***	***5***
1	Construction of two hostels and upgradation of three training schools	Odisha Police Housing & Welfare Corporation	6.00	2019-20
2	Construction of State Forest Academy building, at Shyamsunderpur, Bhubaneswar	Rail India Technical and Economic Service Limited	42.00	2019-22
3	Greening of State CAMPA Authority, at Aranya Bhawan, Bhubaneswar	DCF, HQ	0.07	2019-20
4	Renovation and purchase of furniture and fixtures for the 2nd and 3rd floors in O/o the PCCF & HoFF	DCF, HQ & DFO Chandaka	2.42	2019-20
5	New modular post-mortem hall and Quarantine ward at the Nandankanan Zoological Park (NZP)	R&B division, Works Department	1.39	2019-21
6	Construction of BSL-2 laboratory and toilet, at the Centre for Wildlife Health, at the College of Veterinary Science, Odisha University of Agricultural Technology, Bhubaneswar	OUAT	0.58	2020-21
7	Construction of 15 seizure yards and 13 floating jetties	DFOs	2.90	2019-22
8	Office building at Nawarangpur DFO office	DFO, Nawarangpur	0.25	2020-21
9	Construction of Office building in the premises of DFO, Bhadrak (Wildlife)	DFO, Bhadrak	0.10	2019-20
10	Construction of guest house at Jhanghira in Keonjhar	DFO, Keonjhar	0.36	2020-21
11	Construction of anti-poaching barrack in the premises of DFO, Rayagada	DFO, Rayagada	0.20	2020-21
12	Construction of Cloak room in NZP	DD, NZP	0.14	2019-20
13	Construction of boundary wall and tube well at DFO Residence	DFO, Bargarh, Rayagada, and Simlipal (N)	0.41	2020-21
	Total		**56.82**	

Appendix – X
(Refer paragraph 4.5.4.1 at page 82)

Irregular utilisation of CAMPA funds, for payments towards DGPS survey of forest blocks, software development, salaries and compassionate payments, during 2019-22

Sl. No.	Particulars of work	Amount (₹ in crore)	Year of funding	Remarks
1	*2*	*3*	*4*	*5*
1	Geo-referencing of forest block boundary through differential global positioning system (DGPS) survey through ORSAC and co-partners M/s SPARC Bhubaneswar and M/s Anath, Hyderabad	17.31	2019-20	Payment for the DGPS survey was made to ORSAC, M/s SPARC and M/s Ananth. The work had been completed for 13 forest divisions (i.e 25 *per cent*).
2	Development and implementation, rollout and handholding support on online timber transit permit system (OTTPS) by IDCOL Software Ltd., Bhubaneswar.	0.37	2019-22	The payment was made to Industrial Development Corporation of Odisha Limitted for development of online timber transit permit system.
3	Salary of DEO/ Driver and Vehicle charges	2.58	2019-22	Regular salaries of DEOs and drivers as well as vehicle charges, in seven DFO offices, were paid out of the CAMPA fund, instead of the State Budget.
4	Compassionate payment to victims due to deaths by wild animals.	1.41	2019-22	Compassionate payment was not permissible from the CAMPA fund and it should, instead, have been made out of the State budget.
	Total	21.67		

Appendix - XI

(Refer paragraph 4.5.4.1 at page 82)

Diversion of plantation expenditure towards non-plantation activities

Sl. No.	Name of Division	Voucher No.	Particulars	Amount (In ₹)
1	*2*	*3*	*4*	*5*
1	Deogarh	175	Air Cooler	42,000
		176	Water Cooler	32,000
2	Nayagarh	1	Air Condioner	1,04,100
		13	Instalation of AC	8,000
		14	Air Condioner	1,32,000
		160	Transporation of Tmber	19,800
3	CEO, CAMPA	48	Instalation of Unified Threat Mangement System	11,31,979
		49	GST TDS on Vr no. 48	19,860
		50	IT TDS on Vr no 48	19,860
		70	Chief Minister Award for 3 nos VSS/EDC	4,50,000
		33	MV Tax of Govt. vehicle	24,000
		41	MV Tax of Govt. vehicle	12,988
4	Bargarh	6	Sofa Set	1,15,135
		114	Office Chairs	38,841
		115	Visitors' Chairs	29,393
5	Rayagada	119	1 set Dinning Table with Chair	65,000
		120	Air Condioner with Stabilizer	53,000
		8	Street light bulbs, switch, Fans	20,000
		49	Gas stove and Utensils	44,190
		50	Brass Deepa stand	8,500
6	Similipal (N) WL	376	Furniture for FG Quarters	46,413
		377	Furniture for FG Quarters	32,000
		378	Furniture for FG Quarters	46,413
		379	Furniture for FG Quarters	32,000
		380	Steel Almirah, Rack, Chairs	47,923
7	Nandankanan Zoological Park	42	De-weeding charges of Kanjia lake	4,35,400
		44	De-weeding charges of Kanjia lake	2,90,000
		51	De-weeding charges of Kanjia lake	1,50,000
		52	New pipeline connection	2,23,775
		60	Extention work of Herbivore Safari	4,00,000
		789	SMS charges for online booking of NKZP	88,500
		118	Cost of Air Conditioner	74,700
		120	Repair of vehicle with spares	56,405
		130	Electronic Weigh Bridge	6,25,400
		137	Alluminum Ladder	1,16,000
		108	Visitors' Chairs	24,255

Sl. No.	Name of Division	Voucher No.	Particulars	Amount (In ₹)
1	*2*	*3*	*4*	*5*
		110	Water Purifier	6,180
		126	Repar of Air Conditioner	6,283
8	Bhadrak WL	22	Computer Chair, Moving Chair, Office Table	39,400
		33	Office Table, Chair, Almirah	60,000
			Computer accessories	60,000
9	Khariar	440	Office Table, Visitor Chair	20,500
		443	Symphony Cooler	9,540
		444	Room Cooler	5,960
		459	Almirahs	66,688
		430	Moving Chair	9,500
		433	Almirah	26,000
		434	Almirah	12,075
		435	Moving Chair	19,325
		443	Iron Rack	25,900
		445	Almirah	48,600
		446	Almirah	24,300
		447	Almirah	12,650
		225	Almirah	16,816
10	Boudh	259	Generating DG Set (part amount)	3,60,673
		260	Generating DG Set (part amount)	10,360
		262	HSD for DG Set	20,000
		263	Foundation of DG Set	9,003
		261	Generating DG Set (part amount)	2,40,198
		302	Symphony Air Cooler	13,000
		236	Symphony Air Cooler	13,000
		307	Symphony Cooler	13,000
11	Silviculturist	22	Renovation and Interpretation centre	10,00,000
		23	Audio visual and sound system at Interpretation centre	4,60,600
	Total			**76,69,381**

Appendix – XII
(Refer paragraph 4.5.5.2 at page 83)
Irregular diversion of funds towards other plantation schemes

Sl. No.	Name of the Division	Seedlings raised during 2019-22	Expenditure incurred during 2019-22	Total seedlings utilised in other schemes during 2019-22	Diversion of funds towards other schemes (in ₹)
1	*2*	*3*	*4*	*5*	*6*
1	Bhadrak (WL)	3,50,000	1,00,06,675.00	56,629	15,12,788.00
2	Deogarh	1,80,000	26,72,600.00	56,450	10,21,664.00
3	Khariar	5,27,400	2,14,11,243.00	2,58,852	69,83,562.00
4	Keonjhar	5,00,000	57,28,855.00	2,07,167	57,28,855.00
5	Bargarh	10,10,004	70,12,472.00	2,84,356	39,59,964.27
6	Rayagada	2,06,776	71,02,261.00	2,06,776	71,02,261.00
7	Bonai	1,80,000	54,26,124.00	25,160	7,58,451.55
8	Nayagarh	10,00,000	35,46,835.00	1,76,325	6,25,395.68
9	Boudh	8,30,000	1,83,92,341.00	2,74,230	65,06,200.21
Grand Total		**47,84,180**	**8,12,99,406.00**	**15,45,945**	**3,41,99,141.71**

Appendix – XIII
(Refer paragraph 4.5.5.3 at page 84)
Disallowed vouchers in the CAMPA Account

Sl. No.	**Division**	**Range**	**Number of Persons involved**	**Month of disallowance of the cash account**	**Number of vouchers**	**Money value of the vouchers (In ₹)**
1	***2***	***3***	***4***	***5***	***6***	***7***
1	Boudh	Boudh	1	July - 2020	23	3,86,476
		Kantamal	1	July - 2020	29	1,80,864
2	Nayagarh	Mahipur	1	October - 2021	2	1,76,337
		Nayagarh	1	October and November - 2021	5	43,316
3	Baragarh	Padampur	1	June - 2020	11	5,30,680
4	Keonjhar	Ghatagaon	1	January - 2020	9	6,50,815
		Patna	1	October, November - 2020 and March - 2021	14	2,38,248
		Telkoi	1	March - 2022	7	1,01,430
		Barbil	1	March - 2022	2	44,730
	Total		**9**		**102**	**23,52,896**

Appendix – XIV
(Refer paragraph 4.5.5.4 at page 84)
Infrastructure works undertaken under CAMPA, by Forest Divisions, during Financial year 2019-20 to 2021-22

Sl. No.	Division	Financial year of construction	Nature of work	Number of works	Total Project estimated Cost (in ₹)
1	*2*	*3*	*4*	*5*	*6*
1	Bhadrak WL	2021-22	Forester Quarter, Forest Guard Quarter, Artificial Boundary	4	50,21,900.00
2	DFO, Khariar	2021-22	Forester Quarter, Forest Guard Quarter, Forest Road Maintenance	5	57,42,800.00
3	DFO, Sundargarh	2021-22	Forester Quarter, Forest Guard Quarter, Compound Wall (130 mtr.), Community Center	3	31,10,404.00
4	DFO, Bargarh	2020-21	Forester Quarter, Forest Guard Quarter, forest Road, Boundary wall	4	68,75,000.00
5	DFO, Keonjhar	2020-21	Forester Quarter, Forest Guard Quarter, forest Road, Boundary wall, Check dam, water body	7	1,12,27,000.00
6	DFO, Rairakhol	2020-21	Range office, Forester Quarter Quarter, Forest Guard, Elephant proof trench	4	94,43,000.00
7	DFO, Rayagada	2020-21	Anti-poaching barrack, Forester Quarter, Forest Guard Quarter, forest Road, Boundary wall, water body	19	1,84,33,000.00
8	Similipal (North) Wildlife Division	2019-20	Installation of VHF base station, Mobile phone and maintenance thereof including satellite tracking of patrolling, squad vehicle	1	24,00,000.00
9	DFO, Bonai	2020-21	Forester Quarter, Forest Guard Quarter, Compound Wall, Range officers Quarter	16	1,08,20,000.00
		2021-22	Forester Quarter, Forest Guard, Compound Wall, Range officers Quarter, Cause way, Culvert	24	1,11,03,000.00
10	DFO, Boudh	2020-21	Forester Quarter, Forest Guard Quarter, Forest Road	8	1,66,02,693.00
		2021-22	Construction of forest road	1	37,95,000.00
11	DFO, Nayagarh	2020-21	Forester Quarter, Forest Guard Quarter, Boundary wall	10	79,66,000.00

Sl. No.	Division	Financial year of construction	Nature of work	Number of works	Total Project estimated Cost (in ₹)
		2021-22	Boundary wall, Forest Road Repair	4	26,56,000.00
12	DFO, Puri Wildlife	2020-21	Construction of FG Quarter, Protection Camp, Seizure Yard	5	54,93,000.00
13	DFO, Baliguda	2020-21	Forester Quarter, Forest Guard Quarter, Compound Wall, Range officers Quarter, Check gate	10	1,15,78,000.00
Total				**125**	**13,22,66,797.00**

Purchase of different material under CAMPA, by the Forest Divisions, during FY 2019-20 to 2021-22

Sl. No.	Division	Financial Year of purchase	Type of material purchased	Quantity purchased (in No./Kg)	Total Expenditure incurred (in ₹)
1	*2*	*3*	*4*	*5*	*6*
1	DFO, Baliguda	2019-20	Biomass cook Stove	704	14,08,000.00
			Fertilizer	80,510	18,82,110.00
		2020-21	Fertilizer	45,507.50	8,82,335.00
		2021-22	Fertilizer	21,840	5,35,384.00
3	DFO, Jeypore	2019-20	Fire blower	18	8,29,242.00
		2021-22	Fire blower	15	6,94,400.00
4	DFO, Kalahandi	2021-22	Fencing material such as Iron chain link and Iron angle	1,02,257	94,68,093.00
5	State Silviculturist, Bhubaneswar	2019-20	procurement of Root trainer Iron Frame	288	6,92,389.00
		2020-21	procurement of Hycopots	903	11,80,095.00
6	DFO, Rairakhol	2019-20	Purchase of IT and Planting material under CAMPA	81	42,81,390.00
		2021-22	Polythene bag	833.50	12,04,405.00
7	DFO, Keonjhar	2020-21	G I link	9,016.24	6,34,111.00
			Barbed wire and T pole for fencing	14,465.47	22,35,596.00
		2021-22	Fencing material such as Iron chain link, Iron angle and T Pole	15,682.40	18,50,895.00
			Polythene bag	3,000	6,23,040.00
8	DFO, Bargarh	2019-20	Fencing material	36,055.40	24,58,713.00
		2020-21	Fencing material	12,887	10,03,776.00
		2021-22	Fencing material	12,164.50	10,73,485.00
9	DFO, Rayagada	2021-22	Computer and Periherial	11	13,38,000.00
10	DFO, Sundargarh	2020-21	Animal rescue equiment	114	13,92,145.00

Sl. No.	Division	Financial Year of purchase	Type of material purchased	Quantity purchased (in No./Kg)	Total Expenditure incurred (in ₹)
1	***2***	***3***	***4***	***5***	***6***
11	DD, Nandankanan Zoological Park, Bhubaneswar	2021-22	Chain linked mesh, Supply and installation of weigh bridge, Wireless outdoor night vision CCTV system, Gel Doc Go Gel Imaging System, C1000 Touch Cycler	8	34,37,588.00
Total					**3,91,05,192.00**

Appendix – XV
(Refer paragraph 4.6.1 at page 85)
Expenditure on SSO Bamboo in Forest Divisions and harvest/exploitation of Industrial and Commercial Bamboo

Sl. No.	Division	Year of bamboo cutting series	Name of the cutting series	Working area (In ha)	Expenditure incurred for SSO during 2015 -18 (In ₹)	Number of coupes delivered to OFDC Ltd.	Number of coupes worked by OFDC Ltd.	Total Industrial bamboo harvested/ exploited (In SU)	Total harvest/ exploitation of Commercial bamboo (In number)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1	Berhampur	2019-20	B	1,220.00	24,40,000	7	0	-	0
		2020-21	C	995.00	19,90,000		0	-	0
		2021-22	D	-	-		0	-	0
2	Baliguda	2019-20	C	5,000.00	1,00,00,000	13	2	-	20,329
		2020-21	D	3,000.00	60,00,000		1	-	17,300
		2021-22	A	8,000.00	1,70,80,000		1	109.92	0
3	Jeypore	2019-20	A	700.00	14,00,000	13	0	-	0
		2020-21	B	6,841.00	1,36,82,000		0	-	0
		2021-22	C	2,000.00	42,70,000		2	-	5,110
4	Kalahandi (North)	2019-20	C	4,200.00	84,00,000	23	1	-	42,000
		2020-21	D	11,000.00	2,22,00,000		2	-	19,300
		2021-22	A	7,495.00	1,60,00,000		1	-	6,430
5	Boudh	2019-20	A, B	4,000.00	79,95,500	18	1	-	9,390
		2020-21	B	5,500.00	1,10,00,000		1	535.33	0
		2021-22	C, D	6,491.00	1,34,97,898		1	344.14	0
6	Khariar	2019-20	A, C, D	2,800.00	56,00,000	3	0	-	0
		2020-21	C, D	2,500.00	50,00,000		0	-	0
		2021-22	A, B, C, D	5,000.00	1,00,00,000		0	-	0
7	Deogarh	2019-20	A	2,800.00	56,00,000	6	0	-	0
		2020-21	B	10,000.00	2,00,00,000		0	-	0
		2021-22	C	-	-		0	-	0
8	Bargarh	2019-20	C	8,800.00	1,75,99,420	23	3	1,790.46	4,328
		2020-21	D	6,000.00	1,20,00,000		3	903.17	4,328
		2021-22	A	8,000.00	28,22,000		1	40.25	0
9	Rairakhol	2019-20	C	3,000.00	60,00,000	6	0	-	0
		2020-21	D	3,500.00	70,00,000		0	-	0
		2021-22	A	3,000.00	60,00,000		0	-	0
10	Rayagada	2019-20	B	3,434.50	68,69,000	22	1	-	20,792
		2020-21	C	12,000.00	2,39,99,840		1	-	23,832
		2021-22	D	8,000.00	56,67,000		1	-	2,284
11	Sundargarh	2019-20	C	2,100.00	42,00,000	2	1	539.95	9,660
		2020-21	D	3,000.00	60,00,000		1	435.62	38,640
		2021-22	A	3,000.00	60,00,000		1	608.37	8,000
12	Nayagarh	2019-20	A	2,000.00	1,98,78,000	17	1	-	47,325
		2020-21	B	2,000.00	2,00,00,000		4	-	26,450
		2021-22	C	-	-		2	-	9,844
13	Bonai	2019-20	ABCD	5,000.00	1,00,00,000	9	0	-	0
		2020-21	ABCD	12,700.00	25,40,000		0	-	0
		2021-22	ABCD	8,000.00	16,00,000		0	-	0
	Total			**1,83,076.50**	**34,03,30,658**	**162**	**33**	**5,307.21**	**3,15,342**

