

REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA

on ECONOMIC SECTOR

for the year ended MARCH 2013

The Report has been laid on the table of the State Legislature Assembly on 08-07-2014

**Government of Kerala
Report No.4 of the year 2014**

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Preface

This Report of the Comptroller and Auditor General of India for the year ended March 2013 has been prepared for submission to the Governor of Kerala under Article 151 of the Constitution of India.

The Report contains significant results of performance audit and/or compliance audit of the Departments of the Government of Kerala under the Economic Service including Departments of Agriculture, Food, Civil supplies and Consumer Affairs, Irrigation, Public Works, Tourism and Water Resources.

The instances mentioned in this Report are those, which came to notice in the course of test audit for the period 2012-13 as well as those which had come to notice in earlier years, but could not be reported in the previous Audit Reports; instances relating to the period subsequent to 2012-13 have also been included, wherever necessary.

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

CHAPTER I
INTRODUCTION

CHAPTER I INTRODUCTION

1.1 About this Report

This Report of the Comptroller and Auditor General of India (C&AG) relates to matters arising from performance audit of selected programmes and activities and compliance audit of Government departments and autonomous bodies under Economic Sector.

The primary purpose of the Report is to bring to the notice of the State Legislature, the important results of audit. Auditing Standards require that the materiality level for reporting should commensurate with the nature, volume and magnitude of transactions. The findings of audit are expected to enable the Executive to take corrective actions as also to frame policies and directives that will lead to improved financial management of the organisations, thus, contributing to better governance.

This chapter, in addition to explaining the planning and extent of audit, provides a synopsis of the significant deficiencies and achievements in implementation of selected schemes, significant audit observations made during compliance audit and follow-up on previous Audit Reports.

1.2 Profile of units under audit jurisdiction

The Accountant General (Economic and Revenue Sector Audit) Kerala conducts audit of the expenditure under Economic Services incurred by 18 departments at the Secretariat level and also the field offices, two autonomous bodies, 36 other autonomous bodies/institutions, 101 public sector undertakings and two departmental commercial undertakings under the jurisdiction of these departments. The departments are headed by Additional Chief Secretaries/Principal Secretaries/ Secretaries, who are assisted by Directors/Commissioners/Chief Engineers and subordinate officers under them.

The comparative position of expenditure incurred by the Government during the year 2012-13 and in the preceding years is given in **Table 1.1**

Table 1.1: Comparative position of expenditure incurred by the Government

(₹ in crore)

Disbursements	2011-12			2012-13			Percentage (+) Excess (-) Deficit
	Plan	Non-plan	Total	Plan	Non-plan	Total	
Revenue Expenditure							
General Services	72.98	20227.04	20300.02	68.58	22718.03	22786.61	(+)12.25
Social Services	3401.92	12821.94	16223.86	4312.02	14565.47	18877.49	(+)16.36
Economic Services	1852.31	4279.35	6131.66	2468.73	5339.69	7808.42	(+)27.35
Grants-in-aid and Contributions	---	3389.08	3389.08	---	4016.22	4016.22	(+)18.50
Total	5327.21	40717.41	46044.62	6849.33	46639.41	53488.74	(+)16.17

Disbursements	2011-12			2012-13			Percentage (+) Excess (-) Deficit
	Plan	Non-plan	Total	Plan	Non-plan	Total	
Capital Expenditure							
Capital outlay	3398.10	454.82	3852.92	3465.66	1137.63	4603.29	(+)19.47
Loans and advances disbursed	416.68	581.86	998.54	603.09	533.06	1136.15	(+)13.78
Repayment of public debt		---	2893.06		---	2804.08	(-)3.08
Contingency Fund		---	20.80		---	---	
Public Account disbursements		---	91200.26		---	100455.82	(+)10.15
Total			98965.58	4068.75	1670.69	108999.34	(+)10.14
Grand Total			145010.20		48310.10	162488.08	(+)12.05

(Source: Finance Accounts)

1.3 Authority for Audit

The authority for audit by the C&AG is derived from Articles 149 and 151 of the Constitution of India and the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971(C&AG's DPC Act). C&AG conducts audit of expenditure of the departments of the Government of Kerala under Section 13¹ of the C&AG's (DPC) Act. C&AG is the sole auditor in respect of 23 autonomous bodies which are audited under Sections 19(2), 19(3)² and 20(1)³ of the C&AG's (DPC) Act. In addition, C&AG also conducts audit under Section 14⁴ & 15 of C&AG's (DPC) Act in respect of 196 other autonomous bodies which are substantially funded by the Government. Principles and methodologies for various audits are prescribed in the Auditing Standards and the Regulations on Audit and Accounts, 2007 issued by the C&AG.

1.4 Organisational structure of the Office of the Accountant General (E&RSA), Kerala

Under the directions of the C&AG, the Accountant General (E&RSA), Kerala conducts audit of Government Departments/Offices/Autonomous Bodies/Institutions under Economic and Revenue Sector, which are spread all over the State. The Accountant General (E&RSA) is assisted by three Group Officers.

- 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 & loss accounts, balance sheets and other subsidiary accounts.
- ² Audit of the accounts of Corporations established by law made by the State Legislature on 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 C&AG and the Government.
- ⁴ Audit of all (i) 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.

1.5 Planning and conduct of Audit

The 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 of each unit, Inspection Reports containing audit findings are issued to the heads of the offices. The departments are requested to furnish replies to the audit findings within four weeks from the date of receipt of the Inspection Reports. Whenever replies are received, audit findings are either settled or further action for compliance is advised. The important audit observations arising out of these Inspection Reports are processed for inclusion in the Audit Reports, which are submitted to the Governor of State under Article 151 of the Constitution of India.

During 2012-13, 8,969 party-days were used to carry out audit of 622 units (Performance Audit and Compliance audit) of the various departments/organisations coming under Accountant General (E&RSA). The audit plan covered those units/entities which were vulnerable to significant risks as per our assessment.

1.6 Significant Audit Observations

In the last few years, Audit has reported on several significant deficiencies in implementation of various programmes/activities through performance audits as well as on the quality of internal controls in selected departments which impact the success of programmes and functioning of the departments. Similarly, the deficiencies noticed during compliance audit of the Government departments/organisations have also been reported upon.

The present report contains findings of two performance audits and eleven compliance audit paragraphs. The significant audit observations are discussed below:

Performance Audit

❖ *Implementation of Rashtriya Krishi Vikas Yojana (RKVY)*

Rashtriya Krishi Vikas Yojana (RKVY) has been under implementation in the State from 2007-08 with the objective of providing incentives to the State for increasing public investment in agriculture, reduce the yield gaps in important crops, maximise returns to farmers and bringing about quantifiable changes in production and productivity in Agriculture and Allied sectors. Audit observed that there were numerous deviations from the prescribed guidelines and directions for the implementation of the scheme the financial implication of which worked out to ₹ 258.47 crore. The important findings are:

- The project 'Bull spermatozoa sexing and commercialising sexed semen in India' aiming at increasing female calves by four lakh per year using Flow Cytometry equipment at a cost of ₹ 5.25 crore was sanctioned by Dairy department in March 2011 without conducting

feasibility study or possibility of getting the equipment. After incurring ₹ one lakh on the tender process the equipments were not purchased. This resulted in idling of Plan Funds of ₹ 5.24 crore.

(Paragraph 2.1.5.2(3))

- The Agricultural department purchased tractors, vehicles, creation of employments etc. utilising funds amounting to ₹ 6.93 crore in violation of RKVY guidelines.

(Paragraph 2.1.5.3)

- In respect of 19 approved projects, against the release of ₹ 52.09 crore the actual expenditure was only ₹ 14.63 crore. However, the Nodal department furnished Utilisation Certificate (UCs) for ₹ 52.09 crore inflating the figure by ₹ 37.45 crore. The submission of inflated UCs was done with a view of obtaining further release of funds from Government of India (GoI).

(Paragraph 2.1.6.1)

- Fisheries Resource Management Society (FIRMA) awarded a contract for eradication and utilisation of water hyacinth which included the removal of three lakh cum of water hyacinth within a period of 12 months. The contractor had removed only 56,563.72 cum of weeds by the stipulated time of the contract but was allowed to continue the work without supplementary agreement. Even after 26 months the contractor had removed only 2,09,203.886 cum of weeds. The quantity of weeds removed after the period of contract comes to 1,52,640.166 cum for which the contractor was paid a sum of ₹ 7.40 crore which was not supported by valid order or agreement.

(Paragraph 2.1.7.1)

❖ ***Implementation of Kuttanad Development Package***

In order to strengthen the ecological security of Kuttanad Wetland Ecosystem and for expanding sustainable livelihood opportunity for the area, Government of Kerala implemented Kuttanad Development Package which was recommended by M S Swaminathan Research Foundation (MSSRF) with a financial outlay of ₹ 1,840.75 crore. Scrutiny of records of 17 projects revealed that the Government had to incur loss/excess liability of ₹ 285.30 crore on these projects. The main findings are as follows:

- Failure to initiate action on tasks recommended by MSSRF such as, Restoration of water spread area, Modernisation of Thaneermukkom Bund and Thottappally Spillway, Construction of Alappuzha Changanacherry Canal, Measures for Pollution Control, Improving Health and Sanitation resulted in delay in achieving both the objectives of strengthening ecological security and expanding sustainable livelihood opportunities.

(Paragraph 2.2.7.1)

- Due to delay in implementation of projects under Flood Management Programme by Irrigation department, out of the budgeted outlay of ₹ 634.63 crore, for the period 2010-2013, ₹ 494.16 crore was

surrendered. Besides, a scrutiny of expenditure details in Irrigation department as of March 2013 revealed that ₹ 67.92 crore, received under Flood Management Programme and XIII Finance Commission Award, was idling in Treasury Savings Bank Account.

(Paragraph 2.2.8.1(ii))

- Delay in preparation and submission of DPRs prepared by the Irrigation department caused escalation in cost of the projects from the projected outlay of ₹ 1,518.50 crore to ₹ 3,804.65 crore (151 per cent) as of July 2013. As the Package period was reported (April 2013) by GoI to be over, the State Government may either have to bear additional financial burden for completing the recommended projects in their full scope or curtail their scope as and when taken up for implementation.

(Paragraph 2.2.9.1)

- Unwarranted strengthening of outer bunds of Rani and Chithira *padasekharams* lying abandoned for more than the last 20 years due to abuse by dredging, resulted in avoidable expenditure of ₹ 17.31 crore. The amount could have been used for strengthening vulnerable outer bunds of *padasekharams*, where paddy was cultivated. The expenditure of ₹ 13.34 crore and ₹ 1.16 crore paid as compensation for crop loss and on repair of bund breaches, respectively during the period 2009-10 to 2012-13 could thus have been avoided.

(Paragraph 2.2.9.2(iv))

- Slow progress in implementation of the projects KEL I and II resulted in non release of subsequent instalments of Central Assistance of ₹ 11.10 crore and ₹ 74.18 crore respectively (March 2013) as the projects could not be finished by the original completion date of 31 March 2012.

(Paragraph 2.2.9.2(v))

Compliance Audit

Food, Civil Supplies and Consumer Affairs Department

❖ *Leakages in Public Distribution System*

- The Authorised Retail Dealers were diverting ration commodities to the open market by falsely showing them as issued to the ration card holders. The commodities were sold at subsidised rate through KSCSC beyond the entitlement limits fixed per family. The amount of extra subsidy borne by Government of Kerala (GoK) on this account worked out to ₹ 9.88 crore. The diversion/unrestricted sales made were mainly due to the lack of supervision and monitoring on the part of the department.

(Paragraph 3.1)

- ❖ An excess amount of ₹ 14.23 crore was re-imbursed to Food Corporation of India due to incorrect computation of VAT on Central Issue Price.

(Paragraph 3.2)

Irrigation Department

❖ *Functioning of Lift Irrigation Schemes*

- Department instructions stipulate that Minor Irrigation works benefitting an area less than 80 ha. were to be maintained either by lift irrigation co-operative societies or by ryots themselves. However, out of 279 Lift Irrigation Schemes in three districts, 156 schemes having irrigable area less than 80 ha. were being maintained by the department resulting in avoidable expenditure of ₹ 27.25 crore.

(Paragraph 3.3.4.5)

- Out of 279 LISs implemented in three districts, 19 schemes implemented at a cost of ₹ 4.74 crore were not functioning for many years as of March 2013 for various reasons such as non availability of water near pump house, damage to motor and pump sets etc. Out of the 19, eight schemes could not even be commissioned in spite of spending an amount of ₹ 3.39 crore.

(Paragraph 3.3.4.6)

- ❖ There was extension of undue benefit of ₹ 2.43 crore to the contractor by facilitating supply of sand at reduced rate for construction of Regulator-cum-Bridge across Bharathapuzha at Chamravattom.

(Paragraph 3.4)

Public Works Department

❖ *Execution of State Road Projects using Central Road Fund*

- In violation of Central Road Fund (State Road) Rules, 2007 a project on construction of Dharmadom Bridge in NH 17 costing ₹ 4.00 crore relating to State roads was taken up by National Highways Division.

(Paragraph 3.5.4.4)

- Lack of clearance from GoI to divert forest land for a project Anakkayam bridge led to de-sanctioning of a road project costing ₹ 5.17 crore.

(Paragraph 3.5.4.5)

- Delay in providing hindrance free site to a contractor resulted in enhancement of contract value to the tune of ₹ 1.61 crore for part of Ezhimala-Pulingome project.

(Paragraph 3.5.4.5)

- Absence of planning and evaluation of benefits to the public resulted in stopping of two projects Ezhimala-Pulingome and Kalpetta bypass mid-way and remaining incomplete indefinitely after incurring ₹ 5.91 crore.

(Paragraph 3.5.4.6)

- Delay in awarding works of two projects – improvement of riding quality SH 52 Palakkad - Pollachi road and improvement to Thrikkunnappuzha – Mavelikkara road resulted in costs overrun of ₹ 2.08 crore.

(Paragraph 3.5.5)

- ❖ There was over payment of ₹ 0.91 crore by the Executive Engineer due to improper assessment of actual work executed in respect of improvement to Karyavattom - Ananallor Road and Mankada-Pattikkad Road.

(Paragraph 3.6)

- ❖ Absence of adequate field work and subsequent delay in revising design in construction of Mattool-Madakkara bridge resulted in time overrun by more than six years and cost overrun of ₹ 13.79 crore.

(Paragraph 3.7)

- ❖ There was extra expenditure of ₹ 0.80 crore due to calculation of rates for 'extra item' based on SoR 2010 instead of SoR 2007 and mistake in reckoning the distance from source of material to the work site in respect of the project Kottayam – Kumarakaom – Thanneermukkom Road.

(Paragraph 3.8)

Tourism Department

- ❖ Adoption of unsuitable design for construction of wooden cottages at Ponmudi resulted in infructuous expenditure of ₹ 1.24 crore.

(Paragraph 3.9)

Water Resources Department

- ❖ *Idle investment on incomplete irrigation projects*

- Due to delay in execution of works, the estimate of five incomplete major/medium irrigation projects viz. MVIP, IIP, KRP, BSP and ARCB originally envisaged as ₹ 80.35 crore was revised to ₹ 2,270.30 crore and the total up to date expenditure incurred amounted to ₹ 1,568.10 crore as on March 2013.

(Paragraph 3.10.2.2)

- Lack of coordination between the Railways and Irrigation department, led to an amount of ₹ 90.76 lakh, deposited with Railways during 2008 for the construction of aqueduct over the railway line lying blocked.

