

**Report of the
Comptroller and Auditor General of India
on
Economic Sector**

The Report has been laid on the table of the State Legislature Assembly on 12-08-2014

for the year ended March 2013

**Government of Tamil Nadu
Report No.3 of the year 2014**

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PREFACE

1. This Report has been prepared for submission to the Governor under Article 151 of the Constitution of India.
2. The Report starts with an Introductory Chapter outlining the audit scope, mandate and the key audit findings which emerged during the year-long audit exercise. Chapter II deals with Performance Audit on Irrigation Activities in Chennai Region. Chapter III deals with findings of compliance audit in Highways and Minor Ports, Agriculture, Environment and Forests and Animal Husbandry, Dairying and Fisheries Departments.
3. Reports containing (a) observations arising out of audit of Statutory Corporations, Boards and Government Companies, (b) observations on revenue receipts of the State Government, (c) observations relating to local bodies and (d) observations on the finances of the State Government are being presented separately.
4. The cases mentioned in this Report are among those which came to notice in the course of test audit of accounts during the year 2012-13 as well as those which had come to notice in earlier years but could not be dealt with in previous Reports. Matters relating to the period subsequent to 2012-13 have also been included, wherever necessary.

CHAPTER I

CHAPTER I GENERAL

1.1 Introduction

Tamil Nadu is one of the largest States of India with a population of 7.21 crore and a geographical area of 1,30,058 sq.kms. For the purpose of Administration there are 37 Departments at the Secretariat level headed by Principal Secretaries/Secretaries who are assisted by Directors/Commissioners and Sub-ordinate officers under them.

Government functioning is broadly classified as General Services, Social Services and Economic Services. This report covers the functioning of 10 Departments of Economic Sector listed in the table given below.

Of the 10 Departments with a total expenditure of ₹ 16,980.57 crore covered here, a major portion of the expenditure was incurred by Highways and Minor Ports (28.96 *per cent*), Agriculture (24.58 *per cent*) and Public Works (21.66 *per cent*) Departments during 2012-13.

1.2 Trend of expenditure

Comparative position of expenditure incurred by the Departments during the year 2012-13 along with preceding two years is given in **Table 1**.

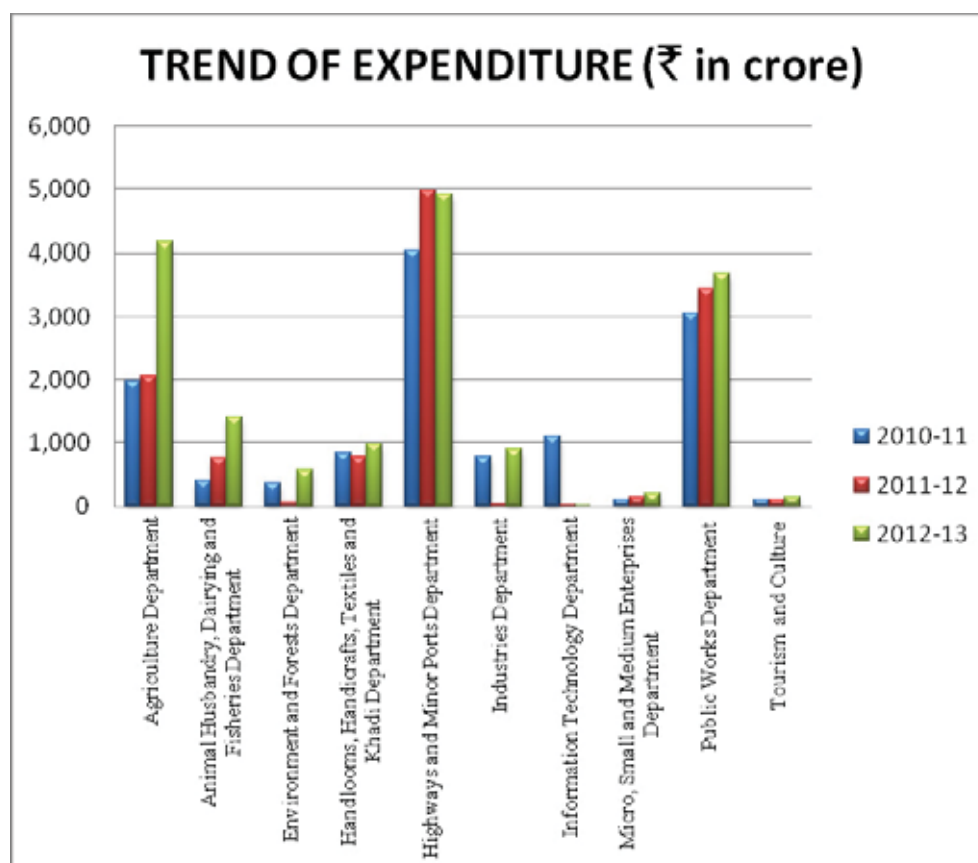
Table 1: Table showing the trend of expenditure for three years

(₹ in crore)

Sl. No.	Name of the Department	2010-11	2011-12	2012-13
1	Agriculture	1,965.99	2,050.02	4,173.29
2	Animal Husbandry, Dairying and Fisheries	400.99	758.98	1,398.06
3	Environment and Forests	365.52	64.92	578.32*
4	Handlooms, Handicrafts, Textiles and Khadi	836.88	763.82	986.79
5	Highways and Minor Ports	4,045.05	4,968.76	4,918.07
6	Industries	775.73	47.01	896.50
7	Information Technology	1,091.62	29.06	6.64
8	Micro, Small and Medium Enterprises	105.84	143.22	199.17
9	Public Works	3,051.92	3,427.39	3,677.31
10	Tourism and Culture	106.77	105.03	146.42
Total		12,746.31	12,358.21	16,980.57

(Source: Finance Accounts for the years 2010-11, 2011-12 and 2012-13)

(*includes Grant 54 pertaining to Forest (Environment and Forests Department))



Reasons for increase/decrease in expenditure are stated below:

Agriculture Department: The increase in expenditure was attributed to payment of grants in aid to Tamil Nadu Electricity Board on behalf of farmers using farm pump sets and also towards State's share to National Horticulture Mission to promote high end technology to increase production of Horticulture crops.

Industries Department: The increase in expenditure was mainly due to Value Added Tax refund subsidy for promotion of Industries and reimbursement of cost of land allotted for Industrial corridor development plans.

Animal Husbandry, Dairying and Fisheries Department: The increase in expenditure was mainly on account of opening of 70 veterinary dispensaries/sub centres in needy places and distribution of goat/sheep and milch cows to women beneficiaries during 2012-13.

Information Technology Department: The expenditure decreased from ₹ 1,091.62 crore in 2010-11 to ₹ 6.64 crore in 2012-13. The Department did not furnish reasons for decrease in expenditure.

1.2.1 Some major schemes implemented by the Departments in the Economic Sector during 2012-13

- (i) National Agriculture Development Programme (₹ 463.84 crore) implemented by Agriculture Department.
- (ii) Comprehensive Road Infrastructure Development Programme (CRIDP) covering State Highways, Major District Roads, Other

District Roads (including Special component plan) at a cost of ₹ 1,905.38 crore implemented by Highways Department.

- (iii) Works under Revamped Central Road Fund (₹ 116.88 crore) implemented by Highways Department.
- (iv) Tamil Nadu Road Sector Project (₹ 115.03 crore) implemented by Highways Department.
- (v) Coastal protection and Restoration of water bodies (₹ 93.21 crore) implemented by Public Works Department (PWD).
- (vi) Free distribution of sheep/goat/milch cows to persons living Below Poverty Line including special component plan (₹ 235.31 crore) implemented by Animal Husbandry Department.
- (vii) Free distribution of handloom cloth to persons living Below Poverty Line including special component plan (₹ 365.34 crore) by Handlooms and Textiles Department.

1.3 About this Report

This Report of the Comptroller and Auditor General of India (CAG) relates to matters arising from Compliance Audit of 10 Government Departments and 48 Autonomous Bodies under the Economic Sector. 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.

1.4 Authority for Audit

The Authority for Audit by the CAG is derived from Articles 149 and 151 of the Constitution of India and the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) (DPC) Act, 1971. CAG conducts audit of expenditure of the Departments of Government of Tamil Nadu under Section 13¹ of the CAG's (DPC) Act. CAG is the sole Auditor in respect of Autonomous Bodies which are audited under Sections 19(3)² and 20(1)³ of the CAG's (DPC) Act. In addition, CAG also conducts Audit of other Autonomous Bodies, under Section 14⁴ of CAG's (DPC) Act, which are substantially funded by the Government. Principles and methodologies for

¹ Audit of (i) all transactions from the Consolidated Fund of the State, (ii) all transactions relating to the Contingency Fund and Public Accounts 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/authority substantially financed by grants or loans from the Consolidated Fund of the State and (ii) all receipts and expenditure of any body or authority where the grants or loans to such body or authority from the Consolidated fund of the State in a financial year is not less than ₹ one crore.

various audits are prescribed in the Auditing Standards and the Regulations on Audit and Accounts, 2007 issued by the CAG.

1.5 Planning and conduct of Audit

The primary purpose of this Report is to bring to the notice of the State Legislature, important results of Audit. Auditing Standards require that the materiality level for reporting should be commensurate with the nature, volume and magnitude of transactions. The findings of Audit are expected to enable the Executive to take corrective action as also to frame policies and directives that will lead to improved Financial Management of the Organisations, 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 findings are also considered in this exercise. Based on this risk assessment, the frequency and extent of Audit are decided.

After completion of Audit, Inspection Reports containing Audit findings are issued to the heads of the Departments. The Departments are requested to furnish replies to the Audit findings within one month of receipt of the Inspection Reports. Whenever replies are received, Audit findings are either settled or further action for compliance is advised. Important Audit observations arising out of these Inspection Reports 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. During 2012-13, audit of 328 units of various Departments/Organisations under Economic Sector were audited and Inspection Reports containing 1,921 Paragraphs were issued.

1.6 Response to Audit

1.6.1 Draft Paragraphs and Performance Audit

Eleven Draft Paragraphs and a Performance Audit report on Irrigation Activities in Chennai Region of Public Works Department were forwarded demi officially to the Principal Secretaries/Secretaries of the Departments concerned between June and November 2013 with the request to send their responses. Departmental replies for only five out of 11 Draft Paragraphs issued during the year 2012-13 have been received. The replies have been incorporated in the Audit Report wherever applicable. In respect of Performance Audit, an Exit Conference was held with representatives of the Government in December 2013 and views expressed in the conference have been included in the Report.

1.6.2 Follow-up on Audit Reports

With a view to ensuring accountability of the executive in respect of the issues dealt with in the Audit Reports, the Public Accounts Committee (PAC) directed that the Department concerned should furnish remedial Action Taken Notes (ATN) on the recommendations of PAC relating to the paragraphs contained in the Audit Reports within the prescribed time frame. Audit reviewed the outstanding ATNs as of 31 March 2013 on the paragraphs included in the Report of the Comptroller and Auditor General of India,

Economic Sector, Government of Tamil Nadu and found that the Departments did not submit ATNs for 578 recommendations pertaining to the audit paragraphs discussed by PAC.

1.6.3 Outstanding replies to Inspection Reports

The Principal Accountant General (E&RSA), Tamil Nadu (PAG) arranges to conduct 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 Inspection Reports (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 reported to the heads of the Departments and the Government.

Inspection Reports issued upto 31 March 2013 were reviewed and found that 4,231 paragraphs relating to 1,374 IRs remained outstanding at the end of September 2013 (**Annexure 1**).

This large pendency of IRs, due to non-receipt of replies, was indicative of the fact that heads of offices and heads of Departments did not initiate appropriate and adequate action to rectify the defects, omissions and irregularities pointed out by audit in the IRs.

1.7 Significant Audit Observations

1.7.1 Performance Audit on Irrigation Activities in Chennai Region was conducted during this year. Significant audit observations are given below:

- State Water Policy was not revised in line with National Water Policy April 2002. In absence of revised State Water Policy with legal frame work for regulation and control of surface and ground water, Department did not have effective control over surface water and drawal of ground water.
- Imprudent financial management resulted in locking up of Government funds of ₹ 217.12 crore outside Government account.
- Ineffective planning and delay in implementation of various schemes defeated intended objective of improving irrigation potential. An amount of ₹ 505.61 crore was locked up in 16 incomplete works ranging from one to eight years.
- Rules and regulations were not framed to protect ground water resources against over exploitation. Observation wells maintained for monitoring ground water were also far below prescribed standards.
- Due to ineffective functioning of Laboratory, water samples could not be analysed on special parameters since 2006 to identify presence of heavy metals, pesticides and pollutants which cause health hazard.
- Deficiencies in hydrological and meteorological data indicate that full potential of data could not be utilised for hydrological design, planning,

water resources management, flood management and for formulation of schemes.

- Preventive measures to control sea water intrusion were inadequate. Coastal protection works were commenced without obtaining environmental clearance from Government of India (GOI). Pollution in Palar River was not controlled despite high level of pollution since the year 2000.
- Defective planning of flood control works in Chennai city led to delay and increased cost thereby defeating objective of the scheme formulated to avoid flooding in Chennai.
- Original capacity of tanks was not restored due to ineffective enforcement of Act for eviction of encroachments.
- Water Resources Management remains unachieved even after a lapse of three years since establishment of SWaRMA, an agency constituted for this purpose.

1.7.2 Compliance Audit

1.7.2.1 *Scheme of Free Distribution of Milch Cows*

Audit on implementation of the scheme brought out following observations:

- Lack of transparency in selection deprived needy eligible women beneficiaries of the benefits envisaged in the scheme.
- Deficiency in procurement mechanism resulted in procurement of poor quality cows and poor milk yield which impacted objectives of improving economic status of poor women in rural areas and increasing milk productivity of the State.
- Poor post procurement management particularly in provision of fodder and insurance coverage impacted sustainability of the Scheme.

1.7.2.2 *Functioning of State Compensatory Afforestation Fund Management and Planning Authority*

Audit conducted on functioning of State CAMPA revealed following deficiencies:

- Deficiencies in the system to assess, levy, collect and remit funds deprived State CAMPA of its share of ₹ 15.49 crore for afforestation during 2009-13.
- Funds of ₹ 6.20 crore received were utilised to the extent of 55 *per cent* only which included ineligible expenditure to the extent of ₹ 0.92 crore.
- Eighty five *per cent* of land received from user agencies for Compensatory Afforestation was yet to be declared as Reserved/Protected forest.
- Apart from 561 ha diverted for non-forest purposes, an extent of 346.53 ha of forest land was utilised by user agencies without prior concurrence of GOI.
- Deficiencies were noticed in the monitoring system for concurrent evaluation of the works implemented in the State.

1.7.2.3 Audit of transactions in various Departments of Government and field offices revealed avoidable expenditure, unfruitful expenditure, retention of funds outside Government account *etc.* Some of the audit findings are given below:

- Defective design in execution of bridge work resulted in avoidable additional expenditure/liability of ₹ 6.02 crore besides defeating the objective of providing bypass link to Ramanathapuram town for more than two years even after incurring an expenditure of ₹ 23.95crore.

(Paragraph 3.3.1)

- Avoidable expenditure/committed liability of ₹ 6.57 crore and non-recovery of ₹ 1.10 crore due to incorrect award of road works to contractor with record of poor performance.

(Paragraph 3.3.2)

- Injudicious rejection of tenders in construction of two bridge works resulted in excess expenditure/liability of ₹ 1.09 crore.

(Paragraph 3.3.3)

- Non-adherence to MORTH specifications resulted in excess payment of ₹ 1.73 crore to contractors.

(Paragraph 3.3.4)

- Short collection of fees of ₹ 8.08 crore from a licensee and interest loss of ₹ 1.91 crore to Tamil Nadu Maritime Board.

(Paragraph 3.5.1)

- Injudicious selection of road resulted in non-availing of GOI funds and also defeated the intended objective of providing an alternate route to an important pilgrim town besides rendering the expenditure of ₹ 2.20 crore unfruitful.

(Paragraph 3.5.2)

CHAPTER II

CHAPTER II

Public Works Department

2 Performance Audit on Irrigation Activities in Chennai Region

Executive Summary

Introduction

In the State of Tamil Nadu, water is a limiting factor affecting production and productivity. Since Tamil Nadu does not have any perennial river, river basin planning, best suited for optimum utilisation of water resources is adopted. Government of Tamil Nadu in Eleventh Five Year Plan (2007-12) aimed at restoration and maintenance of existing water bodies, harnessing of surface water flowing into sea, taking up drainage works in major rivers, canals, tanks and coastal protection works. Ground water being main source for irrigation and drinking purposes, special emphasis is required for obtaining an accurate picture of ground water resources.

Given this background, Performance Audit on Irrigation Activities in Chennai Region comprising nine districts of Tamil Nadu was conducted.

Planning

State Water Policy was not revised in line with National Water Policy April 2002. In absence of revised State Water Policy with legal frame work for regulation and control of surface and ground water, Department did not have effective control over surface water and drawal of ground water.

Financial Management

Imprudent financial management resulted in locking up of Government funds of ₹ 217.12 crore outside Government account.

Implementation of schemes

Ineffective planning and delay in implementation of various schemes defeated intended objective of improving irrigation potential. An amount of ₹ 505.61 crore was locked up in 16 incomplete works ranging from one to eight years.

Ground and Surface Water

Rules and regulations were not framed to protect ground water resources against over exploitation. Observation wells maintained for monitoring ground water were also far below prescribed standards.

Due to ineffective functioning of Laboratory, water samples could not be analysed on special parameters since 2006 to identify presence of heavy metals, pesticides and pollutants which cause health hazard.