Appendix – XVI
(Refer paragraph 4.6.2 at page 86)
Expenditure incurred on research works during 2017-22

Sl. No.	Title of the Project	Financial Year of assignment	Completion period	Project Cost (In ₹)	Total amount paid (In ₹)
1	*2*	*3*	*4*	*5*	*6*
1	Population status, spatial distribution and conservation of Small Carnivores in Similipal Tiger Reserve, Mayurbhanj, Odisha	2017-18	2020-21	11,45,500	7,93,000
2	Integrated Micro watershed management plan in Similipal Tiger Reserve using remote sensing & GIS.	2017-18	2020-21	11,62,000	8,33,000
3	Study of lying eggs by turtles on the Riverbed of Brahmani in Sadangi and Bhuban Range of Dhenkanal Forest Division, Odisha	2017-18	2018-19	3,68,500	3,68,500
4	Sand dune biodiversity significance in Odisha: Conservation and management prospectives	2017-18	2019-20	12,91,000	12,91,000
5	Status survey of the Vulnerable Fishing Cat *Prionailurus viverrinus* in and around Chilika lake, Odisha, India	2018-19	2019-20	4,38,600	4,38,600
6	Monitoring the breeding ecology and fostering breeding success rate of Indian Skimmer along the Mahanadi River in Odisha, India	2020-21	2021-22	4,07,500	4,07,500
7	Assessment of Biodiversity with special emphasis to small carnivores in the Untouched Mangrove Patches along the Mangrove belt of Odisha in Context of Climate Change	2019-20	2021-22	15,66,400	7,83,200
8	Status Survey of White bellied sea eagle in Konark-Balukhand Wildlife Sanctuary	2017-18	2018-19	3,94,900	3,94,900
9	Status survey of fresh water turtles in sacred places of Odisha	2018-19	2019-20	5,77,500	5,77,500
10	Technological interventions to reduce human-animal conflict.	2020-21	2021-22	50,00,000	50,00,000
11	Study on ecological implications in Similipal Biosphere Reserve using biodiversity indices	2017-18	2020-21	16,49,000	11,21,000
12	Status Survey and Conservation threats to Fishing Cat *Prionailurus viverrinus* Bennett, 1833 in Bhitarkanika National Park, Odisha, India	2020-21	2021-22	7,45,500	6,45,500
13	Current status of fern and fern allies of Northern Odisah and its conservation	2020-21	2021-22	5,17,000	4,17,000
14	Inventory of Biodiversity of Kuldiha Wildlife Sanctuary, Balasore, Odisha	2020-21	2021-22	4,40,000	3,40,000

Sl. No.	Title of the Project	Financial Year of assignment	Completion period	Project Cost (In ₹)	Total amount paid (In ₹)
1	*2*	*3*	*4*	*5*	*6*
15	Inventory of Biodiversity of Gupteswar Reserve Forest, Koraput	2020-21	2021-22	5,41,200	4,41,200
16	Inventory of Biodiversity of Gandhamardan Hills in Bolangir and Bargarh Districts of Odisha	2020-21	2021-22	4,40,000	3,40,000
17	Inventory of Biodiversity of Baisipalli Wildlife Sanctuary, Nayagarh, Odisha	2020-21	2021-22	4,40,000	3,40,000
18	Development of SOP for developing quality planting material for SFD, Odisha	2021-22	2021-22	19,26,000	19,26,000
	Total			**1,90,50,600**	**1,64,57,900**

Appendix – XVII

(Refer paragraph 4.6.3 at page 86)

Non/ short deduction of TDS, from payments made to professional service providers

Sl. No.	Consultancy	Invoice Amount	TDS to be deducted at the rate of 10 *per cent*	TDS deducted	Short deduction of TDS
1	*2*	*3*	*4*	*5*	*6*
1	PWC Pvt. Ltd.	21,17,400	2,11,740	42,348	1,69,392
2	CTRAN Consultancy Ltd., Bhubaneswar	15,60,750	1,56,075	36,280	1,19,795
		15,60,750	1,56,075	31,216	1,24,859
		10,40,500	1,04,050	20,810	83,240
3	O. M. Kejiriwal & Co. Chartered Accountants	33,60,000	3,36,000	79,296	2,56,704
		24,96,572	2,49,657	49,932	1,99,725
4	JBMT & Associates, Chartered Accountants	33,85,000	3,38,500	79,886	2,58,614
		19,50,170	1,95,017	39,004	1,56,013
5	Tej Raj & Pal, Chartered Accountants	31,35,593	3,13,559	74,000	2,39,559
		23,24,407	2,32,441	46,488	1,85,953
6	Lal Dash & Co., Chartered Accountants	33,60,000	3,36,000	79,296	2,56,704
		31,06,160	3,10,616	62,124	2,48,492
7	Patra & CO, Chartered Accountants	39,20,000	3,92,000	80,000	3,12,000
		23,10,169	2,31,017	46,204	1,84,813
	Total	**3,56,27,471**	**35,62,747**	**7,66,884**	**27,95,863**

Appendix – XVIII

(Refer paragraph 4.7.1 at page 87)

Shortfall in Forest Foot Patrolling in selected Forest Divisions, during 2019-22

Sl. No.	Division	Annual target of the Division (in km)	Patrolling done during 2019-20 (in km)	Patrolling done during 2020-21 (in km)	Patrolling done during 2021-22 (in km)	Total patrolling done during 2019-20 to 2021-22 (in km)	Total target during 2019-20 to 2021-22 (in km)	Shortfall in patrolling during 2019-20 to 2021-22 (in km)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1	DFO, Berhampur	15,000	12,485.15	8,174.24	5,488.35	26,147.73	45,000	18,852.27
2	DFO, Jeypore	14,400	15,590.69	4,460.76	1,155.54	21,206.99	43,200	21,993.01
3	DFO, Rayagada	16,800	22,108.95	3,596.81	949.39	26,655.15	50,400	23,744.85
4	STR (N) Jashipur	3,35,400	32,324.84	2,13,831.46	2,08,944.89	4,55,101.19	10,06,200	5,51,098.81
5	DFO, Boudh	18,000	18,586.31	8,831.76	733.33	28,151.40	54,000	25,848.60
6	DFO, Nayagarh	1,05,600	29,172.80	35,862.44	42,409.06	1,07,444.30	3,16,800	2,09,355.70
7	DFO, Puri (WL)	12,000	5,512.61	1,013.31	598.02	7,123.94	36,000	28,876.06
8	DFO, Dhenkanal	19,200	23,510.68	5,582.11	1,224.93	30,317.72	57,600	27,282.28
9	DFO, Khariar	71,052	1,01,461.57	37,845.52	22,076.77	1,61,383.86	2,13,156	51,772.14
	Total		**2,60,753.60**	**3,19,198.41**	**2,83,580.28**	**8,63,532.28**	**18,22,356**	**9,58,823.72**

Appendix – XIX
(Refer paragraph 4.7.5 at page 91)
Results of JPI of plantation sites

Sl. No.	Division	Financial year of plantation	Range	Location of Plantation site	Total expenditure incurred (In ₹)	Percentage of survival in JPI	Remarks
1	***2***	***3***	***4***	***5***	***6***	***7***	***8***
1	Boudh	2018-19	Purunakatak	Arakhpadar RF C/5	7,63,385	30.00	Failed
2		2016-17	Boudh	Sunajhari Putuna RF	26,25,077	30.00	Failed
3	Nayagarh	2016-17	Khandpara	Guriabari RF	92,30,820	36.40	Failed
4	Rairakhol	2019-20	Badabahal	Tal RF Podabalanda	14,78,960	32.00	Failed
5	Rairakhol	2019-20	Badabahal	Tal RF Kadaligarh	14,51,796	8.00	Failed
6	Bargarh	2018-19	Nrusinghnath	Kharmal RF	29,73,341	25.52	Failed
7	Baraarh	2018-19	Padampur	Mahadashni PRF	44,60,008	30.72	Failed
8	Keonjhar	2016-17	Champua	Dabuna/Pedi pokhari RF	24,49,861	24.33	Failed
9	Rayagada	2018-19	Pipliguda	Pipliguda PRF	60,34,641	23.48	Failed
10	Rayagada	2018-19	Rayagarh	Sindhahai Rengali Pada	45,25,981	43.22	Partial Successful
11	Kalahandi North	2018-19	Narla	Dudalu	10,56,926	16.37	Failed
12	Kalahandi North	2018-19	Narla	ANR Sadel	13,52,593	42.00	Partial Successful
13	Bhadrak WL	2021-22	Chandbali	Garmal PRF	8,04,276	7.33	Failed
14	Deogarh	2019-20	Barkote	Paudi RF	15,72,960	14.00	Failed
15	Berhampur	2019-20	Khallikote	Mathakhol PRF	1,84,808	31.33	Failed
16	Bonai	2016-17	Bonai	Jarda	70,63,511	56.71	Partial Successful
17	Bonai	2018-19	Bonai	Jarda	26,94,658	51.56	Partial Successful
18	Khariar	2019-20	Sinapali	Jagabahata PRF	31,14,564	55.00	Partial Successful
Total					**5,38,38,166**		

Appendix - XX

(Refer paragraph 6.2.2.1 at page 130)

Statement showing the details of excess deviation of items of OSRP works

Sl. No.	Name of the work	Total No. of items executed	No. of items quantity of which correctly estimated	No. of items the quantities of which increased	No. of items the quantities of which decreased	No. of items deleted	No. of items included
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
	Bhawanipatna-Khariar Road						
1	Widening and strengthening of existing carriageway to two lane road from Bhawanipatna to Khariar (Balance work)- P01A	162	9	29	66	54	4
2	Construction of four numbers of HL Bridge over river Tel from Bhawanipatna Khariar - P01B	57	0	19	23	12	3
	Anandapur -Bhadrak - Chandbali Road						
3	Widening and strengethning of existing carriageway to two lane road from Bhadrak to Pirhat (Balance work) - P02A	139	4	23	62	41	9
4	Widening and strengthening of existing carriageway to two lane road from Bhadrak to Anandapur Balance work	97	2	33	56	5	1
	Berhampur-Taptapani Road						
5	Widening and strengthening of existing carriageway to two lane road from Berhampur to Taptapani	173	2	20	98	39	14
	Jagatpur-Chandbali Road						
6	Construction for widening and strengthening of existing carriageway to two lane road from Nischintakoili to Duhuria of MDR - P04A2	142	4	21	51	62	4
7	Widening and strengthening of existing carriageway to two lane road from Duhuria to Chandbali P04B	169	17	46	46	52	8
8	Widening and strengthening of existing carriageway to two lane road from Jagatpur to Nischintakoili - P04A1	164	5	34	69	50	6
	Total	**1,103**	**43**	**225**	**471**	**315**	**49**

Appendix - XXI
(Refer paragraph 6.2.2.2 at page 131)
Statement showing loss of rebate due to variation of items

Sl. No.	Name of the work	Variation item amount (in ₹)	Loss of rebate (In percentage)	Amount of loss (In ₹ in)
1	**2**	**3**	**4**	**5**
1	Widening and strengthening of existing carriage way to two lane Road from Bhawanipatna to Khariar (P-01)	9,49,80,427	10	94,98,042.70
2	Widening and strengthening of existing carrage way to two lane Road from Bhawanipatna to Khariar (balance work) excluding HL bridge over river Tel and approaches from 02/000 to 27/200 and 30/00 to 70/000 km (P-01A)	5,75,67,818	3	17,27,034.54
3	widening and strengthening of existing carriageway to two lane for Chandbali_Bhadrak_Anadapur road (P02)	8,09,12,807	4	32,36,512.28
4	Widening and strengthening of existing carriageway to two lane road from Bhadrak to Pirahat balance work (P02A)	3,01,39,519	15.3	46,11,346.41
5	Widening and strengthening of existing carriageway to two lane road from pirhat to Chandabali (27/500 to 45/000 of SH-9) balance work (P02B)	7,93,38,418	3	23,80,152.54
6	Widening and strengthening of existing carriageway to two lane road from Berhampur to Taptapani Road (Km 0/0 to Km 41/0 of SH-17 (P03)	2,07,38,688	6	12,44,321.28
7	Widening & strengthening of existing carriageway to two lane Road from Nischintkoili to Duhuria (Km. 25/000 to Km 49/000 of MDR) Balance work. (P04A2)	25,68,311	10	2,56,831.10
8	Widening and strengthning of existing carriageway to two lane road from Duhuria to Chandbali (P04B)	8,78,41,954	5	43,92,097.70
	Total	**45,40,87,942**		**2,73,46,338.55**

Appendix - XXII
(Refer paragraph 6.2.3.3 at page 133)
Statement showing unwarranted provision of capping layer of sand

(₹ in crore)

Sl. No.	Name of the Work and Package No.	Estimated cost	Agreement cost	Upto date Expenditure	Sand quantity executed (in cum)	Rate (in ₹)	Extra cost (in ₹)
1	*2*	*3*	*4*	*5*	*7*	*8*	*9*
1	Widening and strengthening of existing carriageway to two lane for Chandbali-Bhadrak-Anandapur road (Balance Works) (Package No-OSRP-Bal-P02)	278.82	248.12	69.06	1,249	522	6,51,978.00
2	Widening and strengthening of existing carriageway to two lane road from Bhadrak to Pirahat (Balance Works) (OSRP-CW-ICB-P02A)	76.34	79.33	76.23	35,952	700	2,51,66,400.00
3	Widening and strengthening of existing carriageway to two lane road from Pirahat to Chandbali (Balance Works) (Package No-OSRP-CW-ICB-P02B)	96.23	104.23	90.40	5,730	550	31,51,500.00
4	Construction, widening and strengthening of existing carriageway to two lane road from Bhadrak to Anandapur (Balance Works) (Package No-P1-P02-Bal)	39.74	35.71	41.95	16,109	668	1,07,60,812.00
5	Widening and strengthening of existing carriageway to trwo lane road from Jagatpur to Duhuria (Km 0/0 to Km 49/0 of MDR) (Package No-OSRP-CW-ICB-P04A)	172.72	151.31	1.27	32,927	286	94,17,122.00
6	Widening and strengthening of existing carriageway to two lane road from Jagatpur to Nischintakoili (Package No-OSRP-CW-ICB-P04A1)	108.15	107.39	101.54	1,41,027	352	4,96,41,504.00
7	Widening and strengthening of existing carriageway to two lane road from Nischintakoili to Duhuria (Package No-OSRP-CW-ICB-P04A2)	106.18	97.9	86.02	1,61,923	440	7,12,46,120.00
8	Widening and strengthening of existing carriageway to two lane road from Duhuria to Chandbali (Package No-OSRP-CW-ICB-P04B)	192.66	170.43	191.82	7,26,184	365	26,50,57,160.00
	Total	**1,070.84**	**994.42**	**658.29**	**11,21,101**		**43,50,92,596.00**

Appendix - XXIII

(Refer paragraph 6.4.1 at page 137)

Statement showing Special Repair of the road within six months of defect liability period