(Paragraph 3.10.3.4(b))

- Non-commencement of water distribution in IIP, BSP and ARCB led to an amount of ₹ 525.23 crore incurred for the project becoming blocked.

(Paragraphs 3.10.3.5, 3.10.4.6, 3.10.5.6, 3.10.6.3 & 3.10.7.1)

- ❖ Non-execution of agreements as provided for in tenders resulted in granting undue benefit of ₹ 1.03 crore to contractor in five canal improvement works undertaken in Kottayam district.

(Paragraph 3.11)

1.7 Lack of responsiveness of Government to Audit

1.7.1 Outstanding Inspection Reports

The Handbook of Instructions for Speedy Settlement of Audit Objections/Inspection Reports issued by the State Government in 2010 provides for prompt response by the Executive to the Inspection Reports (IRs) issued by the Accountant General (AG) to ensure action for rectification in compliance with the prescribed rules and procedures and accountability for the deficiencies, lapses, etc., noticed during the inspection. The Heads of Offices and next higher authorities are required to comply with the observations contained in the IRs, rectify the defects and omissions and promptly report their compliance to the AG within four weeks of receipt of the Inspection Report. Half-yearly reports of pending IRs are being sent to the Secretaries of the Departments concerned to facilitate monitoring of the audit observations.

As of 30 June 2013, 737 IRs (2,697 paragraphs) were outstanding against Forest and Agriculture Departments. Year-wise details of IRs and paragraphs outstanding are detailed in **Appendix 1.1**.

A review of the IRs pending due to non-receipt of replies, in respect of these two departments revealed that the Heads of offices had not sent even the initial replies in respect of 167 IRs containing 716 paragraphs.

1.7.2 Departmental Audit Committee Meetings

The Government set up department wise audit committees to monitor and expedite the progress of the settlement of IRs and paragraphs in the IRs. The details of the audit committee meetings held during the year 2012-13 and the paragraphs settled are mentioned in the following table.

Table 1.2: Clearance through Audit Committee Meeting

Name of the department	Number of meetings held	Number of paragraphs settled		Number of audit paragraphs outstanding and percentage of settlement
Animal Husbandry	4	2006-07	3	550
		2007-08	11	
		2008-09	6	
		2009-10	30	
		2010-11	39	
		2011-12	31	
		Total	120	
Fisheries	1	2006-07	5	84
		2007-08	4	
		2008-09	4	
		2009-10	4	
		2010-11	8	
		2011-12	13	
		Total	38	
Forest & Wildlife	1	2007-08	5	1167
		2008-09	7	

Name of the department	Number of meetings held	Number of paragraphs settled		Number of audit paragraphs outstanding and percentage of settlement
		2009-10	11	
		2010-11	25	
		2011-12	8	
		Total	56	
PWD Roads & Bridges	2	2006-07	4	942
		2007-08	8	
		2008-09	5	
		2009-10	4	
		2010-11	10	
		2011-12	2	
		Total	33	
Irrigation Department	2	2006-07	3	420
		2007-08	1	
		2008-09	1	
		2009-10	4	
		2010-11	3	
		2011-12	2	
		Total	14	
Harbour Engineering Department	1	2006-07	5	117
		2007-08	3	
		2008-09	0	
		2009-10	1	
		2010-11	5	
		2011-12	2	
		Total	16	
Grand Total			277	3280 8.45

During the year 2012-13, the settlement was less than 10 *per cent*.

1.7.3 Response of departments to the draft paragraphs

Draft Paragraphs and Reviews were forwarded demi-officially to the Additional Chief Secretary/Principal Secretaries/Secretaries of the departments concerned between April 2013 and March 2014 with a request to send their responses within six weeks. The departmental replies for only one out of two Reviews and one out of 11 compliance audit draft paragraphs featured in this Report were received. These replies have been suitably incorporated in the Report.

1.7.4 Follow-up on Audit Reports

The Finance department issued (January 2001) instructions to all administrative departments of the Government that they should submit Statements of Action Taken Notes on audit paras included in the Audit Reports directly to the Legislature Secretariat with copies thereof to the Audit Office within two months of their being laid on the Table of the Legislature.

The administrative departments did not comply with the instructions, and two departments viz. Public Works department and Revenue department had not submitted Statements of Action Taken for two and one paragraphs for the period 2010-11 and 2011-12 respectively even as of February 2014.

1.7. 5 Paragraphs to be discussed by the Public Accounts Committee

There are nine paragraphs relating to Departments of Industries, Public Works and Revenue pertaining to the period 2010-11 and 2011-12 pending discussion by the Public Accounts Committee as of February 2014.

CHAPTER II

PERFORMANCE AUDIT

CHAPTER - II PERFORMANCE AUDIT

AGRICULTURE DEPARTMENT

2.1 Implementation of Rashtriya Krishi Vikas Yojana (RKVY)

2.1.1 Introduction

RKVY is a Centrally Sponsored State Plan Scheme with 100 *per cent* Central assistance. The broad objective of the scheme was to increase agricultural production and productivity keeping in line with the National Agricultural Policy which aimed at achieving a growth rate of four *per cent* in the agriculture sector on a sustainable basis. It has been under implementation in the State from 2007-08 with the objective of providing incentives for increasing public investment in agriculture, reduce the yield gaps in important crops, maximise returns to farmers and bring about quantifiable changes in production and productivity of agriculture and allied sectors.

The eligibility for Government of India (GoI) assistance under the scheme depends upon the amount provided in the State Plan budget for Agriculture and allied sectors over and above the baseline percentage of expenditure incurred by the State Government on the sector prescribed on the basis of certain parameters.

Scheme guidelines prescribes at least 75 *per cent* of the allocated amount to be proposed under Stream I⁵ for specific projects and up to 25 *per cent* to be available to the State under Stream II for strengthening the existing State sector schemes and filling specific resources gap.

The Agriculture department is the nodal department under the scheme to effectively coordinate with other departments/ implementing agencies for preparation, appraisal of projects, implementation, monitoring and evaluation at regular intervals.

The State Level Sanctioning Committee (SLSC) headed by the Chief Secretary is responsible for sanctioning and monitoring the progress of sanctioned projects/schemes.

2.1.2 Sectors covered

Agriculture is the predominant sector. The allied sectors as indicated by the Planning Commission are Crop Husbandry including Horticulture, Animal Husbandry and Fisheries, Dairy Development, Agricultural Research and Education, Agricultural Marketing, Food Storage and Warehousing, Soil and Water Conservation etc.

⁵ Streams are the priorities given by GoI for implementation of the scheme. Stream I identifies new projects and Stream II is for the existing projects which are incomplete.

2.1.3 Organisational set up

Agricultural Production Commissioner is the head of Agriculture department and is assisted by Secretary (Agriculture) and Secretary (Animal Husbandry and Dairy) at Government level. Director, Project Preparation and Monitoring (PPM) Cell is in charge of monitoring the preparation of District Agriculture Plan (DAP) and a comprehensive State Agriculture Plan (SAP) and implementation of the projects. Director of Agriculture is the functional implementation head who is assisted by four Additional Directors, five Joint Directors and seven Deputy Directors. At district level there are Principal Agriculture Officers. The allied departments of Agriculture which implement RKVY scheme are Animal Husbandry, Dairy Development, Fisheries headed by Directors of Animal Husbandry, Dairy Development, Fisheries respectively and Co-operation headed by Registrar of Co-operation.

2.1.4 Audit coverage and methodology

The Directorates of Agriculture, Animal Husbandry, Dairy Development, Fisheries, District level offices and field offices in 14 districts of Kerala were selected for test check using Probability Proportional to Size With Replacement (PPSWR) method considering the criteria of expenditure incurred in the district during 2007-08 to 2012-13.

2.1.4.1 Methodology of selection of sectors

Since implementation of RKVY involves specific projects under defined sectors, the data of sector-wise expenditure reported by the State for the period 2007-08 to 2012-13 has been collected and arranged according to the amount of expenditure incurred under the sector(s). For the purpose of representation of entire sample, three categories of sectors have been made and based on it, the percentage of selection of sectors has been done and nine sectors were selected as per the following criteria.

Category of Sector wise expenditure and number of sectors falling in each category	Percentage of sample sector to be selected	Selected Sectors
A. (Expenditure More than ₹ 100 crore)- 2 sectors	100	Animal Husbandry (ANHB) Crop Development (CROP)
B. (Expenditure Between ₹ 50 – ₹ 100 crore)- 3 sectors	60	Fisheries (FISH) Agriculture Mechanisation (AMEC)
C. (Expenditure Less than ₹ 50 crore)- 21 sectors	30	Research (Agriculture, Horticulture, Animal Husbandry etc.) (AGRE) Natural Resource Management (NRM) Micro/Minor Irrigation (IRRI) Marketing and Post Harvest Management (MRKT) Sericulture (SERI)

2.1.4.2 Methodology of selection of projects within selected sectors

From the consolidated list of sector-wise expenditure, three projects each from AMEC (60.54 per cent) and AGRE (3.79 per cent), four projects each from Animal Husbandry (19.97 per cent), Crop Husbandry (30.35 per cent) and Natural Resource Management (4.35 per cent), five projects from Fisheries (9.46 per cent), two projects each from Irrigation (16.68 per cent), Marketing

(17.44 per cent), Sericulture (46.92 per cent) and one from Horticulture (0.71 per cent) Sectors were selected by audit. Total expenditure of selected projects comes to 20.06 per cent of total expenditure of selected sectors. Stream I and II were not segregated by Nodal Agency and so selection was not possible separately for Stream I and II.

2.1.5. Planning process

RKVY scheme stipulates preparation of DAP projecting the local needs for development of Agriculture and Allied sectors of the district. DAPs should be integrated into a comprehensive SAP to become eligible for grants under RKVY. DAPs are mandatory from 2008-09 onwards for getting funds under RKVY schemes and should be prepared by including resources available from other existing schemes, District, State, Central schemes etc. and adhere to the guidelines circulated by the Planning Commission for District Planning. While preparing the SAP, State's priorities should be ensured with respect to Agriculture and Allied sectors. The Nodal Agency should place the SAP before the SLSC for consideration, discussion, finalisation and sanction of projects.

Audit scrutiny revealed deficiencies in planning process as discussed below:

2.1.5.1 Multiplicity of projects and exclusion of certain districts from project plans

Audit scrutiny revealed that DAP was not prepared by any of the districts of the State in 2008-09 and from 2012-13 onwards. Comprehensive plan was prepared in 2009-10 for the XIth Five Year Plan (2007-2012) period and used by department as DAP for the purpose of RKVY assistance. DAP was not prepared annually.

In the absence of DAPs, the eligible districts were not considered against the schemes in a comprehensive way for Agriculture and Allied sectors while sanctioning projects.

Audit scrutiny revealed that SAP was not prepared by integrating the project proposals of all the districts. Instead, district wise proposals were compiled and included in the agenda notes for approval at SLSC meetings. It also revealed that in many projects sanctioned by SLSC, there could have been better integration by clubbing of similar projects had the SAP been prepared by the State. Some instances are shown below:

Project ID	Project Name	Project Cost (₹ in lakh)	District
KE/RKVY-DDEV/2009/407	Automatic milk collection unit	5.00	Kottayam
KE/RKVY-DDEV/2009/408	Automatic milk collection unit	4.95	Kasaragod
KE/RKVY-ANHB/2009/406	Automation of milk collection in dairy co-operatives	15.75	Thiruvananthapuram
		10.50	Idukki
		10.50	Kollam
KE/RKVY-ANHB/2009/369	Calf feed subsidy (calves)	37.50	Pathanamthitta

Project ID	Project Name	Project Cost (₹ in lakh)	District
KE/RKVY- ANHB/2009/378	Calf feed subsidy	18.75	Kottayam
KE/RKVY- ANHB/2009/381	Calf feed subsidy (per calf) - First year cost	37.50	Alappuzha
KE/RKVY- ANHB/2009/391	Calf feed subsidy (per beneficiary)	22.50	Kozhikode
KE/RKVY- ANHB/2009/372	Cattle insurance scheme	6.33	Pathanamthitta
KE/RKVY- ANHB/2009/363	Cattle insurance programme - Insurance premium @ ₹ 15,000 per animal for 3yr.@ 6.25 %	13.94	Thiruvananthapuram
KE/RKVY- ANHB/2009/384	Cattle insurance @ 5.9 % of cost (₹ 20,000) of cow	17.70	Thrissur
KE/RKVY- ANHB/2009/370	Cattle shed flooring	30.00	Pathanamthitta
KE/RKVY- ANHB/2009/394	Cattle shed flooring (per shed @ ₹ 50 per sq ft)	20.00	Kozhikode
KE/RKVY- ANHB/2009/400	Cattle shed flooring	30.00	Kannur

Non integration of projects of similar nature proposed by different districts resulted in multiplicity of projects and non consideration of other eligible districts. Besides, the requirement from other sectors were not taken care of adequately.

2.1.5.2 Violations of RKVY guidelines

Projects proposed to be implemented under RKVY scheme should be formulated and implemented in accordance with prescribed guidelines. There were instances of non compliance as detailed below.

i) Projects approved as outside agenda of SLSC meeting – ₹ 144.19 crore

The Nodal department had to compile projects received from each district, prioritise and include them in the agenda for consideration and sanction by SLSC. As per RKVY guidelines, the nodal department should give agenda along with a gist of projects for the SLSC meeting to the representatives of the GoI, giving notice of at least 15 days.

Audit test check of 35 (**Annexure I**) out of 949 cases (15 per cent of total project cost of ₹ 995.39 crore and 3.69 per cent of total sanctioned projects), revealed that the projects originated at State Level were approved in SLSC meetings as outside agenda items in violation of the guidelines of RKVY.

As a result, the criteria for selection of projects involving participation from the lower formations was compromised. Since agenda notes on items considered as outside agenda items were not circulated to the GoI representatives in advance, decision on items not included in the agenda denied opportunity of the representatives to study thoroughly about the projects and offer their remarks effectively.

ii) Sanctioning of projects without DPRs

The Nodal department (Agriculture) should satisfy that projects which are feasible, fulfilling RKVY objectives and duly supported by Detailed Project Reports (DPR) only are recommended to SLSC for approval.

Audit test check revealed that 11 out of 62 projects costing ₹ 27.79 crore (**Annexure II**), were approved by SLSC in its meeting held in September 2011 even though they were not duly supported by proper DPRs. It was observed that there was no indication regarding submission of the said DPRs to SLSC in subsequent meetings. Further the nodal agency was not able to confirm whether DPRs of the said projects were produced for consideration of SLSC.

The action of SLSC in approving projects without DPRs and failure of nodal agency to ascertain whether the project fulfills the objectives of RKVY before recommending the DPRs to SLSC were violations of RKVY guidelines.

iii) Approval of projects without feasibility study resulted in idling of funds/non-completion of project – ₹ 5.24 crore

The Nodal Agency should place the SAP before the SLSC for consideration, discussion, finalisation and sanction of projects after ensuring that the department sponsoring the project was convinced about the feasibility of the project. Audit test check revealed that feasibility of the project was not established prior to approval of DPR by SLSC in the following case.