Hydrological and Meteorological Data

Deficiencies in hydrological and meteorological data indicate that full potential of data could not be utilised for hydrological design, planning, water resources management, flood management and for formulation of schemes.

Environment

Preventive measures to control sea water intrusion were inadequate. Coastal protection works were commenced without obtaining environmental clearance from GOI. Pollution in Palar River was not controlled despite high level of pollution since the year 2000.

Flood water Management

Defective planning of flood control works in Chennai city led to delay and increased cost thereby defeating objective of the scheme formulated to avoid flooding in Chennai.

Monitoring

Original capacity of tanks was not restored due to ineffective enforcement of Act for eviction of encroachments.

Water Resources Management remains unachieved even after a lapse of three years since establishment of SWaRMA, an agency constituted for this purpose.

2.1 Introduction

Mandate of Water Resources Department (WRD) of Government is to (i) formulate schemes to effectively utilise available water resources, (ii) maintain and improve existing infrastructure and (iii) ensure effective functioning of irrigation systems. In Eleventh Five Year Plan (2007-12), WRD aimed at restoration and maintenance of existing water bodies, harnessing surface water flowing into sea, taking up drainage works in major rivers, canals, tanks and coastal protection works. In order to achieve above objectives, WRD carried out irrigation schemes for harnessing surface water, regulation of drawal of ground water, management of flood water, *etc.* Schemes were funded by Government besides financial assistance from National Bank for Agriculture and Rural Development (NABARD), Government of India (GOI) assisted Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and World Bank.

2.2 Organisational structure

Secretary to Government is the administrative head of Public Works Department (PWD) of Government. PWD has two wings viz., Water Resources Department (WRD) and Buildings Organisation. Technical head of the WRD is Engineer-in-Chief (E-in-C) who co-ordinates with (i) Chief Engineers (CE) of four regions located at Chennai, Coimbatore, Madurai and Trichy and (ii) five functional CEs for Plan Formulation (PF), Design Research and Construction Support (DRCS),

Operation and Maintenance (O&M), Institute for Water Studies (IWS) and State Ground and Surface Water Resources Data Centre (SG&SWRDC). Each CE is assisted by Superintending Engineers (SE) and Executive Engineers (EE).

2.3 Audit objectives

Performance Audit was conducted to assess

- effectiveness of the planning process in selection of irrigation schemes/works;
- prudence in financial management;
- economy, efficiency and effectiveness in execution of schemes/works;
- adequacy of monitoring and evaluation and
- integrity of hydrological and meteorological data.

2.4 Audit criteria

Audit criteria were sourced from the following:

- Five Year and Annual Plans;
- Regulations, Orders/Instructions of the Government of India/Tamil Nadu;
- Policy notes of Government;
- Tamil Nadu Public Works Department Codes and Manuals, Departmental Schedule of Rates and
- Terms and Conditions governing the loan agreements with the funding agencies viz., World Bank and NABARD.

2.5 Audit coverage and Methodology

Chennai Region covers six out of seventeen river basins covering nine districts namely Chennai, Cuddalore, Dharmapuri, Kancheepuram, Krishnagiri, Tiruvannamalai, Tiruvallur, Vellore and Villupuram. The region has 18 reservoirs and 13,305 tanks with total storage capacity of 569.48 Mcm⁵ and 2,296.97 Mcm respectively in six river basins. PA was conducted during April 2013 to September 2013 covering the period 2008-2013.



5

Million Cubic Meter

Audit objectives, criteria and methodology were discussed in Entry Conference (29 May 2013) with Government represented by Deputy Secretary and senior officers of Department. Audit findings were also discussed with Special Secretary and officers of Department in an Exit Conference (5 December 2013) and views expressed by them have been considered while finalising the report.

Audit Findings

Findings of audit as a result of test check of records are detailed below:

2.6 Policy and Planning

Government in the Eleventh Five Year Plan proposed strategies such as (i) restoration and maintenance of the existing water bodies (ii) carrying out drainage works in the major rivers, canals and tanks and (iii) implementation of the Tamil Nadu Ground water (Development and Management) Act, 2003. Since a large percentage of consumptive use is through irrigation, top priority is to be given to irrigation water management. This task requires a strong institutional arrangement for effective implementation of the policies for better water management.

2.6.1 Water Policy

State Water Policy needs to be revised in accordance with National Water Policy keeping in mind the basic concerns and principles. National Water Policy laid emphasis on integrated water resources development and management for optimal and sustainable utilization of available surface and ground water. Objective of National Water Policy is to take cognizance of the existing situation, to propose a framework for creation of a system of laws and institutions and for a plan of action with a unified national perspective.

Audit noticed that Tamil Nadu State Water Policy was formulated in the year 1994 based on the National Water Policy 1987. National Water Policy was updated and adopted by National Water Resources Council in April 2002. However, Tamil Nadu State Water Policy is yet to be revised by Government. A committee was constituted (August 2013) to submit draft State Water Policy to focus on development, conservation, utilisation and management of water resources and also for regulation of ground water. State Water Policy to be revised within the frame work provided by National Water Policy would facilitate enactment of legislation for regulation and control of ground and surface water. State Water Policy was not revised in line with National Water Policy April 2002. In absence of revised State Water Policy with legal frame work for regulation and control of surface and ground water, Department did not have effective control over surface water and drawal of ground water. Moreover, hydrological and meteorological data available with the Department for effective planning was also deficient as brought out in subsequent paragraph along with other issues.

2.7 Financial Management

Irrigation schemes were implemented with financial assistance from the State, GOI and loan assistance from NABARD and World Bank. Details of expenditure incurred on schemes during 2008-09 to 2012-13 pertaining to Chennai Region are given below:

(₹ in crore)		
Sl. No.	Schemes	Expenditure
1.	IAMWARM ⁶	368.74
2.	State funded schemes and shared schemes ⁷	919.61
3.	NABARD schemes	81.40
Total		1,369.75

Financial management is integral to ensuring that utilisation of funds in implementation of schemes was prudent and works were carried out economically and efficiently. Following instances revealed deficiencies in financial management:

2.7.1 Locking up of Government funds outside Government account

Flood protection works for improvements to Micro and Macro drainages in Chennai city under JNNURM Scheme (October 2009) were to be carried out by Corporation of Chennai (CoC) at a total estimated cost of ₹ 1,447.91 crore (Micro Drainage – ₹ 814.88 crore and Macro Drainage – ₹ 633.03 crore). Since WRD maintains Macro drainages in Chennai city, flood protection works in Macro drainages were to be carried out by WRD. Tamil Nadu Urban Finance and Infrastructure Development Corporation (TUFIDCO) was designated as nodal agency for release of funds.

Municipal Administration and Water Supply Department (MAWS) released funds amounting to ₹ 496.61 crore (2009-10 to 2013-14) to CoC through TUFIDCO which included ₹ 217.12 crore for works to be carried out by WRD. However, WRD did not obtain the amount of ₹ 217.12 crore from CoC, instead, incurred expenditure from budget allocation of Public Works Department. Government also did not monitor timely transfer of funds from CoC to PWD for executing Macro component but released funds to MAWS and PWD for executing the same work.

Thus, failure to obtain funds from CoC and incurring expenditure from budget allocation of PWD resulted in locking up of Government funds of ₹ 217.12 crore (December 2013) outside Government account for a period ranging from six

⁶ World Bank assisted Irrigated Agriculture Modernisation and Water Bodies Restoration and Management Scheme.

⁷ State schemes and shared schemes such as Floodwater Management Programme, JNNURM.

months to four years. Department replied (December 2013) that action would be initiated to obtain funds from CoC.

2.7.2 Non-availing of Central assistance

Taking cognizance of recurrent devastating floods every year, GOI formulated (August 2009) a scheme viz., Flood Management Programme (FMP) under State Sector in Eleventh Five year Plan. Funding pattern of the scheme between Central and State Governments was 75:25.

First instalment of ₹ 30.32 crore was released (March 2010/December 2010) by GOI and for release of second instalment, submission of utilisation certificates (UCs) for 70 *per cent* of earlier release including matching share of the State Government was mandatory. Further, release of Central assistance for schemes in subsequent years would be considered only if audited statements of expenditure are furnished to GOI within nine months of completion of financial year.

Audit scrutiny revealed that as against eligible Central share amounting to ₹ 269.39 crore being 75 *per cent* of total expenditure of ₹ 359.18 crore for five works sanctioned (July 2009 to July 2010) and completed (March 2012) in Chennai Region, Central assistance of only ₹ 30.32 crore was received (March to December 2010), leaving balance of ₹ 239.07 crore, due to belated/defective submission of audited statements and non-furnishing of requisite particulars. This resulted in postponement of availing Central assistance of ₹ 239.07 crore thereby over burdening the State exchequer.

Department replied (December 2013) that action would be initiated to obtain reimbursement from GOI.

2.7.3 Excess payment towards Price Adjustment

Tenders for the work of “Improvements⁸ to South Buckingham Canal” were called for and last date for submission of tender was 10 March 2010. Agreement of work (June 2010) contemplated payment towards price adjustment to compensate fluctuations in rate on the components⁹ based on Government Order (June 2009). All works for which price adjustment was contemplated must have mile stones fixed in physical terms. As per General conditions of contract, base quarter would be reckoned with reference to the quarter of calendar year in which last date for tender submission was fixed. In case of delayed agreement, the quarter in which agreement was signed would be reckoned as base quarter for the purpose of calculation of price adjustments.

Due to change in construction methodology in above work, new rates were arrived at for substituted item of works by Department and same were accepted by the contractor (August 2011 and September 2011) with revised milestone.

⁸ Widening and Deepening, Widening of water ways of Bridges from Okkiam Maduvu to Muttukadu Backwater (North Lock) from LS 10,500M to 23,500M.

⁹ Labour, Cement, Steel, Plant and Machinery, Bitumen and Petroleum, Oil and Lubricants (POL).

Accordingly, supplementary agreement for substituted items of work was entered into with the contractor (March 2012).

Payment towards price adjustment for substituted item was made by Department for seven quarters. In five out of seven quarters, Department adopted quarter pertaining to submission of tender (January 2010-March 2010) as base quarter and for remaining two, Department adopted quarter in which rates for substituted items were approved (July to September 2011) as base quarter. Adoption of quarter pertaining to date of submission of tender as base quarter for substituted item instead of quarter in which rates for substituted items were approved resulted in excess payment to the tune of ₹ 5.87 crore (**Annexure 2**) to the contractor. Department agreed (December 2013) to recover excess payment from the contractor.

2.7.4 Inadequate allotment of funds

Tamil Nadu Public Works Department Code (PWD code) stipulate that no work shall begin unless a properly detailed design and estimate have been sanctioned, allotment of funds made and orders to begin issued by competent authority.

Work of formation of a check dam across Kanar Odai in Vellore District sanctioned (February 2001) with objective of irrigating 18.82 hectares (ha) was awarded (May 2001) for ₹ 0.89 crore. Worksite was, however, handed over (February 2007) after a delay of five and half years from date of award of work due to delay in obtaining permission from Forest Department (FD). As against total value of work done for ₹ 56.38 lakh, an amount of ₹ 21.08 lakh was paid (August 2007) to the contractor. The balance amount to the tune of ₹ 35.30 lakh could not be paid for want of funds.

Work was stopped midway since then (January 2008) due to non-allotment of funds and check dam remains incomplete. Proposal (August 2012) for allotment of funds for ₹ 64 lakh for execution of balance items of works was pending (January 2014) with Government.

Thus, non-execution of work for more than six years due to inadequate allotment of funds violating codal provisions resulted in non-achievement of objective even after incurring an expenditure/liability of ₹ 56.38 lakh on the executed work. Department replied (January 2014) that after allotment of funds, pending works would be completed.

2.8 Programme Implementation

Schemes for optimum harnessing of surface water were not formulated despite there being demand for irrigation activities. Selection of unviable schemes and non-completion of projects due to delay in land acquisition, defective design, slow progress etc., defeated the intended objective of irrigation activities.

Audit observed that an amount of ₹ 505.61 crore was locked up in 16 incomplete works. Six works were incomplete for more than five years, four works more than four years but less than five years, one work for more than three years but less than

four years, one work more than two years but less than three years, four works more than one year but less than two years amounting to ₹ 286.26, ₹ 75.65, ₹ 5.13, ₹ 0.52 and ₹ 138.05 crore respectively (**Annexure 3**).

2.9. Surface water

Tamil Nadu does not have any perennial river. River basin planning, best suited for optimum utilisation of water resources is required. Water management for irrigation needs to be given top priority since a large percentage of consumptive use is through irrigation. Hence, new schemes such as construction of reservoirs, anicuts, checkdams, *etc.*, need to be formulated to harness surface water flowing into river and sea.

2.9.1 Utilisation of surface water

Considering gap in demand and supply of water and also with a view to achieve objective of preservation and stabilisation of existing water resources, Eleventh Five Year Plan envisaged (2007-12) utilisation of surface water flowing into sea by constructing structures to divert water to needy areas by formulating schemes. Audit noticed that there were deficiencies in formulation of such schemes as discussed below:

2.9.1.1 Vellar Basin

Lower Coleroon Anicut (LCA) and Sethiathope Anicut (SA) are situated across Coleroon River and Vellar River respectively before they flow into sea. Details of storage capacity, irrigation demand, quantity supplied and let out to sea during the period from 2008-09 to 2012-13 are furnished below:

Details of quantity of water let out in sea

Sl. No.	Name of the Anicut	Storage capacity (Mcuft) ¹⁰	Irrigation demand TMC	Supplied Quantity TMC	Shortfall TMC	Quantity let out to Sea TMC
1.	LCA	150.13	156.60	80.62	75.98	154.18
2.	SA	104.00	51.75	9.06	42.69	103.16
Total		254.13	208.35	89.68	118.67	257.34

(Source: Details furnished by divisions)

Audit observed that despite shortfall in meeting irrigation demands, more than double the quantity was discharged into sea. Department, however, did not formulate schemes for constructing structures to harness the surplus quantity discharged into the sea in respect of above anicuts. On this being pointed out, Department replied (January 2014) that proposals for construction of checkdams were under consideration of Department.

¹⁰ Million Cubic Feet

2.9.1.2 Palar Basin

Palar River flows in Vellore and Kancheepuram districts and confluences at Sea. There were no harnessing structures like anicuts/check dams *etc.*, across Lower Palar River to harness surface water for a length of 115 km till it reaches Sea. As per flow data available with WRD, surface water flowing into sea measured at the nearest causeway was found to be 1,098 Mcft per year (average flow during past 21 years, upto 2000) and same was found to be 3,260 Mcft in the year 2004. Department during Exit Conference stated that proposal for construction of check dam across Lower Palar River was under consideration at various stages.

Fact, however, remains that schemes were not formulated to harness surface water as envisaged in Eleventh Five Year Plan.

2.9.2 Non-achievement of irrigation facilities

With a view to harness surface water to meet deficit in demand for drinking and irrigation purposes, WRD constructed reservoirs, tanks, artificial recharge structures, checkdams, siphons *etc.* Audit, however, noticed that intended objective of meeting irrigation demand was not achieved due to reasons such as delay in land acquisition, defective design, *etc.*

2.9.2.1 Project remaining incomplete due to non-acquisition of land

PWD code stipulates that no work should be commenced on land which was not duly made over by responsible civil officers. Audit, however, noticed that following projects formulated with intention of tapping surface water potential could not take off due to non- acquisition of land:

(a) Construction of Artificial Recharge Structure (ARS) across Mani Nadhi

With a view to harness surface water to meet demand for drinking and irrigation purposes, Government accorded (October 2010) administrative approval for work of construction of Artificial Recharge Structure (ARS) across Mani Nadhi including formation of a supply channel to benefit an area of 61 ha.

Work which *inter alia* included three components viz., construction of check dam, construction of head sluice and formation of supply channel, was awarded (February 2011) for ₹ 1.08 crore and scheduled to be completed in August 2011. While work of construction of check dam and head sluice was completed (March 2011), work relating to formation of supply channel was not taken up (August 2013) pending acquisition of patta land of 2.89 ha. Proposal submitted to District Collector, Villupuram for acquiring such land through private negotiation as early as in March 2011 was pending with Collector (August 2013).

Audit noticed that Department did not ensure availability of land for formation of supply channel before awarding work to contractor. This resulted in non-achievement of intended objective of irrigating 61 ha of ayacuts even after incurring an expenditure of ₹ 0.83 crore.

(b) Construction of reservoir across Koil Malayar

Formation of reservoir across river Koil Malayar earlier taken up in August 1993 was revived in May 2005 at a cost of ₹ 12.98 crore under NABARD scheme. Work involved acquisition of lands (forest, patta and poramboke lands) to the extent of 59.75 ha. An amount of ₹ 3.37 crore was paid (August and September 2007) towards Compensatory Afforestation (CA) for executing work in forest lands and ₹ 45.09 lakh was remitted to Revenue Department for acquisition of patta land. Work was awarded (February 2007) to contractor with scheduled period of completion of 16 months. However, agreement was foreclosed (October 2008) and project was withdrawn from NABARD scheme due to delay in land acquisition.

Thus, ₹ 4.65 crore remain blocked up on projects which were commenced without ensuring availability of land. Department stated (December 2013) that necessary action would be taken for early completion of the projects.

2.9.2.2 Projects remaining incomplete due to defective design

Projects taken up to increase area under irrigation did not yield the intended result due to defective design in the following two cases.