Sl. No.	Name of the Division	No. of agreements	Amount (₹ in crore)
1	Kalahandi (R & B) Division	18	4.52
2	Khariar (R & B) Division	31	0.62
3	Ganjam (R & B) Division No. I	5	0.33
4	Cuttack (R & B) Division	45	1.47
5	Kendrapara (R & B) Division	27	1.75
6	Bhadrak (R & B) Division	5	0.42
	Total	**131**	**9.11**

Appendix - XXIV

(Refer paragraph 6.5.1.2 at page 140)

Statement showing dual provision of lead distance led to extra and avoidable expenditure

Sl. No.	Name of the work	Estimated cost (₹ in crore)	Agreement cost (₹ in crore)	Date of commencement of the work/ Stipulated date for completion	Upto date payment (₹ in crore)	Description of item	Quantity of compacted materials in cum	Multification factor per cum	Total quantity in cum	Excess lead in Km	Lead charges per cum (in ₹)	Lead charges including Over Head Charges and Contractors Profit at the rate of 18.8 per cent (in ₹)	Total cost (in ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Widening and strengthening of existing carriageway to two lane from Bhawanipatna to Khariar (Km 2/000 to Km 70/000 of SH-16) (Package No-OSRP-CW-ICB-Y1-P01)	103.17	105.51	20-02-2009/ 19-08-2011	43.08	WMM	67,820	1.32	89,522.40	17	102	121.18	1,08,48,324.43
						DBM	12,269	1.47	18,035.43		102	121.18	21,85,533.41
						BC	1,868	1.49	2,783.32		102	121.18	3,37,282.72
2	Bhawanipatana Khariar road (balance work) excluding HL bridge over river Tel and approaches from 02/000 to 27/200 and 30/000 to 70/000 km (Package No-OSRP-CW-ICB-Y1-P01A)	85.45	84.51	21-08-2013/ 20-08-2015	79.47	WMM	63,342	1.32	83,611.44	17	124.1	147.43	1,23,26,834.60
						DBM	17,314	1.47	25,451.58		124.1	147.43	37,52,326.44
						BC	20,651	1.49	30,769.99		124.1	147.43	5,36,419.63
3	Construction of four numbers of High Level Bridges over River Tel with Approaches on the Road from Bhawanipatna to Khariar (SH-16) (Package No-OSRP-Bal-P01B)	27.24	28.97	14-11-2013/ 13-11-2015	35.74	WMM	4,523	1.32	5,970.36	17	124.1	147.43	8,80,210.17
						DBM	1,303	1.47	1,915.41		124.1	147.43	2,82,388.90
						BC	695	1.49	1,035.55		124.1	147.43	1,52,671.14
4	Widening and strengthening of existing carriageway to two lane for Chandbali- Bhadrak-Anandapur road (Km 0/000 to Km 50/000 of SH-53 and Km 0/000 to Km 45/000 of SH-9) (Package No-OSRP-CW-ICB-Y1-P02)	194.05	216.23	03-02-2009/ 02-08-2011	43.2	WMM	40,476	1.32	53,428.32	24	144	171.07	91,39,982.70
						DBM	9,775	1.47	14,369.25		144	171.07	24,58,147.60
						BC	3,043	1.49	4,534.07		144	171.07	7,75,643.35
5	Widening and strengthening of existing carriageway to two lane for Chandbali- Bhadrak-	278.82	248.12	01-11-2013/ 31-01-2016	69.06	WMM	50,972	1.32	67,283.04	24	175.2	208.14	1,40,04,291.95
						DBM	11,994	1.47	17,631.18		175.2	208.14	36,69,753.81
						BC	9,070	1.49	13,514.30		175.2	208.14	28,12,866.40

Sl. No.	Name of the work	Estimated cost (₹ in crore)	Agreement cost (₹ in crore)	Date of commenc-ement of the work/ Stipulated date for completion	Upto date payment (₹ in crore)	Description of item	Quantity of compacted materials in cum	Multification factor per cum	Total quantity in cum	Excess lead in Km	Lead charges per cum (in ₹)	Lead charges including Over Head Charges and Contractors Profit at the rate of 18.8 per cent (in ₹)	Total cost (in ₹)
	Anandapurroad (Balance Works) (Package No-OSRP-Bal-P02)												
6	Widening and strengthening of existing carriageway to two lane road from Pirahat to Chandbali (Balance Works) (Package No-OSRP-CW-ICB-P02B)	96.23	104.23	16-11-2016/ 15-05-2018	90.4	WMM	39,919	1.32	52,693.08	7	64.4	76.51	40,31,547.55
						DBM	11,329	1.47	16,653.63		64.4	76.51	12,74,169.23
						BC	5,953	1.49	8,869.97		64.4	76.51	6,78,641.40
7	Widening and strengthening of existing carriageway to two lane road from Berhampur to Taptapani (Km 0/000 to Km 41/000 of SH-17) (Package No-OSRP-CW-ICB-Y1-P03)	75.07	81.97	22-11-2008/ 21-11-2010	11.41	WMM	20,106	1.32	26,539.92	10	60	71.28	18,91,765.50
						DBM	5,185	1.47	7,621.95		60	71.28	5,43,292.60
						BC	0	1.49	0		60	71.28	0
8	Widening and strengthening of existing carriageway to two lane road from Berhampur to Taptapani (Balance Works) (Package No-OSRP-Bal-P03)	92.18	96.88	24-01-2013/ 23-01-2015	92.67	WMM	81,448	1.32	1,07,511.40	10	73	86.72	93,23,388.61
						DBM	21,311	1.47	31,327.17		73	86.72	27,16,692.18
						BC	15,996	1.49	23,834.04		73	86.72	20,66,887.95
9	Widening and strengthening of existing carriageway to two lane road from Jagatpur to Nischintakoili (Package No-OSRP-CW-ICB-P04A1)	108.15	107.39	01-01-2016/ 30-06-2017	101.54	WMM	43,767	1.32	57,772.44	7	64.4	76.51	44,20,169.38
						DBM	15,101	1.47	22,198.47		64.4	76.51	16,98,404.94
						BC	6,749	1.49	10,056.01		64.4	76.51	7,69,385.33
10	Widening and strengthening of existing carriageway to two lane road from Nischintakoili to Duhuria (Package No-OSRP-CW-ICB-P04A2)	106.18	97.9	01-01-2016/ 30-06-2017	95.56	WMM	47,092	1.32	62,161.44	7	64.4	76.51	47,55,971.77
						DBM	16,435	1.47	24,159.45		64.4	76.51	18,48,439.52
						BC	7,367	1.49	10,976.83		64.4	76.51	8,39,837.26
11	Widening and strengthening of existing carriageway to two lane road from Duhuria to Chandbali (Package No-OSRP-CW-ICB-P04B)	192.66	170.43	04-12-2013/ 03-03-2016	191.82	WMM	1,13,465	1.32	1,49,773.80	14	102.2	121.41	1,81,84,037.06
						DBM	23,020	1.47	33,839.40		102.2	121.41	41,08,441.55
						BC	17,239	1.49	25,686.11		102.2	121.41	31,18,550.62
	Total	**1,359.20**	**1,342.14**		**853.95**				**11,01,530.75**				13,04,32,299.69

Appendix - XXV

(Refer paragraph 6.5.1.3 at page 141)

Statement showing provision of excess lead on sand

Sl. No.	Name of the Work and Package No.	Estimated cost (₹ in crore)	Agreement cost (₹ in crore)	Date of commencement/ stipulated date of completion	Upto date expenditure (₹ in crore)	Sand quantity executed (in cum)	Lead provided (in Km)	Actual lead (in Km)	Difference in lead (in Km)	Rate provided (in ₹)	Actual rate (in ₹)	Difference in rate (in ₹₹)	Extra cost (in ₹)
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
1	Widening and strengthening of existing carriageway to two lane road from Jagatpur to Nischintakoili (Package No-OSRP-CW-ICB-P04A1)	108.15	107.39	01.01.2016/30.06.2017	101.54	1,41,027	15	10	5	248.4	202.4	46	64,87,242.00
2	Widening and strengthening of existing carriageway to two lane road from Nischintakoili to Duhuria (Package No-OSRP-CW-ICB-P04A2)	106.18	97.90	01.01.2016/30.06.2017	86.02	1,61,923	18	10	8	276	202.4	73.6	1,19,17,532.80
3	Widening and strengthening of existing carriageway to two lane road from Duhuria to Chandbali (Package No-OSRP-CW-ICB-P04B)	192.66	170.43	04.12.2013/03.03.2016	191.82	7,26,184	22	14	8	248.1	189.7	58.4	4,24,09,145.60
	Total	**406.99**	**375.72**		**379.38**	**10,29,134**							**6,08,13,920.40**

Appendix - XXVI

(Refer paragraph 6.5.1.4 at page 141)

Statement showing extra expenditure due to provision of excess lead for moorum

Sl. No.	Name of the Work and Package No.	Quantity of moorum/ gravelly soil executed (in cum)	Lead provided (in Km)	Actual lead (in Km)	Difference in lead (in Km)	Rate provided (in ₹)	Actual rate (in ₹)	Difference (in ₹)	Extra cost (in ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1	Widening and strengthening of existing carriageway to two lane road from Bhadrak to Pirahat (Balance Works) (OSRP-CW-ICB-P02A)	1,35,159	55	48	7	602.9	552	50.9	68,79,593.10
2	Widening and strengthening of existing carriageway to two lane road from Pirahat to Chandbali (Balance Works) (Package No.OSRP-CW-ICB-P02B)	1,31,224	78	71	7	752.4	706.9	45.5	59,70,692.00
3	Construction, widening and strengthening of existing carriageway to two lane road from Bhadrak to Anandapur (Balance Works) (Package No.P1-P02-Bal)	96,255	40	17	23	379.5	266.8	112.7	1,08,47,938.50
	Total	**3,62,638**							**2,36,98,223.60**

Appendix - XXVII
(Refer paragraph 6.5.1.5 at page 142)
Statement showing details of excess expenditure on lead of burrow earth

Sl. No.	Name of the Work and Package No.	Quantity of burrow earth utilised (in cum)	Lead provided for burrow earth (in Km)	Cost provided for lead in Estimate (in ₹)	Actual cost for burrow earth for 5 Km as per AoR (in ₹)	Difference (in ₹)	Extra cost
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	Widening and strengthening of existing carriageway to two lane for Chandbali-Bhadrak-Anandapur road (Balance Works) (Package No. OSRP-Bal-P02)	44,379	40.00	313.90	167.52	146.38	64,96,198.02
2	Widening and strengthening of existing carriageway to two lane road from Bhadrak to Pirahat (Balance Works) (OSRP-CW-ICB-P02A)	17,495	10.00	201.10	167.52	33.58	5,87,482.10
3	Widening and strengthening of existing carriageway to two lane road from Pirahat to Chandbali (Balance Works) (Package No-OSRP-CW-ICB-P02B)	1,51,329	10.00	201.10	167.52	33.58	50,81,627.82
4	Widening and strengthening of existing carriageway to two lane road from Nischintakoili to Duhuria (Package No-OSRP-CW-ICB-P04A2)	41,391	10.00	373.30	167.52	205.78	85,17,439.98
5	Widening and strengthening of existing carriageway to two lane road from Duhuria to Chandbali (Package No-OSRP-CW-ICB-P04B)	5,19,991	68.00	395.20	167.52	227.68	11,83,91,550.88
	Total	**7,74,585**					**13,90,74,298.80**

Appendix - XXVIII
(Refer paragraph 6.5.2.1 at page 143)
Statement showing details of excess provision of overhead charges

Sl. No.	Name of the Work and Package No.	Estimated cost (₹ in crore)	Agreement cost (₹ in crore)	Date of commencement/ Stipulated date of completion	Upto date expenditure (₹ in crore)	Value of work done (₹ in crore)	OHC contractor's profit at the rate of 18.8 *per cent*	Estimated cost of value of work done excluding OHC and contractor's profit at the rate of 18.8 *per cent*	Estimated cost including OHC and contractor's profit at the rate of 10 *per cent* and 15 *per cent*	Extra cost (₹ in crore)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1	Widening and strengthening of existing carriageway to two lane from Bhawanipatna to Khariar (Km 2/000 to Km 70/000 of SH-16) (Package No-OSRP-CW-ICB-Y1-P01)	103.44	105.51	20.02.2009/ 19.08.2011	43.08	32.33	6.08	26.25	28.88	3.45
2	Widening and strengthening of existing carriage way to two lane Road from Bhawanipatna to Khariar (Balance Work) (Package No-OSRP-Bal-P01A)	85.62	84.51	21.08.2013/ 20.08.2015	79.47	73.64	13.84	59.80	65.78	7.86
3	Construction of four numbers of High Level Bridges over River Tel with Approaches on the Road from Bhawanipatna to Khariar (SH-16) (Package No-OSRP-Bal-P01B)	27.28	28.97	14.11.2013/ 13.11.2015	35.74	28.68	5.39	23.29	25.62	3.06
4	Widening and strengthening of existing carriageway to two lane for Chandbali-Bhadrak-Anandapur road (Km 0/000 to Km 50/000 of SH-53 and Km 0/000 to Km 45/000 of SH-9) (Package No-OSRP-CW-ICB-Y1-P02)	194.05	216.23	03.02.2009/ 02.08.2011	43.2	32.93	6.19	26.74	29.41	3.52
5	Widening and strengthening of existing carriageway to two lane for Chandbali-Bhadrak-Anandapur road (Balance Works) (Package No-OSRP-Bal-P02)	279.2	248.12	01.11.2013/ 31.01.2016	69.06	68	12.78	55.22	60.74	7.26
6	Widening and strengthening of existing carriageway totwo two lane road from Bhadrak to Pirahat (Balance Works) (OSRP-CW-ICB-P02A)	76.4	79.33	16.11.2016/ 05.05.2018	76.23	84.39	15.87	68.52	78.80	5.59
7	Widening and strengthening of existing carriageway to 2-lane road from Pirahat to Chandbali (Balance Works) (Package	96.28	104.23	16.11.2016/ 15.05.2018	90.4	80.83	15.20	65.63	75.48	5.35

Sl. No.	Name of the Work and Package No.	Estimated cost (₹ in crore)	Agreement cost (₹ in crore)	Date of commencement/ Stipulated date of completion	Upto date expenditure (₹ in crore)	Value of work done (₹ in crore)	OHC contractor's profit at the rate of 18.8 *per cent*	Estimated cost of value of work done excluding OHC and contractor's profit at the rate of 18.8 *per cent*	Estimated cost including OHC and contractor's profit at the rate of 10 *per cent* and 15 *per cent*	Extra cost (₹ in crore)
	No-OSRP-CW-ICB-P02B)									
8	Widening and strengthening of existing carriageway to two lane road from Berhampur to Taptapani (Km 0/000 to Km 41/000 of SH-17) (Package No-OSRP-CW-ICB-Y1-P03)	92.5	81.97	22.11.2008 21.11.2010	11.41	8.91	1.68	7.23	7.96	0.95
9	Widening and strengthening of existing carriageway to two lane road from Berhampur to Taptapani (Balance Works) (Package No-OSRP-Bal-P03)	75.34	96.88	24.01.2013 23.01.2015	92.67	76.75	14.43	62.32	68.55	8.20
10	Widening and strengthening of existing carriageway to two lane road from Jagatpur to Duhuria (Km 0/000 to Km 49/000 of MDR) (Package No-OSRP-CW-ICB-P04A)	172.8	151.31	24.12.2013 23.03.2016	1.27	1.24	0.23	1.01	1.11	0.13
11	Widening and strengthening of existing carriageway to two lane road from Jagatpur to Nischintakoili (Package No-OSRP-CW-ICB-P04A1)	108.19	107.39	01.01.2016/ 30.06.2017	101.54	91.35	17.17	74.18	85.30	6.05
12	Widening and strengthening of existing carriageway to two lane road from Nischintakoili to Duhuria (Package No-OSRP-CW-ICB-P04A2)	106.21	97.9	01.01.2016/ 30.06.2017	86.02	95.56	17.97	77.59	89.23	6.33
13	Widening and strengthening of existing carriageway to two lane road from Duhuria to Chandbali (Package No-OSRP-CW-ICB-P04B)	192.75	170.43	04.12.2013/ 03.03.2016	191.82	178.06	33.48	144.58	166.27	11.79
	Total	**1,610.06**	**1,572.78**		**921.91**	**852.67**	**160.31**		**783.13**	**69.54**