The project ‘Bull Spermatozoa Sexing and Commercialising Sexed Semen in India for uplifting National Dairy Sector’ was sanctioned (March 2011) with an outlay of ₹ 5.25 crore and allotted (July 2011) to implementing agency, M/s. Kerala Livestock Development Board (KLDB). The project was intended to increase the number of female calves of the State by four lakh per year using Flow Cytometry equipment for bovine sperm sexing. Global tenders were invited (June 2011) for procurement of Flow Cytometer, an equipment for frozen semen processing, with the specific nozzle for sexing of bovine spermatozoa. KLDB incurred ₹ 0.01 crore towards the cost of invitation of tenders etc. M/s Inguran LLC dba Sexing Technologies in United States of America, was the only competent firm in the world, which had the patent to produce the equipment, declined to sell the equipment to India. Though it was established beyond doubt that the possibility of getting the equipment was remote, the implementing agency (KLDB) did not refund the amount of ₹ 5.25 crore allotted till date (February 2014). Out of the balance amount of ₹ 5.24 crore, ₹ five crore was deposited in fixed deposit and the balance kept in savings bank account of KLDB. It was observed that ₹ 1.11 crore accrued as interest on the unspent RKVY funds was kept in bank accounts of KLDB providing an unwarranted advantage of interest and liquidity to KLDB at the cost of RKVY funds. The amount sanctioned for this project could have been utilised for the implementation of other important projects.

2.1.5.3 Approval of inadmissible items out of RKVY funds – ₹ 6.93 crore

RKVY guidelines explicitly prohibit utilisation of funds allotted for purchase of tractors, vehicles and creation of permanent employment.

Audit test check revealed that approval was accorded for inadmissible items of expenditure in violation of RKVY guidelines in the following cases:

i) Approval and purchase of tractors out of RKVY funds – ₹ 4.74 crore

The SLSC sanctioned (February 2010) a project for Agriculture mechanisation under Kuttanad Package to be implemented by Kerala Agro Industries Corporation Ltd. (KAICO) with total project outlay of ₹ 85 crore. The project included supply of 150 tractors to farmers through Custom Hiring Service cum Training Centres in a phased manner in three years.

It was observed that ₹ 47.63 crore was spent up to October 2013 on the above projects including ₹ 4.69 crore towards purchase of 92 tractors.

In another case the SLSC sanctioned (June 2010) a project ‘Augmentation of Vegetable Production through Technological Interventions’ with a project cost of ₹ 3.01 crore. The implementing agency Kerala Agricultural University (KAU) purchased a mini tractor costing ₹ 0.05 crore under the project. The action of SLSC approving projects involving purchase of tractors was in clear violation of RKVY guidelines.

ii) Approval and purchase of vehicles and construction of buildings - ₹ 2.18 crore

Audit test check revealed that the State had approved 20 projects from 2007-08 to 2011-12, which provided for construction of buildings and purchase of vehicles. A sum of ₹ 2.18 crore was incurred on the said components. However, as the components were explicitly prohibited and not approved through SAP or DAP, the entire expenditure of the components detailed below were not eligible for assistance under RKVY schemes.

Implementing Agency	Amount spent (₹ in crore)	Purpose
KAICO	0.34	Purchase of vehicles
KAICO	0.25	Construction of additional store and renovation of building
KAICO	0.22	Purchase of excavator
Assistant Executive Engineer (Agriculture), Wayanad	0.15	Construction of Office Building
Kerala Agricultural University	1.22	Purchase of vehicles
Total	2.18	

2.1.5.4 Defective planning by implementing agency and consequent non implementation of projects

Government accorded sanction (June 2008) to implement the project ‘Matsyakeralam’, by Special Officer, Matsyakeralam under Fisheries department. The project envisaged to integrate various activities of fish culture and to provide infrastructure linkage for the development of inland fisheries and aquaculture by constructing building for 100 Fish Farmers Clubs (FFCs) with common facilities such as fish booth, conference hall, pump sets, drag nets etc. at a cost of ₹ 0.05 crore each and also for necessary insurance to shrimp farming. Accordingly, sanction was accorded to release the grant of ₹ three crore in four instalments (November 2009 to May 2012) for 60 FFCs.

The Nodal department released the amount to the Director of Fisheries who in turn released the amount to Special Officer, Matsyakeralam (October 2010 – August 2012). As the Special Officer, Matsyakeralam, was not a drawing officer, the amount released was kept with the Agency for Development of Aquaculture (ADAK) in their savings bank account.

Even though the Special Officer submitted utilisation certificates for ₹ three crore, Audit scrutiny revealed that the implementing agency failed to implement the project in time and a sum of ₹ 2.69 crore remained as unutilised balance (March 2013) in the accounts of ADAK (₹ one crore), Fish Farmers Development Agency (FFDA) (₹ 1.53 crore) and construction agencies (₹ 0.16 crore).

As against the stipulated number of construction of buildings for 60 FFCs, only five were completed (March 2013). Many FFDAs could not identify the site for the construction of building for FFCs and entrust the work to construction agencies in time.

Defective planning of the project by the implementing agency resulted in non achievement of objectives due to non implementation of the project and consequent idling of plan funds.

2.1.6 Financial Management

Allocation and Release of Funds

Funds would be released by GoI to GoK which would allocate and release funds to the nodal department for release to directors of allied departments/CEOs of autonomous bodies/ Principal Agriculture Officer. They in turn would release funds to implementing officers/ agencies and the nodal department would submit Utilisation Certificate (UC) to GoI.

Number of Projects approved, Receipt from GoI/Release by GoK and Expenditure incurred

Year	No. of project proposals	Total cost of the projects	Receipt from GoI (as on March 2013)	Release by GoK (as on March 2013)	Expenditure incurred (up to January 2014)	Position of UC (up to January 2014)
₹ in crore						
2007-08	91	55.01	55.40	55.31	55.15	55.15
2008-09	96	59.11	30.06	30.00	29.86	29.86
2009-10	278	129.32	110.92	110.92	105.99	105.99
2010-11	132	218.79	149.65	149.65	144.06	144.06
2011-12	249	300.86	182.89	182.89	182.45	191.17*
2012-13	103	232.30	253.03	253.03	252.69	252.69
Total	949	995.39	781.95	781.80	770.20	778.92

*This amount includes UC for ₹ 8.72 crore relating to the unspent amount of previous years.

2.1.6.1 Submission of inflated Utilisation Certificates – ₹ 37.45 crore

As per RKVY guidelines funds for Stream I projects are released in three instalments (50 per cent on receipt of sanction, 40 per cent when physical progress of 50 per cent is achieved and balance 10 per cent on completion of the project). The amounts of second and final instalments depend upon

utilisation of funds by States. Non-utilisation of central assistance will hinder further release of funds.

Audit test check revealed that in 19 approved projects (**Annexure III**) against the release of ₹ 52.09 crore, though actual expenditure was only ₹ 14.63 crore the nodal department / agency had furnished UCs for ₹ 52.09 crore.

In response to audit query the nodal department/ agency stated (January 2014) that UC was issued to GoI based on the UCs received from various implementing agencies and it did not possess any mechanism to verify the actual utilisation of funds by various implementing agencies. This confirmed that the nodal department/ agency did not exercise any further control to verify the authenticity of actual utilisation of plan funds under RKVY resulting in submission of inflated UCs to GoI. Further, all the 19 projects mentioned above were shown in the Relational Database Management Information System (RDMIS) database as completed, though only one project was completed.

Furnishing of incorrect UCs by nodal department without attaining the prescribed physical progress, with a view of obtaining further grants from GoI, is a serious undermining of the entire system of Government interventions to bring about improvements in the State's agricultural production.

2.1.6.2 Misutilisation of interest accrued in accounts operated by implementing agencies

Interest is being accrued in the accounts of implementing agencies due to advance release/delay in utilisation of RKVY funds. However, neither GoI nor the GoK issued instructions regarding the accounting and utilisation of interest accrued from RKVY funds.

However, test check in seven institutions alone revealed that interest to the tune of ₹ 5.14 crore had accrued in the accounts of respective implementing departments/agencies till December 2013.

Lack of instruction regarding the accounting and utilisation of interest resulted in use of amounts by implementing agencies for purposes not approved by SLSC/PPM Cell.

Finance department needs to look into the matter and release further funds to these projects keeping in view the amount of interest accrued.

2.1.6.3 Diversion of funds and consequent extension of unwarranted benefit to an agency

Audit scrutiny revealed that Director of Fisheries diverted plan fund under RKVY to an external agency as detailed below:

Construction of Fishery Harbour at Kasaragod was sanctioned (December 2008) at a total project cost of ₹ 29.85 crore under Fishery sector and the implementation was entrusted to Harbour Engineering department (HED). However, the Director of Fisheries (DoF) decided (June 2009) to implement the scheme through Kerala State Coastal Area Development Corporation (KSCADC) with the support of HED and to transfer the fund to KSCADC. Based on this decision, funds released by Nodal department to Fisheries department (₹ 19 crore) was further released to KSCADC (during June 2009

to November 2012) even before actual requirement. KSCADC had no role except release of funds on demand.

As the implementing and executing agencies were State departments, the decision taken by DoF to entrust the work and transfer funds to KSCADC was irregular and was tantamount to diversion of funds. It also resulted in unwarranted advantage to KSCADC who had deposited the planned fund in the commercial bank account upto one year and earned an interest of ₹ 0.41 crore.

2.1.6.4 Non-refund of unspent amount – ₹ 54.90 lakh

On completion of implementation of projects, the implementing officer had to furnish necessary UC and the balance amount was required to be refunded.

Audit test check revealed that in respect of the following projects, the implementing agencies received ₹ 2.34 crore. Even after completion of the work, the agencies did not refund the unutilised balance as shown below:

Project Name	Implementing agency	Amount received	Unspent balance	Remarks
		₹ in lakh		
Deepening and widening of side protection of Kundoor thodu – Nennambra point	District Panchayat Malappuram	31.25	7.07	The project was completed and UC furnished for ₹ 24.18 lakh.
Two projects	Principal Agriculture Officer, Kannur	Details* not available	19.82	The unspent balance of ₹ 19.82 lakh remaining in TSB account from 2010 onwards.
Establishment of lead centres for organic farming at Vellayani	Kerala Agricultural University	109.60	8.70	Though the project was completed, the unspent balance kept idling in TSB account.
Mulberry cultivation and distribution of equipment	SERIFED	33.00	9.25	The agency was liquidated on 15 March 2010, but the amount not refunded and UC not furnished.
Infrastructure works in padasekharams for paddy cultivation	Principal Agriculture Officer, Ernakulam	40.00	1.82	The unspent balance is pending with Minor Irrigation Division, Ernakulam since February 2011.
Pig rearing	MPI	20.00	8.24	
Total		233.85*	54.90	

* Figure is incomplete as the details in respect of two projects implemented by PAO Kannur are not available.

The implementing agencies kept the funds in interest bearing bank accounts resulting in blocking up of Government funds in the form of interest from deposits which had to be refunded. This also indicated lack of proper monitoring by the Nodal department regarding the implementation of project and utilisation of amount.

2.1.7 Implementation

The implementing units/agencies included *Grama panchayats*, primary level offices of allied and autonomous institutions such as Kerala Land Development Corporation (KLDC), Kerala Livestock Development Board Ltd. (KLDB), Kerala Co-operative Milk Marketing Federation Ltd.

(MILMA), State Horticulture Mission (SHM), Vegetable and Fruit Promotion Council of Kerala (VFPC), Kerala Feeds Ltd. (KFL), Meat Products of India (MPI), Kerala Agro Industries Corporation Ltd. (KAICO), Kerala Agricultural University (KAU) etc. RKVY funds from the nodal department reach the Principal Agriculture Officers directly through allotments and by demand draft to allied departments and implementing agencies.

As per details available in RDMIS (**Annexure IV**), out of the total number of 949 projects sanctioned by SLSC during the period from 2007-08 to 2012-13, 865 projects were completed, 63 projects were in progress, five projects were not yet implemented and 16 projects were abandoned as on January 2014.

Audit scrutiny revealed the following defects in the implementation of the projects.

2.1.7.1 Undue benefit to contractor in the project Eradication and Utilisation of Water Hyacinth – ₹ 7.40 crore

Water hyacinth, a water plant, had been labelled as world's worst water weed and has gathered increasing international attention as an invasive species. It can cause extensive environmental, social and economic problems. The success of this invasive alien species is largely due to its reproductive output. Water Hyacinth can flower throughout the year and releases more than 3,000 seeds per year. The seeds have a life span of over 20 years. Threats posed by Water Hyacinth include destruction of biodiversity, oxygen depletion and reduced water quality, breeding ground for pests and vectors and blockage of waterways hampering agriculture, fisheries, recreation and hydropower.

In order to eradicate Water Hyacinth spread over Kuttanad wet lands, a project 'Eradication and utilisation of water hyacinth' was approved by SLSC (February 2010) with a total outlay of ₹ 21.29 crore and its implementation was entrusted with State Fisheries Resource Management Society (FIRMA). The main components of the project included mechanical removal of Water Hyacinth from Kuttanad wetlands (₹ 15 crore) and establishment of 2,000 vermi compost units (₹ three crore) for production of vermi compost from water hyacinth removed from water bodies and construction of three biogas plants (₹ 2.1 crore).

The work for the mechanical removal of 3,00,000 m³ of water hyacinth was tendered by FIRMA (April 2010) and awarded (August 2010) to M/s Ornamental Fish Farming (P) Ltd. at the rate of ₹ 485/m³ (Agreed PAC ₹ 14.55 crore) with a time of completion of 12 months which ended on 31 July 2011. The contractor was permitted by the implementing agency (FIRMA) to continue the work even after expiry of contract period. As the progress of the work was very slow, in a meeting convened by the Hon'ble Minister for Fisheries, Port and Excise, it was decided to stop the work (July 2012).

The work for the removal of water hyacinth was subsequently tendered (November 2012) and awarded to M/s Bombay JCB Earth Movers Ltd. (January 2013) at the rate of ₹ 220/ m³ plus taxes and levies and the work is in progress (January 2014).

Audit scrutiny relating to contract with M/s Ornamental Fish Farming (P) Ltd. revealed the following irregularities:

A. Undue favour to the contractor

The period of contract for mechanical removal of water hyacinth as per agreement was 12 months. However, by the end of September 2011 the contractor had only removed 56,563.72 m³ of weeds as against the stipulated quantity of 3,00,000 m³. Though the contractor failed to fulfil his commitment as per the agreement no action was taken against him. Further, despite the expiry of one year period by 31 July 2011, the implementing agency (FIRMA) did neither extend nor terminate the contract.

The contractor was allowed to continue the work till September 2012 without any orders/supplementary agreement. Even after 26 months, the contractor removed only 209,203.886 m³ of weeds for which he was paid a sum of ₹ 10.02 crore as of June 2013⁶.

The quantity of weeds removed after the period of contract comes to 1,52,640.166 m³ for which he was paid a sum of ₹ 7.40 crore. The work executed by the contractor after the period of contract was not supported by any valid order/agreement and hence the payment of ₹ 7.40 crore made to the contractor was irregular and an undue favour to the contractor.

As the contractor failed to complete the work in time, FIRMA should have resorted to retendering the work on risk and cost basis immediately after the period of contract. Penalty clause should be inserted in contracts for such delays.

B. Unscientific method of measurement

The work of measurement of weeds removed by the contractor was initially entrusted with Harbour Engineering department and then to Kerala State Coastal Area Development Agency. The practice followed by Irrigation department for valuation of removed quantity of weeds is based on the coverage area (sq m) of water hyacinth in wet lands and not on the quantity of weeds removed and dumped. But in the present work, the volume of weeds removed and dumped was arrived at based on tape measurement. As the volume of removed weeds would vary due to change in climate or passage of time, the method adopted for measurement was neither scientific nor reliable.



⁶ Balance amount of ₹ 0.12 crore retained by FIRMA.