(a) Construction of siphon across Palar River

Government accorded (November 1997) administrative sanction of ₹ 40 crore for “Construction of Mordhana Reservoir” including two sub works viz., “Construction of Right Main Canal (RMC) and Left Main Canal (LMC)”. Water released through RMC crossed Palar River through an aqueduct for a length of 400m to cater to a total ayacut of 1,378 ha situated on the right side of the Palar River with an assured supply from Mordhana Reservoir. Sub work of construction of above aqueduct in RMC was completed for a designed capacity of one lakh cusecs (Maximum Flood Discharge in the Palar River) in 2002 at a cost of ₹ 1.26 crore.

Special CE, during inspection (October 2006), noticed that top of aqueduct was not at uniform level and hence water level was not uniform. As a remedial measure, a dividing wall below aqueduct with necessary energy dissipation arrangements for designed discharge capacity of one lakh cusecs was constructed (March 2010) at a cost of ₹ 2.15 crore. However, during construction of dividing wall, aqueduct collapsed (November 2008) due to sudden flash flow of water of 5,000 cusecs. SE (Designs) opined that water pressure and lateral pressure were reasons for failure of aqueduct and also suggested (December 2008) construction of well siphon in lieu of aqueduct. Accordingly, construction of well siphon was completed (August 2013) at a cost of ₹ 1.39 crore.

Aqueduct designed for a capacity of one lakh cusecs could not withstand 5,000 cusecs due to defective design. Thus, expenditure of ₹ 3.41 crore on construction of aqueduct and remedial works was rendered wasteful besides defeating the intended objective of irrigating an ayacut of 1,378 ha. Department attributed (January 2014) reason for collapse of aqueduct to sudden flash flood. Fact,

however, remains that aqueduct did not withstand even lesser discharge of water than its designed capacity.

(b) Construction of Shenbagathope Reservoir

Construction of Shenbagathope Reservoir Project under NABARD loan assistance was formulated in 2001 with the objective of supplying water to four¹¹ anicuts in the downstream. Reservoir proposed at a cost of ₹ 34 crore was to feed 46 tanks covering 30 villages with a command area of 2,710 ha¹².

Work of construction of reservoir *inter alia* included (i) formation of a reservoir across Kamandalar River and (ii) design, manufacturing, erection, testing and commissioning of seven radial shutters¹³. According to terms of agreement (July 2004) with the contractor for erection of shutters, period of guarantee was 24 months and any defect in smooth functioning noticed during above period had to be made good by the contractor at his own cost. Components of formation of a reservoir work and commissioning of shutters were completed (March 2007) at a total cost of ₹ 28.78 crore.

While testing radial shutters commissioned and erected, Chief Engineer, Operation and Maintenance, WRD, noticed (May 2008) certain defects due to improper alignment of gates. Radial shutters were also in open condition and hence water could not be stored beyond sill level. Contractor did not rectify defects, though required, as per terms of agreement. Efforts of Department (2008 to 2010) to rectify defects through Departmental workshop were also not successful due to non-availability of experienced staff. Estimate prepared (April 2013) for ₹ nine crore for rectifying these defects in radial shutters of reservoir through a new agency was pending approval of Government (December 2013).

Inordinate delay in execution and subsequent delay in carrying out rectification works resulted in non-achievement of supplying water to four anicuts in the downstream, even after incurring an expenditure of ₹ 28.78 crore on construction of the reservoir and allied works. Department stated (December 2013) that necessary action would be taken for early completion of the project.

Thus, due to defective execution of original works and delay in carrying out remedial measures, above two projects initiated with objective of irrigating 4,088 ha could not be put to beneficial use. Besides, objective of Eleventh Five Year Plan to harness surface water and to increase area under irrigation remained unachieved even after incurring an expenditure of ₹ 32.19 crore.

¹¹ (i) Aliyabad (ii) Vellore (iii) Kamakkur (iv) S.V. Nagar.

¹² Stabilisation 2,068 ha and gap filling 642 ha.

¹³ The Radial Shutters are used for the process of controlling the over flow of the water when the situations of flooding come up.

2.9.2.3 *Dropped projects*

As per guidelines of NABARD, project should be selected after a comprehensive study of technical, economic, financial and organisational aspects to ensure that the capital resources are used to create productive assets which are expected to realise benefits over a period. Audit, however, noticed that project taken up under NABARD assistance was subsequently dropped on grounds of being uneconomical as discussed below:

Government accorded (August 1998) sanction for work of “Formation of a Reservoir across Vellakkal Kanar in Vellore District” at an estimated cost of ₹ 7.70 crore. As the proposed reservoir site was located in reserve forest area, Department remitted (March 2002) an amount of ₹ 82.67 lakh and also handed over (August 2004) land to the extent of 72 ha to Forest Department (FD) towards Compensatory Afforestation. While work was proposed with NABARD loan assistance for ₹ 10.30 crore, cost escalated to ₹ 11.50 crore (January 2005) due to delay in getting possession of forest land. Work could not be commenced as additional payments were to be made to FD. Finally, on request (November 2010) of Government, scheme was deleted (September 2011) from NABARD assistance in view of economic un-viability.

Despite sanction of project by NABARD, poor planning and belated handing over of land towards Compensatory Afforestation led to uneconomical cost of project thereby losing an opportunity of forming a reservoir.

Thus, due to non completion of schemes for reasons such as pending land acquisition process, defective design, selection of un-viable project *etc.*, intended objective of irrigating ayacuts effectively was defeated.

Department replied (December 2013) that preparation/sanction of revised estimates were under process for early completion of the pending projects.

2.10 Ground Water

Ground Water wing of WRD also known as State Ground and Surface Water Resources Data Centre (SG&SWRDC) functions with objectives which *inter alia* include (i) Scientific ground water investigation and periodic assessment of ground water potential and (ii) Continuous monitoring of monthly hydrological, hydro meteorological water level parameters and water quality for ground and surface water. Ground water being main source of water for irrigation and drinking purposes, special emphasis is required for obtaining an accurate picture of ground water resources.

2.10.1 Issue of No Objection Certificate (NOC) for drawal of ground water

Government enacted ‘The Tamil Nadu Ground Water (Development and Management) Act’ in the year 2003 to prevent indiscriminate drawal of ground water for sustainable development. Act contemplated formation of Tamil Nadu Ground Water Authority to protect ground water resources, safeguard against hazards of over exploitation and to ensure its planned development and proper

management in State. Government did not frame rules and regulations for implementation of Act (2003). Moreover, Government repealed (September 2013) the above Act with a view to comprehensively change it taking into account the present demand, need and supply. However, this is yet to be done (February 2014). As a result there has been no clear framework to monitor extraction of ground water as discussed below:

With a view to control indiscriminate drawal of ground water, Government issued orders (February 2004 and March 2012) prohibiting formulation of schemes in over exploited and critical blocks as categorised by them. As per guidelines issued by Central Ground Water Authority (CGWA), no NOC should be granted (with effect from November 2012) for drawal of ground water in over exploited areas and wherever State Government Authorities are in existence to manage and control ground water regimes, ground water regulations would be done by them. Chennai Region of WRD issued NOCs to 49 units during November 2001 to August 2011 for drawal of ground water.

Audit scrutiny of records on issue of NOCs in respect of these 49 units revealed the following discrepancies.

- NOC from State Ground water Authority for drawal of ground water is one of the main requirements to be complied with by packaged drinking water units for obtaining water quality Licence from Bureau of Indian Standards (BIS). Out of total number of 49 units for which NOC were issued, only two were issued for packaged drinking water units. It was, however, observed that 440 packaged drinking water units in Chennai Region were granted BIS Licence. Thus, it is evident that there was inadequate control mechanism to monitor drawal of ground water.
- In one case NOC was issued (June 2009) for drawal of ground water in over-exploited block¹⁴ contrary to Government instructions.
- NOC was to be renewed after completion of three years from the date of issue. Though validity of NOCs in respect of 47 units expired during November 2004 to December 2013, only two units applied for renewal of NOC.

Department expressed their inability to prevent indiscriminate drawal of ground water due to non-framing of rules and regulations leaving protection of ground water resources against over exploitation vulnerable.

2.10.2 Monitoring of ground water structures through observation wells/Piezometers

Observation wells/Piezometers¹⁵ are non pumping wells identified by Department primarily for observing elevation of water and to obtain water quality samples to

¹⁴ Wallajabad Block, Kancheepuram District

¹⁵ Piezometer: Small-diameter well open at a point or short length in the aquifer to allow measurement of hydraulic head at that point or short length

monitor ground water. As the current prescribed ratio of 1:500 of observation wells to ground water structures was inadequate, Planning Commission, GOI stressed (October 2011) the need to have a ratio of 1:100 for effective ground water management. Strengthening ground water monitoring system by establishing one Piezometer in each village was included in Twelfth Five Year Plan.

Audit scrutiny revealed that Department could maintain a ratio of 1:1000 only as against the prescribed ratio of 1:500. No action was initiated by it to enhance the ratio of observation wells or install a Piezometer. Hence, existing ratio was inadequate for effective ground water management and also far below the ratio prescribed by Planning Commission.

Department replied that existing proportion of observatory wells was satisfactory. However, Planning Commission recommended ratio of 1:100 after considering inadequacy of the existing prescribed ratio of 1:500.

2.11 Deficiencies in hydrological and meteorological data

SG&SWRDC was established for continuous monitoring of surface and ground water quantity and quality, collection/storage of all processed and validated data of both surface and ground water and dissemination of hydrological and meteorological data to all potential users for water resource planning and management. Hydrological and Meteorological data are captured from equipments such as Staff Gauge, Current Meters, Standard Rain Gauge (SRG), Autographic Rain Gauge (ARG) and Full Climatic Stations (FCS). Hydrological and Meteorological data were analysed by audit and following observations are made:

- Hydrological and Meteorological data were not available either for continuous or intermittent period in SWDES¹⁶ database. As a result, consolidated data of FCS was not published after 2005 by SG&SWRDC. Thus, inconsistencies in data resulted in absence of data integrity and same could not be utilised in full extent for planning, design, management for conservation and dependability of surface water to potential users for water resources planning and management.
- Water quality data relating to special parameters (heavy metals, pesticides and pollutants) which cause health hazards for human beings were not captured for surface water and ground water in Water Quality Data Entry System database as these tests were not conducted.
- Rainfall data and water quality data were not integrated in Ground Water Data Entry System (GWDES) database to monitor the influence of rainfall on ground water level fluctuations and the ground water quality parameters through GWDES database as stipulated in GWDES Manual.

¹⁶ Surface Water Data Entry System – A database to store all types of meteorological and hydrological data using SWDES Software.

- Comparison of rainfall data captured through SRG and ARG in 18 out of 23 stations in Chennai region revealed that deviations were not rectified by SG&SWRDC to ensure consistency of data entered by comparing related data that are observed and entered independently as stipulated in SWDES Manual.
- Meteorological data up to year 2010 sent to National Data Centre (NDC) of Indian Meteorological Department for inter agency validation were returned for rectification of errors and same was not rectified by SG&SWRDC. No response was received from Central Water Commission (CWC) for hydrological data sent for inter agency validation by SG&SWRDC. No follow-up action was taken by the Department. Department did not send hydrological and meteorological data to CWC and NDC after 2009 and 2011 respectively for inter agency validation as stipulated in SWDES Manual.
- Tamil Nadu e-Security Policy, 2010 envisages migration of data to the State Data Centre (SDC). However, data were stored in personal computers and backups were stored in external hard disks manually. Data were not migrated to SDC.
- Information on water quality and ground water level status were not updated in the website¹⁷ maintained for the purpose of dissemination of information to the potential users after January 2008 and February 2011 respectively.
- Prime objectives of e-security and availability of information as envisaged in Tamil Nadu e-security Policy, 2010¹⁸ remains largely unachieved.

The above deficiencies indicate that full potential of data could not be utilised for hydrological design, planning, water resources assessment, flood management and also for formulation of projects. Department accepted this (December 2013) and said deficiencies would be rectified.

2.12 Environment

2.12.1 Special parameters on water quality not tested due to non-recognition of laboratory by Central Pollution Control Board (CPCB)

Sections 51, 52 and 53 of the Water (Prevention and Control of Pollution), Act, 1974 stipulated establishment of a State Laboratory and appointment of Analyst to test samples. The Environment Protection Act, 1986 also stressed the need for such laboratories to carry out the functions. CPCB recognised (June 2001) one Geo-Chemical Laboratory in Chennai valid for a period of five years (May 2006).

¹⁷ www.groundwatertnnpwd.org.in (English) and www.nilaneer.in (Tamil)

¹⁸ Information Technology (B4) Department - G.O. Ms. No.42 dated 24.09.2010

Audit noticed that Department, after June 2006, did not take any initiative to obtain fresh recognition for laboratory and for appointment of Government Analyst. Department stated (July 2013) that fresh recognition was not sought for since Department could not comply with CPCB norms in respect of staff pattern. Consequently, special parameters like heavy metals, pesticides, inorganic carbon, organic carbon and total carbon which cause health hazard could not be analysed in water samples since 2006. Special parameters become all the more significant in view of fact that Department themselves identified presence of heavy metals such as lead and iron beyond permissible limit in water even as early as 2003.

However, at present only general parameters are being tested and report published by SG&SWRDC. Department accepting the audit observation stated that action would be initiated to make laboratory functional.

2.12.2 Control of Sea Erosion and Sea Water Intrusion

Behaviour of sea varies throughout the year and consequent littoral drift causes erosion of land on one side and accretion of sand on other side. Loss of sand due to sea erosion is one of the problems faced by coastal areas of State. After disastrous Tsunami in the year 2004, Tamil Nadu Coast was adversely affected. During monsoon periods, problems were aggravated due to formation of cyclonic storms, surges, depression, low pressure zones *etc.* Due to rapid growth of industrialisation, urbanization, ground water in coastal aquifers is being extracted indiscriminately in most part of areas. Hence, Government decided to give priority to coastal protection works. Audit, however, observed lapses in execution of work to control sea water intrusion as evidenced from the following:

2.12.2.1 Commencement of work without obtaining environmental clearance

For carrying out coastal protection works, Government directed (December 2011) that necessary environmental clearance as per Coastal Regulation Zone (CRZ) notification should be obtained before their commencement and guidelines prescribed by GOI were to be followed which was also reiterated by Tamil Nadu State Coastal Zone Management Authority (TNSCZMA), Chennai (November 2011).

Work of construction of sea wall and groynes (rigid hydraulic structure built from ocean shore to interrupt water flow) commenced (September 2012- January 2013) at four¹⁹ sites without obtaining environmental clearance was stopped (March 2013) after incurring an expenditure of ₹ 7.11 crore due to public agitation and also on intervention of National Green Tribunal.

¹⁹ Three – Cuddalore and one – Villupuram district

Commencement of work without obtaining environmental clearance contravening guidelines issued by GOI and disregarding views of TNSCZMA, Chennai resulted in stoppage of work after incurring an expenditure of ₹ 7.11 crore.

Department, during Exit Conference, stated (December 2013) that work would be resumed after obtaining clearance from GOI.

2.12.2.2 *Non-formulation of schemes to control sea water intrusion*

- (a) Government decided (April 2009) to construct a checkdam across Palar near Vayalur in Kancheepuram District to arrest sea water intrusion and improve quality of water. Based on the suggestions of Regional Director, Central Ground Water Board (CGWB), State Level Technical Coordination Committee (SLTCC) submitted (August 2009) a proposal for ₹ 55.55 crore with 100 *per cent* funding by CGWB. While furnishing (July 2011) further details as required by CGWB, cost of scheme was worked out as ₹ 72.50 crore but scheme is yet to be formulated (May 2013).
- (b) Excessive extraction of ground water is the cause for sea water intrusion resulting in soil losing its fertility and uneconomical for cropping. Sea water intrusion was noticed in Minjur belt of North Chennai to the extent of 14.5 km from coast and about 10,000 ha in Gummidipoondi, Cholavaram and Ponneri Blocks were affected. However, no proposal was initiated by WRD to redress the issue.
- (c) CGWB extended financial assistance (December 2002) for Artificial Recharge to Ground Water. Government decided to avail financial assistance for scheme under artificial recharge to utilise surface water draining into sea during monsoon for recharging aquifers. A proposal for Artificial Recharge of Besant Nagar Aquifer to control sea water intrusion was formulated at a cost of ₹ 3.76 crore (October 2006) by utilising flood water from Velachery Tank. Project was, deferred due to encroachment in Velachery area. In the mean time, an alternate proposal (November 2007) of “Artificial recharge of Besant Nagar Acquiifer by pumping flood water from Taramani” was found not feasible and proposal was deferred (July 2009). However, status report on sea water intrusion study in Besant Nagar in Chennai during the year 2007 to 2010 revealed that level of chloride was on increasing trend due to over extraction of ground water. Despite this, Department is yet to formulate scheme to control sea water intrusion.

Thus, non-pursuance of proposal to construct checkdam and non-formulation of schemes to prevent sea water intrusion defeated objective of improving quality of water. Department replied (December 2013) that necessary action would be initiated to arrest sea water intrusion.

2.12.3 Pollution in Palar River not controlled by WRD

Palar River, a major irrigation and drinking water source of Vellore and Kancheepuram Districts is also a recharge source for ground water to nearby areas. Large numbers of leather tanneries are functioning in Vellore District. A study on Pollution in Palar River conducted during 2000 by SG&SWRDC revealed that area to the extent of 8,015 ha was severely affected while 22,904 ha was moderately affected due to tannery effluents.

Another study on effect of tannery effluents in Palar River conducted in 2003 by SG&SWRDC also indicated that Total Dissolved Salts and Chloride value in river water increased to 9,766 mg/l from the level of 8,000 mg/l (year 2000) as against permissible level of 750 – 2,000 mg/l. Common Effluent Treatment Plant was not designed to reduce salt level in effluent. No steps were taken to contain pollution in Palar River.