Appendix - XXIX

(Refer paragraph 6.5.2.2 at page 143)

Statement showing details of avoidable extra expenditure due to excess provision of CRMB

Sl. No.	Name of the Work and Package No.	Estimated cost (₹ in crore)	Agreement cost (₹ in crore)	Date of commencement/ Stipulated date of completion	Upto date expenditure (₹ in crore)	Quantity of bitumen provided as per AoR for 191 cum (in cum)	Quantity of bitumen provided in analysis for 191 cum (in cum)	Difference multiplying factor (in cum)	CRMB rate provided for 191 cum (in ₹)	Cost of bitumen for 191 cum (in ₹)	Cost of bitumen for one cum (in ₹)	Quantity of BC (in cum)	Extra expenditure (in ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Construction, widening and strengthening of existing carriageway to two lane road from Bhadrak to Anandapur (Balance Works) (Package No-P1-P02-Bal)	39.74	35.71	12.03.2018/ 11.02.2019	41.96	22.50	24.30	1.80	26,260.00	472,68.00	247.48	7,239.00	17,91,481.95
2	Widening and strengthening of existing carriageway to two lane road from Bhadrak to Pirahat (Balance Works) (OSRP-CW-ICB-P02A)	76.40	79.33	16.11.2016/ 05.05.2018	76.23	22.50	24.30	1.80	37,661.21	67,790.18	354.92	7,728.70	27,43,088.74
3	Widening and strengthening of existing carriageway to two lane road from Pirahat to Chandbali (Balance Works) (Package No-OSRP-CW-ICB-P02B)	96.23	104.23	16.11.2016/ 15.05.2018	90.40	22.50	24.30	1.80	37,661.21	67,790.18	354.92	5,953.00	21,12,853.03
4	Widening and strengthening of existing carriageway to two lane road from Jagatpur to Nischintakoili (Package No-OSRP-CW-ICB-P04A1)	108.15	107.39	01.01.2016/ 30.06.2017	101.54	22.50	24.30	1.80	38,049.21	68,488.58	358.58	6,749.00	24,20,049.28
5	Widening and strengthening of existing carriageway to two lane road from Nischintakoili to Duhuria (Package No-OSRP-CW-ICB-P04A2)	106.18	97.9	01.01.2016/ 30.06.2017	86.02	22.50	24.30	1.80	38,049.21	68,488.58	358.58	7,367.00	26,41,651.07
	Total	**426.70**	**424.56**		**396.15**				**1,77,680.84**			**35,036.70**	**1,17,09,124.07**

Appendix - XXX

(Refer paragraph 6.5.2.3 at page 144)

Statement showing details of erroneous adoption of hire charges of motor grader

Sl. No.	Name of the Work and Package No.	Estimated cost (₹ in crore)	Agreement cost (₹ in crore)	Date of commencement/ Stipulated date of completion	Upto date expenditure (₹ in crore)	Quantity of burrow earth utilised for embankment (in cum)	Quantity of earth utilised for subgrade (in cum)	Total earth utilised (in cum)	Rate provided compaction 100 cum per hour for motor grader (in ₹)	Actual cost compaction 200 cum per hour for motor grader (in ₹)	Difference (in ₹)	Extra cost (in ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1	Widening and strengthening of existing carriageway to two lane from Bhawanipatna to Khariar (Km 2/000 to Km 70/000 of SH-16) (Package No-OSRP-CW-ICB-Y1-P01)	103.17	105.51	20.02.2009/ 19.08.2011	43.08	2,72,397	3,58,649	6,31,046	120.40	111.20	9.20	58,05,623.20
2	Widening and strengthening of existing carriage way to two lane Road from Bhawanipatna to Khariar (Balance Work) (Package No-OSRP-Bal-P01A)	85.45	84.51	21.08.2013/ 20.08.2015	79.47	1,93,171	93,762	2,86,933	127.00	117.80	9.20	26,39,783.60
3	Construction of four numbers of High Level Bridges over River Tel with Approaches on the Road from Bhawanipatna to Khariar (SH-16) (Package No-OSRP-Bal-P01B)	27.24	28.97	14.11.2013/ 13.11.2015	35.74	2,08,761	16,467	2,25,228	127.00	117.80	9.20	20,72,097.60
4	Widening and strengthening of existing carriageway to two lane for Chandbali-Bhadrak-Anandapur road (Km 0/000 to Km 50/000 of SH-53 and Km 0/000 to Km 45/000 of SH-9) (Package No-OSRP-CW-ICB-Y1-P02)	194.05	216.23	03.02.2009/ 02.08.2011	43.2	1,81,564	2,26,327	4,07,891	120.40	111.20	9.20	37,52,597.20
5	Widening and strengthening of existing carriageway to two lane for Chandbali-Bhadrak-Anandapurroad (Balance Works) (Package No-OSRP-Bal-P02)	278.82	248.12	27.09.2013/ 26.12.2015	69.06	44,379	72,263	1,16,642	313.90	304.70	9.20	10,73,106.40
6	Widening and strengthening of existing carriageway to twolane road from Bhadrak to Pirahat (Balance Works) (OSRP-CW-ICB-P02A)	76.34	79.33	16.11.2016/ 05.05.2018	76.23	17,495	0	17,495	201.10	191.90	9.20	1,60,954.00
7	Widening and strengthening of existing carriageway to two lane road from Pirahat to Chandbali (Balance Works) (Package No-OSRP-CW-ICB-P02B)	96.23	104.23	16.11.2016/ 15.05.2018	90.4	1,51,329	0	1,51,329	201.10	191.90	9.20	13,92,226.80
8	Construction, widening and strengthening of existing carriageway to two lane road from Bhadrak to Anandapur (Balance Works) (Package No-P1-P02-Bal)	39.74	35.71	12.03.2018/ 11.02.2019	41.96	67,226		67,226	159.90	129.90	30.00	20,16,780.00

Sl. No.	Name of the Work and Package No.	Estimated cost (₹ in crore)	Agreement cost (₹ in crore)	Date of commencement/ Stipulated date of completion	Upto date expenditure (₹ in crore)	Quantity of burrow earth utilised for embankment (in cum)	Quantity of earth utilised for subgrade (in cum)	Total earth utilised (in cum)	Rate provided compaction 100 cum per hour for motor grader (in ₹)	Actual cost compaction 200 cum per hour for motor grader (in ₹)	Difference (in ₹)	Extra cost (in ₹)
9	Widening and strengthening of existing carriageway to two lane road from Berhampur to Taptapani (Km 0/000 to Km 41/000 of SH-17) (Package No-OSRP-CW-ICB-Y1-P03)	75.07	81.97	22.11.2008/ 21.11.2010	11.41	62,280	45,721	1,08,001	120.40	111.20	9.20	9,93,609.20
10	Widening and strengthening of existing carriageway to two lane road from Berhampur to Taptapani (Balance Works) (Package No-OSRP-Bal-P03)	92.18	96.88	24.01.2013/ 23.01.2015	92.67	84,847	1,99,968	2,84,815	127.90	118.70	9.20	26,20,298.00
11	Widening and strengthening of existing carriageway to two lane road from Jagatpur to Nischintakoili (Package No-OSRP-CW-ICB-P04A1)	108.15	107.39	01.01.2016/ 30.06.2017	101.54	17,142	0	17,142	373.30	364.10	9.20	1,57,706.40
12	Widening and strengthening of existing carriageway to two lane road from Nischintakoili to Duhuria (Package No-OSRP-CW-ICB-P04A2)	106.18	97.9	01.01.2016/ 30.06.2017	86.02	41,391	0	41,391	373.30	364.10	9.20	3,80,797.20
13	Widening and strengthening of existing carriageway to two lane road from Duhuria to Chandbali (Package No-OSRP-CW-ICB-P04B)	192.66	170.43	04.12.2013/ 03.03.2016	191.82	1,93,004	3,26,987	5,19,991	395.20	386.00	9.20	47,83,917.20
	Total	**1,475.28**	**1,457.18**		**962.60**	**15,34,986**	**13,40,144**	**28,75,130**		**2,620.50**	**140.40**	**2,78,49,496.80**

Appendix – XXXI

(Refer paragraph 7.1 at page 155)

Non-realisation of MV Tax and additional tax from Goods carriages (Class - III vehicles) for the years 2019-21

Sl. No.	RTO	Total number of registered vehicles	Number of defaulter vehicles	Amount of Tax due (₹)	Amount of penalty due (₹)	Total tax and penalty due (₹)
1	*2*	*3*	*4*	*5*	*6*	*7*
1	Bargarh	11,695	33	6,83,668	13,67,336	20,51,004
2	Sundargarh	4,377	173	27,67,398	55,34,796	83,02,194
3	Jharsuguda	19,290	529	1,09,65,087	2,19,30,174	3,28,95,261
4	Balasore	3,690	94	4,89,047	9,78,094	14,67,141
5	Jagatsinghpur	1,191	5	72,395	1,44,790	2,17,185
6	Bhubaneswar I	49,790	425	49,98,162	99,96,324	1,49,94,486
	ARTO Khurda		228	25,15,052	50,30,104	75,45,156
7	Kalahandi	1,867	33	3,56,219	7,12,438	10,68,657
8	Nuapada	646	2	9,910	19,820	29,730
9	Gajapati	210	5	95,395	1,90,790	2,86,185
10	Bolangir	2,198	18	1,40,593	2,81,186	4,21,779
11	Rayagada	1,604	14	1,33,259	2,66,518	3,99,777
12	Bhubaneswar II	7,978	221	25,88,626	51,77,252	77,65,878
13	Ganjam	20,738	54	3,51,697	7,03,394	10,55,091
14	Mayurbhanj	6,716	38	5,14,212	10,28,424	15,42,636
15	Sambalpur	20,919	1,095	1,75,66,375	3,51,32,750	5,26,99,125
16	Talcher	10,891	114	21,58,459	43,16,918	64,75,377
Total		**1,63,800**	**3,081**	**4,64,05,554**	**9,28,11,108**	**13,92,16,662**

(Source: Information furnished by the RTOs)

Appendix - XXXII

(Refer paragraph 7.2 at page 156)

Statement showing less payment of One Time Tax **(In ₹)**

Sl. No.	Name of the RTO	No. of vehicles	Tax due	Tax paid	Differential tax due	Penalty leviable (at the rate of 20 *per cent*)	Total
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	RTO, Angul	25	9,07,948	5,70,677	3,37,271	67,454	4,04,725
2	RTO, Balasore	967	55,27,487	40,94,230	14,33,257	2,86,651	17,19,908
3	ARTO, Barbil	116	8,27,870	5,72,771	2,55,099	51,020	3,06,119
4	RTO, Bargarh	338	22,44,016	16,26,083	6,17,933	1,23,587	7,41,520
5	RTO, Bhubaneswar-I	96	60,02,698	35,74,793	24,27,905	4,85,581	29,13,486
6	RTO, Bhubaneswar-II	32	10,75,186	5,93,738	4,81,448	96,290	5,77,738
7	RTO, Chandikhol	8	3,62,419	2,35,470	1,26,949	25,390	1,52,339
8	RTO, Cuttack	213	17,85,290	12,36,470	5,48,820	1,09,764	6,58,584
9	RTO, Dhenkanal	8	1,07,377	76,957	30,420	6,084	36,504
10	RTO, Gajapati	83	4,51,930	3,37,616	1,14,314	22,863	1,37,177
11	RTO, Ganjam	451	31,95,968	22,88,564	9,07,404	1,81,481	10,88,885
12	RTO, Jagatsinghpur	80	7,80,044	5,01,082	2,78,962	55,792	3,34,754
13	RTO, Jharsuguda	118	6,01,588	4,85,660	1,15,928	23,186	1,39,114
14	RTO, Kalahandi	249	17,50,219	11,89,750	5,60,469	1,12,094	6,72,563
15	RTO, Kendrapara	98	4,12,409	3,23,273	89,136	17,827	1,06,963
16	RTO, Keonjhar	99	6,73,894	4,80,979	1,92,915	38,583	2,31,498
17	ARTO, Khordha	15	5,87,834	3,88,043	1,99,791	39,958	2,39,749
18	RTO, Mayurbhanj	46	2,06,050	1,71,726	34,324	6,865	41,189
19	RTO, Nabarangpur	35	1,69,450	1,23,963	45,487	9,097	54,584
20	RTO, Nuapada	59	1,84,560	1,50,569	33,991	6,798	40,789
21	RTO, Phulbani	21	1,35,399	98,439	36,960	7,392	44,352
22	RTO, Puri	198	8,60,643	680,322	1,80,321	36,064	2,16,385
23	RTO, Rayagada	268	12,21,364	9,55,001	2,66,363	53,273	3,19,636
24	RTO, Rourkela	131	21,41,710	13,26,606	8,15,104	1,63,021	9,78,125
25	RTO, Sambalpur	380	40,56,424	27,97,802	12,58,622	2,51,724	15,10,346
26	RTO, Sundargarh	236	9,18,012	7,28,733	1,89,279	37,856	2,27,135
27	RTO, Talcher	3	1,41,240	88,276	52,964	10,593	63,557
	Total	**4,373**	**3,73,29,029**	**2,56,97,593**	**1,16,31,436**	**23,26,288**	**1,39,57,724**

Appendix – XXXIII

(Refer paragraph 7.5 at page 160)

Division-wise abstract of non-disposed timber and forest produce seized in undetected forest offence cases during 2015-21

Sl. No.	Name of the Division	No. of cases	Volume of logs (cft.)	Rate (₹)	Money value (₹)	Volume of sized wood (Cft.)	Rate (₹)	Money value (₹)	No. of poles	Rate (₹)	Money value (₹)	Fire wood (Stack)	Rate (₹)	Money value (₹)	Total money value (₹)
1	Bargarh	194	1,352.58	305	4,12,536.90	0.00	0	0	904	60	54,240.00	92.53	405	37,474.65	5,04,251.55
2	Subarnapur	8	148.25	305	45,216.25	17.01	397	6,752.97	0	0	0.00	0.00	0	0.00	51,969.22
3	Bamra (WL)	25	163.51	305	49,870.55	38.79	397	15,399.63	162	60	9,720.00	5.00	405	2,025.00	77,015.18
4	Balasore (WL)	21	445.56	305	1,35,895.80	405.70	397	1,61,062.90	74	60	4,440.00	10.00	405	4,050.00	3,05,448.70
5	Sunabeda WL	12	142.77	305	43,544.85	0.00	0	0.00	10	60	600.00	0.00	0	0.00	44,144.85
6	Berhampur	17	129.63	305	39,537.15	0.00	0	0.00	821	60	49,260.00	0.00	0	0.00	88,797.15
7	Keonjhar (WL)	15	69.51	305	21,200.55	38.24	397	15,181.28	88	60	5,280.00	6.00	405	2,430.00	44,091.83
8	Puri (WL)	27	78.31	305	23,884.55	21.83	397	8,666.51	187	60	11,220.00	31.30	405	12,676.50	56,447.56
9	Satakosia (WL)	41	766.37	305	2,33,742.85	15.90	397	6,312.30	30	60	1,800.00	0.00	0	0.00	2,41,855.15
10	Boudh	72	845.64	305	2,57,920.20	63.56	397	25,233.32	259	60	15,540.00	36.85	405	14,924.25	3,13,617.77
11	Balangir	130	1,870.00	305	5,70,350.00	673.96	397	2,67,562.12	759	60	45,540.00	492.00	405	1,99,260.00	10,82,712.12
12	Keonjhar	75	733.19	305	2,23,622.95	166.64	397	66,156.08	418	60	25,080.00	23.75	405	9,618.75	3,24,477.78
13	Deogarh	41	234.70	305	71,583.50	103.04	397	40,906.88	105	60	6,300.00	25.00	405	10,125.00	1,28,915.38
14	Angul	6	50.20	305	15,311.00	5.78	397	2,294.66	3	60	180.00	0.00	0	0.00	17,785.66
15	Bonai	30	2,005.44	305	6,11,659.20	89.14	397	35,388.58	2	60	120.00	0.00	0	0.00	6,47,167.78
16	Cuttack	3	127.02	305	38,741.10	0.00	0	0.00	0	0	0.00	8.75	405	3,543.75	42,284.85
17	Paralakhemundi	53	825.64	305	2,51,820.20	202.00	397	80,194.00	11	50	550.00	1.00	405	405.00	3,32,969.20
18	Rayagada	30	1,224.07	305	3,73,341.35	36.00	397	14,292.00	0	0	0.00	3.00	405	1,215.00	3,88,848.35
19	Rourkela	104	1,352.69	305	4,12,570.45	2,280.92	397	9,05,525.24	129	60	7,740.00	0.00	0	0.00	13,25,835.69
20	Phulbani	41	827.34	305	2,52,338.70	0.00	0	0.00	0	0	0.00	0.00	0	0.00	2,52,338.70
21	Athagarh	3	74.27	305	22,652.35	12.70	397	5,041.90	19	50	950.00	0.00	0	0.00	28,644.25
22	Sundargarh	20	484.28	305	1,47,705.40	1.06	397	420.82	0	0	0.00	0.00	0	0.00	1,48,126.22
23	Rairangpur	27	127.67	305	38,939.35	89.64	397	35,587.08	56	60	3,360.00	22.50	405	9,112.50	86,998.93
24	Jharsuguda	21	161.00	305	49,105.00	94.75	397	37,615.75	119	60	7,140.00	45.50	405	18,427.50	1,12,288.25
25	Khordha	107	1,406.00	305	4,28,830.00	160.00	397	63,520.00	39	60	2,340.00	310.00	405	1,25,550.00	6,20,240.00
26	Baripada	317	1,085.30	305	3,31,016.50	397.46	397	1,57,791.62	159	60	9,540.00	138.55	405	56,112.75	5,54,460.87
27	Baliguda	12	5.83	305	1,778.15	0.87	397	345.39	0	0	0.00	0.00	0	0.00	2,123.54
28	Ghumsur (N)	53	1,150.93	305	3,51,033.65	27.94	397	11,092.18	8	60	480.00	1.00	405	405.00	3,63,010.83
29	Dhenkanal	79	624.77	305	1,90,554.85	132.85	397	52,741.45	363	35	12,705.00	15.60	405	6,318.00	2,62,319.30
30	Ghumsur (S)	92	383.80	305	1,17,059.00	352.65	397	1,40,002.05	1,942	60	1,16,520.00	36.00	405	14,580.00	3,88,161.05
Total		**1,676**	**18,896.27**		**57,63,362.35**	**5,428.43**		**21,55,086.71**	**6,667**		**3,90,645.00**	**1,304.33**		**5,28,253.65**	**88,37,347.71**