C. Non achievement of benefit envisaged in the scheme

The total area of Kuttanad lake was 256 sq.km and an estimated quantity of 3,00,000 m³ of Water Hyacinth was required to be removed at an agreed cost of ₹ 14.55 crore. The Task Implementation committee under the Agricultural Production Commissioner observed (September 2010) that the present system of weed removal could not achieve the required objective of making Kuttanad a weed-free zone. It was noticed from the reports of FIRMA that the weeds grow rapidly and could multiply within 13 days and cover over a hectare within nine months. The review committee meeting under the Chairmanship of Principal Secretary (Fisheries) also observed that the speed of removal of weeds was slow and at that speed, the weeds get enough time to re-establish in the water body by the time they were removed.

There was no direction to the contractor to remove the weed completely from the location taken up for removal and there was no provision in the agreement to maintain the water body weed free. All these indicated that the removal of weeds did not achieve the benefit envisaged in the scheme and the purpose of making the Kuttanad lake weed free was defeated despite spending ₹ 10.02 crore during the period from August 2010 to September 2012.

2.1.7.2 Sale of blasted hard rock to contractor resulted in undue benefit to contractor – ₹ 124.22 lakh

The project 'Infrastructure development work in Thrissur Kole area' (Project cost ₹ 617 lakh) included excavation of five canals including formation of bunds with an outlay of ₹ 218 lakh. The excavation work was awarded to a contractor in March 2010 (including blasting of 22,922 m³ hard rock) at an agreed Probable Amount of Contract of ₹ 1.84 crore. The actual blasted quantity of rubble was 30,444.18 m³ (1.5 times of 20,296.122 m³) as per Standard Data Book.

There was no provision in the agreement for sale of the blasted rock. However, the implementing agency M/s KLDC sold 30,444.18 m³ of blasted rock to the contractor recovering ₹ 7.75 lakh, which was stated to be 10 per cent of the value of rock. But the actual value of blasted rock comes to ₹ 117.79 lakh. As the sale was outside the terms of agreement, it extended an undue advantage of ₹ 110.04 lakh to the contractor. Besides KLDC incurred labour charges for conveying blasted rubble up to 50 m for which contractor was paid a sum of ₹ 14.18 lakh.

In response to the audit query KLDC justified the sale citing the instructions of July 1994 by the Chief Engineer (Irrigation and Administration) wherein it was iterated that stacking charges might be deducted by issue of the blasted rock to the contractor at site itself recovering 10 per cent of the value.

However, the reply of the department is not tenable as there was no provision in agreement for stacking and that the sale of blasted rock at site was obvious. The non inclusion of the provision for sale of blasted rock in tender schedule resulted in restricting competition and extended unwarranted advantage of ₹ 124.22 lakh (**Annexure V**) to the contractor.

2.1.7.3 Non-achievement of target and consequent non-utilisation of funds – ₹ 5.52 crore

The project 'Rice Development' was sanctioned (June 2010) with the objective of increasing rice production in an area of 66,000 ha. identified in 14 districts with the help of three major components of the scheme such as increasing cropping intensity, paddy cultivation in fallow land kept uncultivated for several years and to bring more area under upland rice cultivation. Utilising the assistance, the expected additional minimum outturn of rice production was 64,000 MT per year (25,000 MT from increasing cropping intensity, 9,000 MT from upland cultivation and 30,000 MT from fallow land). The physical and financial target and achievement thereon are as shown below:

Particulars	Physical (Area Ha)			Financial (₹ in crore)		
	Target	Achievement	Excess (-) Shortfall (+)	Outlay	Expenditure	Excess (-) Shortfall (+)
Rice production in rice growing tracts	50,000	55,974.97	(-) 5,974.57 (- 11.95 %)	25 (@ ₹ 5,000/ha.)	27.99	(-) 2.99
Upland cultivation of rice	6,000	1,760.82	(+) 4,239.18 (+ 70.65 %)	3 (@ ₹ 5,000/ha.)	0.88	(+) 2.12
Fallow land cultivation of rice	10,000	3,795.14	(+) 6,204.86 (+ 62.05 %)	12 (@ ₹ 12,000/ha.)	4.55	(+) 7.45
Total	66,000	61,530.93		40	33.42	

The amount of assistance was provided as input subsidy to the farmers under the scheme without linking the subsidy to the output/ production. The major share of the project was earmarked for the component 'Rice Production in rice growing tracts', a lenient target, where the department spent an additional amount of ₹ 2.99 crore. The department was not able to provide the quantity of rice expected from the implementation of the scheme. In respect of upland and fallow land cultivation, the department failed to achieve the stipulated target.

2.1.7.4 Expenditure on ineligible items utilising allocation towards administrative expenses - ₹ 1.11 crore

In terms of RKVY guidelines, State is permitted to use up to one *per cent* of its total RKVY funds towards administrative expenses. However, the nature of expenditure explicitly specified should be adhered to and deviations are not allowed.

Audit scrutiny revealed that in the following cases the State had utilised the share towards administrative expenses for activities/components expressly not permitted, viz. (i) Purchase of vehicles and (ii) Non recurring expenses (modernisation of directorate building) .

Year	Amount released by GoK	Total expenditure incurred	Inadmissible expenditure incurred	Purpose
₹ in crore				
2009-10	0.93	0.89	0.47	Purchase of 11 vehicles for departmental purpose
2010-11	1.93	1.46	0.46	Modernisation, electrification and civil works of Directorate building
Total	2.86	2.35	0.93	

2.1.7.5 Unfruitful expenditure due to delay in taking over project – ₹38.18 lakh

The project 'Infrastructure works in *padasekharams* for paddy cultivation' having an outlay of ₹ 815.40 lakh was sanctioned during 2008-09; out of which ₹ 40 lakh was allotted to Principal Agricultural Officer, Ernakulam for development of Thottarapuncha *padasekharam* for augmenting rice production. Thottarapuncha *padasekharam* comprise of 700 ha. of land and paddy cultivation was restricted to 450 ha. of land. The project was intended to bring the balance 250 ha. under cultivation.

The work included construction of tractor passage, installation of 'Petty and Para'⁷ with necessary motor and pump sets. The Executive Engineer, Minor Irrigation Division, Ernakulam, completed the work at a cost of ₹ 38.18 lakh. Irrigation department requested (February 2011) Agriculture department to take over the project. But neither Agriculture department nor any other authority took over the project (December 2013) and hence the intended purpose could not be achieved. The unspent balance of ₹ 1.82 lakh was still pending with Minor Irrigation Division, Ernakulam.

The maintenance and operation of the 'Petty and Para' should have been entrusted to a suitable agency so as to make the project fruitful.

2.1.7.6 Failure of implementing agency to ensure proper infrastructure resulted in undue favour to an external agency - ₹1.25 crore

Prawn Shell waste is a raw material for production of Glucose Amine which is used extensively for treatment of arthritis. 'MATSYAFED', an autonomous body in the State, prepared DPR (₹ 3.66 crore) for (a) production of Glucose Amine from prawn shell (b) disposal of prawn shell waste from coastal areas and (c) generation of employment opportunities for 100 youths (direct) and 4,000 women (indirect). The project was approved by SLSC during November 2008 and funds of ₹ 2.39 crore sanctioned under RKVY towards purchase of machinery. The Agriculture department (nodal department) released ₹ 1.25 crore (2009-11) to the implementing agency, MATSYAFED. As the fund received for the project was insufficient, a revised project with an outlay of ₹ seven crore had been submitted, which is yet to be approved.

The scheme was proposed to be implemented after constructing a building utilising assistance of ₹ 2.92 crore from Government and National Fisheries Development Board (NFDB). Construction of building started in August 2010 without getting prior sanction from Town Planner. The time of completion

⁷ A machinery used for the regulation of water flow into and out of the paddy fields

was stipulated as ten months (June 2011). However, the building could not be constructed as it violated the norms of Pollution Control Board (PCB).

Failure to comply with the stipulations of PCB/District Town Planner and failure to obtain prior sanction from Town Planner, Alappuzha for the construction of the plant led to the following.

- The project approved in November 2008 with stipulated period of completion of nine months is yet to be completed. Delay in completion of the project resulted in failure of objectives.
- The implementation of the project prolonged with the delay in construction. This resulted in idling of plan funds in commercial bank accounts from 2009 onwards.
- Loss of potential income of ₹ 10.13 crore per annum projected by the implementing agency from the sale of Glucose Amine products.
- Denial of hygienic environment to the coastal people through removal of prawn shell waste as envisaged in the DPR.

2.1.7.7 Irregular payment of mobilisation advance - ₹ 50 lakh

In terms of RKVY guidelines, payment of mobilisation advance to contractor is not permissible.

The project for enhancement of Shell fish production in the State by strengthening the Seed Production Centre of Agency for Aquaculture Development Kerala (ADAK), at Odayam, Varkala, was sanctioned (February 2009) with an outlay of ₹ 253.25 lakh and the entire amount released for the project. One of the components of the said project was 'Establishment of Aquarium' for which ₹ 33 lakh was earmarked. As the allotment of ₹ 33 lakh was insufficient, it was delinked from the main project and a fresh project for 'Establishment of Aquarium Complex cum Training and Awareness Centre at Odayam' was sanctioned (May 2011) with a project cost of ₹ 350 lakh. The amount was released to the implementing agency ADAK (₹ 150 lakh in December 2011 and ₹ 200 lakh in January 2013). The work of establishment of Aquarium Complex cum Training and Awareness Centre was awarded to M/s. COSTFORD in December 2012.

Audit scrutiny revealed that ADAK, advanced ₹ 50 lakh to the contractor, (M/s COSTFORD) (January 2013). Though payment of advance is permissible as per GoK instructions, the same is prohibited as per RKVY guidelines. Hence the action of ADAK in advancing ₹ 50 lakh to the contractor was not in order and in violation of provisions of RKVY.

2.1.8 Monitoring and supervision

As per RKVY guidelines, SLSC was responsible for monitoring the progress of sanctioned projects/schemes and reviewing implementation of schemes' objectives and ensure that programmes were implemented in accordance with the guidelines laid down.

Government of Kerala formed a State Level Monitoring Committee (SLMC) (August 2008) under the chairmanship of Agricultural Production Commissioner exclusively for monitoring the implementation of RKVY

scheme, review the implementation of RKVY on a monthly basis and submit reports to SLSC. SLMC should also finalise the agenda for SLSC meetings.

Audit scrutiny revealed the following lapses in the prescribed internal control mechanisms:

2.1.8.1 Failure in Internal Controls of Monitoring and evaluation by SLSC, SLMC and Nodal department

According to RKVY guidelines, SLSC meetings should be held at least once in three months. From January 2008 to March 2013 (63 months) there were only 11 meetings as against the required minimum of 21 meetings. The gap between meetings was up to 10 months.

RKVY guidelines stipulate SLMC to meet monthly, but the first meeting was convened after 18 months (18 February 2010) of its formation. Up to 31 March 2013, only five meetings were conducted. The gap between consecutive meetings ranged up to 11 months. It indicated that SLMC failed to review the implementation of RKVY schemes as stipulated in RKVY guidelines.

As per RKVY guidelines, the nodal department (Agriculture) was required to effectively coordinate with various departments and implementing agencies with respect to preparation and appraisal of projects, implementing, monitoring and evaluating them and also to submit quarterly reports of physical and financial progress to GoI.

Audit scrutiny revealed that Nodal department did not have a system of either monitoring the progress of each project physically and financially or submitting the detailed reports of their physical and financial progress to Department of Agriculture and Co-operation (DAC). The funds were released without taking into consideration the actual requirement for implementation of the scheme. The utilisation certificates submitted by the Nodal department based on the utilisation certificates submitted by the implementing departments/agencies did not represent the actual spending as the funds were still remaining idle with implementing agencies in many cases.

2.1.8.2 Wide variation in data on expenditure renders RDMIS unreliable

The web based RDMIS provided for the nodal department and the implementing agencies to enter the progress of each project concerned both physical and financial so that the controlling and monitoring departments/units even up to the level of DAC would be able to get the up to date position of implementation of each project.

Audit scrutiny revealed that details filled in by each department from the level of nodal department to the level of implementing units were neither correct nor up to date. Some instances are given below:

1. As per the details furnished by the nodal department, the total expenditure on RKVY projects as at the end of January 2014 was ₹ 770.20 crore whereas the expenditure as per RDMIS was ₹ 810.45 crore showing a difference of ₹ 40.25 crore.

2. Two projects⁸ with a total project cost of ₹ 4.1 crore were shown in RDMIS as abandoned projects whereas the department had stated that the projects were completed.
3. As per the details available in the RDMIS in February 2014, 10 projects sanctioned without DPRs were completed at a cost of ₹ 25.76 crore. The status of physical progress of the said projects could not be ascertained due to mismatch between target and achievement shown in database of RDMIS.

The RDMIS was not populated with data in 'work-flow' mode and regular update of project status was not made. This method of updation without any scrutiny defeated the very purpose of RDMIS. This indicated that data available in RDMIS lacked credibility and any analysis done based on such data would be unrealistic and unreliable.

2.1.9 Recommendations

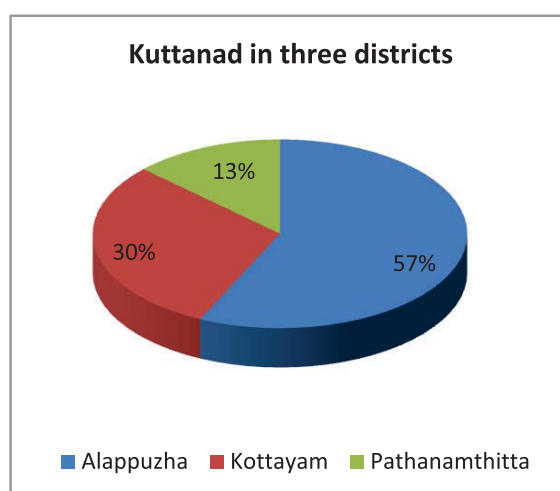
- PPM Cell should ensure that projects which are feasible only are proposed and approved.
- Nodal department should ensure that UCs are issued by respective implementing agencies only after the funds are spent completely.
- SLSC and SLMC should monitor each project and should ascertain whether the projects are implemented adhering to RKVY guidelines.
- The authenticity and reliability of RDMIS should be ensured.
- Government should issue instructions regarding the accounting and utilisation of interest earned by implementing agencies on RKVY funds deposited in banks.

⁸ 'Kuttanad Package – Onattukara First Paddy Cultivation (2010-11)' and 'Kuttanad Package – Sesamum cultivation in Onattukara region (2010-11)'.