During Exit Conference, Department replied (December 2013) that Pollution study was not conducted in Palar River since the year 2003 and pollution in river Palar would be controlled in coordination with Tamil Nadu Pollution Control Board.

2.13 Flood Water Management

Government sanctioned (October 2009) ₹ 633.03 crore under JNNURM to carry out improvement to Macro drainages to avoid flood water inundation. Flood protection works were carried out in ten packages along canals²⁰ and in tank. Audit observations are discussed in succeeding paragraphs.

2.13.1 Flood Protection Works in South Buckingham Canal

➤ **Increase in cost and non completion of work due to change of construction methodology:**

Work of “Improvements to South Buckingham Canal from Okkiyam Maduvu to Muttukadu Backwater” was intended to increase discharge capacity of canal from 3,500 cusecs to 9,000 cusecs taking into account reduction in discharge quantum by 3,500 cusecs due to proposed “Construction of shortcut diversion Channel at confluence point of Buckingham Canal near Okkiyam Maduvu”. Since method of deploying machineries like poclain and conveying excavated earth by using tippers to dumping yard was found unsuitable while executing the work, alternate methodology using chain of poclains without deploying any tippers/lorries for conveyance was adopted. Design of bridge was also changed to pile foundation instead of raft foundation due to soil condition. As against proposed widening of 20m width to 100m for total length of 13,000m (from LS 10,500m to LS 23,500m), widening work was not completed for a length of 5,490 m due to non availability of funds. Adoption of alternate

²⁰

South Buckingham Canal, North Buckingham Canal and Central Buckingham Canal

methodology and change of design resulted in revision of estimates (February 2013) from ₹ 78.14 crore to ₹ 104.40 crore.

➤ **Construction of bridge in contravention to IRC specifications:**

Work of “Improvements to South Buckingham Canal from Okkiyam Maduvu to Muttukadu Backwater” *inter alia* included remodelling of two bridges of 12m width across South Buckingham Canal. At request of WRD, Highways Department granted NOC (February 2011) subject to condition that work would be carried out as per Indian Road Congress (IRC) and MORTH (Ministry of Road Transport and Highways) specifications since both the existing bridges are being maintained by Highways Department. However, bridges with three lanes (width increased from 12m to 15m) were constructed by WRD instead of two lanes having two directional traffic violating IRC specifications. Department stated that 15m width bridges with three lanes were constructed anticipating future expansion and volume of traffic. However, fact remains that WRD did not obtain traffic census from Highways Department and executed work without considering IRC specifications.

➤ **Work dropped due to non-availability of funds for land acquisition:**

Work of “Short cut diversion drainage from Buckingham Canal near Okkiyam Maduvu to sea” was proposed to divert portion of flood water (3,500 cusecs) from Okkiyam Maduvu to sea directly in view of time lag for discharging major portion of flood water, zero bed slope terrain, formation of sand bar and hindrance to flow at confluence with sea at Muttukadu. Objective of scheme to discharge sizable quantum of flood water from South Chennai catchments to Bay of Bengal through Buckingham Canal could not be achieved as work was dropped due to increase in land acquisition cost involving ₹ 100 crore. As a result, there would be excess discharge of water to extent of 3,500 cusecs over and above designed discharged capacity of 9,000 cusecs in South Buckingham Canal from Okkiyam Maduvu to Muttukadu Backwater.

Following two works commenced in July 2010 and May 2011 were not completed due to pending land acquisition and delay in shifting of service utilities as discussed below:

➤ **Work not completed pending land acquisition:**

Work of “Improvement to Veerangal Odai Drainage Course Channel” intended to mitigate flooding in Velachery and adjoining areas *inter alia* involved construction of flood protection wall for a length of 8,140m for draining flood water of Veerangal Odai surplus. Work to the extent of 677m was not completed (March 2013) and construction of wall to the extent of 25m (LS 3,925m to LS 3,950m) on both sides of canal was not taken up as land acquisition for the work was pending.

➤ **Non-completion of work due to delay in shifting of service utilities:**

Work of “Short cut diversion drainage channel for Velachery Tank Surplus” was intended to divert surplus discharge from Velachery Tank to South Buckingham Canal instead of draining into Pallikaranai Swamp to reduce its load. Work involved provision of a straight cut canal from Velachery Tank drain to connect it to South Buckingham Canal for a length of 4,100m. Audit observed that 48 *per cent* of work was not completed even after incurring an expenditure of ₹ 67.73 crore (September 2013) due to delay in shifting of service utilities (Tamil Nadu Electricity Board - ₹ 13.72 crore; Chennai Metropolitan Water Supply and Sewerage Board - ₹ 1.26 crore; Highways Department - ₹ 3.69 crore and Works expenditure - ₹ 49.06 crore), though due for completion in 2012.

Thus, intended objective of the works proposed in South Buckingham Canal to give flood relief and minimise period of inundation in flood affected areas in Velachery, Madipakkam and Pallikaranai in South Chennai remained largely unachieved.

2.13.2 Flood Protection Work in North Buckingham Canal

Work was intended to provide a new drainage channel to divert a portion of floods from Kodungaiyur Drain, Madhavaram Tank and Otteri Nullah to prevent inundation in North Chennai area at a cost of ₹ 63.05 (January 2010) crore. However, estimate was revised (March 2013) to ₹ 122.50 crore due to change in foundation type, inclusion of additional quantities and substituted items *etc.*

Audit analysis revealed that original estimate was prepared without conducting soil investigation as stipulated in PWD Code. Soil test conducted before commencement necessitated change in type of foundation with resultant cost escalation and submission of RAS proposal. Due to encroachment in work site, court cases, problems involving road cuts *etc.*, works could not be completed even after a lapse of nearly two years since extension of time beyond agreement period of completion and incurring an expenditure of ₹ 62.22 crore, though Department was aware of existence of encroachment before commencement of work. Further, non-conduct of soil test before preparation of estimate led to change in design and consequent cost escalation thereby defeating the objective of flood alleviation in Northern Chennai.

2.13.3 Flood Protection Work in Central Buckingham Canal

Work involving widening, deepening and construction of flood protection walls *etc.*, was sanctioned (January 2010) by Government for ₹ 83.89²¹ crore to be executed in three slices. Slice 1 and 3 were not completed (March 2013) due to non eviction/delay in eviction of encroachments and work under Slice 2 was also not completed due to delay in finalisation of alignment as discussed below:

a) Work not completed due to non eviction/delay in eviction of encroachments:

Work under Slice 1 estimated at a cost of ₹ 14.67 crore to divert surplus water from Maduravoyal Tank to Cooum River for mitigating heavy flooding in Virugambakkam – Arumbakkam Drains was awarded (June 2010) despite existence of storied structures of Tamil Nadu Slum Clearance Board (TNSCB) and heavy encroachments in work site. Work was, however, not commenced (November 2011) pending eviction of encroachments and clearance from TNSCB. Work proposed to be taken up (November 2012) in an alternate alignment at revised estimate of ₹ 28.72 crore was also not commenced due to non-handing over of site (September 2013) even after lapse of more than one year. Work under Slice 3 “Improvements to Virugambakkam and Arumbakkam Drain” at an estimated cost of ₹ 33.22 crore was in progress to the extent of 58 *per cent* only due to delay in eviction of encroachments.

b) Work not completed due to delay in finalisation of alignment:

Work under Slice 2, taken up at an estimated cost of ₹ 21.33 crore to divert excess flood water through a cut and covered diversion channel to avoid flooding in Koyembedu Bus Stand, SAF Village area *etc.*, was entrusted to contractor (June 2010) without getting concurrence from Traffic Police and other line Departments. Consequently, alignment was to be shifted (December 2012) and work carried out adopting a new construction methodology. Length of 70m out of 2,040m of channel was completed (January 2014).

Thus, award of work before clearing encroachments and without obtaining consent from various Departments resulted in non-completion of work (September 2013). Consequently, mitigation of flooding in Central part of Chennai City remains largely unachieved.

2.13.4 Commencement of work without considering hydraulic designs for discharging surplus water from Ambattur Tank to Korattur Tank

Work was intended to mitigate inundation in Ambattur industrial area of North Chennai by discharging 1,830 cusecs of surplus water from Ambattur Tank to Korattur Tank at a cost of ₹ 19.63 crore. Even after lapse of more than one year from original period of completion (July 2012), work was not completed despite

²¹ Slice 1 ₹17.52 crore, Slice 2 ₹25.98 crore and Slice 3 ₹40.39 crore (which includes overall lumpsum provision and contingencies of three slices ₹14.67 crore)

incurring an expenditure of ₹ 18.68 crore (September 2013). Audit scrutiny revealed the following:

- Estimate was prepared without conducting preliminary investigation. Consultant for checking hydraulic calculations, designs and drawings was appointed only after commencement of the work.
- Consultant's suggestions could not be complied with since Railways did not permit provision of additional vent for 570 cusecs citing future expansion.
- Highways Department also could not execute work of provision of additional vent for 815 cusecs immediately but accepted to take up the work at the time of widening of road.

Thus, work was taken up by Department, without considering hydraulic design²² and also consent from Railway Authorities/Highways Department prior to award of work.

To sum up, flood control works in Chennai City area executed under JNNURM in three out of ten packages were yet to commence and in other seven packages, completion of works in near future appears remote pending RAS from Government. Audit observed that reasons for non-completion of work were preparation of estimate without adherence to codal provisions, change in design and methodology midway, delays in shifting of service utilities *etc.* Thus, objective of scheme formulated as envisaged in Eleventh Five Year Plan to avoid flooding in Chennai remained unachieved even after incurring an expenditure of ₹ 394.53 crore (September 2013).

Department replied that works under three packages of JNNURM which were not taken up were likely to be dropped and the remaining works would be completed on receipt of RAS and after shifting of service utilities.

However, the fact remains that alleviation of inundation of flood water in Chennai City remains largely unachieved.

2.14 Monitoring

Monitoring and evaluation is imperative not only to ensure smooth progress of planned works but also to protect existing structures. However, deficiencies noticed during audit are detailed below:

2.14.1 Encroachments not evicted to restore water bodies

State Planning Commission, in Eleventh Five Year Plan document observed that encroachments were serious issues affecting adversely water resources and in particular irrigation tanks. With a view to provide measures for eviction of encroachment and protection of tanks under the control of PWD (WRD), Government enacted (September 2007) the "Tamil Nadu Protection of Tanks and Eviction of Encroachment Act, 2007". Act provided for a survey of each tank for determining the limits in respect of area and preparation of proper charts and registers.

²² Designing canal with reference to peak flood discharge

Charts and Registers, thus prepared, should be in possession of Department and encroachment upon any land within the boundaries of tank should be evicted. Audit scrutiny of records revealed the following:

➤ **Delay in survey and eviction of encroachments:**

Despite lapse of six years since enactment of the Act, survey of tank was completed only in respect of 1,359 out of 3,990 tanks (34 *per cent*) maintained by the Department. Seven hundred sixty six out of the 1,359 tanks surveyed (56 *per cent*) were restored by the Department. Only 21,421 (67 *per cent*) out of 32,140 encroachments identified were evicted.

Due to ineffective enforcement, original capacity of tanks was not restored by evicting encroachments in water bodies thereby defeating objective of the Act.

Department stated (December 2013) that effective action would be taken to restore water bodies by evicting encroachments in coordination with Revenue Department.

2.14.2 Monitoring of Structural stability of Dam

The Director of Dam Safety under the control of PWD is responsible for safety of large Dams in the State. Director is to prepare health status report of Dams on the basis of periodical inspections conducted four times in a year by the concerned Divisional Executive Engineers. Health Status Report is forwarded to CEs, E-in-C and Government for appropriate remedial action.

As seen from monsoon reports during the period from 2008-09 to 2012-13, major defects were noticed in Manimuktha Nadhi Dam, located across Manimuktha Nadhi, one of the major tributaries of Vellar River. During inspection (December 2010), EE/Vellar Basin division noticed severe sliding of earthen bund at several places on downstream and seepage of water. Director, during site inspection suggested (December 2010) to test soil samples of core and casing material to identify existence of filter arrangements. Subsequently, revetment pockets in the upstream of Dam also completely collapsed and dislocated due to 'Thane Cyclone' (December 2011). Though more than two years have lapsed since field inspection carried out by Director, no remedial measures were taken.

Due to non rectification of defects, structural safety of Dam is at risk posing threat to habitations and lands adjoining slided portion of Dam area. Department stated (December 2013) that proposal to set right defects in Manimuktha Nadhi Dam would be considered under Dam Rehabilitation and Improvement Project (Phase II).

2.14.3 Permanent remedial measures not taken to control meandering of Vellar River

“Manual of instructions of Railway affecting tanks and works” (2012) of WRD emphasises that the maintenance of Railway Affecting works²³ needs to be given priority since it would cause serious damages/breaches or flooding of Railway line or bridge. Audit, however, noticed that there was delay in carrying out maintenance work to protect Railway track as detailed below:

Vellar River, over the years came closer to Railway track near Killai Station of Villupuram - Mailaduthurai Section (from 1400m in 1915 to 2.8m in 2012) due to meandering. Citing public safety and risk for travelling passengers, Southern Railway has been periodically requesting the PWD (WRD) to train the river course from as far back as 2006 and also cautioned that railway services would be suspended between Villupuram - Mailaduthurai Section during monsoon. Though an estimate for ₹ 32 crore for strengthening flood affected area of Vellar River was submitted (January 2010) by CE/Chennai Region to Government, only a temporary remedial measure was taken at a cost of ₹ 91.06 lakh (March 2011). Not satisfied with temporary arrangements, Railway Authorities insisted (November 2012) for protection of Railway track from submersion due to change of river course.

Despite persistent efforts by Railway Authorities since 2006, no permanent remedial measures were taken by WRD for permanent solution to ensure safety of public and trains passing through the route. Even as on date (February 2014), Railway line continues to be a safety hazard for travelling public. Department accepting (December 2013) audit observation informed that possibility of providing permanent remedial measure would be explored to control meandering of Vellar River.

2.14.4 Functioning of State Water Resources Management Agency (SWaRMA)

Government constituted (April 2009) SWaRMA²⁴ to improve institutional arrangements and capacity for sustainable Water Resources Management in river basin frame work with objective of (i) allocating water efficiently across sectors and (ii) developing and managing the water resources of the State. Main functions of SWaRMA are:

- Preparation of an annual Water Audit for each river basin in the State.
- To develop a State Water Allocation data base.
- Providing advice in regulating water allocation for bulk users for optimal water utilization and water conservation incorporating environmental, social and economic objectives and in conformity with the State Water Policy.

²³ Those works, the construction, defective design, failure, improper or poor maintenance or operation of which may cause serious damages/breaches or flooding of Railway line or bridge.

²⁴ Effectively functioning since 9.6.2011

Audit observed that preparation of database, water budget were in process and the remaining functions of SWaRMA were not completed. Proposal to assign regulatory powers to SWaRMA for water allocation for bulk users was yet to be given effect to by Government. Objective of formation of SWaRMA to improve institutional environment and to manage water resources of State remained unachieved even after lapse of three years since its formation.

Department assured (December 2013) that water audit in respect of river basins would be completed.

Conclusion

- State Water Policy was not revised in line with National Water Policy April 2002. In absence of revised State Water Policy with legal frame work for regulation and control of surface and ground water, Department did not have effective control over surface water and drawal of ground water.
- Imprudent financial management resulted in locking up of Government funds of ₹ 217.12 crore outside Government account.
- Ineffective planning and delay in implementation of various schemes defeated intended objective of improving irrigation potential. An amount of ₹ 505.61 crore was locked up in 16 incomplete works ranging from one year to eight years.
- Rules and regulations were not framed to protect ground water resources against over exploitation. Observation wells maintained for monitoring ground water were also far below prescribed standards.
- Deficiencies in hydrological and meteorological data indicate that full potential of data could not be utilised for hydrological design, planning, water resources management, flood management and for formulation of schemes.
- Due to ineffective functioning of Laboratory, water samples could not be analysed on special parameters since 2006 to identify presence of heavy metals, pesticides and pollutants which cause health hazard.
- Preventive measures to control sea water intrusion were inadequate. Coastal protection works were commenced without obtaining environmental clearance from GOI. Pollution in Palar River was not controlled despite high level of pollution since the year 2000.

- Defective planning of flood control works in Chennai City led to delay and increased cost thereby defeating objective of the scheme formulated to avoid flooding in Chennai.
- Original capacity of tanks was not restored due to ineffective enforcement of Act for eviction of encroachments.
- Water Resources Management remains unachieved even after a lapse of three years since establishment of SWaRMA, an agency constituted for this purpose.

Recommendations

- State Water Policy needs to be revised for water resources development and management. Action is needed to introduce a legal framework for monitoring over exploitation of ground water.
- Planning process should be improved and co-ordination with other Departments strengthened to ensure timely completion of schemes and avoid delays and cost escalations.
- System of capturing hydrological and meteorological data needs to be improved by strengthening internal control and inter agency validation.
- Department may take effective action for obtaining recognition for the Laboratory and improve their infrastructure to conduct necessary tests to ensure water quality.
- Control of sea water intrusion may be prioritised.
- Coastal protection works may be carried out after obtaining environmental clearance.