(Source: Information furnished by DFOs)

Appendix – XXXIV

(Refer paragraph 7.7 at page 162)

Statement showing excess payment made to the contractors due to non-revision of cost of DI K7 pipes as per the agreement

SL. No.	Name of the Work	Sanctioned estimated cost (₹ in crore)	Agreement value (₹ in crore)	Scheduled date of completion	Up to date payment (₹ in crore)	Particulars of DI K7 pipe in mm dia	Quantity provided in estimate/ agreement in meter	Approved basic rate of K7 pipes in October 2017 per meter (In ₹)	Rate after adding 15 *per cent* per meter (9 x 15 per cent) (In ₹)	Final rate of DI K7 pipes after adding labour cess one *per cent* per meter (10 x 1 *per cent*) (In ₹)	Estimate / agreement rate per meter including OHC+CP+ labour cess (In ₹)	Differential cost per meter (12-11) (In ₹)	Differential excess cost (13 x 8) (In ₹)	Add tender premium in percentage	Excess payment including tender premium made to Contractors [14+(14 x15)] (In ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
1	Extension of distribution pipeline in uncovered area of ward no 1,2,3,4,5,7,16 and 18 in Jajpur	2.42 sanctioned by SE, PH Circle, Cuttack on 26.09.2017	2.48	28.05.2018	2.09	100 mm	3,700	786.40	904.36	913.40	1,077.87	164.47	6,08,526	4.14	6,33,718.64
						150 mm	2,600	1,122.90	1,291.335	1,304.25	1,538.99	234.74	6,10,328	4.14	6,35,595.88
						200 mm	1,816	1,413.60	1,625.64	1,641.90	1,937.38	295.48	5,36,598	4.14	5,58,813.38
2	Laying of balance distribution in uncovered area including commissioning of source foe ward no. 1, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14, 15, 16 and 17 in Vyas Nagar Municipality	3.18 sanctioned by SE, PH Circle, Cuttack on 26.09.2017	3.05	25.07.2018	3.04	150 mm	4,000	1,122.90	1,291.335	1,304.25	1,538.99	234.74	9,38,967	-3.10	9,09,858.64
						100 mm	15,500	786.40	904.36	913.40	1,077.87	164.47	25,49,229	-3.10	24,70,203.09
3	Laying of balance distribution network, construction of production well pump house power supply and commissioning of production well in ward No. 6,7,8,17,18,19,20 and 21 of Jagatsinghpur Municipality	3.15 sanctioned by SE, PH Circle, Cuttack on 24.09.2017	3.01	23.06.2018	2.98	150 mm	5,204.50	1,122.90	1,291.335	1,304.25	1,538.99	234.74	12,21,713	-2.46	11,91,658.78
						100 mm	10,823	786.40	904.36	913.40	1,077.87	164.47	17,80,020	-2.46	17,36,231.36

SL. No.	Name of the Work	Sanctioned estimated cost (₹ in crore)	Agreement value (₹ in crore)	Scheduled date of completion	Up to date payment (₹ in crore)	Particulars of DI K7 pipe in mm dia	Quantity provided in estimate/ agreement in meter	Approved basic rate of K7 pipes in October 2017 per meter (In ₹)	Rate after adding 15 *per cent* per meter (9 x 15 per cent) (In ₹)	Final rate of DI K7 pipes after adding labour cess one *per cent* per meter (10 x 1 *per cent*) (In ₹)	Estimate / agreement rate per meter including OHC+CP+ labour cess (In ₹)	Differential cost per meter (12-11) (In ₹)	Differential excess cost (13 x 8) (In ₹)	Add tender premium in percentage	Excess payment including tender premium made to Contractors [14+(14 x15)] (In ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
4	Construction of production well, pump house laying of distribution network, power supply to pump house and commissioning of production well at Bauria palanda in ward No.6 of Paradeep Municipality	0.72 sanctioned by EE PH Division Cuttack on 04.09.2017	0.65	15.05.2018	0.65	150 mm	499.50	1,122.90	1,291.335	1,304.25	1,538.99	234.74	1,17,253	-1.07	1,15,998.84
						100 mm	2,050.50	786.40	904.36	913.40	1,077.87	164.47	3,37,238	-1.07	3,33,629.90
5	Extension of distribution network at Jagannath colony, Housing board colony and Mundapada in Ward No.13 of Paradeep Municipality	0.53 sanctioned by EE PH Division Cuttack on 28.07.2017	0.52	18.06.2018	0.5	150 mm	759	1,122.90	1,291.335	1,304.25	1,538.99	234.74	1,78,169	0.50	1,79,059.76
						100 mm	2,000	786.40	904.36	913.40	1,077.87	164.47	3,28,933	0.50	3,30,577.46
6	Laying of distribution network in ward no 13 & 18 including commissioning of production well of Jagatsinghpur Municipality	0.61 sanctioned by EE PH Divn Cuttack on 12.09.2017	0.42	06.05.2018	0.42	150 mm	500	1,122.90	1,291.335	1,304.25	1,538.99	234.74	1,17,371	-7.05	1,09,096.18
						100 mm	1,001	786.40	904.36	913.40	1,077.87	164.47	1,64,631	-7.05	1,53,024.39
7	Laying of distribution network in ward No. 1,3,6,7,10, 12, 14 & 21 Jagatsinghpur Municipality	1.17 sanctioned by SE PH circle Cuttack on 16.09.2017	1.07	06.07.2018	0.9	150 mm	1,000	1,122.90	1,291.335	1,304.25	1,538.90	234.65	2,34,652	-7.15	2,17,874.06
						100 mm	6,001	786.40	904.36	913.40	1,077.87	164.47	9,86,963	-7.15	9,16,395.02
	Total	**11.78**	**11.2**		**10.58**		**57,454.50**						**1,07,10,591**		**1,04,91,735.38**

Appendix – XXXV
(Refer paragraph 7.10 at page 167)
Non-realisation of Dead Rent (DR) and interest thereon

Lease area in ha.	Rate of DR per Ha. per year (In ₹)	Period	Dead Rent (In ₹)	Due date of payment	Due date including grace period of 60 days	Period of interest		No. of days delays	Interest due at the rate of 24 *per cent* (In ₹)
						From	To		
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Orient Colliery									
487.369	2000	1st half of 2015	4,83,363	15/1/2015	16/3/2015	17/3/2015	31/3/2022	2,572	8,17,453
		2nd half of 2015	4,91,375	15/7/2015	17/9/2015	14/9/2015	31/3/2022	2,391	7,72,522
		1st haf of 2016	4,84,706	15/1/2016	15/3/2016	16/3/2016	31/3/2022	2,207	7,03,394
		2nd half of 2016	4,90,032	15/7/2016	13/9/2016	14/9/2016	31/3/2022	2,025	6,52,481
		1st half of 2017	4,83,363	15/1/2017	16/3/2017	17/3/2017	31/3/2022	1,841	5,85,121
		2nd half of 2017	4,91,375	15/7/2017	13/9/2017	14/9/2017	31/3/2022	1,660	5,36,339
		1st half of 2018	4,83,363	15/1/2018	16/3/2018	17/3/2018	31/3/2022	1,476	4,69,114
		2nd half of 2018	4,91,375	15/7/2018	13/9/2018	14/9/2018	31/3/2022	1,295	4,18,409
		1st half of 2019	4,83,363	15/1/2019	16/3/2019	17/3/2019	31/3/2022	1,111	3,53,107
		2nd half of 2019	4,91,375	15/7/2019	13/9/2019	14/9/2019	31/3/2022	930	3,00,479
Total			**48,73,690**						**56,08,419**
Gandaghora Colliery									
121.732	1000	1st half of 2014	60,366	15/1/2014	16/3/2014	17/3/2014	31/3/2022	2,936	1,16,537
		2nd half of 2014	61,366	15/7/2014	13/9/2014	14/9/2014	31/3/2022	2,755	1,11,165
	2000	1st half of 2015	1,20,731	15/1/2015	16/3/2015	17/3/2015	31/3/2022	2,572	2,04,178
		2nd half of 2015	1,22,733	15/7/2015	13/9/2015	14/9/2015	31/3/2022	2,391	1,92,956
		1st haf of 2016	1,21,067	15/1/2016	15/3/2016	16/3/2016	31/3/2022	2,207	1,75,689
		2nd half of 2016	1,22,397	15/7/2016	13/9/2016	14/9/2016	31/3/2022	2,025	1,62,973
		1st half of 2017	1,20,731	15/1/2017	16/3/2017	17/3/2017	31/3/2022	1,841	1,46,148
		2nd half of 2017	1,22,733	15/7/2017	13/9/2017	14/9/2017	31/3/2022	1,660	1,33,963
		1st half of 2018	1,20,731	15/1/2018	16/3/2018	17/3/2018	31/3/2022	1,476	1,17,172
		2nd half of 2018	1,22,733	15/7/2018	13/9/2018	14/9/2018	31/3/2022	1,295	1,04,508
		1st half of 2019	1,20,731	15/1/2019	16/3/2019	17/3/2019	31/3/2022	1,111	88,197
		2nd half of 2019	1,22,733	15/7/2019	13/9/2019	14/9/2019	31/3/2022	930	75,052
Total			**13,39,052**						**16,28,538**
New Gandaghora Colliery									
161.104	2000	1st haf of 2016	1,60,224	15/1/2016	15/3/2016	16/3/2016	31/3/2022	2,206	2,31,773
		2nd half of 2016	1,61,984	15/7/2016	13/9/2016	14/9/2016	31/3/2022	2,024	2,14,988
		1st half of 2017	1,59,780	15/1/2017	16/3/2017	17/3/2017	31/3/2022	1,841	1,93,417

Lease area in ha.	Rate of DR per Ha. per year (In ₹)	Period	Dead Rent (In ₹)	Due date of payment	Due date including grace period of 60 days	Period of interest		No. of days delays	Interest due at the rate of 24 *per cent* (In ₹)
						From	To		
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
		2nd half of 2017	1,62,428	15/7/2017	13/9/2017	14/9/2017	31/3/2022	1,660	1,77,291
		1st half of 2018	1,59,780	15/1/2018	16/3/2018	17/3/2018	31/3/2022	1,476	1,55,070
		2nd half of 2018	1,62,428	15/7/2018	13/9/2018	14/9/2018	31/3/2022	1,295	1,38,309
		1st half of 2019	1,59,780	15/1/2019	16/3/2019	17/3/2019	31/3/2022	1,111	1,16,722
		2nd half of 2019	1,62,428	15/7/2019	13/9/2019	14/9/2019	31/3/2022	930	99,326
Total			**12,88,832**						**13,26,896**
IB River Colliery									
82.273	280	1st half of 2000	11,424	15/1/2000	15/3/2000	16/3/2000	31/3/2022	8,050	60,467
		2nd half of 2000	11,613	15/7/2000	13/7/2000	14/9/2000	31/3/2022	7,868	60,079
		1st half of 2001	11,424	15/1/2001	16/3/2001	17/3/2001	31/3/2022	7,684	57,717
		2nd half of 2001	11,613	15/7/2001	13/9/2001	14/9/2001	31/3/2022	7,503	57,292
		1st half of 2002	11,424	15/1/2002	16/3/2002	17/3/2002	31/3/2022	7,319	54,976
		2nd half of 2002	11,613	15/7/2002	13/9/2002	14/9/2002	31/3/2022	7,138	54,505
		1st half of 2003	11,424	15/1/2003	16/3/2003	17/3/2003	31/3/2022	6,954	52,234
		2nd half of 2003	11,613	15/7/2003	13/9/2003	14/9/2003	31/3/2022	6,773	51,718
		1st half of 2004	11,455	15/1/2004	15/3/2004	16/3/2004	31/3/2022	6,589	49,630
		2nd half of 2004	11,581	15/7/2004	13/9/2004	14/9/2004	31/3/2022	6,407	48,789
	400	1st half of 2005	16,319	15/1/2005	16/3/2005	17/3/2005	31/3/2022	6,223	66,776
		2nd half of 2005	16,590	15/7/2005	13/9/2005	14/9/2005	31/3/2022	6,042	65,908
		1st half of 2006	16,319	15/1/2006	16/3/2006	17/3/2006	31/3/2022	5,858	62,859
		2nd half of 2006	16,590	15/7/2006	13/9/2006	14/9/2006	31/3/2022	5,677	61,927
		1st half of 2007	16,319	15/1/2007	16/3/2007	17/3/2007	31/3/2022	5,493	58,943
		2nd half of 2007	16,590	15/7/2007	13/9/2007	14/9/2007	31/3/2022	5,312	57,945
		1st half of 2008	16,365	15/1/2008	15/3/2008	16/3/2008	31/3/2022	5,128	55,179
		2nd half of 2008	16,545	15/7/2008	13/9/2008	14/9/2008	31/3/2022	4,947	53,816
		1st half of 2009	16,319	15/1/2009	16/3/2009	17/3/2009	31/3/2022	4,762	51,099
		2nd half of 2009	16,590	15/7/2009	13/9/2009	14/9/2009	31/3/2022	4,581	49,971
	1000	1st half of 2010	40,798	15/1/2010	16/3/2010	17/3/2010	31/3/2022	4,397	1,17,955
		2nd half of 2010	41,475	15/7/2010	13/9/2010	14/9/2010	31/3/2022	4,216	1,14,974
		1st half of 2011	40,798	15/1/2011	16/3/2011	17/3/2011	31/3/2022	4,032	1,08,164
		2nd half of 2011	41,475	15/7/2011	13/9/2011	14/9/2011	31/3/2022	3,851	1,05,021
		1st half of 2012	40,912	15/1/2012	15/3/2012	16/3/2012	31/3/2022	3,667	98,645
		2nd half of 2012	41,361	15/7/2012	13/9/2012	14/9/2012	31/3/2022	3,485	94,780
		1st half of 2013	40,798	15/1/2013	16/3/2013	17/3/2013	31/3/2022	3,301	88,554