2.2 Implementation of Kuttanad Development Package

2.2.1 Introduction

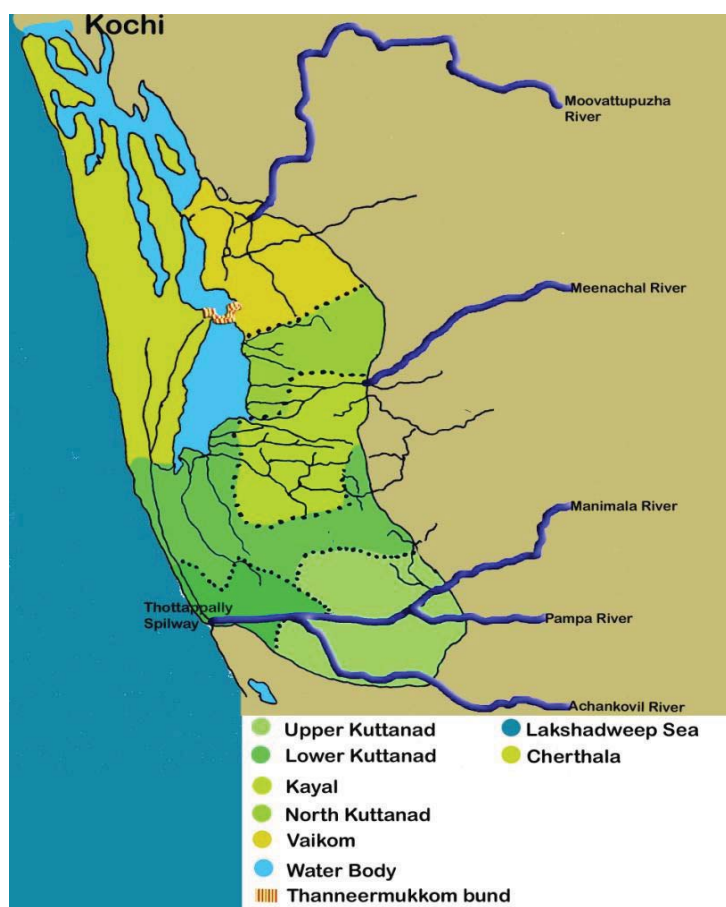
‘Kuttanad’ is a geographical region covering parts of Alappuzha, Kottayam and Pathanamthitta districts, forming the floodplain⁹ of four rivers namely, Pampa, Achenkovil, Manimala and Meenachil of the Vembanad Wetland System stretching from Kayamkulam Backwaters in the south to Cochin in the north. Its flood plains also comprise of marshy low-lying areas below mean sea level. The land in Kuttanad was partly a natural formation in the backwater caused by deposit of silt and sand by the rivers while the other parts were developed through reclamation. Nearly 57 per cent of Kuttanad falls in Alappuzha, 30 per cent in Kottayam and 13 per cent in Pathanamthitta districts as depicted in the chart below.



Kuttanad was once considered as ‘rice bowl of Kerala’. Agricultural practices of Kuttanad are unique as rice cultivation is practiced two meters ‘below sea level’. Cultivation in these fields below sea level is a huge gamble with the floodwaters brought by the northeast monsoon during October-November and tidal intrusion of saline water during summer, where outer bund plays a critical role in minimising risks due to natural causes. This wetland was declared a Ramsar¹⁰ Site in November 2002.

⁹ A low plain adjacent to a river that is formed chiefly of river sediment and subject to flooding

¹⁰ The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an inter-Governmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.



In spite of its natural wealth, Alappuzha district has a high proportion of population living in poverty. Thus GoI approved (September 2006) a specific package for Alappuzha and Idukki districts at the request of GoK and Members of Parliament from the region along with a 'Special Rehabilitation Package' for distressed farmers of the 31 districts of Andhra Pradesh, Karnataka, Maharashtra and Kerala.

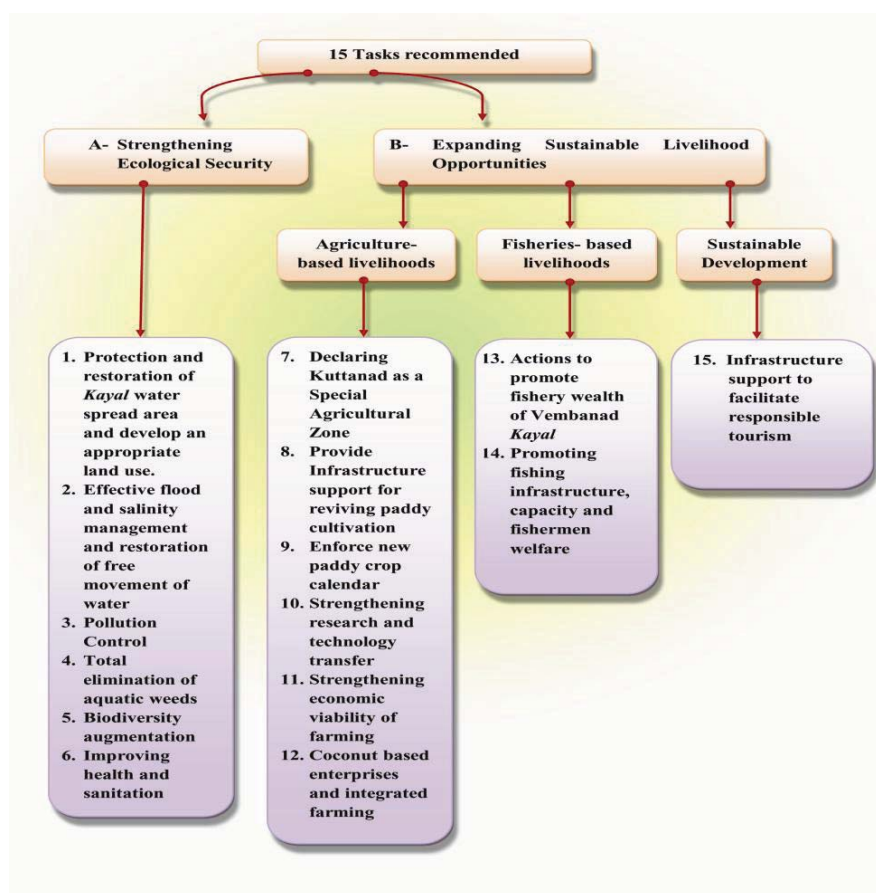
Ministry of Agriculture, GoI, engaged (November 2006) M. S. Swaminathan Research Foundation¹¹ (MSSRF), Chennai to conduct a study on the economic and ecological problems of Alappuzha district as well as the Kuttanad Wetland Ecosystem (KWE) as a whole. MSSRF was also required to report on sustainable development of KWE and make specific recommendations on measures for strengthening the ecological security of the KWE, and measures for expanding sustainable livelihood opportunities for the area.

MSSRF submitted (August 2007) its Report to GoI recommending 15 tasks¹², with a financial outlay of ₹ 1,840.75 crore. GoI granted (July 2008) 'in-

¹¹ M S Swaminathan Research Foundation (MSSRF) is a non-profit research organisation established in 1988 for research and development in pro-nature, and pro-sustainable on-farm and non-farm livelihoods through appropriate eco technology and knowledge empowerment.

¹² Tasks are specific programmes/interventions recommended for implementation in the study area with a view to achieve the stated objectives of the study.

principle' approval for providing financial support for implementing various programmes/interventions suggested by MSSRF, through the Ministries/departments concerned within their existing schemes¹³ of funding pattern. A formal order for implementing the recommendations of MSSRF was issued by the GoK in October 2008. For receipt of assistance, GoK was to identify different activities and formulate Detailed Project Reports (DPRs) conforming to the guidelines/procedures of existing Central schemes and submit them to the departments/Ministries concerned under GoI. DPRs prepared by implementing departments/agencies were sent to GoI for release of funds with the approval of GoK. The 15 tasks were broadly grouped under two heads - Strengthening of Ecological Security and Expanding Sustainable livelihood opportunities, for which ₹ 335.50 crore and ₹ 1,505.25 crore respectively were proposed by MSSRF. The project was to be implemented within a period of five years, as informed by the Minister of State for Agriculture to Rajya Sabha in December 2008.



¹³ Rashtriya Krishi Vikas Yojana (RKVY), Flood Management Programme (FMP), Seed Village Programme (SVP), Agricultural Technology Management (ATMA) Scheme, Coconut Development Board (CDB), National Project for Cattle and Buffalo breeding (NPCB) Scheme, Integrated Development of Small Ruminants and Rabbits (IDSRR) Scheme, National Wetland Conservation Programme (NWCP), grants under XIII Finance Commission (ThFC) and Development of Inland Aquaculture and Fisheries (DIAF).

Seventy five works (including sub works) are being implemented by 10 departments¹⁴ and 11 allied agencies¹⁵. The total amount sanctioned and actual expenditure as on February 2014 was ₹ 1,261.31 crore and ₹ 314.43 crore respectively.

2.2.2 Scope of Audit

A Performance Audit was conducted during February 2013 to September 2013 covering the period from 2009-10 to 2012-13. The Performance Audit involved scrutiny of records of 17 projects covering 80 *per cent* of the total expenditure incurred under the Kuttanad Development Package (KDP), up to 31 March 2013, by various implementing departments/agencies. The criteria adopted for sampling is explained in detail in **Annexure VI**. Thrust was given to Irrigation as major share (82 *per cent*) of the outlay for the KDP was for this department.

2.2.3 Audit Objectives

The main objectives of this Performance Audit were to ascertain whether:

- i) the project planning was effective and efficient;
- ii) financial controls were in place, effective and adequate;
- iii) project implementation was economic and effective to avoid cost and time over-run, at all stages of execution; and
- iv) the principal objectives of strengthening ecological security, and, expanding sustainable livelihood opportunities in Kuttanad, were achieved to the extent implemented.

2.2.4 Audit Criteria

The implementation of various components of selected projects was audited with reference to the criteria derived from following documents:

- i) M.S. Swaminathan Research Foundation Report;
- ii) Guidelines/instructions issued by GoI with relation to Funding Schemes;
- iii) State Government Orders released in connection with KDP;
- iv) Kerala Public Works Account Code, Kerala Public Works Departmental Code and Manual of Public Works Department;
- v) Sanctioned DPRs, sanctioned original/revised estimates, working instructions of projects; and

¹⁴ Irrigation, Agriculture, Fisheries, Soil Survey and Conservation, Animal Husbandry, Forest, Local Self Government Department, Health, Tourism and Social Welfare.

¹⁵ Kerala Agro Industries Corporation (KAICO), Onattukara Vikasana Agency (OVA), Kerala State Seed Development Authority (KSSDA), Kerala Livestock Development Board (KLDB), Agency for Development of Aquaculture Kerala (ADAK), Fisheries Resources Management Agency (FIRMA), Kerala State Co-operative Federation for Fisheries Development Ltd.(MATSYAFED), Kerala Agricultural University (KAU), State Horticulture Mission (SHM), Suchitwa Mission and Asoka Trust for Research in Ecology and Environment (ATREE).

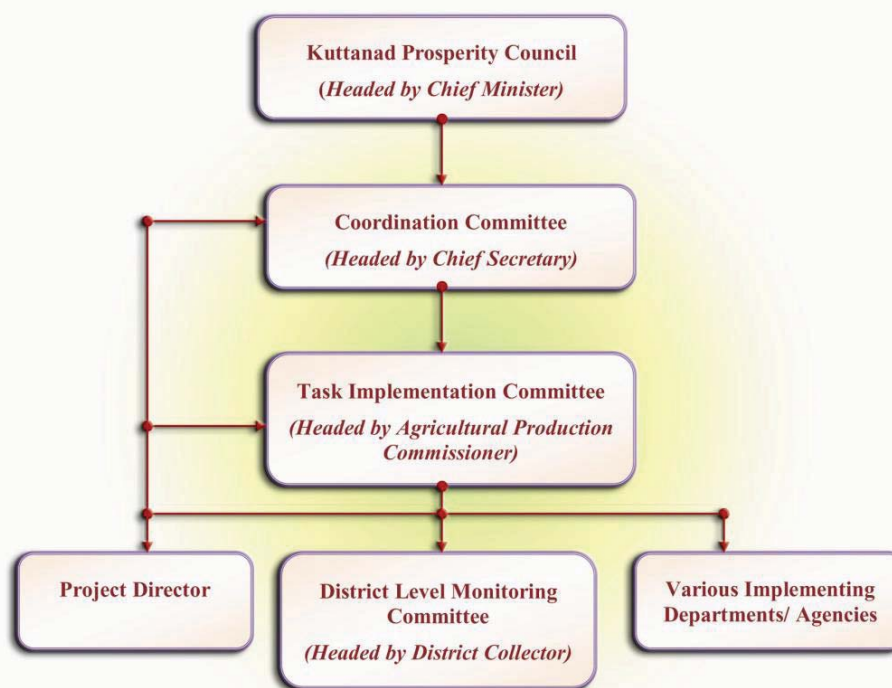
- vi) Agreements executed between implementing departments and the contractors/beneficiaries and quality control reports of Rajiv Gandhi Institute of Technology and Kerala Agricultural University.

2.2.5 Audit Methodology

The methodology adopted for attaining audit objectives with reference to audit criteria consisted of explaining audit objectives to the Top Management in an entry conference held in April 2013, scrutiny of records at controlling office of the line departments and selected units, interaction with auditee personnel, analysis of data with reference to audit criteria, raising of audit queries, discussion of audit findings with Heads of department and issue of draft performance audit report to the Government.

The exit conference was conducted on 29 April 2014 with Additional Chief Secretary, Water Resources department along with various implementing officers and Audit observations discussed. The comments of the departmental authorities were taken into account and incorporated appropriately in the Report.

2.2.6 Governance structure for implementation of KDP



A separate wing headed by Chief Engineer, Kuttanad Package (CE/KP) was created (June 2011) for the purpose only in Irrigation department. The CE was assisted by 371 staff.

2.2.7 Audit findings

For the successful and smooth implementation of recommendations, the MSSRF divided various activities into 15 tasks which were interdependent. GoK, however, failed to implement some of these important tasks. The deficiencies noticed in planning and implementation of the KDP are discussed in the following paragraphs:

2.2.7.1 Inaction on priority/recommended tasks

Strengthening of ecological security:

- Non-identification of implementing agencies for Task 1 and 6 till July 2013 has resulted in failure to take even the initial steps to get approval/sanction from GoI.
- There was delay in preparation and forwarding of two DPRs in respect of Thaneermukkom Bund (TMB) and Thottappally Spilway (TSW) by the GoK in respect of Task 2. Consequently, the approval by the Ministry of Water Resources, GoI, is still awaited though they are ecologically important tasks (July 2013).
- Tender for Phase I of “Complete construction of Alappuzha Changanacherry (AC) Canal” was not finalised. DPRs for the remaining phases were yet to be approved (July 2013).
- Non-finalisation of design of the side protection wall for creating a wide channel between Rani and Chithira as well as C and D¹⁶ blocks in *kayal*¹⁷, a component of Task 2, is leading to delay in completion of an important flood control measure.
- Non-preparation of DPRs for Task 3 for execution of measures for pollution control is causing delay in addressing the issue of exceedingly high concentrations of plant nutrients, high levels of bacterial coliform, pesticide concentration and heavy metal contamination at distressing levels at different locations.

Expanding sustainable livelihood opportunities (Agriculture-based):

- Kuttanad is yet (March 2014) to be declared as a “Special Agricultural Zone” (Task 7) though it is an important task included in MSSRF recommendation for promoting an eco-system friendly farming, generation of additional economic activity, promotion of investment, creation of employment opportunity and development of farming infrastructure. The Prosperity Council could not take effective steps to declare Kuttanad as a Special Agricultural Zone.
- Implementation of Crop calendar, as recommended in Task 9 of MSSRF Report for facilitating sowing of *punja*¹⁸ crop by November and its harvest by February, so as to enable opening of TMB by late February, could not be implemented up to October 2013, though the

¹⁶ C, D, Rani and Chithira are the names for identifying *padasekharams* reclaimed from *Kayal* (Lake).

¹⁷ *Kayal* is the malayalam word for backwater/lake.

¹⁸ *Punja* crop is paddy cultivated in the largest area of Kuttanad, grown from November to February

Agriculture department prepared one in May 2012. Such a calendar would have facilitated longer opening time of TMB, which in turn would strengthen the general ecology of Kuttanad.

With regard to tasks yet to be taken up under both the groups, the Secretary (Agriculture department) stated (October 2013) that Director, Centre for Earth Science Studies (CESS) had been entrusted to prepare an integrated action plan with focus on restoration of water spread area of the lake, salinity and flood management, pollution control, prevention of soil erosion. It was further stated that a full-fledged crop calendar could be insisted only after strengthening outer bunds.