CHAPTER III

CHAPTER-III

COMPLIANCE AUDIT

Animal Husbandry, Dairying and Fisheries Department

3.1 Implementation of Scheme of Free Distribution of Milch Cows

3.1.1 Introduction

Government introduced a Scheme in July 2011 to distribute 60,000 Milch Cows (cows) free to poor women in rural areas over a period of five years from 2011-12. Under the Scheme, about 12,000 cows of Cross Bred Jersey/Cross Bred Holstein-Friesian breeds were to be distributed each year. The Scheme was prioritised in districts that were considered to be milk deficient and where the number of milk co-operative societies was less than the number of revenue villages²⁵. The Scheme *inter alia* provided for payment of a lumpsum amount of ₹ 30,000 to a beneficiary towards purchase of Milch cow and an amount of ₹ 2,000 to ₹ 3,000 for transportation of the cow and other incidental expenditure²⁶.

3.1.2 Scope of audit

Audit was conducted to examine effectiveness in implementation of Scheme with reference to guidelines and instructions issued by Government from time to time. Records of the Secretariat, Directorate and Field Offices of Animal Husbandry, Dairying and Fisheries Department for the period from July 2011 to March 2013 were scrutinised. Out of 21 districts in which the Scheme was being implemented, five districts were selected on regional basis²⁷ and in them, 45 out of the 136 Village Panchayats (VPs) were selected on simple random basis for detailed study. For studying impact of the Scheme, field visits were carried out in 9²⁸ VPs and beneficiaries' feedback through questionnaire was obtained.

The Secretary to Government, Animal Husbandry, Dairying, and Fisheries Department is the administrative head of the Department. Directorate of Animal Husbandry and Veterinary Services is headed by Commissioner and assisted by Regional Joint Director of Animal Husbandry (RJD) at the District level. For implementation of the Scheme, each revenue division has an Assistant Director of Animal Husbandry (AD) assisted by Veterinary Assistant Surgeons (VAS).

²⁵ A revenue village is a small administrative region in a district.

²⁶ Cost of conveyance to the beneficiaries, Insurance charges and Contingent charges

²⁷ 1) Namakkal, Western 2) Thoothukudi, Southern 3) Pudukkottai, Eastern
4) Nagapattinam, Delta 5) Villupuram, Northern.

²⁸ 1) Aranthangi - Kulathur 2) Pudukottai - Vadugapatti 3) Tindivanam - Nalmukkal
4) Tirukoilur - Nerkunam 5) Villupuram - Ponnampoondi 6) Mayiladuthurai - Edakudi 7) Namakkal - Gundaninadu 8) Kovilpatti - Sengottai 9) Tuticorin - K. Appankoil

3.1.3 Planning and Execution

Government formulated the Scheme with the objective of giving a boost to milk productivity of the State and also empowering women in rural areas. During the period of audit (2011-12 to 2012-13), Department procured 24,000 cows incurring an expenditure of ₹ 84.28 crore towards cost of cows, transportation, insurance and other contingent expenditure *etc.* Audit scrutiny of records in test checked districts, however, revealed the following deficiencies in planning and execution of the Scheme.

3.1.3.1 Identification of Beneficiaries

The District Collector is overall incharge of the process of identification of beneficiaries. Village Level Committees (VLC) are constituted to identify and shortlist the eligible beneficiaries. After confirming adherence to the norms from VAS and Deputy Block Development Officer (Deputy BDO), Gram Sabha approves the final list. However, guidelines issued by the Department were silent on prioritisation among the eligible applications out of large number of applications received.

Audit scrutiny revealed the following deficiencies in selection of beneficiaries in violation of selection criteria²⁹.

➤ Rejection of applications without justification

Number of beneficiaries in each VP should ordinarily be 50. More than 100 applications were received in 24 VPs out of 45 VPs test checked. Many applications were rejected either without recording any reason or on grounds not contemplated in the guidelines such as drawal of old age pension by relative, beneficiary of Indira Awas Yojana and other Schemes, *etc.* Government, accepting the audit observation, informed (January 2014) that the field officers and District Administration were instructed to strictly comply with the guidelines in process of selection.

➤ Selection of ineligible beneficiaries

Against 1,170 beneficiaries selected in 23 out of 45 test checked VPs, audit found that 210 (18 *per cent*) were ineligible due to reasons such as age more than 60 years, already in possession of cows, excess land holdings *etc.* This included 33 ineligible beneficiaries selected ignoring the remarks of Village Administrative Officer (VAO) for non-selection. Government replied (January 2014) that compliance with guidelines would be ensured.

➤ Shortfall in selection of SC/ST beneficiaries

In 31 out of 136 VPs covered in the test checked districts, percentage of SC/ST representation was nil in seven VPs, in the range of 1-10 *per*

²⁹

Women headed households, below 60 years of age, do not own land over one acre in their own name or family members' name, do not own any cows/buffaloes. Further, 30 *per cent* of the beneficiaries should belong to SC/ST Communities.

cent in six VPs and 11-20 per cent in 11 VPs, much below the prescribed norm of 30 per cent. Department replied (January 2014) that the shortfall was due to non-availability of SC/ST in certain villages. Scheme guidelines, however, prescribed that shortfall due to non-availability of SC/ST population should be certified by the concerned Tahsildar. Such endorsement was not available on records.

In response thereto, Department cited inadequate time for scrutiny of applications and non-cooperation of Deputy BDO/VAO as main reasons for selection of ineligible beneficiaries. Government assured (January 2014) that sufficient time would be given for scrutiny of application. However, the fact remains that selection of ineligible beneficiaries deprived eligible needy beneficiaries of benefits of the Scheme.

3.1.3.2 Procurement of cows

Procurement of 12,000 cows was targeted every year with direct involvement of beneficiaries with a requirement of 1,000 cows every month. Department decided to adopt the option of purchase from Shandies (livestock market) of neighbouring States in order to increase the overall number of cows within the State. The report of the special teams constituted to study feasibility of procurement of cows opined (September/October 2011) that Andhra Pradesh was not an ideal State for procurement of cross bred jersey cows for reasons such as non-availability of sufficient cross bred, lactating cows *etc.* Disregarding recommendations of the committee, Department, however, proceeded with purchase of cows from the Shandies at Punganur, Palamaner and Peleru in Andhra Pradesh. This resulted in distress purchase of poor quality/over-aged cows to achieve annual target as detailed below:

- **Hasty Procurement of cows**
As per instructions of Commissioner of Animal Husbandry (CAH), purchase of cows was to be made after observing health status, milk yield, *etc.*, for four to five days. However, this was done within one to two days in ten VPs in three³⁰ test checked districts indicating hasty and distress purchase.
- **Procurement of over-aged cows**
Scheme guidelines stipulated that lactating cows that are in their first/second lactation and not more than five years old should be procured to ensure continuous production for next five lactations. In 19 out of 45 VPs test checked, it was found that 329 out of 950 cows procured (35 per cent) were more than five years of age. Government agreed (January 2014) that necessary instructions to the field officials would be issued.
- **Procurement of poor quality cows**
Beneficiary can get continuous benefits from rearing the cow only when the cow calves periodically. Department also carried out artificial insemination from the third month of calving to enable continuous benefit. Despite involvement of VAS in the procurement process to ensure good health of cows and conformity to norms, audit observed

³⁰ Seven VPs in Thoothukudi, two VP in Nagapattinam and one VP in Villupuram districts.

through questionnaire that 86 out of 441 cows procured (20 *per cent*) became 'dry and non-pregnant'³¹ subsequently in nine VPs of five Districts. Since Scheme guidelines do not provide for replacement of such cows, the beneficiary could not get intended benefit of the Scheme. Government stated (January 2014) that out of the total cows procured, only two to three *per cent* are such cows which is within acceptable standards. However, scrutiny of figures furnished by Directorate revealed that percentage of dry and non-pregnant cows in test checked districts was 44 *per cent* of total such cows throughout the State.

➤ **Poor Milk Yield**

CAH instructed that cows with a minimum yield of 10 litres per day as verified over three consecutive milking were to be procured. However, 235 of 364 beneficiaries (65 *per cent*) in the field survey conducted by audit reported that milking was not done even once before purchase. As against the expected yield of 10 litres per day, only 61 beneficiaries (16 *per cent*) of the 383 beneficiaries stated that they received more than seven litres and 19 *per cent* of the beneficiaries received less than three litres per day while 65 *per cent* reported yield in the range between three and seven litres.

Government replied (January 2014) that scheme guidelines did not stipulate milk yield from the cow as ten litres. However, yield of 10 litres per cow was fixed by CAH to ensure procurement of quality cows.

➤ **Milk procurement by Co-operative Societies**

Scheme guidelines stipulated that Deputy Registrar (Dairy) should take action to form new Primary Milk Producers Co-operative Societies with beneficiaries of the Scheme in each village and milk should be procured from day one onwards without any delay. In five³² out of 45 VPs, societies were not formed. In remaining 40 societies, procurement was (i) less than three litres in 16 VPs, (ii) three litres to five litres in 19 VPs and (iii) more than five litres in five VPs. Average milk yield per beneficiary as informed by Government was around three litres as compared to minimum expected yield of ten litres. Consequently, maximum recorded addition to milk procurement of the State was around 46,000 litres per day as against the expected quantity of 1,68,000³³ litres per day even after allowing a margin of 30 *per cent* for self consumption. Government in their reply (January 2014) informed that milk obtained at present was to the extent of 1,35,000 litres per day from 30,000 cows. However, this is at variance with the details of procurement of milk by societies (46,000 litres) as furnished by the Government and those stated to be 80,000 litres in Policy Note (2013-14) from 24,000 cows distributed during the audit period.

³¹ The cow will come for breeding within three months of calving. The cow would continue to produce milk continuously depending on its productivity for commercially viable dairying, two months after calving the cow would be inseminated and made pregnant. Due to reproductive issues, the cow fails to become pregnant even after repeated insemination and there is also cessation of milk production. This condition is "Dry and Non-pregnant" condition.

³² Kalugachalapuram, Kumareddiyarpuram, Sakkanapuram and T. Subbaiahpuram in Thoothukkudi district and Melsiviri in Villupuram district.

³³ 24,000 cows x 10 litres x 70 *per cent* = 1,68,000 litres.

Government replied (January 2014) that market forces were expected to bring adequate cows to the Shandies. Further field officials would be given sufficient time to complete procurement process to avoid sub-standard quality. However, the fact remained that incorrect selection of place for purchase of cows and non-adherence to Scheme guidelines resulted in procurement of poor quality/over-aged cows which in turn impacted yield of milk.

3.1.3.3 *Post procurement management*

Scheme guidelines insisted on compulsory maintenance of cows by beneficiaries for a period of four years. Audit observed the following deficiencies in post procurement management.

➤ **Non-consideration of supply of fodder**

Public Accounts Committee in their recommendations (Thirteenth Assembly 2006-2007 fourth report) to audit para on 'Formulation of schemes under Special Central Assistance - free supply of calves to Hindu Adi Dravida women' figured in Audit Report for the year ended March 1996, pointed out that feed facilities were to be considered while formulating the Scheme for supply of cows to poorest people. However, there was no mechanism in these guidelines to ensure adequate feed management to cows especially considering poor financial status of the beneficiaries. Government replied (January 2014) that State Fodder Development Scheme was implemented to ensure adequate feed management. Audit scrutiny, however, revealed that only 91 (three *per cent*) out of 2,689 beneficiaries under this scheme were benefited in three³⁴ test checked districts.

➤ **Insurance of cows**

Cows purchased under the Scheme were insured for replacement of dead cow. As against 453 deaths noticed in test checked districts, insurance companies settled 201 claims (42 *per cent*) and Department replaced only 103 cows. Department was yet to claim compensation in 50 cases and 183 cases were pending with insurance company. Government replied (January 2014) that departmental officials were instructed to take necessary follow up measures for early settlement of insurance claim.

➤ **Non-allotment of funds for reinsurance**

Government sanctioned an amount of ₹ 2.16 crore during 2012-13 for insurance of cows purchased during 2012-13 and reinsurance of cows purchased in the year 2011-12. However, provision for reinsurance of cows purchased during 2011-12 and 2012-13 was not made in the budget for the year 2013-14. Government replied (January 2014) that allotment of funds was not made for reinsurance.

➤ **Sale of cows after purchase**

Audit noticed that 190 (three *per cent*) out of 6,689 cows were sold by beneficiaries before the prescribed period in the test checked districts. In above cases, Department filed first information report with Police Department and cost of cows was not recovered from beneficiaries. As reported by them, sale was resorted to on grounds of poor milk yield,

³⁴

The details in this regard were not furnished in other two (Pudukkottai and Villupuram) test checked districts.

sickness *etc.* After selling cross breed cows, 118 out of 190 beneficiaries purchased cows locally. This goes against the guidelines which envisaged increase in milk productivity of the State and enhancement in overall number of cows within the State.

Poor management after procurement in ensuring fodder and insurance cover would impact accrual of benefits under the Scheme to the poor and needy.

3.1.3.4 Monitoring

Physical verification of all cows was to be conducted by VAS periodically for ensuring continuous possession of cows by the beneficiaries. There was no system at apex level to ascertain correctness of the facts furnished by the VAS. Department also failed to conduct periodical evaluation to initiate corrective measures for effective implementation of the Scheme. In the absence of such mechanism, there were discrepancies in reporting in respect of dead cows as evidenced from the following.

Discrepancies in reporting

Details of cows that died during 2011-12 to 2012-13 as furnished by the CAH and by the test checked districts are furnished below:

Sl. No.	Name of the District	No. of cows reported dead	
		CAH Data	District Data
1.	Nagapattinam	38	56
2.	Thoothukudi	24	44
3.	Villupuram	130	175
Total		192	275
State wide		770	

Audit analysis also showed that

- In three out of five test checked districts, there were discrepancies between figures furnished by districts and that of CAH.
- Number of cows that died in three test checked districts out of 21 districts in which Scheme was being implemented (district figure) constituted 36 *per cent* of total cows that died throughout the State as furnished by CAH.

Though the physical target was reported to have been achieved, number of cows available was less due to sale/death *etc.* Thus, there was no effective mechanism to monitor effective implementation of the Scheme and also assess difficulties encountered at the field level. Government replied (January 2014) that instructions were given to the departmental officials to avoid discrepancies in reporting.

Government stated (January 2014) that field officers were instructed to comply strictly with guidelines in the process of selection of beneficiaries and procurement of cows.

Conclusion

A scheme, formulated with the objective of empowering poor women in rural areas and to improve economic status of beneficiaries was adversely impacted due to deficiencies in execution.

- Lack of transparency in selection deprived needy eligible women beneficiaries of the benefits envisaged in the scheme.
- Deficiency in procurement mechanism resulted in procurement of poor quality cows and poor milk yield which impacted objectives of improving economic status of poor women in rural areas and increasing milk productivity of the State.
- Poor post procurement management particularly in provision of fodder and insurance coverage impacted sustainability of the Scheme.

ENVIRONMENT AND FOREST DEPARTMENT

3.2 Functioning of State Compensatory Afforestation Fund Management and Planning Authority

3.2.1 Introduction

State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), was constituted (September 2009) by Government, as per guidelines issued by Ministry of Environment and Forests (MoEF), Government of India (GOI). State CAMPA would receive moneys collected from user agencies for diversion of forest land towards Compensatory Afforestation (CA), Additional Compensatory Afforestation (ACA), Penal Compensatory Afforestation (PCA), Net Present Value³⁵ (NPV) and Catchment Area Treatment Plan (CATP) under Forest Conservation Act, 1980 and presently lying with Ad-hoc CAMPA constituted (May 2006) under directions of Hon'ble Supreme Court of India.

State CAMPA would administer the amount received from Ad-hoc CAMPA and utilise the moneys collected for undertaking CA, assist natural regeneration, conservation and protection of forests, infrastructure development, wildlife conservation and protection of other related activities and for matters connected therewith or incidental thereto.

3.2.2 Scope of Audit

Audit was conducted to ascertain proper assessment of compensation receivable from user agencies for diversion of forest land, collection, remittance and utilisation of funds received from Ad-hoc CAMPA. Audit, benchmarked these activities against Forest Conservation Act, guidelines and orders issued by MoEF governing conservation of forest. Audit scrutinised records during September to December 2012 and from August to September 2013 at the offices of State CAMPA and 13³⁶ out of 22 DFOs who implemented the programme.

³⁵ Net Present Value – Net Value of forest land being diverted for non-forest purpose

³⁶ Kancheepuram, Tiruvallur, Dindigul, Kodaikanal, Karur, Salem, Attur, Coimbatore, Nilgiris (South), Nilgiris (North), Vellore, Tiruvannamalai and Tirupattur where expenditure involved was higher.

As per instructions of Hon'ble Supreme Court of India, amount collected for purpose of diversion of forest land from the period 2002 was to be transferred to Ad-hoc CAMPA. Accordingly, records pertaining to diversion of forest land during the period from April 2002 to March 2013 and expenditure incurred out of the funds released by the Ad-hoc CAMPA since its formation (2009-13) were examined by audit.

State CAMPA consists of two committee viz., State Level Steering Committee (SLSC) and Executive Committee (EC) under the Chairmanship of Chief Secretary to Government and Principal Chief Conservator of Forests (PCCF) respectively. The Additional Principal Chief Conservator of Forests (State CAMPA) looked after the activities of State CAMPA. District Forest Officer (DFO) implemented the programme at district level.