Lease area in ha.	Rate of DR per Ha. per year (In ₹)	Period	Dead Rent (In ₹)	Due date of payment	Due date including grace period of 60 days	Period of interest		No. of days delays	Interest due at the rate of 24 *per cent* (In ₹)
						From	To		
1	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***
		2nd half of 2013	41,475	15/7/2013	13/9/2013	14/9/2013	31/3/2022	3,120	85,085
		1st half of 2014	40,798	15/1/2014	16/3/2014	17/3/2014	31/3/2022	2,937	78,789
		2nd half of 2014	41,475	15/7/2014	13/9/2014	14/9/2014	31/3/2022	2,756	75,159
	2000	1st half of 2015	81,597	15/1/2015	16/3/2015	17/3/2015	31/3/2022	2,572	1,37,995
		2nd half of 2015	82,949	15/7/2015	13/9/2015	14/9/2015	31/3/2022	2,391	1,30,410
		1st half of 2016	81,823	15/1/2016	15/3/2016	16/3/2016	31/3/2022	2,206	1,18,687
		2nd half of 2016	82,723	15/7/2016	13/9/2016	14/9/2016	31/3/2022	2,025	1,10,146
		1st half of 2017	81,597	15/1/2017	16/3/2017	17/3/2017	31/3/2022	1,841	98,775
		2nd half of 2017	82,949	15/7/2017	13/9/2017	14/9/2017	31/3/2022	1,660	90,540
		1st half of 2018	81,597	15/1/2018	16/3/2018	17/3/2018	31/3/2022	1,476	79,191
		2nd half of 2018	82,949	15/7/2018	13/9/2018	14/9/2018	31/3/2022	1,295	70,632
		1st half of 2019	81,597	15/1/2019	16/3/2019	17/3/2019	31/3/2022	1,111	59,608
		2nd half of 2019	82,949	15/7/2019	13/9/2019	14/9/2019	31/3/2022	930	50,724
Total			**15,13,825**						**30,45,664**
Grand Total			**90,15,399**						**1,16,09,517**

Appendix – XXXVI
(Refer paragraph 7.11 at page 168)
Non-realisation of additional amount from OCPL

(In ₹)

Period		**Despatch quantity in MT**	**Price of Coal per MT**	**Additional amount at the rate of 14 *per cent** per MT**	**Additional amount**
1	***2***	***3***	***4***	***5***	***6***
28/3/2021	31/3/2021	9,376.50	1,157.00	161.98	15,18,805
1/4/2021	30/4/2021	1,42,193.520	1,176.00	164.64	2,34,10,741
1/5/2021	31/5/2021	1,36,035.770	1,163.00	162.82	2,21,49,344
1/6/2021	30/6/2021	2,09,214.810	1,175.00	164.50	3,44,15,836
1/7/2021	31/7/2021	1,70,467.270	1,259.00	176.26	3,00,46,561
1/8/2021	31/8/2021	1,29,148.910	1,334.00	186.76	2,41,19,850
1/9/2021	30/9/2021	48,733.270	1,560.00	218.40	1,06,43,346
	Total	**8,45,170.050**			**14,63,04,483**

*Additional amount equal to royalty payable on coal at the rate of 14 *per cent*.

Appendix – XXXVII
(Refer paragraph 7.11 at page 168)
Short realisation of royalty on sale of coal

(In ₹)

Month (As of)	Quantity in MT	Rate applicable for Power Sector as per CIL	Rate applicable for Non-Power Sector as per CIL	Amount of Royalty at the rate of 14 *per cent* on the price for Power Sector	Amount of Royalty at the rate of 14 *per cent* on the price for Non-Power Sector	Differential rate per MT	Total Royalty amount
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
31/12/2019	56,104.440	748.00	897.00	104.72	125.58	20.86	11,70,339
31/1/2020	1,41,739.150	748.00	897.00	104.72	125.58	20.86	29,56,679
29/2/2020	1,47,772.700	748.00	897.00	104.72	125.58	20.86	30,82,539
31/3/2020	1,66,503.110	748.00	897.00	104.72	125.58	20.86	34,73,255
30/4/2020	86,558.610	748.00	897.00	104.72	125.58	20.86	18,05,613
31/5/2020	1,40,230.330	748.00	897.00	104.72	125.58	20.86	29,25,205
30/6/2020	1,46,249.900	748.00	897.00	104.72	125.58	20.86	30,50,773
31/7/2020	81,271.370	748.00	897.00	104.72	125.58	20.86	16,95,321
31/8/2020	1,16,117.720	748.00	897.00	104.72	125.58	20.86	24,22,216
30/9/2020	1,15,586.910	748.00	897.00	104.72	125.58	20.86	24,11,143
31/10/2020	85,559.820	748.00	897.00	104.72	125.58	20.86	17,84,778
30/11/2020	1,96,387.750	748.00	897.00	104.72	125.58	20.86	40,96,648
31/12/2020	2,06,650.300	758.00	907.00	106.12	126.98	20.86	43,10,725
31/1/2021	1,76,043.860	758.00	907.00	106.12	126.98	20.86	36,72,275
28/2/2021	1,77,707.350	758.00	907.00	106.12	126.98	20.86	37,06,975
31/3/2021	2,05,298.910	758.00	907.00	106.12	126.98	20.86	42,82,535
	22,45,782.230						**4,68,47,019**
					DMF (10 *per cent*)		**46,84,702**
					NMET (2 *per cent*)		**9,36,940**
					Total		**5,24,68,661**

Appendix – XXXVIII

(Refer paragraph 7.15 at page 174)

Statement showing extra cost due to laxity in survey and investigation and revision of estimate

Sl. No.	Description of work	Quantity and rate as per revised estimate			Item rate as per original estimate (SoR 2014)	Revised Amount (In ₹)	Original cost (In ₹)
		Unit	Quantity	Rate			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Earth work excavation in foundation of structures up to 3 mtrs depth	Cum	12,396.75	37.20	30.60	4,61,159.10	3,79,340.55
2	Filling clean sand in road work as per section 900, 2,100 and clause 401 & 304	Cum	7,941.09	354.21	342.70	28,12,813.49	27,21,411.54
3	Sand filling in foundation of CD	Cum	3,355.31	337.60	323.70	11,32,752.66	10,86,113.85
4	RCC of M-35 grade bored cast-in-situ pile 1,000 mm dia for bridge	Rmt	900.00	6,037.28	6,861.30	54,33,552.00	61,75,170.00
5	RCC of M-35 grade in pile cap of bridge work	Cum	1,024.98	5,147.21	5,491.70	52,75,787.31	56,28,882.67
6	PCC M-15 grade in foundation of pile cap & saucer	Cum	653.67	3,855.16	4,686.90	25,20,002.44	30,63,685.92
7.1	Abutment & Pier shaft	Cum	227.09	5,905.04	6,149.00	13,40,975.53	13,96,376.41
7.2	Abutment cap, dirt wall, pier cap	Cum	730.63	6,538.23	6,120.60	47,77,026.98	44,71,893.98
7.3	Retaining wall foundation	Cum	1,680.75	5,113.55	6,120.60	85,94,599.16	1,02,87,198.45
7.4	Retaining wall shaft	Cum	671.91	7,369.29	6,120.60	49,51,499.64	41,12,492.35
8	RCC M-35 kerb in super structure	Cum	162.85	6,538.23	6,120.60	10,64,750.76	9,96,739.71
9	RCC M-40 for super structure deck slab	Cum	2,525.16	7,854.44	7,597.80	19,83,3717.71	1,91,85,660.65
10	RCC M-40 in foot path slab	Cum	342.85	6,271.46	5,699.00	21,50,170.06	19,53,902.15
11	Filter media/ metal spall backing	Cum	1,566.72	1,761.04	1,657.80	27,59,056.59	25,97,308.42
12	Drainage spouts in deck slab with 100 mm dia G.I pipe for finished	No.	252.00	787.66	613.40	1,98,490.32	1,54,576.80
13	Weep holes in abutment, wing wall reating wall	Rmt	1,308.20	103.06	100.00	1,34,823.09	1,30,820.00
14	Labour for fixing in position true to line & level POT-cum-PTFE Bearing	MT	52,500.00	3.07	1.57	1,61,175.00	82,425.00
15	RCC M-30 in wearing coat with reinforcement cost	Cum	428.56	9,413.71	9,710.80	40,34,339.56	41,61,660.45
16	HYSD bars confirming to IS 1786 for reinforcement work	MT	2,093.52	64,039.22	60,628.00	13,40,67,387.85	12,69,25,930.56
17	Fitting & fixing Strip seal expansion joint	Rmt	271.40	9,225.97	8,500.00	25,03,928.26	23,06,900.00
18	RCC crash barrier of M-35 including HYSD (IRC-21)	Rmt	1,523.78	4,145.70	3,396.50	63,17,134.75	51,75,518.77
19	Painting two coat with synthetic enamel paint	Sqm	4,272.05	109.34	83.70	4,67,105.95	3,57,570.59
20	Laying GSB Gr-IV	Cum	2,460.69	1,529.70	1,464.10	37,64,117.49	36,02,696.23
21	Providing WMM	Cum	2,869.61	1,523.43	1,575.60	43,71,649.96	45,21,357.52
22	Primer Coat	Sqm	11,478.44	22.91	24.60	2,62,971.06	2,82,369.62
23	Tack coat	Sqm	12,878.44	8.39	9.00	1,08,050.11	1,15,905.96
24	Providing BM (Gr-II) using 60/70	Cum	643.92	5,701.20	6,095.30	36,71,116.70	39,24,885.58
25	Providing SDBC	Cum	321.96	7,468.64	8,011.80	24,04,603.33	25,79,479.13
26	Fabrication, assembly, erection bridge deck	Kg	40,26,304.00	85.71	79.34	34,50,94,515.84	31,94,46,959.36

Sl. No.	Description of work	Quantity and rate as per revised estimate			Item rate as per original estimate (SoR 2014)	Revised Amount (In ₹)	Original cost (In ₹)
		Unit	Quantity	Rate			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
27	Labour for erection	Kg	4,70,647.00	8.77	9.00	41,27,574.19	42,35,823.00
28	Providing road marking	Sqm	727.21	390.89	494.90	2,84,259.12	3,59,896.23
29	Cleaning & grubbing road land	Sqm	11,420.00	5.12	2.80	58,470.40	31,976.00
30	Painting two coat with weather coat	Sqm	9211.47	124.00	325.00	11,42,222.28	29,93,727.75
31	Compacted shoulder using moorum	Cum	40.00	551.13	408.90	22,045.20	16,356.00
32	RCC M-30 bridge railing cast	Rmt	1,523.78	1,714.24	1,613.77	26,12,124.63	24,59,030.45
33	Dry lean concrete	Cum	254.31	3,467.84	3,437.50	8,81,906.39	8,74,190.63
34	Cement concrete pavement by semi mechanised method	Cum	350.00	5,686.62	6,566.30	19,90,317.00	22,98,205.00
35	RCC M-15 grade Guard Post	No	660.00	355.92	338.10	2,34,907.20	2,23,146.00
36	Loosening levelling 150mm depth & compacting	Cum	1,369.50	20.58	22.90	28,184.31	31,361.55
37	Metalising painting steel grider	Sqm	38,577.70	659.13	239.60	2,54,27,719.40	92,43,216.92
38	Installation of MS stud M-25x205	No	72,460.00	261.60	261.60	1,89,55,536.00	1,89,55,536.00
39	RCC M 20 grade foundation	Cum	482.39	4,505.48	4,910.81	21,73,398.50	23,68,925.64
40	RCC M 20 grade in culvert/drain wall	Cum	191.67	6,797.66	6,426.31	13,02,907.49	12,31,730.84
41	RCC M 20 grade in culvert/drain slab	Cum	200.37	6,063.54	6,139.21	12,14,951.51	12,30,113.51
	Total					**63,11,25,796**	**58, 43,78,467.74**
	Tender premium (In *per cent*)					**(+ 1.77)**	**(+ 9.99)**
	After Tender premium					**64,22,96,723**	**64,27,57,877**
	Add GST of 12 *per cent* on revised estimate					**71,93,72,330**	**0**
	Total after Tender premium and GST						**7,66,14,453**

Appendix – XXXIX

(Refer paragraph 7.15 at page 174)

Statement showing extra cost due to award of balance work on revised estimate for the work construction of high level bridges at chainage 5.080 km and 11.050 km of Dharmasala - Kabatabandha road

Cost of Original work (₹ in crore)			Cost of Balance work (₹ in crore)		Sl. No.	Description of work	Quantity and rate as per revised estimate			Original item rate (In ₹)	Cost of balance work at revised rate (In ₹)	Cost of balance work at original rate (In ₹)
Chainage	Estimated cost	Agreement value	Estimated cost	Agreement value			Unit	Quantity	Rate (In ₹)			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
5/080	3.71	3.47	2.87	2.67	1	Earth work in excavation of foundation of structure in all kinds of soil	Cum	268.76	128.92	84.88	34,649	22,812
					2	PCC M-15 Grade in foundation and bed using 40mm and down grade size crushed stone aggregates	Cum	47.65	3,815.29	3,917.65	1,81,799	1,86,676
					3	Bored cast-in-situ M35 grade R.C.C. Pile of 1200 mm dia	Rmt	98.81	8,348.90	9,122.00	8,24,955	9,01,345
					4	Providing RCC Pile Cap with grade M35 *etc*. complete	Cum	611.06	6,914.17	5,377.17	42,24,973	32,85,774
					5	Reinforced Cement Concrete of grade M30 (Cast - in - Situ) in RCC T Beam Girder, Cross diaphragm End girder, Central girder, Deck Slab etc.	Cum	174.87	6407.30	6,381.97	11,20,445	11,16,015
					6	Reinforced cement concrete in M30 (Cast - in - Situ) for sub-structure	Cum	60.89	6,407.30	6,229.84	3,90,140	3,79,335
					7	Providing Reinforced Cement Concrete of grade M30 (Cast - in - Situ) in RCC substructure (Abutment/Pier shaft return wall and cantilever wing wall)	Cum	357.00	6,612.33	6,229.84	23,60,602	22,24,053

Cost of Original work (₹ in crore)			Cost of Balance work (₹ in crore)		Sl. No.	Description of work	Quantity and rate as per revised estimate			Original item rate (In ₹)	Cost of balance work at revised rate (In ₹)	Cost of balance work at original rate (In ₹)
Chainage	Estimated cost	Agreement value	Estimated cost	Agreement value			Unit	Quantity	Rate (In ₹)			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
					8	Providing Fe-500 HYSD reinforcement	MT	206.42	59,543.05	54,260.15	1,22,90,876	1,12,00,380
					9	Providing and laying of strip seal expansion joint	RMT	48.00	9,134.62	9,500.00	4,38,462	4,56,000
					10	RCC M-30 Grade (cast in situ) in Wearing coat including Reinforcement	Cum	47.82	9,468.65	9,273.62	4,52,791	4,43,465
					11	Reinforced cement concrete crash barrier at the edges of the bridge structures, constructed with M- 40 grade concrete with HYSD reinforcement	RMT	116.16	1,972.67	3,175.52	2,29,145	3,68,868
					12	Supplying, fabricating welded water tight drainage spout	Each	18.00	762.54	724.20	13,726	13,036
					13	Providing weep holes In Plaint reinforced concrete abutment, wing wall/ return wall	RMT	111.42	104.56	101.00	11,650	11,253
					14	Providing and laying of Filter media with stone crushed aggregates of 45 mm size	Cum	137.71	1,690.34	1,606.13	2,32,777	2,21,180
					15	Back filling behind abutment, wing wall and return wall	Cum	439.55	616.04	533.00	2,70,780	2,34,280
					16	Painting two coats with water bound cement paints	Sqm	226.51	46.28	38.15	10,483	8,641
					17	Gravel backing to revetment	Cum	61.10	684.25	562.00	41,808	34,338
					18	Providing stone pitching on slopes	Cum	122.21	1,278.20	1,134.90	1,56,209	1,38,696
					19	RCC M-20 Grade in Toe wail & Road side kerb	Cum	572.38	4,468.56	4,624.77	25,57,714	26,47,126