Failure to take effective steps to plan for implementation of these important tasks resulted in delay in achieving both the objectives of strengthening ecological security and expanding sustainable livelihood opportunities.

2.2.7.2 Physical and financial progress

The physical and financial progress achieved by various line departments/agencies and the deficiencies noticed therein, are discussed below:

i) Physical Progress

The Scheme/Activity-wise status as of July/August 2013 covered under KDP is given in **Annexure VII**. The physical status of Irrigation and Agriculture department revealed that the targets set were not achieved adequately even after a period of five years since the approval of the Package (July 2008) resulting in non-achievement of intended objectives of KDP. Audit also noticed that the reported physical status did not match with actuals as exemplified below:-

Sl. No.	Department / Agency	Scheme/Activity	Progress of implementation reported for the month July/August 2013	Audit findings
1	Kerala Agricultural University	Strengthening of ORARS ¹⁹ Lab complex	Strengthening of laboratory complex, renovation of existing laboratory and training hall including seed production unit and Mobile Agro Clinic cum mobile lab established	Structure for laboratory and Training Centre is yet to be completed (March 2014).
2	Agriculture	Agriculture Mechanisation-Distribution of 328 motors and 121 <i>Petty-para</i>	Distributed 328 motors and 121 <i>petty para</i> ²⁰	Partly completed.
3	Irrigation	<i>Orumuttus</i> creation of 33 permanent Kottachira across Kariyar	Work implemented under XIII Finance Commission Award	Regulator across Kariyar not completed. Only one <i>orumuttus</i> out of 33 completed.

¹⁹ Onattukara Regional Agricultural Research Station

²⁰ *Petty para* is an indigenous pumpset used for dewatering paddy fields for enabling cultivation.

ii) Financial Progress

Though GoI fully approved the recommended tasks of MSSRF with an outlay of ₹ 1,840.75 crore, GoK decided (October 2008) to implement projects for ₹ 1,825.75 crore, after excluding the seventh task of declaring Kuttanad a 'Special Agricultural Zone' with an outlay of ₹ 15 crore. The funds sanctioned, released and utilised as of July 2013 is given in the following table:

(₹ in crore)			
Department/Institution	Funds sanctioned	Funds released	Funds utilised as of July 2013
Irrigation	821.99	144.80	112.79
Agriculture	131.59	71.64	68.61
State Horticulture Mission	15.23	9.40	9.29
Kerala Agricultural University	42.06	31.28	10.15
Animal Husbandry	46.81	25.55	13.43
Kerala Livestock Development Board	5.26	3.18	2.87
Fisheries	24.43	10.84	5.77
Forest	4.95	2.75	2.72
Fisheries Resources Management Agency	21.29	8.68	8.68
Tourism	0.50	0.50	0.12
Suchitwa Mission	5.93	3	0.02
Local Self Government	9.54	4.45	0.11
Health	0.22	0.22	0.50
Agency for Development of Aquaculture, Kerala	20.71	13.20	9.69
Soil Conservation	15.25	7.28	6.76
Total	1,165.76	336.77	251.01

(Source: Status Reports compiled by Project office available in official website of Kuttanad Package)

2.2.8 Deficiencies in Management

2.2.8.1 Financial Deficiency

i) Maintenance of Accounts

The implementing departments receive funds from GoI and GoK. Though the Irrigation and Fisheries departments had sub heads for ongoing Central schemes for booking expenditure, other eight departments had no such budget heads. As a result, expenditure on KDP could not be easily identified and correlated with the amount booked in the State's account.

Short release of funds was mainly seen in the Irrigation department. Audit observed that the delay in preparation and submission of DPRs and under-utilisation of earlier instalments of funds led to delay in release of funds.

ii) Non-utilisation of sanctioned fund by Irrigation department

Funds for projects under KDP entrusted with the Irrigation department were released from Flood Management Programme (FMP) and XIII Finance Commission (ThFC) grants. The CE (KP) was maintaining two Special Treasury Savings Bank (TSB) Accounts²¹ with the District Treasury Alappuzha.

Total provisions in the Budget and expenditure details of FMP Schemes disclosed the non-utilisation of sanctioned fund as given below:-

(₹ in crore)

Year	Total grant in Budget (Original plus Supplementary)	Expenditure	Surrender
2010-11	84.63	36.48	48.14
2011-12	350.00	2.79	347.21
2012-13	200.00	100.95	98.81
Total	634.63	140.22	494.16

(Source: Compiled by audit from details furnished by Irrigation department)

From the above table it could be seen that out of ₹ 634.63 crore sanctioned, ₹ 494.16 crore was surrendered due to delayed implementation of projects. It was further seen in audit that out of ₹ 140.22 crore shown as expenditure, an amount of ₹ 51.61 crore was lying in TSB Account (March 2013).

In addition to above, the Irrigation department received ₹ 24.72 crore²² from ThFC grants as some projects did not match with FMP guidelines. Out of this, only ₹ 8.40 crore was spent and the unutilised balance of ₹ 16.31 crore was kept in the TSB account (March 2013). Thus, total unutilised balances in two TSB accounts stood at ₹ 67.92 crore.

The slow progress in implementation of the projects had adversely affected the agriculture in Kuttanad due to saline intrusion as barriers remained incomplete and outer bund breach due to non-strengthening of outer bunds.

2.2.8.2 Organisational Deficiency

On approval of Project by GoK in October 2008, an Indian Forest Service Officer, was appointed²³ (December 2008) as the first Project Officer for Kuttanad Package, for co-ordination of various implementing departments/agencies and to liaison with the Central/State Governments for obtaining required funds for different Tasks/Activities. Currently an Indian Administrative Service Officer is holding additional charge of Project Officer with effect from 23 May 2013.

KDP is to be implemented through 10 departments and 11 allied agencies spread across three districts. The Project Officer was to co-ordinate with different line departments and agencies implementing the projects and to

²¹ Account Nos. 4821 for FMP and 4868 for ThFC.

²² ₹ 11.68 crore in 2011-12 and ₹ 13.04 crore in 2012-13.

²³ Government Order (Rt.) No.9555/08/GAD 9 dated 12.12.2008.

facilitate the preparation and submission of DPRs by line departments under the existing schemes to obtain funds from the Government for tasks envisaged in the Package. Instead of approving the request by the Project Officer for a Special Purpose Vehicle as recommended in MSSRF Report, the Co-ordination Committee decided (October 2010) to strengthen the Project Office by providing additional staff including a Public Relations Officer to improve the co-ordination activities. But this was not yet done. Audit noticed that there was no co-ordination among these departments and with Project office. Decisions taken at different levels within the different departments were not known to the other departments and even to the Project Officer. Further, funds were released directly to the line departments. Project Officer had no financial monitoring over these departments. Hence the Project Officer could not synchronize different activities of the line departments and agencies which were vital for proper implementation. His functions were limited only to transmission of the DPRs for approval and compilation of progress reports as and when received. Project Office intimated (November 2013) Audit that Agriculture, Animal Husbandry, Soil Conservation and SHM submitted their progress only on request.

GoI, with the concurrence of State Government, decided to fund KDP under on-going Central Schemes. Hence the requirements of several tasks could not be accommodated within the guidelines of such schemes, causing deviations from the recommendations of MSSRF. The Secretary to GoI (Agriculture and Co-operation) stated (February 2009) in a review meeting that the Package was quite flexible and the State Government had the discretion to decide the funding sources for projects. Therefore, State Government could have explored alternate funding sources without violating the recommendations.

The details of meetings conducted by the three important Committees from inception to March 2013 are given below:-

Name of Committee	Chaired by	Committee formed on	No. of meetings held during each financial year
Kuttanad Prosperity Council	Chief Minister	15 October 2008	2008-09: 1 2009-10: 2 2010-11: 1 2011-12: 3 2012-13: 1
Coordination Committee	Chief Secretary	15 October 2008	2008-09: 1 2009-10: 7 2010-11: 5 2011-12: 3 2012-13: 1
Task Implementation Committee	Agricultural Production Commissioner	15 October 2008	2008-09- 1 2009-10: 5 2010-11: 4 2011-12: 2 2012-13: 1

It was also seen in audit that all the three committees had conducted only one meeting during 2012-13. This indicated the poor monitoring of the implementation of KDP.

2.2.9 Issues relating to Irrigation department

Irrigation department had a significant role in the implementation of KDP as projects involving an outlay of ₹ 1,518.50 crore (82 *per cent*), out of the total project cost of ₹ 1,840.75 crore was to be executed by that department. The department, however, had not drawn up a comprehensive plan, determining the time line and quantum of work for effective execution of the project as discussed in the following paragraphs.

2.2.9.1 Delay in preparation and submission of DPRs

The total projected cost of 13 DPRs prepared by the Irrigation department amounted to ₹ 3,804.65 crore (July 2013) (**Annexure VIII**) which showed an increase of 151 *per cent* over the projected outlay of ₹ 1,518.50 crore. The projected cost was based on the Schedule of Rates (SoR) of 2006 and there were revision of SoRs every year. Thus, delayed submission of DPRs, approval from GoI and invitation of tenders led to huge escalation in cost of the project. The delays at various stages in planning are detailed below:-

- As the DPRs prepared by Agriculture department were not in conformity with the FMP guidelines, same were rejected by GoI in December 2008. Consequently, a task force was formed for preparation of revised DPRs in Irrigation department (February 2009) which took nine months (November 2009) to send the first DPR. Lack of clarity regarding the funding scheme and long line of institutional approvals for sanction were other noted reasons for delay.
- The Irrigation department submitted two²⁴ DPRs with an estimated cost of ₹ 631.90²⁵ crore in September/November 2010, the implementation period of which spilled over beyond XI Plan period (2007-12). Hence, GoI partly approved (May/November 2011) the DPRs for ₹ 176.13 crore for the XI Plan period. The unapproved portion of the DPRs amounting to ₹ 451.31 crore has to be met by GoK which included, GoI share of ₹ 338.48 crore (75 *per cent*) of project cost. Since the FMP guidelines clearly stated that it was only applicable to XI Plan, DPRs should have been prepared immediately on approval (July 2008) of the Package by GoI.
- Five DPRs, prepared for assistance under FMP, estimated at ₹ 2,978.05 crore, remained unapproved (July 2013), which include ecologically important DPRs such as Modernisation of TMB and TSW. GoI intimated (April 2013) the State Government that Package period was over, but implementation of sanctioned schemes could be continued. Consequently, the delay in preparation of DPRs may provide additional burden to GoK to the tune of ₹ 2,233.54 crore (75 *per cent* of ₹ 2,978.05 crore) to complete the recommended projects in their full scope.

²⁴ Mitigation of floods in Kuttanad Region Phase I- 231 padasekharam (₹ 379.15 crore) and Mitigation of floods in Onattukara region (₹ 252.75 crore).

²⁵ Investment Clearance obtained from Planning Commission was for ₹ 627.44 crore, against estimated cost of DPRs amounting to ₹ 631.90 crore.

2.2.9.2 Implementation

The projects under Tasks 2 and 8²⁶ recommended in the MSSRF Report with an estimated cost of ₹ 1,518.50 crore was entrusted to the Irrigation department which were further divided into eight sub-tasks/programmes/interventions. Audit test checked the works executed under KEL I and II²⁷, Regulation of flood water in *kayal* near C and D, Rani and Chithira and Construction of Bridge-cum- Regulator across Kariyar and found that projects remained incomplete even after the scheduled date of completion of three projects. In the exit conference the ACS stated that in respect of the time lag in the implementation of the package, though the scheme was sanctioned in 2008 “in principle”, it was conceptualised in 2009 and launched in 2010. The remark is not acceptable to audit as GoI had intimated (April 2013) GoK that the implementation period of the package is over. Moreover, Audit observed that there was deviation from the recommendations of MSSRF on actual execution. The said aspects are discussed in succeeding paragraphs.

i) *Incorrect fixing of outer bund height*

Paddy fields in Kuttanad exist in clusters called *Padasekharams*, which are bound by an outer bund, to protect them from surrounding water bodies. Strengthening of outer bund during every crop season is very crucial to safeguard crop from frequent flooding and intrusion of saline water. Works relating to outer bund strengthening and allied infrastructure were funded under FMP. The bund height recommended in the Report was to be determined by reckoning the average flood level during the last 10 years. Against this the bund height was arrived at by reckoning the flood frequency of 25 years (FMP guidelines), consequently increasing bund section and cost. The bund height recommended by MSSRF was to avoid problems of adverse ecological impact from reduced flood plain. As flood mitigation was one of the important services performed by the Kuttanad Wetlands, which included paddy polders²⁸, constructing a higher outer bund to paddy polders than recommended, would cause flooding in the inhabited area as the bund would not be submersible and hence would not allow the flood waters to overflow in to the paddy polders.

Thus the decision of the Irrigation department to deviate from MSSRF recommendation had resulted in defeating the objective of enabling the *padasekharams* of Kuttanad Region to function as flood plains.

ii) *Usage of pile and slabs instead of bio-bunding for outer bunds resulting in adverse effect on ecology and reduction in water spread area*

The Report had recommended²⁹ that the material to be used for protecting water-facing sides of outer bunds should be stiff clay, wherever feasible, with

²⁶ Task 2 Effective flood and salinity management under Strengthening Ecological Security and Task 8 Provide Infrastructural Support to Paddy cultivation under the group “Strengthening Livelihood Security-Agriculture based livelihoods”.

²⁷ KEL I, II are scheme codes assigned to approved schemes by Ministry of Water Resources, GoI.

²⁸ Group of paddy fields.

²⁹ Paragraph 8.1.2

bio-bunding on the water side, while restricting rubble masonry to areas where requirement of strength was critical. As against this, the Irrigation department constructed pile and slab type protection, using costly Reinforced Cement Concrete.

The Associate Director of Research at Regional Agricultural Research Station, Kumarakom opined (November 2013) that natural bund made of stiff clay is better suited for the flora and fauna in the lake. It was also stated that the egg depositing substratum and feeding ground for many fishes including the much caught *Karimeen*³⁰ (Pearl Spot) are natural hard objects and small plants in the shallow waters. Hence conversion of such bunds to a vertically built smooth pile and slab structure will definitely hinder the feeding and breeding activities of fishes.

Thus, the decision to protect the bunds with pile and slabs defeated the very purpose of implementation of the Project.

Pile and slabs were erected on the *kayal* bed at a distance of 0.80 to 1.00 m away from face of outer bunds, despite specific recommendation of MSSRF that the task of strengthening outer bunds should not reduce canal width. Reduction of water spread area had adverse impact on flood plain services of the wetlands, resulting in increased frequency of floods.



The Member Secretary, Planning Commission, GoI, observed (January 2012) that using pile and slab over rubble masonry was duplication of work and expensive with no additional benefits. It was directed to strengthen the existing rubble masonry and pile and slab need be provided only in areas where rubble masonry did not exist, however the department did not adhere to the directions.