3.2.3 Planning

Guidelines of State CAMPA stipulated that Annual Plan of Operations (APO) should be prepared before end of December for each financial year by EC for various activities to be carried out in the State. APO duly approved by the SLSC was required to be sent to Ad-hoc CAMPA for release of funds giving a break-up of proposed activities and estimated costs. Details of funds released to State CAMPA and utilisation thereof are furnished below:

(₹ in lakh)

Year	Amount released by Ad-hoc CAMPA	Actual expenditure	Under utilisation
2009-10	197.13	Nil	197.13
2010-11	170.32	167.92	2.40
2011-12	138.30	131.13	7.17
2012-13	114.54	40.47	74.07
Total	620.29	339.52	280.77

Audit scrutiny revealed that

- APO was not prepared for the year 2009-10. Funds released by Ad-hoc CAMPA during 2009-10 were utilised in the year 2010-11.
- EC failed to prepare APO for the unspent amount and the amount to be released by the Ad-hoc CAMPA.
- State CAMPA could utilise only ₹ 3.4 crore (55 per cent) against release of ₹ 6.20 crore during 2009-10 to 2012-13. This included expenditure of ₹ 0.92 crore (**Annexure-4**) incurred on ineligible components like extension of training hall, Laboratory etc., constituting 27 per cent.

Government in reply stated (December 2013) that unspent amount would be utilised during 2013-14.

3.2.4 CAMPA Fund

Notification issued (April 2004) by MoEF considered it necessary and expedient for the constitution of CAMPA and subsequently, GOI instructed (May 2006) that all receipts from user agencies towards NPV, CA, PCA, ACA, CATP should be transferred to Ad-hoc CAMPA fund for compliance of conditions stipulated by the GOI. Unspent funds already realised by the States from October 2002 should also be transferred to Ad-hoc CAMPA within six

months from the date of the issue of the order. GOI also instructed State CAMPA to collect NPV in respect of the cases involving diversion of forest land for which the Stage I³⁷ clearance was given prior to 29/30 October 2002 and Stage II³⁸ clearance thereafter.

Audit observed following deficiencies in process of assessment, collection and remittance of funds into Ad-hoc CAMPA in violation of above instructions.

3.2.4.1 *Incorrect adoption of rates for diversion of land*

As per orders of Hon'ble Supreme Court of India (March 2008), NPV at the rate ranging from ₹ 4.38 lakh to ₹ 10.43 lakh per hectare (ha), depending upon density and class of forest was to be charged. In case of National Parks, this amount was to be charged at ten times the normal rate and in case of Sanctuaries at five times the normal rates. However, audit observed short assessment to the tune of ₹ 0.83 crore (**Annexure - 5**) due to adoption of incorrect rate/extent of land in diversion of forest land for construction of high level bridge at Pulicat Lake Bird Sanctuary, laying underground cable at Mudumalai Wild Life Sanctuary etc.

3.2.4.2 *Non-remittance/belated remittance of funds to Ad-hoc CAMPA*

As per the guidelines, unspent funds already realised by States from October 2002 should also be transferred to Ad-hoc CAMPA within six months. An amount of ₹ 15.84 crore collected towards CA during 2002-03 to 2009-10 was belatedly credited (March 2013) into Ad-hoc CAMPA account though State CAMPA was formed in September 2009. Sum of ₹ 2.87 crore realised from user agencies was still pending remittance to Ad-hoc CAMPA account. This includes an erroneous credit of ₹ 1.78 crore (May 2006 - CATP amount) to Crop Husbandry head by Deputy Director, Project Tiger, Ambasamudram and remittance head of Forest Department amounting to ₹ 1.09³⁹ crore.

As per section 2(ii) of Forest (Conservation) Act, 1980, no State Government or other authority shall use any forest land for non-forest purpose without prior approval of Central Government. However, three⁴⁰ Government Departments were allowed to utilise forest land without obtaining GOI clearance and also without remitting stipulated amount of ₹ 19.92 crore. Audit observed that Department was yet to recover an amount of ₹ 9.72 crore (**Annexure - 6**) involving seven cases for which the Stage I clearance was given prior to 29/30 October 2002 and Stage II clearance thereafter.

Government while accepting (December 2013) audit observation stated that DFOs were instructed to initiate action.

³⁷ Stage I: In principle clearance stipulating conditions for transfer of forest lands.

³⁸ Stage II : Issue of formal approval on compliance of conditions stipulated in Stage I

³⁹ ₹ 0.44 crore (2005), ₹ 0.05 crore (2003), ₹ 0.41 crore (2001), ₹ 0.19 crore (1998).

⁴⁰ Construction of Reservoir across Vadakku Pachayar river (₹19.17 crore), Tamil Nadu Electricity Board (TNEB) (₹ 0.58 crore), Udhagamandalam Municipality (₹ 0.17 crore).

Release of funds to the State for afforestation work was made every year at a fixed percentage. Failure of the State CAMPA to levy, collect and remit the dues to Ad-hoc CAMPA in time as brought out above, deprived the State CAMPA its share amount of ₹ 15.49 crore in the last four years which could have been utilised for afforestation activities.

3.2.5 Non-Preparation of Annual Accounts

Guidelines on State CAMPA issued by MoEF stipulated that State CAMPA should maintain proper accounts and other relevant records and prepare an annual statement of accounts for certification. However, the State CAMPA did not prepare the statement of accounts from 2009-10 to 2012-13 and certification of its accounts could not be conducted.

Government replied (December 2013) that accounts would be prepared at the earliest and submitted for certification.

3.2.6 Utilisation of State CAMPA Fund

MoEF in the notification (April 2004) specified that the money received towards CA, NPV etc., shall be used only for the purpose. Receipts were to be recorded under each component to ensure its utilisation for such purpose. However, in absence of a proper system to account for funds collected from user agencies against these components, the APO was prepared without mentioning components under which the plans were drafted. An amount of ₹ 0.92 crore (**Annexure 4**) constituting 27 per cent was incurred on ineligible components in contravention of guidelines.

Government stated (December 2013) that though items of works were not sanctioned in APO, expenditure was incurred within the approved pro-rata. However, works were executed without approval of SLSC. Thus, funds intended for afforestation were utilised for other activities not included in approved APO thereby defeating objective of enhancing forest cover.

3.2.7 Regulatory shortcomings in diversion of forest land

The Act stipulated that orders permitting use of any forest land or any portion thereof for non-forest purpose should be issued with prior approval of MoEF. Compensation for diversion of forest land should be in the form of equal area of non-forest land or double the area in case of degraded forests. Non-forest land identified for CA was required to be transferred to Forest Department (FD) and declared as Reserved/Protected forest. Further, guidelines envisaged that State CAMPA should carry out afforestation within a period of one year or within two growing seasons after project completion.

Scrutiny of records revealed that as against an extent of 561.61 ha of forest land diverted/leased out to various Departments during the period from April 2002 to March 2013, Department received 365.59 ha of non-forest land and further identified 370.64 ha of degraded forest land (for diversion of forest land to GOI Department/Undertakings) towards CA. Audit analysis of the land diversion by State CAMPA revealed the following deficiencies.

- Out of the 365.59 ha of non-forest land received and 370.64 ha of degraded forest land identified by the FD, CA was not carried out (December 2013) in 79.28 ha of non-forest land and 76.10 ha in degraded forest land.
- An extent of 309.58 ha (85 *per cent*) of land out of 365.59 ha received from user agencies towards CA was yet to be declared as Reserved/Protected forest.
- Forest land to the extent of 346.53⁴¹ ha was utilised by user agencies without prior concurrence of GOI in violation of the Forest Conservation Act.

Non-compliance of regulatory provisions in diversion of forest land defeated objective of conservation, protection, regeneration and management of natural forest by the State CAMPA.

Government in their reply stated (December 2013) that action has been initiated by concerned DFOs to notify non-forest land as reserved forests and also carry out CA. As regards utilisation of forest lands without prior concurrence of GOI, it was stated that the matter has been taken up with concerned Departments/Authorities/GOI for necessary action.

3.2.8 Monitoring

EC should take steps for giving effect to State CAMPA and its overarching objectives and core principles, in accordance with rules and procedures approved by SLSC and approved APO. EC was to prepare the APO of the State for various activities, submit it to the SLSC before end of December for each financial year and obtain the SLSC's concurrence for release of funds. Further, EC was required to supervise the works being implemented in the State out of the funds released from the State CAMPA. PCCF was to monitor the programme through monthly periodicals and monthly meetings. However, audit observed deficiencies in the monitoring as evidenced from the following:

- There were differences in the amount credited into the Ad-hoc CAMPA as per the records maintained by it and that of State CAMPA. Due to absence of centralised monitoring of remittances made (March 2007 to July 2012) to Ad-hoc CAMPA by user agencies/Department, difference of ₹ 1.20 crore (nine items) was noticed between the two accounts.

⁴¹ PWD (Construction of Reservoir across Vadakku Pachayar river in Tirunelveli district) – 191.60 Ha; NHAI (Construction of a two lane bypass road to Kulitthalai town) – 4.58 Ha; TNSTC, Coimbatore – 1.32 Ha; Central Potato Research Centre – 16.80 Ha; SIDCO – 4.49 Ha; Hindustan Photo Films Manufacturing Company Limited, Ooty – 117.88 Ha; TNEB – PUSEP – 3.68 Ha; Udhagamandalam Municipality – 4.8 Ha; Police Repeater Station – 1.08 Ha; Selva Murugan Vazhipattu Sangam – 0.31 Ha

- There was no system to watch proper remittances of NPV, CA, PCA etc., into Ad-hoc CAMPA.
- While the amount collected towards CA from user agencies included the charges for raising of plantations and also maintenance of the plantation so raised for five years, State CAMPA released funds for maintenance only for one year.
- There was no detailed scrutiny by SLSC while approving APO. Audit observed inclusion of ineligible items of works such as Survey and Demarcation of Ayyankoil village for relocation of inhabitants living in Mudumalai Tiger Reserve, expenditure incurred for the works which were executed during 2006-07 etc., to the tune of ₹ 1.52 crore (Annexure – 7).

Government stated (December 2013) that follow up action was initiated to reconcile discrepancies in funds available in State CAMPA. Belated receipt of funds during first year (2009-10) of functioning of State CAMPA was attributed to postponement of utilisation of funds received from Ad-hoc CAMPA by one financial year. As regards deficient monitoring system, it was replied that action was initiated.

Deficiencies in the system of concurrent monitoring of assessment of compensation from user agencies for diversion of forest land, collection and remittance of funds defeated the intended objective of formation of State CAMPA.

Conclusion

- Deficiencies in the system to assess, levy, collect and remit the funds deprived State CAMPA of its share of ₹ 15.49 crore for afforestation during 2009-13.
- Funds of ₹ 6.20 crore received were utilised to the extent of 55 per cent only which included ineligible expenditure to the extent of ₹ 0.92 crore.
- Eighty five per cent of the land received from user agencies for Compensatory Afforestation was yet to be declared as Reserved/Protected forest.
- Apart from 561 ha diverted for non-forest purposes, an extent of 346.53 ha of forest land was utilised by user agencies without prior concurrence of GOI.
- Deficiencies were noticed in the monitoring system for concurrent evaluation of the works implemented in the State.

Thus, the intended objectives of conservation, protection, regeneration and management of natural forest by the State CAMPA remained largely unachieved due to gaps in implementation.

3.3 Avoidable expenditure

HIGHWAYS AND MINOR PORTS DEPARTMENT

3.3.1 Avoidable expenditure due to adoption of defective design

Defective design in execution of work resulted in avoidable additional expenditure/liability of ₹ 6.02 crore and also defeated the objective of providing bypass link to pilgrims visiting Rameswaram for more than two years even after incurring an expenditure of ₹ 23.95 crore.

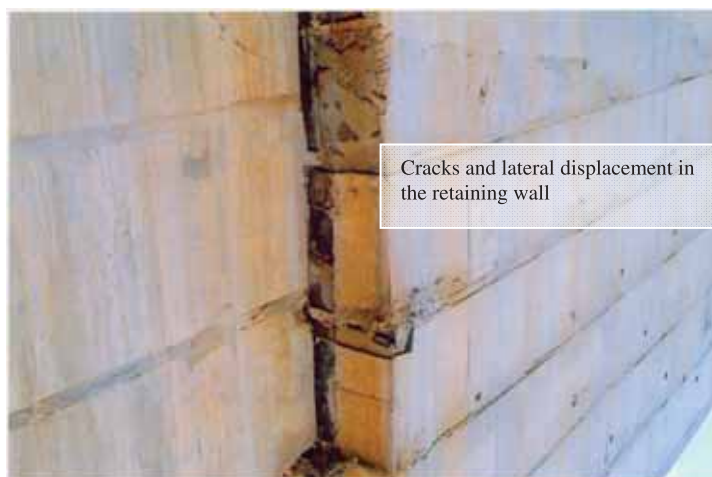
Vehicles bound for pilgrim town of Rameswaram pass through Ramanathapuram Municipal Area. To decongest heavy traffic flow and to avoid unnecessary entry of vehicles through Ramanathapuram, a bypass was proposed (December 2000) under Tamil Nadu Road Sector Project (TNRSP). Government accorded (April 2003) administrative sanction for the “Construction of Ramanathapuram bypass” for ₹ 51.55 crore. Consultancy services for preparation of detailed engineering design, cost estimates and bid documents for Ramanathapuram bypass road were awarded (June 2003) to a Design Consultant and payment of ₹ 11.56 lakh was made (July 2003 to January 2008) on submission (December 2007) of final Detailed Design Report.

Scope of works included construction of Road Over Bridge (ROB) by Southern Railway as a deposit work and laying of double lane road and construction of approaches to ROB with retaining wall by Highways Department.

On clearance (December 2007) from World Bank for execution of works by Highways Department the work split into two sections⁴² was awarded (June 2008) to a contractor for a value of ₹ 35.30 crore.

Works under Highways portion were completed (January 2011 and October 2010) for Section 1 and 2 respectively by the contractor. Construction of ROB falling under Section 1 was completed (April 2012) by Southern Railway at a cost of ₹ 8.79 crore. Total expenditure incurred by the Department for both sections of work was ₹ 52.57 crore (July 2013) which included an expenditure of ₹ 23.95 crore incurred for Section 1.

Cracks and lateral displacement in the retaining wall of ROB approaches under Highways portion in Section - 1 were noticed (February 2011) immediately after completion of the work by supervision consultant



⁴²

Section 1 – km 4/500 to 10/400 and Section 2 – km 0/0 – 4/500

engaged for measurement and quality check. Structural design of retaining walls for Ramanathapuram bypass was referred (June 2011) to Indian Institute of Technology, Madras (IIT) for checking its correctness. IIT pointed out (February 2012) defective design⁴³ prepared by Design Consultant. Later, Indian Institute of Science, Bangalore (IISC) was requested (March 2012) to arrive at suitable remedial measure for the retaining wall. Based on the report (March 2013), the work of strengthening the retaining wall was awarded (June 2013) to another contractor for a value of ₹ 6.02 crore.

Audit scrutiny revealed the following:

- World Bank observed (November 2007) inconsistencies in design prepared by the Consultant and instructed TNRSP to assure correctness of the design and its constructability. Proof checking of designs was not conducted in this work.
- The request (August 2007) of the Engineer in charge of execution to ascertain correctness of design was turned down by Project Director, TNRSP on grounds of urgency to complete the long pending work. Thus, TNRSP lost the opportunity to rectify the defects in the design before execution of works.
- Though the defect liability period of the work was operative when cracks and lateral displacement in the retaining wall were noticed, the contractor refused to rectify the defects on the grounds that the design was prepared by a Design Consultant and the fact of non-conformity of the design was already brought to the notice of TNRSP.

Thus, action of TNRSP in accepting the defective design prepared by the Design Consultant and rejection of request to allow time for proof checking of designs resulted in avoidable additional expenditure/liability of ₹ 6.02 crore towards rectification of retaining wall and also defeated the objective of providing bypass link to pilgrims visiting Rameswaram for more than two years (January 2011-October 2013) even after incurring an expenditure of ₹ 23.95 crore.

TNRSP (June 2013) replied that no distress was noticed at the time of issue of completion certificate (February 2011) and adoption of correct design would involve more expenditure. However, the fact remains that structural stability of ROB and safety of general public cannot be compromised.

⁴³

The design calculations for all the retaining wall sections were inadequate against overturning and sliding. The safety factor against overturning and sliding was not in conformity with the Indian Standards Specifications. The stem sections were found to be inadequate.

3.3.2 Award of road works to a contractor with record of poor performance

Avoidable expenditure/committed liability of ₹ 6.57 crore and non-recovery of ₹ 1.10 crore due to incorrect award of road works to a contractor with a record of poor performance.

Government accorded (February 2008) administrative sanction for three road works⁴⁴ under Road sub-projects of the World Bank (BANK) aided “Tamil Nadu Urban Development Project III”. Bids for one work, received in December 2008, were evaluated (January 2009) by the Chief Engineer (Highways), Metro wing (CE) and the bid submitted by the lowest tenderer (L1) was approved (January 2009) by the Commissionerate of Tenders (COT) for a value of ₹ 24.59 crore. The evaluation report was sent (February 2009) to BANK for final concurrence.

Clause 4.8 of the General Conditions of Contract of the bid documents *inter alia* provided that bidders would be disqualified if they had a record of poor performance such as abandoning works, not properly completing contracts, inordinate delays in completion, etc. As per the procurement guidelines of the BANK, the borrowers should carry out due diligence on the technical and financial qualifications of bidders to be assured of their capabilities in relation to the specific contract.

While the bid of L1 was under consideration by BANK, CE apprised (March 2009) the BANK of the fact that the work entrusted to L1 by Kerala State Public Works Department (KPWD) was terminated in February 2009 due to stoppage of work by contractor despite repeated reminders by KPWD. In response, the BANK instructed CE to carry out due diligence in taking a final decision in this regard. CE, however, ignoring poor performance record of contractor awarded (June 2009) the contract to L1. Two other works were also awarded subsequently (January 2010) to the same Firm. Since progress of works awarded to them in the above works was poor, contracts relating to all three works were terminated between April and November 2011. Balance works left over by the contractor amounting to ₹ 30.49 crore were entrusted (September and December 2011) to other contractors for a value of ₹ 43.16 crore through fresh tenders. Out of three works, two works were completed and third work was in progress (December 2013).