Cost of Original work (₹ in crore)			Cost of Balance work (₹ in crore)		Sl. No.	Description of work	Quantity and rate as per revised estimate			Original item rate (In ₹)	Cost of balance work at revised rate (In ₹)	Cost of balance work at original rate (In ₹)
Chainage	Estimated cost	Agreement value	Estimated cost	Agreement value			Unit	Quantity	Rate (In ₹)			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
					20	Providing and Filling foundation and plinth	Cum	502.60	308.91	297.00	1,55,258	1,49,272
					21	Construction of GSB	Cum	418.64	1,453.84	1,473.67	6,08,636	6,16,937
					22	providing WMM	Cum	365.63	1,479.64	1,526.15	5,41,001	5,58,006
					23	Providing and applying primer coat with bitumen emulsion	Sqm	1,365.00	18.17	19.00	24,802	25,935
					24	Providing and applying tack coat with bitumen emulsion	Sqm	1,365.00	6.76	7.00	9,227	9,555
					25	Providing & laying 50 mm thick compacted Bituminous Macadam (Grading-II)	Cum	68.25	4801.51	4,903.15	3,27,703	3,34,640
					26	Providing and laying 25 mm thick ay. compacted Semi Dense Bituminous Concrete (Grading-II) using VG-30 grade Bitumen	Cum	34.13	6,112.52	6,171.77	2,08,620	2,10,643
					27	Supplying and fixing 15 cm diameter 1.00 m long guard posts of RCC (12:4)	Cum	40.00	308.60	294.50	12,344	11,780
					28	Painting two coats with approved Synthetic enamel paints	Sqm	226.51	177.12	95.60	40,119	21,654
					29	Providing and laying of hot applied thermoplastic compound 2.5 mm thick	Sqm	115.50	392.00	495.16	45,276	57,191
					30	Construction of embankment with approved material obtained from borrow pits	Cum	1,755.00	128.78	132.97	2,26,009	2,33,362

Cost of Original work (₹ in crore)			Cost of Balance work (₹ in crore)		Sl. No.	Description of work	Quantity and rate as per revised estimate			Original item rate (In ₹)	Cost of balance work at revised rate (In ₹)	Cost of balance work at original rate (In ₹)
Chainage	Estimated cost	Agreement value	Estimated cost	Agreement value			Unit	Quantity	Rate (In ₹)			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
					31	Providing & laying moorum in sub-base in layers not exceeding 100 mm	Cum	101.24	621.54	666.97	62,925	67,524
					32	Earthwork in Excavation for road works in hard soil	Cum	151.20	42.31	42.34	6,397	6,402
					33	PCC M-15 Grade in foundation and bed using 40 mm and down grade size crushed stone aggregates	Cum	12.60	3,815.30	3,650.78	48,073	46,000
						Total					**2,81,60,374**	**2,62,42,174**
						Tender rebate (In *per cent*)					(- 5.11)	(- 4.89)
						After Tender rebate					2,67,21,379	2,49,58,932
						Add: GST at the rate of 12 *per cent* on balance work agreement					32,06,565	0
						Total after Tender premium/ rebate and GST					2,99,27,944	2,49,58,932
						Extra cost (A)						**49,69,012**
11/050	3.49	3.35	4.45	4.61	1	Earth work in excavation of hard soil	Cum	58.58	130.87	84.88	7,666	4,972.27
					2	providing and laying PCC M-15 Grade in foundation	Cum	77.98	3,784.65	3,905.10	2,95,127	3,04,519.70
					3	Bored cast-in-situ M35 grade R.C.C. T Beam Girder etc.	RMT	268.60	8,301.04	9,108.00	22,29,659	24,46,408.80
					4	Providing RCC Pile Cap with grade M 35	Cum	948.42	6,931.05	5,364.62	65,73,546	50,87,912.90
					5	Reinforced Cement Concrete of grade M30 (Cast - in - Situ)	Cum	249.76	6,508.13	6,217.30	16,25,471	15,52,832.85

Cost of Original work (₹ in crore)			Cost of Balance work (₹ in crore)		Sl. No.	Description of work	Quantity and rate as per revised estimate			Original item rate (In ₹)	Cost of balance work at revised rate (In ₹)	Cost of balance work at original rate (In ₹)
Chainage	Estimated cost	Agreement value	Estimated cost	Agreement value			Unit	Quantity	Rate (In ₹)			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
					6	Reinforced cement concrete in M30 (Cast - in - Situ) for sub-structure in Abutment/Pier Cap, Dirt wall, Pedestal	Cum	50.29	6,508.13	6,217.30	3,27,294	3,12,668.02
					7	Providing Reinforced Cement Concrete of grade M30 (Cast - in - Situ) in RCC substructure (Abutment/Pier shaft. return wall and cantilever wing wall)	Cum	564.00	6,719.59	6,369.43	37,89,849	35,92,358.52
					8	Providing Fe-500 HYSD reinforcement	MT	281.28	67,478.82	54,298.80	1,89,80,442	1,52,73,166.46
					9	Providing and laying of strip seal expansion joint	RMT	48.00	9,134.62	9,500.00	4,38,462	4,56,000.00
					10	RCC M-30 Grade (cast in situ) in Wearing coat including Reinforcement	Cum	62.67	10,345.23	9,264.00	6,48,336	5,80,574.88
					11	Reinforced cement concrete crash barrier at the edges of the bridge structures, constructed with M- 40 grade concrete with HYSD reinforcement	Rmt	152.16	3,521.43	3,004.15	5,35,821	4,57,111.46
					12	Supplying, fabricating welded watertight drainage spout	Each	18.00	813.21	724.33	14,638	13,037.94
					13	Providing weep holes in plain reinforced concrete abutment, wing wall/ return wall with 100 mm die AC Pipe	RMT	110.88	104.01	101.00	11,533	11,198.88

Cost of Original work (₹ in crore)			Cost of Balance work (₹ in crore)		Sl. No.	Description of work	Quantity and rate as per revised estimate			Original item rate (In ₹)	Cost of balance work at revised rate (In ₹)	Cost of balance work at original rate (In ₹)
Chainage	Estimated cost	Agreement value	Estimated cost	Agreement value			Unit	Quantity	Rate (In ₹)			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
					14	Providing and laying of Filter media with stone crushed aggregates of 45 mm size	Cum	153.78	1,652.13	1,561.53	2,54,065	2,40,132.08
					15	Back filling behind abutment, wing wall and return wall	Cum	429.55	673.26	588.75	2,89,199	2,52,897.56
					16	Painting two coats with water bound cement paints	Sqm	296.71	46.57	38.15	13,818	11,319.49
					17	Gravel backing to revetment	Cum	123.88	734.35	608.46	90,971	75,376.02
					18	Providing stone pitching on slopes	Cum	247.76	1,252.84	1,097.73	3,10,404	2,71,973.58
					19	RCC M - 20 Grade in Toe wall and Road side kerb	Cum	696.28	4,432.09	4,612.23	30,85,976	32,11,403.50
					20	clearing and grubbing road land	Cum	6,400.00	5.63	3.66	36,032	23,424.00
					21	Loosening, leveling and Compacting original ground supporting embankment	Cum	960.00	20.69	23.10	19,862	22,176.00
					22	Providing and filling foundation and plinth with sand in Road work and foundation of structure	Cum	543.17	354.01	343.50	1,92,288	1,86,578.90
					23	Construction of GSB	Cum	893.09	1,360.64	1,426.10	12,15,174	12,73,635.65
					24	providing WMM	Cum	600.00	1,455.54	1,498.04	8,73,324	8,98,824.00
					25	Providing and applying primer coat with bitumen emulsion	Sqm	2,240.00	18.20	19.00	40,768	42,560.00
					26	Providing and applying tack coat with bitumen emulsion	Sqm	2,240.00	6.58	7.00	14,739	15,680.00

Cost of Original work (₹ in crore)			Cost of Balance work (₹ in crore)		Sl. No.	Description of work	Quantity and rate as per revised estimate			Original item rate (In ₹)	Cost of balance work at revised rate (In ₹)	Cost of balance work at original rate (In ₹)
Chainage	Estimated cost	Agreement value	Estimated cost	Agreement value			Unit	Quantity	Rate (In ₹)			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
					27	Providing & laying 50 mm thick of compacted Bituminous Macadam (Grading-II)	Cum	112.00	4,656.31	4,875.00	5,21,507	5,46,000.00
					28	Providing and laying 25 mm thick ay compacted Semi Dense Bituminous Concrete (Grading-II)	Cum	56.00	5,854.17	6,142.27	3,27,834	3,43,967.00
					29	Supplying and fixing 15 cm diameter 1.00 m long guard posts of RCC (12:4)	Cum	220.00	336.11	292.50	73,944	64,350.00
					30	Painting two coats with approved Synthetic enamel paints of approved colour/ shade over a coat of primer including sand papering, polishing the surface, cost, conveyances, taxes of all materials. labour with T&P required for the work. complete as per specification and direction of the Engineer in charge	Sqm	276.78	190.22	95.60	52,649	26,460.00
					31	Providing and laying of hot applied thermoplastic compound 2.5 mm thick	Sqm	230.00	392.02	495.16	90,165	1,13,886.80
					32	Construction of embankment with approved material obtained from borrow pits	Cum	5,925.50	128.83	132.97	7,63,382	7,87,913.74

Cost of Original work (₹ in crore)			Cost of Balance work (₹ in crore)		Sl. No.	Description of work	Quantity and rate as per revised estimate			Original item rate (In ₹)	Cost of balance work at revised rate (In ₹)	Cost of balance work at original rate (In ₹)
Chainage	Estimated cost	Agreement value	Estimated cost	Agreement value			Unit	Quantity	Rate (In ₹)			
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
					33	Construction of granular sub-base by providing coarse graded Granular sub-base Grading-IV	Cum	72.00	670.70	666.97	48,290	48,021.84
					34	Earth work in excavation of hard soil	No.	349.20	42.34	42.34	14,785	14,785.13
					35	PCC M 15	Cum	29.10	3,784.65	3,650.78	1,10,133	1,06,237.70
					36	Painting two coats after filling the surface with synthetic enamel paint	Sqm	296.71	190.22	178.64	56,440	53,004
						Total					4,39,73,593	3,87,23,370
						Tender premium/ rebate (In *per cent*)					(+ 4.99)	(- 2.33)
						After Tender rebate					4,61,67,875	3,78,21,116
						Add : GST at the rate of 12 *per cent* on balance work agreement					55,40,145	0
						Total after Tender premium/ rebate and GST					5,17,08,020	3,78,21,116
						Extra cost (B)						**1,38,86,904**
Grand Total	7.2	6.82	7.32	7.28		**Grand Total after Tender premium/ rebate and GST**					**8,16,35,964**	**6,27,80,048**
						Total extra cost (A + B)						**1,88,55,916**

Appendix – XL

(Refer paragraph 7.23 at page 190)

Extra cost for transportation of GSB, due to provision of conveyance of materials by ten tonne trucks in the estimates, instead of using rates specified in the service contract for plants and machinery

Sl. No.	Work	Estimated cost (₹ in crore)	Tender Premium (in *per cent*)	Date of commencement/ Stipulated date of completion	Payment made (₹ in crore)	Quantity of GSB (in cum)	Quantity in loose volume (in cum)	Lead cost provided in the estimates (per cum) (in ₹)	Total lead cost provided (in ₹) (8 x 9)	Lead (in km)	Lead cost of GSB (per cum per km) (in ₹)	Lead cost cost of GSB per cum (in ₹)	Total lead cost (in ₹) (8 x 13)	Differential excess lead cost (in ₹) (10 – 14)	Total excess differential lead cost, including Tender Premium (in ₹) [15 – (15 x 4/ 100)]
											As per Chapter IV of SoR				
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
1	Improvement to Subdega - Rajpur Road (ODR) from 0/450 to 2/770 km, 3/280 to 4/800 km, 9/300 to 14/610 km and 15/340 to 17/000 km for the year 2019-20 under NABARD	10.55/ 8.97	- 14.99	16.11.2020/ 15.09.2021	7.53	4,891.16	6,260.68	774.47	48,48,708.84	76	4.17	316.92	19,84,134.71	28,64,574.13	24,35,174.47
2	Improvement to Sahajbahal to Ekma road via Pamra under NABARD for the year 2019-20	8.7/ 7.96	- 8.53	23.12.2020/ 22.08.2021	3.54	3,105.16	3,974.60	939.67	37,34,812.38	80	4.17	333.60	13,25,926.56	24,08,885.82	22,03,407.86
3	Improvement to Rajangapur Dubuka road from 8/500 to 16/500 km under RIDF XXV for the year 2019-20	7.44/ 6.79	- 8.69	07.12.2020/ 06.08.2021	2.63	3,295.32	4,218.01	545.67	23,01,641.52	50	4.17	208.50	8,79,455.09	14,22,186.43	12,98,598.43
4	Improvement to Bihabandha to Ramabahal via Kesrmal ODR from 0/00 to 7/800 km	7.54/ 7.54	0	24.12.2020/ 23.11.2021	7.06	3,162.50	4,048.00	431.27	17,45,780.96	37	4.17	154.29	6,24,565.92	11,21,215.04	11,21,215.04
5	Improvement to Hemgiri-Bileimunda road (ODR) via Kendudihi and	13.11/ 13.11	+ 7.50	11.09.2019/ 10.09.2020	15.02	7,863.21	10,064.91	387.27	38,97,837.70	32	4.17	133.44	13,43,061.59	25,54,776.11	27,46,384.31

Sl. No.	Work	Estimated cost (₹ in crore)	Tender Premium (in *per cent*)	Date of commencement/ Stipulated date of completion	Payment made (₹ in crore)	Quantity of GSB (in cum)	Quantity in loose volume (in cum)	Lead cost provided in the estimates (per cum) (in ₹)	Total lead cost provided (in ₹) (8 x 9)	Lead (in km)	Lead cost of GSB (per cum per km) (in ₹)	Lead cost cost of GSB per cum (in ₹)	Total lead cost (in ₹) (8 x 13)	Differential excess lead cost (in ₹) (10 – 14)	Total excess differential lead cost, including Tender Premium (in ₹) [15 – (15 x 4/ 100)]
											As per Chapter IV of SoR				
	Kuarnkela 0/00 to 17/00 km														
6	Construction of Koida Bypass road from 0/00 to 8/00 km under DMF	45.1/ 40.13	- 11.02	23.12.2019/ 21.12.2021	51.29	27,492.03	35,189.80	987.29	3,47,42,537.64	121	4.17	504.57	1,77,55,717.39	1,69,86,820.26	1,51,14,872.66
7	Widenning and strengthening of Mochibahal-Sonepur boarder road from 6/00 to 23/60 km	37.45/ 34.43	- 8.05	20.11.2019/ 19.07.2021	38.41	21,837.00	27,951.36	484.07	1,35,30,414.84	43	4.17	179.31	50,11,958.36	85,18,456.47	78,32,720.73
8	Widenning and strengthening of Talpali-Hiroli-Balam-Barghat-Gohipada Road 11/300 to 38/000 km	40.85/ 34.73	- 14.99	22.01.2020/ 21.09.2021	34.24	21,837.55	27,952.06	466.47	1,30,38,797.43	41	4.17	170.97	47,78,963.70	82,59,833.73	70,21,684.65
9	Improvement to Laikera-Bagdihi-Dharuadihi road from 18/500 to 26/500 km under NABARD assistance- XXII	12.14/ 12.13	- 0.10	24.04.2017/ 23.02.2018	12.55	11,815.55	15,123.90	589.9	89,21,588.61	53	4.17	221.01	33,42,533.14	55,79,055.47	55,73,476.42
10	Improvement to Laikera-Bagdihi-Dharuadihi road from 26/500 to 31.500 km under NABARD assistance-XXIV	7.9/ 7.05	- 10.8	15.12.2018/ 14.06.2019	7.90	4,399.64	5,631.54	607.87	34,23,244.22	60	4.17	250.20	14,09,011.31	20,14,232.91	17,96,695.76