To the remarks that the strengthening of the bunds with rubble masonry in terms of MSSRF recommendations instead of pile and slab structure, the ACS stated in the exit conference that the work of pile and slab was carried out only in five *per cent* of length proposed due to high cost. The remark is not tenable

³⁰ Pearl spot is a highly demanded and priced variety of fish, which is declared the State Fish.

as the work of pile and slab was not recommended by MSSRF as it would not allow seepage of water through rubble masonry.

iii) Cost escalation amounting to ₹ 1.05 crore due to change in width of outer bunds after approval of DPR by GoI

The MSSRF Report recommended to provide an outer bund with a top width of 3 m for road space, facilitating movement of farm machinery. However, approved DPRs under the schemes KEL I and II had proposed outer bunds of 2 m width. In the Co-ordination Committee meeting convened (October 2010) by the Chief Secretary to GoK, the department informed that DPRs with 2 m bund width was prepared based on decisions taken during earlier meetings to ensure that Kuttanad was not converted into a real estate haven. Later, the Kuttanad Prosperity Council decided (January 2011) to provide width of 3 m, based on necessity in *Kayal* areas and Lower Kuttanad. Accordingly, the estimates were revised and consequent increase in estimate was ₹ 1.05 crore. Since approved cost was firm, additional expenditure of ₹ 1.05 crore will have to be borne by GoK.

The ACS remarked in the exit conference that the excess cost would be borne by the State.

iv) Unwarranted strengthening of outer bunds for Rani and Chithira under FMP resulted in avoidable expenditure of ₹ 17.31 crore

MSSRF Report recommended to strengthen outer bunds to Rani (T block) and Chithira (Q block) *padasekharams* comprising of 402 hectare, lying abandoned for years together due to abuse by dredging and not suitable for paddy cultivation, to enable regular cultivation. In case, this could not be done, it was suggested to convert these blocks into a fishery sanctuary. The Irrigation department carried out the work of strengthening of outer bunds of these *padasekharams*. As per the progress report compiled by the CE (KP) the work was incomplete and hence neither of the recommended objectives could be achieved despite spending ₹ 17.31 crore. The Irrigation department took up this work on priority basis despite knowing the fact that the land was abandoned for a long time and not suitable for paddy cultivation. In this connection, Audit noticed that an amount of ₹ 13.34 crore was paid as compensation to farmers of Alappuzha district alone for crop loss arising due to bund breach during the period 2009-10 to 2012-13. Expenditure incurred on repair of breach of bunds during the same period in Alappuzha and Kottayam districts was ₹ 1.16 crore.

This unwarranted work also came up for discussion in the Task Implementation Committee meeting, where the officials from Irrigation department admitted (September 2011) that bund constructed in Rani and Chithira was not necessary and was a mistake. Thus, this amount could have been used for strengthening outer bunds to *padasekharams* which were vulnerable to breach.

v) Slow progress in implementation of the project

KEL-I

This scheme for mitigation of floods in 14 *Padasekharams* (KEL I³¹) in Nedumudy Panchayat, Alappuzha district received investment clearance in May 2010. The scheme was sanctioned for a cost of ₹ 24.70 crore, under FMP, at the 2009 SoR and was to be completed by 31 March 2012. Works included raising and strengthening existing bunds by using clay excavated from adjacent water bodies, protection with rubble masonry etc. Audit found that as against stipulated period of completion of March 2012 for 14 works, only two were completed.

The CE (KP) reported (April 2013) to GoK that works could be completed only by March 2014. Reasons attributed for slow progress of the scheme was delay in according Technical Sanctions (TS), difficulty in transporting materials to site, scarcity of materials, obstruction to work due to cultivation etc. The reasons stated were not acceptable as the responsibility of according TS rested with the same department and the fact that the works could be executed only by bringing materials to the site was known both to the department and the contractors. Due to the slow progress of the works and expiry of approved time of completion, ₹ 11.10³² crore, being balance portion of Central Share receivable, was not released as of March 2013.

KEL-II

The works consisted of cutting of existing barriers and constructing channels between C and D as well as Rani and Chithira blocks to regulate flood waters as shown in the diagram below, strengthening of their outer bunds and raising and strengthening of existing outer bunds of five *padasekharams* in Group nine. The estimated cost of the scheme (KEL II) approved (July 2010), under FMP, was ₹ 118.91 crore. Though it was scheduled for completion by 31 March 2012, no works were completed as of March 2013 and physical progress achieved ranged from 20 to 71.50 per cent.



 Barrier to be opened between C -D and Rani - Chithira blocks.

³¹ KEL I and KEL II are codes assigned by GoI to Schemes while according Sanction.
³² 75 per cent of 24.70 – 7.425

The CE (KP) reported (April 2013) to GoK that these works also could be completed only by March 2014. Reasons attributed for delay by the department in implementing the scheme was time-lag in according TS and tendering, difficulty in transporting materials to site, litigation, non-sanction of Revised Estimates (RE) despite their submission nine months back, etc. REs for C, D blocks and Rani, Chithira blocks were pending approval from Finance department and approval for structural adequacy and design from the Irrigation Design Research Board. On the delay being pointed out in audit CE, (KP) replied (July 2013) that no milestones/time-frames were fixed for implementation of the project and that department was unaware of any time-frame for implementation. Moreover, due to the slow progress of the works and expiry of approved time of completion, ₹ 74.18³³ crore, being balance portion of Central Share receivable, was not released as of March 2013.

Audit observed that there was delay ranging from two to 10 months for according TS by GoK. The RE was necessitated as length of pile and slab provided as well as the design of the protection wall was insufficient despite the fact that DPR was prepared by an expert team.

Further, delay in work resulted in denial of intended benefit to the farmers and non-release of subsequent instalments of Central Assistance. It was also observed that substantial variations brought after GoI's approval to estimates, would further burden the State's resources as the estimate cost approved by the GoI was firm.

vi) Crop loss due to non-completion of salinity barriers

MSSRF recommended³⁴ construction of 33 *Orumuttus* or salinity barriers in order to prevent intrusion of salt water into paddy fields. It was observed in audit that proposals were approved for only five numbers of which only one work could be completed. Thus, due to non-completion of the salinity barriers, total crop loss assessed in Kuttanad region due to salinity intrusion for the period from 2010-11 to 2012-13 was ₹ 16.25 crore.

vii) Payment on incidental items of work in violation of tender conditions resulted in undue benefit to the contractor ₹ 73.36 lakh

During execution of the work of Bridge-cum-Regulator across Kariyar, RE was proposed with increase in dimensions of ring bund - 'Putting up ring bund with 6.25 m average bottom width and 4 m average top width' was introduced as an extra item to substitute the originally agreed item of 'Putting up ring bund with bottom width of 4.25 m average and top width of 3.00 m average etc'. The Irrigation department stated (May 2012) that the substitution was necessitated as the actual depth of water to be held was 6.5 m against 2.5 m proposed, the quantity of earthwork excavation for preparing the bed increased and ring bund section provided was unable to withstand heavy vibration caused by the six piling rigs working simultaneously after dewatering. On consideration of the RE, Water Resource department (WRD) directed (November 2012) to review the expensive design, since the original rate for the item was only ₹ 5,283/m against ₹ 25,014/m proposed in RE. But CE (KP)

³³ 75 per cent of 118.913 – 15.

³⁴ Sub task 8.1.7 under Task 8 of MSSRF Report.

declined (December 2012) the possibility of reducing the RE, as provision was the least and the minimum required for satisfactory completion of work and RE was approved by WRD in March 2013.

In terms of Clause 5 of Special conditions of Contract the rate quoted by the tenderer for schedule items of work shall cover such charges as are incidental and for proper execution of the item of work. The clause also stipulated that no extra claims on account of incidental charges, like ring bund etc., carried out as per necessity for proper execution of the item shall be admissible. Since the contractor would have reckoned site conditions before quoting his rate, and as the RE did not propose change in the site or type of foundation, any additional provisions for ring bund which was incidental to the work, relating to concreting of pile and its cap, was to be borne by the contractor.

Thus, the revision of estimate for proposing increase in dimension of ring bund resulted in additional expenditure of ₹ 73.36 lakh³⁵ and extension of undue benefit to the contractor.

viii) Injudicious decisions led to cost escalation of ₹ 2.34 crore and delayed the arrangement of works

Tenders for the works costing ₹ two crore and more in the Irrigation department had to adhere to the Pre-qualification (PQ) process, where a minimum of four pre-qualified contractors were necessary to ensure fair and reasonable competition in a PQ process. Otherwise, the works had to be re-tendered and finally open tender should be resorted to, if necessary.

Due to absence of the stipulated minimum number of PQ tenderers for the three works as detailed in the Table below, CE requested (September 2010) WRD, GoK to relax the stipulation of minimum number of participants for a PQ tender process to avoid cost escalation. WRD, however, turned down the request because such relaxation required concurrence of Finance department and approval of Council of Ministers which was time consuming and hence directed CE (KP) to revise the estimate based on SoR 2010 and re-tender the works. Complying with the above directions the three works were re-tendered. Details of the works are given below:-

(₹ in crore)

Sl. No.	Name of work	Estimated PAC on original tender (SoR 2009)	Estimated PAC on subsequent award of work (SoR 2010)	Cost escalation in estimate	Accepted PAC
1.	KP-FMP-Mitigation of flood in Manthrakkal Ganapathypadom in Group I <i>padasekharams</i>	4.01	5.23	1.22	4.76
2.	KP-FMP-Mitigation of flood in Muttanavelipadom in Group I <i>padasekharams</i>	3.21	4.16	0.95	4.16
3.	KP-FMP-Mitigation of flood Puthenkarypadom in Group I <i>padasekharams</i>	2.14	2.78	0.64	2.78
Total		9.36	12.17	2.81	11.70

(Source: Compiled by Audit from the information furnished by Irrigation department)

³⁵ (₹ 25,014 – ₹ 5,283) x 361m x 1.03 (3 per cent tender excess).

As seen from the above table the works were initially tendered based on SoR 2009, but retendered based on SoR 2010. In respect of three works, under KEL I, total cost escalation in estimate was ₹ 2.81 crore and works were finally awarded at total cost of ₹ 11.70 crore.

It was observed that in a similar situation, when the CE requested (January 2012) for relaxation of PQ requirement, WRD gave its consent on the grounds that Irrigation and PW departments were one and the same before bifurcation and they follow the same Manual and SoR. Had such an approval been given on the earlier request, cost escalation of ₹ 2.34³⁶ crore could have been avoided. Considering the fact that the cost approved by GoI for the scheme was firm, and no cost escalation would be considered, the State will have to bear the escalated cost.

2.2.10 Impact of Observations

i) Ecological Impact

Sl. No.	Para No.	Subject of Para	Ecological Impact
1	2.2.7.1	Non-identification of implementing agencies of Task 1 and 6	Restoration of water spread area to increase accommodation of floods could not be achieved
2	-do-	Non-approval of DPRs for TMB and TSW	i) TMB was erected to prevent the intrusion of salinity into the paddy fields, but the structure was not completed as envisaged. Modernisation of TMB was recommended for better control of salinity and to prevent ecological decay, as it would facilitate expunging of aquatic weeds and impurities from KWS and also to increase fishery wealth. Non-implementation of the project failed to achieve the projected benefits. ii) Improving efficiency of TSW aimed at improving flood control, but the stated objective could not be achieved as the project could not be implemented.
3	-do-	Work of 'Complete construction of AC canal' not taken-up	Flood Control was the major objective of the work. As this project did not take off, Kuttanad continues to be affected by floods.
4	-do-	DPR for Task 3- 'Measures for Pollution Control' not prepared	Due to non-implementation of the task, water pollution due to plant nutrients and bacterial coliform in high concentration continued. Similarly, the pesticide concentration and heavy metal contamination in water remained at distressing levels.
5	-do-	Non-implementation of Crop Calendar	Non-enforcement of Crop Calendar resulted in the TMB remaining closed for a longer duration, thus affecting general ecology and its decay.
6	2.2.9.2 (ii)	Usage of Pile and Slab instead of bio-bunding for outer bunds resulting in adverse effect on	i) Construction of vertically built pile and slab with smooth surface will hinder the feeding and breeding activities of fishes. ii) Erection of pile and slab on the <i>kayal</i> bed

³⁶ ₹ 11.70 crore - ₹ 9.36 crore

		ecology and reduction in water spread area	at a distance of 0.80 to 1.00 m away from the existing face of the bunds resulted in reduction of canal width, thus reducing water spread area. Reduction of water spread area had adverse impact on the floodplain services of wetlands, which would result in increasing frequency of floods.
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ii) Financial Impact

Sl. No.	Para No.	Subject of Para	Financial impact (₹ in crore)
1	2.2.7.2(ii)	Financial Progress- Under utilisation	251.01
2	2.2.8.1(ii)	Non-utilisation of sanctioned fund by Irrigation department 1. FMP provision 2. ThFC grants	494.16 16.32
3	2.2.9.1	Delay in preparation and submission of DPRs (Irrigation) 1. Possible financial burden on GoK due to partial sanction of two schemes. 2. Possible financial burden on GoK due to non-approval of DPRs.	338.48 2,233.54
4	2.2.9.2(iii)	Cost escalation due to change in width of outer bund.	1.05
5	2.2.9.2(iv)	Unwarranted strengthening of outer bunds of Rani-Chithira <i>padasekharams</i> .	17.31
6	2.2.9.2(v)	Strengthening of outer bunds of 14 <i>Padasekharams</i> in Nedumudy Panchayat (KEL I) – Non- receipt of Central share receivable due to slow progress of work.	11.10
7	2.2.9.2(v)	Strengthening of outer bunds of five <i>padasekharams</i> in Group nine and demolishing barrier between C-D blocks and Rani- Chithira blocks (KEL II)- Non-receipt of Central share receivable due to slow progress of work.	74.18
8	2.2.9.2(vi)	Crop loss due to non-completion of salinity barrier.	16.25
9	2.2.9.2(vii)	Payment on incidental items of works for construction of Bridge-cum-Regulator across Kariyar.	0.73
10	2.2.9.2(viii)	Injudicious decision led to cost escalation and delayed arrangement of works.	2.34
Total			3,456.47

2.2.11 Conclusions

- Ecologically significant projects such as Protection and restoration of *Kayal* water-spread area, Modernisation of Thaneermukkom Bund and Thottapally Spillway, Flood control in *kayal* area, complete construction of AC canal, declaring Kuttanad as Special Agricultural Zone and Enforcement of a crop calendar could not be implemented so far. Thus, by not taking effective steps to implement these important tasks, GoK failed to achieve the prime objective of strengthening ecological security.
- The Project Officer failed in his role as a Co-ordinator in implementing the Project.
- Though ₹ 1,165.76 crore was sanctioned, only ₹ 336.77 crore (29 *per cent*) was released by GoI/State Government.
- Failure to conduct regular meetings of the Kuttanad Prosperity Council, Coordination Committee and Task Implementation Committee led to poor monitoring of implementation of the package.
- Reasons for short release of funds were the delay in preparation and submission of DPRs and under utilisation of funds released. Of the released funds, ₹ 67.92 crore (March 2013) remained idle in Special TSB Accounts maintained by Irrigation department.
- Delay in preparation and submission of DPRs by Irrigation department resulted in cost increase by 151 *per cent* of the recommended outlay, non-receipt of ₹ 338.48 crore due to partial approval, and possibility of burdening GoK to the tune of ₹ 2,233.54 crore, being 75 *per cent* (Central share) cost of unapproved DPRs.
- Deviation in implementation of Projects from MSSRF recommendations such as fixing bund height, usage of pile and slab instead of bio-bunding resulted in reduction of flood plain and water spread areas, apart from affecting the feeding and breeding activities of fishes.
- Strengthening of outer bunds of Rani and Chithira blocks, which was unsuitable for paddy cultivation, resulted in unfruitful expenditure of ₹ 17.31 crore. These funds could have been effectively used where risk of natural calamity was imminent and approved projects were available for implementation.
- Due to non-completion of salinity barriers, as recommended in the Report, salinity intrusion caused crop loss amounting to ₹ 16.25 crore during 2010-11 to 2012-13.
- Of the 14 works for strengthening outer bunds under KEL I, only two could be completed as of March 2013, though the approved time of completion expired in March 2012. Similarly, all the three works under KEL II scheme remained incomplete (March 2013) even after a year had elapsed since expiry of stipulated completion date of 31 March 2013. Non-completion of works as per schedule was due to laxity on the part of the Irrigation department, which also resulted in

non-release of subsequent installments of Central shares and denial of intended benefits to the farmers.