⁴⁴

One work - Widening and Strengthening of Taramani Link Road in km 0/0 – 3/650 – ₹ 23.45 crore. Another work - Widening and Strengthening of Minjur – Kattur – Thirupalaivanam in km 0/0 – 10/0 - ₹ 15.80 crore. Third work - Widening and Strengthening of Minjur – Kattur – Thirupalaivanam in km 10/0 – 17/4- ₹ 15.98 crore.

As against an amount of ₹ 6.10 crore recoverable from contractor towards 20 *per cent*⁴⁵ of cost of balance works as per terms of agreement, ₹ 1.10 crore remained unrecovered (December 2013).

Thus, failure of CE in overlooking the poor performance record of bidding firm resulted in non-completion of works for more than two years leading to denial of benefits to public and also avoidable expenditure/liability to Government to the tune of ₹ 6.57 crore⁴⁶ due to execution of balance works through other contractors at enhanced rates.

Government replied that full details of poor performance of contractor in KPWD were not available to CE. The fact, however, remains that CE was aware of the poor performance of the contractor before entrustment.

3.3.3 Avoidable expenditure/liability on construction of bridge works

Injudicious rejection of tenders though there were no possibilities of getting further favourable tenders resulted in excess expenditure/liability of ₹ 1.09 crore in the construction of two bridge works.

The Commissionerate of Tenders, Highways Department (COT) was constituted (January 1999) to streamline tender acceptance procedure and to scrutinise and approve tenders where the contract value of the road/bridge work was more than ₹ two crore irrespective of tender excess and where the contract value was between ₹ one crore and two crore with tender excess of above three *per cent* (March 2007).

Tenders were rejected in respect of following two cases without referring the results of negotiation to COT, the competent authority and the consequences thereon are discussed below:

(A) Reconstruction of bridge at km 2/6 of Papakoil - Karunkanni Road

Government accorded (September 2009) administrative sanction for the above work. Tenders were invited (April 2010) and the lowest tenderer (L1) in the first call quoted 18.50 *per cent* above estimate rate (AER) (2009-10) of ₹ 1.89 crore after negotiation. The tender was rejected by Superintending Engineer (Highways), Construction & Maintenance Circle, Trichy (SE, Trichy) since the contractor refused to reduce rates further. Second and the third calls received no response.

L1 of fourth call agreed to reduce the rate to 15.30 *per cent* AER. While forwarding (October 2010) proposals of the fourth call to COT, CE endorsed recommendation of SE, Trichy, that there was no possibility of getting further favourable tenders. However, COT, ignoring the above recommendations of SE and CE, returned the tender with instructions to further negotiate and bring down the rates to a reasonable level. As the contractor refused to reduce the

⁴⁵ If the contract is terminated for fundamental breach of contract by the contractor, clause 60 of the conditions of the contract read with clause 34 of contract data contained in the bid documents in respect of three works provided for recovery of 20 *per cent* of balance works as additional cost for completing the unfinished works and the same works out to ₹ 6.10 crore (20 *per cent* of ₹ 30.49 crore).

⁴⁶ Additional cost ₹ 12.67 crore – amount recoverable ₹ 6.10 crore = ₹ 6.57 crore.

rates further, the tender was rejected (October 2010) unilaterally by SE, without referring the results of negotiation to COT.

As there was no response to subsequent tenders⁴⁷, the Department could finalise tender only in the ninth call with a tender excess of 43.25 *per cent* AER (2009-10) on approval (November 2011) by COT. Due to rejection of tender, the Department was to execute the work with additional liability of ₹ 0.53 crore⁴⁸.

(B) Reconstruction of bridge across Pazhayar River

Government approved (August 2010) the above work for ₹ two crore. When tenders were invited (December 2010) for the above work, L1 of the first call after negotiation agreed to reduce the rate to 9.90 *per cent* AER (2010-11).

In view of non-availability of skilled labour for bridge works, heavy rainfall and scarcity of sand, Superintending Engineer, Highways, Construction and Maintenance, Tirunelveli (SE, Tirunelveli) opined that the chances for better response in future calls would be remote and further delay would lead to time and cost overrun and recommended (January 2011) the above tender for approval. CE also concurred with Superintending Engineer and forwarded (February 2011) the proposal to COT. Disregarding the recommendations, COT directed (February 2011) further negotiations to bring down the rates to reasonable level. As the negotiation did not fructify, the tender was rejected (February 2011) unilaterally by SE, Tirunelveli. Finally, COT approved (June 2012) the lowest tender in the eighth call with a tender excess of 45 *per cent* AER (2010-11). Despite the fact that there were no possibilities of getting further favourable tenders, injudicious rejection of tender resulted in avoidable expenditure of ₹ 0.56 crore⁴⁹.

Audit observed that

- Though COT was aware of the past trend on tender percentage in bridge works, the tenders were returned for further negotiations. As a result, the Department could only finalise the tenders after a delay of 18 months with tender excess *per cent* more than thrice that initially agreed to by the contractors.
- CE forming part of COT approved the tender for further negotiation, even after recommending the tender for approval on the grounds that there was no possibility of getting further favourable tender.
- Neither the approval of COT nor the concurrence of CE was obtained before cancellation of tenders by both SEs.
- The constitution of COT was to streamline the tender acceptance procedure and to speed up execution of works. The failure of COT to follow up the outcome of returned tenders sent for negotiations resulted in closing an opportunity of accepting favourable tenders.

⁴⁷ Three tenders had no response (fifth, seventh and eighth) and sixth call was rejected due to higher tender percentage.

⁴⁸ Lowest tender value of ninth call at 43.25 *per cent* AER (₹ 2, 70, 11,117) - Lowest tender value of fourth call at 15.30 *per cent* AER (₹ 2, 17,40,885).

⁴⁹ Lowest tender value of eighth call at 45 *per cent* AER (₹ 2,31,15,526) - Lowest tender value of first call at 9.90 *per cent* AER (₹ 1,75,30,293).

Thus, the injudicious rejection of tenders, though limited possibilities of getting further favourable tenders existed, resulted in excess expenditure/liability of ₹ 1.09 crore⁵⁰ in the construction of two bridge works besides time over run.

3.3.4 Avoidable expenditure due to payment made for excess provision of cement

Non-adherence to MORTH specifications resulted in excess payment of ₹ 1.73 crore to contractors due to payment made for adoption of excess cement quantity.

Clause 602.3.2 of Specifications for Road and Bridge Works issued by the Ministry of Road Transport and Highways (MORTH) (Fourth Revision, 2001) stipulates provision of minimum cement content of 350 Kilogram (kg) per cubic metre (cu. m) of concrete in Cement Concrete (CC) pavement. It also provides for increased quantity of cement as necessary, if the minimum cement content was not sufficient to produce concrete of the specified strength, without additional compensation to the contractor for the increased quantity. It further states that cement content should not exceed 425 kg per cu. m of concrete.

Scrutiny of records relating to twelve works executed by three Construction and Maintenance Divisions (Highways)⁵¹ during 2008-09 to 2010-11 revealed that M40 grade CC mix of 1:1.2:2.4 with a cement content of 540 kg per cu.m was provided in the estimates prepared by the Department for laying CC pavement. A specific clause viz., the works would be executed as per MORTH specifications, was also included in Specification Report accompanying the estimates and in agreements. Works were awarded to the contractors on percentage tender system⁵² and payment made accordingly.

Thus, incorrect adoption of 540 kg per cu. m for payment purposes instead of restricting it to 350 kg per cu.m as per MORTH specifications resulted in excess payment of ₹ 1.73 crore to contractors.

On this being pointed out, Department replied (March 2013) that the actual cement consumption or 350 kg per cu.m whichever was higher should be adopted. It was further stated that 540 kg per cu.m was adopted in the estimate as per standard data for M40 design mix. The agreements executed with the contractors as well as the Specification Report accompanying the tenders and estimates clearly specified that the works would be executed as per MORTH and IRC specifications. Further, MORTH specification stipulates that even if cement was utilised in excess of 350 kg per cu.m either as per standard data or as per design mix, the cost of the excess utilised cement should be borne by the contractor only.

⁵⁰ ₹ 1.09 crore = ₹ 0.53 crore + ₹ 0.56 crore

⁵¹ Tiruvarur (Five works), Virudhunagar (Four works) and Chengalpattu (Three works)

⁵² Estimate rates plus or minus tender premium/discount

3.4 Blocking of funds

AGRICULTURE DEPARTMENT

3.4.1 Release of funds without immediate requirement

Excess drawal of ₹ 72.77 crore for financial assistance to farmers in the cyclone affected areas and its retention outside Government accounts resulted in a loss of interest of ₹ 1.46 crore to Government.

Based on the proposal (January 2012) of Commissioner of Horticulture and Plantation Crops (CHPC), Government sanctioned (March 2012) an amount of ₹ 3.65 crore towards ploughing cost at ₹ 1,000 per hectare (ha) to the farmers affected by the Thane Cyclone (December 2011) mainly in Cuddalore and Villupuram Districts. Simultaneously, Government sanctioned (March 2012) financial assistance of ₹ 91.29 crore for removal of stumps and roots and also for ploughing at ₹ 25,000 per hectare.

As per orders of the CHPC, the Deputy Director of Horticulture (DDH), Cuddalore and DDH, Villupuram drew entire amount of ₹ 82.62⁵³ crore (31,777.42 ha) and ₹ 12.31⁵⁴ crore (4,736 ha) in July/September 2012 respectively and deposited the same in Nationalised Banks⁵⁵. Out of the above, only an amount of ₹ 20.50 crore (8,200 ha) and ₹ 1.16 crore (478.59 ha) were actually disbursed to eligible farmers (July 2012 to June 2013). The two DDsH finally remitted (March 2013) the entire unspent amount of ₹ 61.62⁵⁶ crore and ₹ 11.15 crore in respect of Cuddalore and Villupuram districts to Government account.

Audit observed that

- While issuing sanction for the financial assistance of ₹ 91.29 crore for removal of stumps and roots and ploughing, Government failed to exclude assistance for ploughing already sanctioned leading to unwarranted excess drawal of ₹ 3.65 crore in two districts.
- Though all trees in the damaged area were not uprooted and farmers were against cutting and removal of trees (July 2012), CHPC did not exercise financial prudence and failed to instruct the DDsH to restrict drawals only to the extent the situation demanded as stipulated in Article 3 (b) (i) of Tamil Nadu Financial Code Volume I which states that expenditure should not prima facie be more than the occasion demands. As the requirement of funds in these two districts was only ₹ 21.66 crore drawal of entire amount of ₹ 91.28 crore resulted in excess drawal of ₹ 69.12 crore.

Thus, violation of codal provisions by CHPC and DDsH resulted in drawal of ₹ 72.77 crore in excess of requirements and its retention outside Government account for a period of six/eight months resulted in a loss of interest of ₹ 1.46 crore (**Annexure - 8**) to Government being the difference between the interest earned on the deposits and the Government borrowing rate of interest.

⁵³ ₹ 3.18 crore + ₹ 79.44 crore

⁵⁴ ₹ 0.47 crore + ₹ 11.84 crore

⁵⁵ a) Bank of India, Cuddalore b) Central Bank of India, Villupuram

⁵⁶ Out of unspent amount of ₹ 62.12 crore, an amount of ₹ 0.5 crore was diverted (March 2013) to another scheme.

To a specific audit query, DDsH stated (July and August 2013) that the entire funds were drawn for immediate disbursement and parked in Nationalised Banks to encourage the bankers on the reasoning that the farmers depend on these banks for their loans. CHPC also concurred with the above reply and stated that the deposited amount would fetch interest.

However, the fact remains that the entire amount need not have been drawn as Treasury Officer confirmed to audit that urgent relief measure bills would have been passed immediately. Further, DDsH were also aware that the entire amount may not be required due to reluctance of farmers for cutting and removing.

3.5 Regularity issues

HIGHWAYS AND MINOR PORTS DEPARTMENT

3.5.1 Unintended benefit extended to a Licensee

Undue favour extended to a licensee resulted in short collection of fees of ₹ 8.08 crore and interest loss of ₹ 1.91 crore to Tamil Nadu Maritime Board in construction of marine structures.

Tamil Nadu Maritime Board (TNMB), the licensor for developing minor ports in Tamil Nadu permitted (January 2008) Tamil Nadu Industrial Development Corporation (TIDCO) to form a Joint Venture Company (JVC) with another company (licensee) to develop the Captive Port⁵⁷ (CP) at Kattupalli village in Ponneri Taluk, Tiruvallur District. As per Detailed Project Report (DPR), the capital cost estimate of the project of ₹ 4,675 crore proposed by licensee included the cost of construction of marine structures of ₹ 2,666 crore.

Para 6 of Form No.32 of Tamil Nadu Port Manual (Manual) (amended 1997) stipulates that 0.5 *per cent* of the estimated cost shall be paid to TNMB by the licensee towards consultation fee in advance for erection of marine structures. TNMB further informed the licensee that one time payment of consultation fee was also governed by Government Order⁵⁸ (November 1993).

TNMB insisted (March 2010) that the licensee pay one time advance of ₹ 14.70 crore which included consultation fee of ₹ 13.33 crore at 0.5 *per cent* of the estimated cost of marine structures (₹ 2,666 crore) and also warned (April 2010) that failure to pay the amount would attract levy of interest. TNMB *inter alia* cited instances of payment of above fees by other CP developers⁵⁹.

However, TNMB finally acceded (June 2010) to the request of licensee, for collection of consultation fee of ₹ 5.25 crore on the estimated cost of ₹ 1,050 crore (cost of Phase I) on marine structures in quarterly instalments while the exact scope of phases was not set out in any formal agreement.

TNMB, while entering (July 2010) into the agreement with the licensee included the clause of collection of 0.5 *per cent* of estimated cost in advance as per manual provisions. However, the licensee paid the consultation fee of ₹ 5.25⁶⁰ crore only in seven instalments (July 2010 to September 2011) instead

⁵⁷ Captive Port means port created by a promoter for handling captive cargo (viz.,) cargo meant for exclusive use of the Port Promoter.

⁵⁸ G.O.Ms.No.1060 Transport Department dated 09.11.1993.

⁵⁹ Public Sector and Public Limited Companies.

⁶⁰ 0.5 *per cent* on Phase I Marine Structure with Investment of ₹ 1,050 crore.

of one time advance payment of ₹ 13.33⁶¹ crore in contravention of manual, Government Orders and agreement. This violation resulted in short collection of consultation fee of ₹ 8.08⁶² crore.

When short collection of ₹ 8.08 crore was pointed out (June 2013), TNMB stated (August 2013) that the matter was referred to Government for necessary orders. Further, Government sought (October 2013) clarification from TNMB.

Thus, action of TNMB in extending undue favour to the licensee violating manual provisions and Government Orders resulted in short collection of consultation fee of ₹ 8.08 crore and interest loss to TNMB to the tune of ₹ 1.91 crore⁶³ (Annexure 9) on payment of consultation fee in instalments.

3.5.2 Unfruitful expenditure on road work

Injudicious selection of road resulted in non-availing of GOI funds and also defeated the intended objective of providing an alternate route to an important pilgrim town besides rendering the expenditure of ₹ 2.20 crore unfruitful.

Administrative approval for the work of “Widening and Strengthening of Vellamadam – Suchindram road from km 0/0 – 7/3” for ₹ seven crore under Revamped Central Road Fund (RCRF) for 2009-10 was given (March 2010) by GOI. As Rule 7(8) of “The Central Road Fund (State Roads) Rules 2007” (CRF Rules) states that the executive agency should not sponsor any proposal involving land acquisition and shifting of utilities, Chief Engineer (National Highways), Chennai (CE) certified (March 2010) that no land acquisition and shifting of utilities were involved in the work. It was proposed (June 2010) to widen the existing single lane road (3.75m) to double lane (7m) to provide an alternate route to Suchindram Temple and to decongest the traffic in Nagercoil. The work technically sanctioned for ₹ 6.77 crore was awarded (December 2010) to the contractor for a value of ₹ 5.93 crore.

After commencement of work, the CE on field inspection instructed the field engineers (October 2011) to widen the road to the possible width of intermediate lane (5.50m) only in the first five kilometres due to the existence of a canal parallel to the road. In the final stretch (km 5/0-7/3), the widening of the road in total was deleted due to existence of Tamil Nadu Water Supply and Drainage Board (TWAD Board) water pipelines and the work was confined to mere strengthening. Accordingly, the estimate was revised to ₹ 3.22 crore.

⁶¹ 0.5 per cent of the estimated cost of entire marine structures (₹ 2,666 crore) of the Project.

⁶² ₹ 13.33 crore - ₹ 5.25 crore = ₹ 8.08 crore.

⁶³ Calculated at 7.75 per cent being the least investment rate of TNMB from July 2010 to March 2013.

The work in the first two kilometres was not taken up due to non-handing over of the site to the contractor. On request from the contractor, the work on the above reach was foreclosed (May 2012) due to internal disputes in the Department. The works in other reaches (km 2/0 - 5/0 and 5/0-7/3) were completed (March 2012) at a cost of ₹ 2.20 crore as contemplated in the revised estimate. The work in the stretch (km 0/0 - 2/0) now taken up as an intermediate lane with State funds was awarded to a contractor for a value of ₹ 1.53 crore (November 2013).