Sl. No.	Work	Estimated cost (₹ in crore)	Tender Premium (in *per cent*)	Date of commencement/ Stipulated date of completion	Payment made (₹ in crore)	Quantity of GSB (in cum)	Quantity in loose volume (in cum)	Lead cost provided in the estimates (per cum) (in ₹)	Total lead cost provided (in ₹) (8 x 9)	Lead (in km)	Lead cost of GSB (per cum per km) (in ₹)	Lead cost cost of GSB per cum (in ₹)	Total lead cost (in ₹) (8 x 13)	Differential excess lead cost (in ₹) (10 – 14)	Total excess differential lead cost, including Tender Premium (in ₹) [15 – (15 x 4/ 100)]
											As per Chapter IV of SoR				
11	Improvement to Patrapalli Chhak to Jharmunda via Halkadhipa road from 0/00 to 14/000 km under NABARD assistance, RIDF XXIV	16.98/ 15.92	- 6.20	19.01.2019/ 18.03.2020	17.24	9,681.84	12,392.76	576.77	71,47,772.19	55	4.17	229.35	28,42,279.51	43,05,492.68	40,38,552.13
12	Construction of four lane carriage way road with servce road of SH -10 lecture colony to Balijore Chowk from 0/00 to 3/581 km for the year 2018-19 under DMF	14.21/ 13.88	- 2.33	08.03.2019/ 07.02.2020	7.31	6,164.31	7,890.32	387.27	30,55,684.23	32	4.17	133.44	10,52,884.30	20,02,799.93	19,56,134.69
13	Widening and strngthening of Mading-Pastikudi-Deypur road to 2 lane paved shoulder from 0/000 to 18/953 km under CRF	35.91/ 30.52	- 14.99	30.6.2021/ 29.12.2022	25.58	13,530.43	17,318.95	193.67	33,54,161.05	10	4.17	41.70	7,22,200.22	26,31,960.83	22,37,429.90
	Total	**257.88/ 233.16**			**230.30**	**1,39,075.70**	**1,78,016.89**		**10,37,42,981.61**				**4,30,72,691.80**	**6,06,70,289.81**	**5,53,76,347.05**
											Add 1 *per cent* labour cess				5,53,763.47
											Add 12 *per cent* GST				66,45,161.65
											Total				**6,25,75,272.17**

Appendix – XLI
(Refer paragraph 7.24 at page 191)
Extra cost due to provision of paved shoulder, in deviation from IRC provisions

Sl. No.	Work	Technical sanction/ Agreement cost (₹ in crore)	Date of commencement/ Stipulated date for completion	Upto date expenditure incurred (₹ in crore) (as of April 2021/ January 2022)	Item of work	Quantity executed, as per last RA bill (in cum)	Rate per cum (in ₹)	Expenditure incurred (in ₹)	Carriage width provided (in meter)	Paved shoulder width provided on both sides (In meter)	Extra quantity executed for paved shoulder (in cum)	Extra expenditure incurred (in ₹)	Tender premium (in per cent)	Extra expenditure including tender premium (in ₹)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
1	Improvement to Rangadihi Phuljhar Balabhadrapur Jagadala Dam road (ODR) from 18/00 to 28/00 km under District Mineral Fund in the distrct of Keonjhar	29.88/ 25.40	20.06.2017/ 19.09.2018	29.14	GSB IV	15,782.25	1,915.85	3,02,36,423.66	10.45	3	4,530.79	86,80,314.02	-14.99	73,79,134.95
					GSB VI	13,528.32	1,740.12	2,35,40,900.20	14	3	2,898.93	50,44,486.07	-14.99	42,88,317.61
					WMM	23,372.48	1,812.91	4,23,72,202.72	10.15	3	6,908.12	1,25,23,799.83	-14.99	1,06,46,482.23
					DBM	6,088.04	6,559.27	3,99,33,098.13	10	3	1,826.41	1,19,79,916.32	-14.99	1,01,84,126.86
					BC	3,740.28	7,116.97	2,66,19,460.55	10	3	1,122.08	79,85,809.70	-14.99	67,88,736.82
2	Widening and Strengthening of Dantiamuhan-Chitrada road to two lane from 0/000 km to 12/000 km	32.14/ 23.26	30.05.2020/ 29.06.2021	21.15	GSB IV	12,206.20	2,132.76	2,60,32,895.11	10.3	3	3,555.20	75,82,388.35	-14.99	64,45,788.34
					GSB VI	5,016.52	1,964.87	98,56,809.65	10.3	3	1,461.12	28,70,910.85	-14.99	24,40,561.32
					WMM	22,613.04	2,079.86	4,70,31,957.37	10	3	6,783.91	1,41,09,583.05	-14.99	1,19,94,556.55
					DBM	6,328.50	6,734.40	4,26,18,650.40	10	3	1,898.55	1,27,85,595.12	-14.99	1,08,69,034.41
					BC	1,070.25	7,296.10	78,08,651.03	10	3	321.08	23,42,631.79	-14.99	19,91,471.28
	Total	**62.02/ 48.66**		**50.29**		**1,09,745.88**		**29,60,51,048.82**			**31,306.19**	**8,59,05,435.11**		**7,30,28,210.38**

Appendix – XLII
(Refer paragraph 7.25 at page 193)
Avoidable expenditure due to non-utilisation of slag, in place of GSB stone products

Sl. No.	Work	Agreement cost (₹ in crore)	DOC/ SDoC	Amount paid (₹ in crore)	Quantity of GSB executed, as per last RA bill (in cum)	Cost of GSB per cum, including transportation cost (in ₹)	Total amount paid (in ₹) (6*7)	Cost of slag per cum, including transportation (in ₹)	Extra cost paid per cum (in ₹) (7-9)	Total extra cost (in ₹) (6*10)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1	Construction of Koida bypass road from 0/00 to 8/00 km	40.13	23.12.2019 22.12.2021	59.33	13,018.92	2,252.58	2,93,26,158.81	1,377.04	875.54	1,13,98,585.22
2	Widening to Tuniapalli Balia road from 14/800 to 27/450 km	15.15	12.06.2019 11.06.2020	14.37	7,646.96	1,853.82	1,41,76,087.39	825.93	1,027.89	78,60,233.71
3	Widening to Tuniapalli to Balia road via Bhalupani from 0/000 to 12/050 km	11.54	22.12.2016 21.03.2018	11.54	8,926.62	2,072.73	1,85,02,473.07	1,133.48	939.25	83,84,327.84
	Total	**66.82**		**85.24**	**29,592.50**		**6,20,04,719.27**			**2,76,43,146.77**

Appendix – XLIII

(Refer paragraph 7.27 at page 196)

Statement showing the year-wise break up of outstanding Inspection Reports/ Paragraphs issued up to 31 March 2022 but not settled by 30 June 2022

Sl. No.	Year	Number of Inspection Reports	Number of Paragraphs
1	1984-85	2	2
2	1985-86	2	3
3	1986-87	2	15
4	1987-88	0	0
5	1988-89	3	10
6	1989-90	3	18
7	1990-91	5	13
8	1991-92	7	13
9	1992-93	18	25
10	1993-94	17	79
11	1994-95	18	97
12	1995-96	21	78
13	1996-97	28	45
14	1997-98	40	120
15	1998-99	35	92
16	1999-00	47	122
17	2000-01	51	201
18	2001-02	60	142
19	2002-03	61	301
20	2003-04	83	374
21	2004-05	90	218
22	2005-06	74	128
23	2006-07	104	310
24	2007-08	125	413
25	2008-09	151	703
26	2009-10	195	858
27	2010-11	233	1,096
28	2011-12	109	311
29	2012-13	141	554
30	2013-14	125	348
31	2014-15	159	699
32	2015-16	274	1,297
33	2016-17	305	2,010
34	2017-18	334	1,810
35	2018-19	316	1,862
36	2019-20	252	1,540
37	2020-21	91	653
38	2021-22	215	1,749
	Total	**3,796**	**18,309**

Appendix – XLIV
(Refer paragraph 7.27 at page 196)
Statement showing serious irregularities noticed and reported in Inspection Reports

Sl. No.	Name of the objection	Number of Paragraphs	Amount (₹ in Lakh)
	A. Non-Compliance with rules and regulations		
1	Infructuous / Unfruitful/Avoidable expenditure/ Extra liability/Excess expenditure	94	2,03,902.06
2	Inadmissible/irregular payment	2	403.27
3	Advance payment/less recovery of advance	1	237.00
Sub total (A)		**97**	**2,04,542.33**
	B. Audit against propriety / expenditure without justification		
4	Excess payment of firms/contractors	1	508.00
5	Loss, misappropriation and shortage of stores	0	0
6	Unauthorised expenditure	2	625.00
7	Undue financial aid to contractors/firms	23	12,598.90
Sub total (B)		**26**	**13,731.90**
	C. Persistent and pervasive irregularities		
8	Idle store/surplus/unserviceable store/blockage of Government money	2	737.23
9	Retention of un-disbursed amount	2	9,336.00
10	Demurrage/penalty	1	14.00
11	Miscellaneous/doubtful expenditure/non submission of vouchers/overdrawals, etc.	4	2,714.00
12	Short/non realization of Government dues	33	54,145.30
Sub total (C)		**42**	**66,946.53**
	D. Failure of oversight / governance		
13	Irregular purchase/Non-accountal of stock/Non-adjustment of cost of materials	1	375.00
14	Non recovery of dues from firms/contractors and others	1	47.15
Sub total (D)		**2**	**422.15**
Grand total (A+B+C+D)		**167**	**2,85,642.91**

Appendix – XLV

(Refer paragraph 7.27 at page 196)

Statement showing few persistent irregularities reported in Audit Reports requiring remedial measures

Paragraph Number and Year of Audit Report	Department	Gist of the Observation
Para No.3.10/AR 2013-14 Para No.3.17/AR 2014-15	Works	Non-recovery of compensation/ penalty due to delay and default in execution of works.
Para No.3.19/AR 2014-15 Para No.3.14/AR 2016-17		Excessive pavement thickness provided in estimates in deviation to IRC specifications.
Para No.3.15/AR 2015-16		Execution of work without carrying out Benkelman Beam Deflection Technique leading to non-consideration of existing crust and resultant extra expenditure.
Para No.3.6/AR 2019-20		Adoption of higher vehicle damage factor led to unwarranted excess pavement layers which resulted in avoidable extra expenditure.

Glossary of Abbreviations

Glossary of Abbreviations

Sl. No.	Abbreviation	Description
1.	AAQ	Ambient Air Quality
2.	AG	Accountant General
3.	AGM	Annual General Meeting
4.	AHL TIN	Abridged Household List-Temporary Identification Number
5.	AoR	Analysis of Rates
6.	APBS	Aadhaar Payment Bridge System
7.	APO	Annual Plan of Operation
8.	BC	Bituminous Concrete
9.	BEW	Biju Expressway
10.	BG	Bank Guarantee
11.	BM	Bituminous Macadam
12.	BMC	Bhubaneswar Municipal Corporation
13.	BNO	Block level Nodal Officer
14.	BoD	Board of Directors
15.	BOT	Built, Operate and Transfer
16.	CA	Concessionaire Agreement
17.	CAF	Compensatory Afforestation Fund
18.	CAMPA	Compensaroty Afforestation Fund Management and Planning Authority
19.	C&AG	Comptroller and Auditor General
20.	CAAQMS	Continuous Ambient Air Quality Monitoring System
21.	CBMWTF	Common Bio Medical Waste Treatment Facility
22.	CBR	California Bearing Ratio
23.	CC	Cement Concrete
24.	CD	Cross Drainage
25.	CCE	Chief Construction Engineer
26.	CE	Chief Engineer
27.	CEO	Chief Executive Officer
28.	CMPP	Code of Management Plan Procedure
29.	CoS	Change of Scope
30.	CPCB	Central Pollution Control Board
31.	CRIF	Central Road Infrastructure Fund
32.	CTE	Consent to Establish
33.	CTO	Consent to Operate
34.	cum	Cubic Metre
35.	CVPD	Commercial Vehicles Per Day
36.	DBM	Dense Bituminous Macadam
37.	DBT	Direct Benefit Transfer
38.	DFO	Divisional Forest Officer
39.	DGBM	Dense Graded Bituminous Macadam
40.	DHH	District Headquarter Hospital
41.	DI	Ductile Iron
42.	DLP	Defect Liability Period
43.	DNO	District level Nodal Officer

Sl. No.	Abbreviation	Description
44.	DPC	Duties Powers and Conditions of Service
45.	DPI&R	Design, Planning, Investigation and Roads
46.	DPR	Detailed Project Report
47.	DTCN	Detailed Tender Call Notice
48.	D2D	Door to Door
49.	EE	Executive Engineer
50.	EIC	Engineer in Chief
51.	EOT	Extension of Time
52.	EPC	Engineering, Procurement and Construction
53.	ETP	Effluent Treatment Plant
54.	FCA	Forest Conservation Act
55.	FDP	Forest Diversion Plan
56.	F&ARD	Fisheries and Animal Resources Development
57.	FE&CC	Forest, Environment and Climate Change
58.	FRS	Forest Resource Survey
59.	FS&CW	Food Supplies and Consumer Welfare
60.	GAD	General Arrangement Drawing
61.	GoI	Government of India
62.	GoO	Government of Odisha
63.	GPNOs	Gram Panchayat Nodal Officers
64.	GSB	Granular Sub Base
65.	GSDP	Gross State Domestic Product
66.	GST	Goods and Services Tax
67.	HCFs	Health Care Facilities
68.	HLB	High Level Bridge
69.	HLLAC	High Level Land Allotment Committee
70.	HRMS	Human Resource Management System
71.	IE	Industrial Estate/ Independent Engineer
72.	IGC	Increasing Green Cover
73.	IIS	Internet Information Service
74.	IPR	Industrial Policy Resolution
75.	IR	Inspection Report
76.	IRC	Indian Road Congress
77.	IRR	Internal Rate of Return
78.	ISFR	India State of Forest Reports
79.	JPV	Joint Physical Verification
80.	KALIA	Krushak Assistance for Livelihood and Income Augmentation
81.	KCC	Kisan Credit Card
82.	KLD	Kiloliter per Day
83.	LA	Land Acquisition
84.	LAO	Land Acquisition Officer
85.	LL	Landless agricultural households
86.	MAP	Management Action Plan
87.	MCCs	Micro Composting Centres
88.	MCL	Mahanadi Coalfields Limited
89.	MLD	Million Litres per Day

Sl. No.	Abbreviation	Description
90.	MoEF	Ministry of Environment and Forest
91.	MoRT&H	Ministry of Road Transport and Highways
92.	MoU	Memorandum of Understanding
93.	MSA	Million Standard Axle
94.	MSME	Micro Small and Medium Enterprises
95.	MT	Metric Ton
96.	NAC	Notified Area Council
97.	NFSA	National Food Security Act
98.	NH	National Highways
99.	NHAI	National Highways Authority of India
100.	NPCI	National Payment Corporation of India
101.	NPV	Net Present Value
102.	OCPL	Odisha Coal and Power Limited
103.	OFSDP	Odisha Forestry Sector Development Project
104.	OGFR	Odisha General Financial Rules
105.	OM	Office Memorandum
106.	OMVT	Odisha Motor Vehicle Taxation
107.	OPWD	Odisha Public Works Department
108.	OSPCB	Odisha State Pollution Control Board
109.	OSRP	Odisha State Road Project
110.	OTT	One Time Tax
111.	OWD	Odisha Works Department
112.	OWSSB	Odisha Water Supply and Sewerage Board
113.	PAC	Public Accounts Committee
114.	PAD	Project Appraisal Document
115.	PCCF&HoFF	Principal Chief Conservator of Forests and Head of Forest Forces
116.	PCU	Passenger Car Unit
117.	PF	Protected Forest
118.	PMU	Project Monitoring Unit
119.	P-PAS	Paddy Procurement Automation System
120.	PPP	Public Private Partnership
121.	PWD	Public Works Department
122.	R&B	Roads and Buildings
123.	RD	Reduced Distance
124.	RF	Reserve Forest
125.	rkm	Running Kilometre
126.	RMC	Rourkela Municipal Corporation
127.	RO	Regional Officer/ Range Officer
128.	ROB	Rail Over Bridge
129.	RTOs	Regional Transport Officers
130.	SDBC	Semi Dense Bituminous Concrete
131.	SDBT	Seed Direct Benefit Transfer
132.	SDH	Sub-Divisional Hospital
133.	SE	Superintending Engineer
134.	SFSS	State Food Security Scheme
135.	SH	State Highways

Sl. No.	Abbreviation	Description
136.	SLC	State Level Committee
137.	SMF	Small/ Marginal Farmer
138.	SoR	Schedule of Rates
139.	SPSEs	State Public Sector Enterprises
140.	SQL	Structured Query Language
141.	SRS	Software Requirement Specification
142.	STP	Sewage Treatment Plant
143.	SWM	Solid Waste Management
144.	TRC	Tax Recovery Certificate
145.	UGR	Under Ground Reservoir
146.	VDF	Vehicle Damage Factor
147.	VDF	Viability Gap Fund
148.	WPI	Wholesale Price Index
149.	WMM	Wet Mix Macadam
150.	VAW	Village Agriculture Worker
151.	ZLD	Zero Liquid Discharge

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