Audit observed that

- Constraints affecting widening of the road from single lane to double lane were visualised only after ten months from the award of the work. Highways Department failed to ensure the availability of land and tie-up with TWAD Board for removal of water pipelines before commencement of work to keep the work site ready for road development.
- The widening work in the entry point (km 0/0 - 2/0) which was not taken up under CRF was subsequently approved in July 2013 after a delay of one year under Comprehensive Road Infrastructure Development Programme (CRIDP), a State funded scheme at an estimated cost of ₹ 1.75 crore thereby overburdening the State exchequer. However, this widening is only as an intermediate lane.
- The incorrect certification furnished by CE to GOI without proper investigation resulted in non-availing of GOI funds to the tune of ₹ 4.57crore (₹ 6.77 crore - ₹ 2.20 crore).
- No work was carried out in the stretch 0/0 – 2/0 km. While the middle stretch (2/0 – 5/0 km) was converted to an intermediate lane, the final stretch (5/0 – 7/3 km) was only strengthened and not widened. This defeated the twin objectives of providing an alternate route to an important pilgrim centre and decongesting the existing route passing through Nagercoil Town even after incurring an expenditure of ₹ 2.20 crore on the work.

Selection of road work without proper preliminary work resulted in non-availing of GOI assistance of ₹ 4.57 crore (₹ 6.77 crore – ₹ 2.20 crore), besides rendering an expenditure of ₹ 2.20 crore unfruitful.

Government replied (January 2014) that the work had to be foreclosed in view of the site conditions and practical problems involving sensitive issue of continuous supply of drinking water to the public. However, Department was aware of site conditions while recommending the above work for execution under RCRF.

Chennai
Dated 19 April 2014


(SUBHASHINI SRINIVASAN)
Principal Accountant General
(Economic and Revenue Sector Audit)
Tamil Nadu

Countersigned

New Delhi
Dated 29 April 2014


(SHASHI KANT SHARMA)
Comptroller and Auditor General of India

ANNEXURES

Annexure-1
(Referred to in Paragraph 1.6.3; Page 5)
Department wise details of Inspection Reports
and Paragraphs pending

Sl. No.	Name of the Department	Number of Outstanding	
		Inspection Reports	Audit Observations
1.	Public Works Department (Water Resources)	128	353
	Public Works Department (Buildings)	130	399
2.	Highways	307	922
3.	Environment and Forest	202	653
4.	State Autonomous Bodies	17	74
5.	Agriculture	282	988
6.	Animal Husbandry	102	244
	Dairy Development	22	67
	Fisheries	45	126
7.	Handlooms and Textiles	32	99
	Khadi Village Industries	2	11
	Sericulture	22	70
8.	Industries and Commerce	60	168
9.	Tourism	23	57
Total		1,374	4,231

Annexure-2
(Referred to in Paragraph 2.7.3; Page 14)
Excess payment towards Price Adjustment

Sl. No.	Base index to be adopted (*)	Base index actually adopted (#)	Quarter ending	Price variation payable (₹)	Price variation paid by Department (₹)	Excess Payment (₹)
1.	Jul, Aug & Sep 2011	Jan, Feb & Mar 2010	September 2011	0.00	2,76,45,195.15	2,76,45,195.15
2.	Jul, Aug & Sep 2011	Jan, Feb & Mar 2010	December 2011	8,27,647.56	92,02,657.45	83,75,009.89
3.	Jul, Aug & Sep 2011	Jan, Feb & Mar 2010	March 2012	24,97,241.54	1,71,62,756.37	1,46,65,514.83
4.	Jul, Aug & Sep 2011	Jan, Feb & Mar 2010	June 2012	16,68,768.03	76,36,697.02	59,67,928.99
5.	Jul, Aug & Sep 2011	Jan, Feb & Mar 2010	September 2012	7,03,540.35	27,17,129.50	20,13,589.15
6.	Jul, Aug & Sep 2011	Jul, Aug & Sep 2011	December 2012	15,55,131.27	15,54,824.24	-307.03
7.	Jul, Aug & Sep 2011	Jul, Aug & Sep 2011	March 2013	6,69,226.82	6,68,882.99	-343.83
					Total	5,86,66,587.15 (or) 5.87 crore

* Base index to be adopted based on the quarter of approval of rates for Substituted items i.e., July 2011 to September 2011

Base index adopted based on quarter of submission of tender i.e January 2010 to March 2010

(Referred to in Paragraph 2.8; Page 15)

(Referred to in Paragraph 2.8; Page 15)

(₹ in crore)

(Source: Details furnished by Department)

Annexure - 4
(Referred to in Paragraph 3.2.3; Page 42)
Ineligible items executed

Sl. No.	Details of work	Amount (₹ in lakhs)
1.	Extension of training hall in three VVKs, Infrastructure facilities in GIS laboratory and for State CAMPA Cell	47.70
2.	Works already executed during 2006-07 towards CA	4.75
3.	First year maintenance for the plantation raised during 2006-07	0.88
4.	Works not sanctioned in APO	27.85
5.	Works not contemplated in the model estimate	10.80
Total		91.98 (or) 0.92 crore

Annexure – 5**(Referred to in Paragraph 3.2.4.1; Page 43)****Short assessment due to incorrect adoption of rate/extent of land**

Sl. No.	Name of the Office	Nature of Recovery	Amount short collected (₹ in lakhs)
1.	Wild Life Warden, Chennai	Conservation and Protection of sanctuary	25.00
		Net Present Value	10.33
2.	Wildlife warden, Udthagamandalam	Net Present Value	8.19
3.	District Forest Officer, Vellore	Net Present Value	36.74
4.	Principal Chief Conservator of Forests	Net Present Value	2.27
Total			82.53 (or) ₹ 0.83 crore

Annexure – 6
(Referred to in Paragraph 3.2.4.2; Page 43)
Receipts to CAMPA Fund
(Pending collection from user agencies)
(Seven Cases)

Sl. No.	Year	The area of forest land transferred (In Ha)	The total amount recoverable (Amount in ₹)	Amount recovered (Amount in ₹)	Reasons for transfer of land without recovery
1.	2004	Inner jawadhi RF -40 ha. for Forest land lease out to Indian Institute of Astrophysics at Kavalur.	3,27,60,000	50,00,000	Diversion of forest land for this project was cleared by GOI in letter dated 7.7.2004. However, orders were received from Ad-hoc CAMPA regarding collection of NPV during 2006-07 only. Hence, demand notice was sent to the user agency by the DFO, Thirupathur. The user agency has remitted ₹ 50 lakh only and assured to remit the balance later.
2.	2006	Vellakkal RF - 35.84 ha	2,93,53,000	Nil	Demand letter has been sent to the Executive Engineer, PWD, Andiyappanur Odai Reservoir Project Division, Thirupathur vide DFO, Thirupathur letter no.4974/98 D dated 28.11.06 and reminded on 20.12.06, 4.4.07, 31.5.07, 27.7.07, 26.5.08, 6.8.08, 31.12.08. But till date the NPV amount has not been received from the PWD. Now the E.E., Shenbagathope Reservoir Project Division, Polur has informed in his letter No. JDP /D1/ Vellakkal Kanar 9 Misc/2010 dated 17.6.10 that the scheme has now been dropped due to the reason that the B.C. ratio comes to 0.5:1.
3.	2003	Karapattu RF- 3.07 ha for formation of a pond across Karal river, Ponnampalli village	17,80,600	Nil	Diversion of forest land for this project was cleared by GOI in letter dated 22.5.03. However, orders were received from Ad-hoc CAMPA regarding collection of NPV during 2006-07 only. Hence, demand notice was sent to the user agency by the District Forest Officer, Thirupathur in his letter No. 1043/2000/D dated 11.11.05 and repeated reminders to remit the NPV amount. But till date the NPV amount has not been received from the PWD.

Sl. No.	Year	The area of forest land transferred (In Ha)	The total amount recoverable (Amount in ₹)	Amount recovered (Amount in ₹)	Reasons for transfer of land without recovery
4.		Punganur RF 2.67ha for construction of check dam across Kanar	20,02,500	Nil	Diversion of forest land for this project was cleared by GOI in letter dated 12.5.2003. However, orders were received from Ad-hoc CAMPA regarding collection of NPV during 2006-07 only. Hence, demand notice was sent to the user agency by the DFO, Vellore in his letter No.8741/99/D1 dated 24.1.2007 and reminders were sent to the user agency to remit the NPV.
5.	2002	Andipatti south RF 2,820 ha for laying pipe line	3,90,000	Nil	Diversion of forest land for this project was cleared by GOI in letter dated 31.12.2002. However, orders were received from Ad-hoc CAMPA regarding collection of NPV during 2006-07 only. Hence, demand notice was sent to the user agency by the DFO, Madurai
6.	2004	Thumbakkal RF 24.88 Ha for construction of Reservoir across Varator	1,86,60,000	Nil	Diversion of forest land for this project was cleared by GOI in letter dated 28.5.2004. However, orders were received from Ad-hoc CAMPA regarding collection of NPV during 2006-07 only. Hence, demand notice was sent to the user agency by the DFO, Harur.
7.	2002	Wenlockdown RF 27.51 Ha for establishment of Radio Astronomy Centre	1,73,00,000	Nil	Diversion of forest land for this project was cleared by GOI in letter dated 20.12.2002. However, orders were received from Ad-hoc CAMPA regarding collection of NPV during 2006-07 only. Hence, demand notice was sent to the user agency by the DFO, The Nilgiris south in June 2005 for ₹ 1,36,93,800 only due to oversight. Now audit pointed out the omission.
Total Recoverable			₹ 10,22,46,100		
Amount recovered			₹ 50,00,000		
Amount yet to collected			₹ 9,72,46,100		

Annexure - 7
(Referred to in Paragraph 3.2.8; Page 45)
Ineligible items included in APO

Sl. No.	Details of work	Amount (₹ in lakh)
1.	Extension of training hall in three VVKs, Infrastructure facilities in GIS laboratory and for State CAMPA Cell	47.70 (Expenditure incurred)
2.	Survey and Demarcation of Ayyankoil area of Cherangodu village in Gudalur Division for relocation of inhabitants living in Mudumalai Tiger Reserve, Udhagai	33.64 (not sanctioned, not executed)
3.	Survey and Demarcation of the lands to an extent of 11,204.47 ha of Gudalur Janmam Estates	64.60 (Not executed)
4.	Works already executed during 2006-07 towards CA	04.75 (Expenditure incurred)
5.	First year maintenance for the plantation raised during 2006-07	00.88 (Expenditure incurred)
Total		151.57

Annexure – 8
(Referred to in Paragraph 3.4.1; Page 53)

Interest loss on parking of funds outside Government account
Villupuram

Rate of interest of 8.83 <i>per cent</i> was adopted for calculation of interest loss being the average Rate of interest of Open Market Borrowings by Government of Tamil Nadu from September 2012 to March 2013								
Year	Total amount kept outside Government Account (₹)	Period		No. of days	Interest amount (₹)	Interest earned (₹)	Loss to Government (₹)	
		From	To					
2012-13	11,15,19,700	14-09-12	31-03-13	199	53,68,742	8,85,936	44,82,806	I

Cuddalore

Rate of interest of 8.83 <i>per cent</i> was adopted for calculation of interest loss being the average Rate of interest of Open Market Borrowings by Government of Tamil Nadu from July 2012 to March 2013								
Year	Total amount kept outside Government Account (₹)	Period		No. of days	Interest amount (₹)	Interest earned (₹)	Loss to Government (₹)	
		From	To					
2012-13	61,62,12,400	30-07-12	26-03-13	240	3,57,77,461	2,56,35,660	1,01,41,801	II

TOTAL: I + II = ₹ 1,46,24,607

Annexure-9

(Referred to in Paragraph 3.5.1; Page 54)

Statement showing the Interest loss on short collection of consultation fee

Sl. No.	Amount due (₹)	Amount collected		Amount pending collection (₹)	Period		No. of days	Interest Loss (₹)
		Date	Amount (₹)		From	To		
1.	13,33,00,000	02.07.2010	1,96,00,000	11,37,00,000	02-07-2010	30-09-2010	91	21,96,902
2.	11,37,00,000	01.10.2010	65,00,000	10,72,00,000	01-10-2010	27-12-2010	88	20,03,025
3.	10,72,00,000	28.12.2010	66,00,000	10,06,00,000	28-12-2010	24-03-2011	87	18,58,344
4.	10,06,00,000	25.03.2011	66,00,000	9,40,00,000	25-03-2011	27-06-2011	95	18,96,096
5.	9,40,00,000	28.06.2011	66,00,000	8,74,00,000	28-06-2011	28-09-2011	93	17,25,851
6.	8,74,00,000	29.09.2011	66,00,000	8,08,00,000	29-09-2011	31-12-2011	94	16,12,679
7.	8,08,00,000	Nil	0	8,08,00,000	01-01-2012	31-12-2012	366	62,79,156
8.	8,08,00,000	Nil	0	8,08,00,000	01-01-2013	31-03-2013	90	15,44,055
Total								1,91,16,108

Glossary

Sl.No.	Abbreviation	Description
1	AER	Above estimate rate
2	C&AG	Comptroller and Auditor General of India
3	CA	Compensatory Afforestation
4	ACA	Additional Compensatory Afforestation
5	AD	Assistant Director of Animal Husbandry
6	APO	Annual Plan of Operations
7	ARG	Autographic Rain Gauge
8	ARS	Artificial Recharge Structure
9	ATN	Action Taken Note
10	BDO	Block Development Officer
11	BIS	Bureau of Indian Standards
12	CAH	Commissioner of Animal Husbandry
13	CAMPA	Compensatory Afforestation Fund Management and Planning Authority
14	CATP	Catchment Area Treatment Plan
15	CC	Cement Concrete
16	CE	Chief Engineer
17	CGWA	Central Ground Water Authority
18	CGWB	Central Ground Water Board
19	CHPC	Commissioner of Horticulture and Plantation Crops
20	CoC	Corporation of Chennai
21	COT	Commissionerate of Tenders
22	CP	Captive Port
23	CPCB	Central Pollution Control Board
24	CRF	Central Road Fund
25	CRIDP	Comprehensive Road Infrastructure Development Programme
26	CRZ	Coastal Regulation Zone
27	Cu. m.	Cubic Metre
28	Cusec	Cubic Feet Per Second
29	CWC	Central Water Commission
30	DDH	Deputy Director of Horticulture
31	DDR	Detailed Design Report
32	DFO	District Forest Officer
33	DPC Act	Duties, Powers and Conditions of Service Act
34	DRCS	Design Research and Construction Support
35	EC	Executive Committee

Sl.No.	Abbreviation	Description
36	EE	Executive Engineer
37	E-in-C	Engineer-in-Chief
38	FD	Forest Department
39	FIR	First Information Report
40	FMP	Flood Management Programme
41	GO	Government Order
42	GOI	Government of India
43	GTN	Government of Tamil Nadu
44	GWDES	Ground Water Quality Data Entry System
45	IAMWARM	Irrigated Agriculture Modernization and Water Bodies Restoration and Management
46	IISC	Indian Institute of Science
47	IIT	Indian Institute of Technology
48	IR	Inspection Report
49	IRC	Indian Road Congress
50	IWS	Institute for Water Studies
51	JNNURM	Jawaharlal Nehru National Urban Renewal Mission
52	JVC	Joint Venture Company
53	LMC	Left Main Canal
54	MAWS	Municipal Administration and Water Supply
55	Mcft	Million Cubic Feet
56	MoEF	Ministry of Environment and Forests
57	MORTH	Ministry of Road Transport and Highways
58	NABARD	National Bank for Agriculture and Rural Development
59	NDC	National Data Centre
60	NOC	No Objection Certificate
61	NPV	Net Present Value
62	O&M	Operation and Maintenance
63	PA	Performance Audit
64	PAC	Public Accounts Committee
65	PCA	Penal Compensatory Afforestation
66	PCCF	Principal Chief Conservator of Forests
67	PF	Plan Formulation
68	PMU	Project Management Unit

Sl.No.	Abbreviation	Description
69	PWD	Public Works Department
70	PWD Code	Tamil Nadu Public Works Department Code
71	RAS	Revised Administrative Sanction
72	RCRF	Revamped Central Road Fund
73	RJD	Regional Joint Director of Animal Husbandry
74	RMC	Right Main Canal
75	ROB	Road Over Bridge
76	SDC	State Data Centre
77	SE	Superintending Engineer
		State Ground and Surface Water Resources Data
78	SG &SWRDC	Centre
79	SLSC	State Level Steering Committee
80	SLTCC	State Level Technical Coordination Committee
81	SR	Southern Railway
82	SRG	Standard Rain Gauge
83	SWaRMA	State Water Resources Management Agency
84	SWDES	Surface Water Data Entry System
85	TIDCO	Tamil Nadu Industrial Development Corporation
86	TMC	Thousand Million Cubic Feet
87	TNMB	Tamil Nadu Maritime Board
88	TNPCB	Tamil Nadu Pollution Control Board.
89	TNRSP	Tamil Nadu Road Sector Project
		Tamil Nadu State Coastal Zone Management
90	TNSCZMA	Authority
91	TUFIDCO	Tamil Nadu Urban Finance and Infrastructure Development Corporation
92	TWAD	Tamil Nadu Water Supply and Drainage Board
93	VAO	Village Administrative Officer
94	VAS	Veterinary Assistant Surgeons
95	VLC	Village Level Committees
96	VP	Village Panchayat
97	WQDES	Water Quality Data Entry System
98	WRD	Water Resources Department