2.2.12 Recommendations

- GoK may take effective steps to implement ecologically significant projects.
- The meetings of various committees may be held regularly to monitor/ review the progress achieved by implementing departments/agencies.
- Effective steps may be taken to secure the balance unreleased funds in respect of sanctioned projects by GoI and speed up implementation of projects so that funds do not idle in special TSB accounts.
- Efforts may be initiated to obtain early approval from GoI in respect of unapproved projects.
- Deviations from recommendations should be avoided, especially where the ecology of the Kuttanad is affected.
- *Padasekharams* may be prioritised according to their vulnerability to bund breach and balance 28 salinity barriers recommended by MSSRF may be taken up immediately for construction.
- Works under the Schemes KEL I and II may be fast tracked to complete it without further delay.

CHAPTER III

COMPLIANCE AUDIT

CHAPTER - III COMPLIANCE AUDIT

AUDIT OF SELECTED TOPICS

FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

3.1 Leakages in Public Distribution System

3.1.1 Introduction

Public Distribution System (PDS) came into existence with effect from 1 July 1965 with the multiple objective of rationing of essential commodities, ensuring availability of basic commodities to the poor and needy through Fair Price Shop (FPS), stability of prices and to check the practice of hoarding and black marketing.

3.1.2 Functioning of the Rationing System

The major agencies of the system are:

- | | |
|--|---|
| Government of India (GoI) | - Responsible for fixing quantity and price of food grains to be distributed to all categories of beneficiaries. |
| Food Corporation of India (FCI) | - Responsible for procurement, transportation and warehousing the food grains. |
| State Government (Secretary, Food, Civil Supplies and Consumer Affairs Department) | - Responsible for identification of BPL families, issuing ration cards, the management of PDS, supervision and monitoring of FPS. |
| Dealers | - Responsible for distribution to actual consumers. |

The Commissioner of Civil Supplies (CCS) is the Head of the Department who is assisted by Director of Civil Supplies (DCS), Controller of Rationing, two Deputy Controllers of Rationing, 14 District Supply Officers (DSO), 63 *Taluk* Supply Officers (TSOs) and six City Rationing Officers.

In order to ensure the availability of essential commodities, Kerala State Civil Supplies Corporation Limited (KSCSC) was also entrusted the responsibility of providing assistance and services in the distribution of essential commodities under two separate subsidy schemes. The activities of the Company supplement the other schemes implemented by the department.

The GoI makes bulk allocation of ration articles for distribution through PDS among the States whereas the Ministry of Petroleum and Natural Gas allocates kerosene. The quantity of allocation is based on the number as well as category of ration cards in the State as approved by it. Food grains procured

by GoI through FCI are allocated to State on price fixed by GoI for different categories of card holders.

3.1.3 Audit objectives, scope and methodology

The objective of Audit was to examine whether:

- there was diversion of ration articles by the Authorised Retail Dealers (ARD) and
- there was excess issue of subsidised commodities to families by KSCSC

Audit conducted a field survey of ration articles availed by 2,783 card holders³⁷ spread over 39 *taluks* (out of 69) in 10 districts (out of 14) of the State were cross verified with the primary records maintained at the respective ARDs during the period. Audit also test checked about 40 lakh sales bills of 102 outlets (under five depots) using the data analysis software IDEA to check the veracity of quantity restriction exercised by KSCSC on the commodities sold at subsidised rates.

3.1.4 Audit Findings

Audit found leakages in PDS as shown below:

3.1.4.1 Falsification of ration accounts by dealers

i) Accounting of ration articles

As per Rule 53 (1) and 29(1) of Kerala Rationing Order 1966 (KRO), Authorised Wholesale Dealer (AWD) should make necessary entries in the day book and ledger on supply of ration articles to ARD against payment of cash and similarly, on issue of ration articles to Card holder, ARD should record the same in the appropriate space in the ration card. The AWDs/ARDs should also maintain regular, accurate daily accounts of each rationed articles. At the end of the month, a monthly rationing report should be prepared showing details of quantity allotted, lifted and distributed and submit to the TSOs along with the monthly indent for the next month. The TSOs consolidate the monthly reports of the ARDs under their jurisdiction and submit to the DSOs and the DSOs to the DCS.

ii) Comparison of issued quantity recorded in ration cards with the records in ARDs through field survey

A field survey was considered to see whether the rationed articles accounted for as issued were actually distributed to the card holders and also to ascertain whether the accounts maintained by the ARDs were correct and complete.

For the purpose, copies of 2,783 ration cards (2,607 APL³⁸ and 176 BPL) collected were tabulated and cross verified with the preliminary accounts viz., day book and ledger of the ARDs.

³⁷ Employees of the audit units under the audit jurisdiction of AG (E&RSA) where audit was undertaken during the year 2013 and who volunteered to participate in the survey.

³⁸ As the probability for availing the ration articles were comparatively less in respect of APL cards the survey focused on APL card holders.

It was revealed that the ARDs had accounted essential commodities far in excess of that was availed by card holders as shown below:

Table 3.1: Excess accounting by ARDs for the month of March 2013

	Rice			Wheat			Kerosene
	APL	BPL	Total	APL	BPL	Total	Total
No. of cards test checked	2,607	176	2,783	2,607	176	2,783	2,783
No. of cards in which quantity was less than ARD's record	2,142	166	2,308	1,046	123	1,169	1,944
Percentage of cards with difference	82.16	94.32	82.93	40.12	69.89	42.01	69.85
Quantity availed by card holders (in Kg./L)	10,415	1,836	12,251	737.5	250	987.5	813.7
Quantity recorded as issued by ARDs (in Kg/L)	22,766	4,613	27,379	3,317.5	988	4,305.5	2,138.55
Quantity inflated by ARDs as a percentage of original purchase	219	251	223	450	395	436	263

Lack of departmental monitoring on issue and accounting of ration articles and failure to make end to end computerisation of PDS led to falsification of accounting of ration articles and its diversion to open market.

3.1.5 Sale of subsidised items by KSCSC without restriction and resultant loss

Kerala State Civil Supplies Corporation Limited (KSCSC), a Public Sector Undertaking, was incorporated with the objective of procurement and distribution of essential commodities to the public at reasonable prices. KSCSC procures commodities from the open market through tenders and sell them from 1,314 outlets (as of March 2013) across the State which are coordinated by 56 Depots. These items are sold to the customers without quantity restriction at a retail price fixed by the Company on a commercial basis above the procurement price.

KSCSC sells part of the commodities procured as "subsidised sale"; based on a lesser price fixed by the GoK. GoK releases grants to KSCSC for compensating the loss borne by the Company. Being a subsidised sale, the eligible quantity to a household is restricted and the quantity restriction is monitored through ration cards by entering the card number at the time of sales in the billing software in the sales outlets. The sales from outlets are managed using MySQL based database-Outlet Management System (OMS).

Audit noticed that the subsidised sales were made without any restriction. The commodities were sold without entering the ration card numbers³⁹ in the billing software or against invalid ration card numbers or in excess of the restricted quantity per household.

³⁹ Refers to ration card numbers not matching with 10 digit unique numbers.

The amount of subsidy borne by GoK on the sales without restriction - being the difference between subsidised rates and regular retail price worked out to ₹ 9.88 crore at five test checked depots and the outlets coming under them as indicated in the table below:

Sl. No.	Name of depot	No. of outlets analysed	Amount of ineligible subsidy (₹ in crore)			
			Without ration cards	Invalid ration cards	Sales above eligible quantity	Total
1.	Kannur	26	0.40	1.34	0.12	1.86
2.	Kottayam	15	0.21	0.15	0.01	0.38
3.	Alathur	16	0.62	0.34	0.09	1.04
4.	Chavakkad	20	0.94	1.90	0.04	2.88
5.	Attingal	25	3.47	0.19	0.06	3.72
Total		102	5.64	3.92	0.32	9.88

The Government stated (January 2013) that strict instructions were given to ensure that subsidy items were issued only to genuine customers. Further, directions were also given to recover the loss on account of such instances, if any, from the officers responsible.

3.1.6 Conclusion

The results of the findings show that the accounts maintained by the ARDs were manipulated and the quantity obtained through the manipulation were possibly diverted and disposed in black market. Audit also noticed that the commodities were sold at subsidised rate through KSCSC without any restriction. The diversion/unrestricted sales so made were mainly due to the lack of supervision and monitoring on the part of the department. Considering that Government subsidies distribution of ration articles to beneficiaries, Government was bearing a huge unnecessary subsidy burden on sale of ration articles to ineligible people.

3.1.7 Recommendations

- Action may be taken to strengthen the inspection of the ARDs by periodical verification of the accounts of the ARDs with reference to the entries made in the ration cards;
- End to end computerisation including biometric system may be implemented in a time bound manner;
- Action may be taken to ensure sale of item only to genuine customers through KSCSC.

3.2 Excess payment due to incorrect computation of Value Added Tax

An excess amount of ₹ 14.23 crore was reimbursed to FCI due to the incorrect computation of VAT on CIP

Food Corporation of India (FCI) is responsible for procurement, transportation and warehousing the food grains to be distributed to the ration card holders through Authorized Wholesale Dealer and Retail Dealer. FCI procures the food grains at Central Issue Price (CIP) fixed by GoI and sells them to Authorized Wholesale Dealers at wholesale price. GoK introduced (vide GO (Ms) No.11/2011/F&CSD dated 25 February 2011) a special scheme of issue of food grains (rice and wheat) at subsidised rates to different categories of card holders through PDS (as stated below):

- At the rate of ₹ two per kg to certain categories of APL card holders,
- At the rate of ₹ two per kg to all BPL card holders up to 31 August 2011 and at the rate of ₹ one from 1 September 2011.

In order to compensate the difference between the CIP and wholesale price of FCI, the State Government gave subsidy to FCI at the following rates during the years 2010-11, 2011-12 and 2012-13.

Category	Amount of subsidy per quintal (in ₹)
APL (Rice)	690
APL (Wheat)	470
BPL (Rice) (upto 31.08.2011)	420
BPL (Rice) (from 01.09.2011)	520
BPL (Wheat)	270

The quantum of subsidy was arrived at in such a way that the retail selling price should be ₹ two / ₹ one per kg as the case may be, after meeting all other expenses including VAT on central issue price. As per the provisions of the Kerala Value Added Tax Act, 2003, the FCI is not liable to pay VAT on the amount of subsidy received from Government. Thus, VAT to be reimbursed to FCI is to be calculated on net CIP (i.e. CIP less amount of subsidy). Instead, VAT was calculated in full CIP (inclusive of subsidy) and re-imbursed to FCI. This resulted in excess payment of ₹ 14.23 crore as shown in **Annexure IX**.

Due to the incorrect computation of VAT on CIP, the amount reimbursed during the years 2010-11, 2011-12 and 2012-13 was in excess by ₹ 14.23 crore. On this being pointed out, the department accepted the point.

IRRIGATION DEPARTMENT

3.3 Functioning of Lift Irrigation Schemes

3.3.1 Introduction

Lift irrigation is a method of irrigation in which water is not transported by natural flow (as in gravity-fed canal systems) but is lifted with motor and pumps. Lift Irrigation Schemes (LISs) are mainly intended to enhance the irrigation potential of paddy production. LISs, coming under Minor Irrigation (MI) sector, were undertaken when the water source - rivers, canals, ponds, etc - was at a level lower than the level of area irrigated entailing lifting of water for irrigation.

There are 459 LISs in Kerala spread over in 13⁴⁰ districts, with an ayacut⁴¹ of 38,938 hectare (ha.). These form only 18.7 *per cent* of the total area of 2,08,160 ha. under paddy cultivation. The total expenditure during 2009-2013 towards construction, upkeep and maintenance of MI structures⁴² like LISs, class I and II schemes, etc. was ₹ 666.20 crore.

3.3.2 Organisational set up

Works of construction and maintenance of lift irrigation structures are being attended to by MI divisions headed by Executive Engineers who are being assisted by sub-divisional engineers and sectional engineers. Three MI circle offices are functioning to supervise the functions. The Chief Engineer (CE) (Irrigation and Administration), Thiruvananthapuram is the Administrative head of the department. The Principal Secretary to Government, Water Resources department is the head at Government level.

3.3.3 Audit Scope and coverage

Audit studied the viability of LISs by scrutinising the functioning of LISs in Ernakulam, Thrissur and Palakkad districts where 279 schemes (61 *per cent* of the schemes) were implemented and about ₹ 199.66 crore was incurred. The audit was conducted during April 2013 to August 2013 covering the period from 2009-10 to 2012-13.

3.3.4 Audit findings

Audit found that LISs are not delivering the intended benefits as discussed in the succeeding paragraphs.

3.3.4.1 Budget Allocation and Expenditure

The budget allocation and expenditure incurred for the construction, upkeep and maintenance of MI structures for the period between 2009-10 and 2012-13 are mentioned below.

⁴⁰ There is no LIS in Thiruvananthapuram district.

⁴¹ Ayacut- Irrigable area

⁴² MI structures are classified into three -.Class I, Class II and Lift Irrigation.

Table 3.2 : Allocation and Expenditure details for MI structures for four years**(₹ in crore)**

Year	2702 - Revenue		4702 –Capital		Total		
	Allocation	Expenditure	Allocation	Expenditure	Allocation	Expenditure	Percentage of expenditure on allocation
2009-10	128.45	114.29	56.29	18.61	184.74	132.90	72
2010-11	149.45	107.56	78.49	26.35	227.94	133.91	59
2011-12	174.65	104.69	128.16	76.59	302.81	181.28	60
2012-13	186.07	139.21	161.66	78.90	347.73	218.11	63
Total	638.62	465.75	424.60	200.45	1063.22	666.20	

Source: Figures compiled by the Office of the PAG (A&E), Kerala

There was over budgeting during all the years – for Capital as well as Revenue heads covered under review. The over budgeting was more in the Capital heads especially during 2009-10 and 2010-11, 67 *per cent* of the allocation under Capital outlay remained unutilised. This is an indication that new MI schemes are not being implemented as envisaged.

3.3.4.2 LISs in the State

There were 459 LISs in Kerala to serve the ayacut of 38,938 ha. District wise details of LISs as of July 2013 are given below.

Table 3.3: District wise details of LISs

Sl. No.	Name of District	No. of LISs	Ayacut (in ha.)	Sl. No.	Name of District	No. of LISs	Ayacut (in ha.)
1	Thiruvananthapuram	Nil	Nil	9	Palakkad	41	4,572
2	Kollam	14	572	10	Malappuram	51	6,725
3	Pathanamthitta	51	357	11	Wayanad	21	1,210
4	Alappuzha (Chengannur)	14	1,475	12	Kozhikode	5	143
5	Kottayam	13	793	13	Kannur	4	232
6	Idukki	4	333	14	Kasargode	3	426
7	Ernakulam	141	12,500	Total		459	38,938
8	Thrissur	97	9,600				

Source: Departmental data/ website

In the sample check, audit noticed that there were significant variations between the details of LISs maintained by CE's office and by the division offices as shown below.

Table 3.4: Discrepancies in the number of schemes

Sl. No.	Division	Nos. as per CE	Nos. as per Division	Ayacut as per CE (in ha.)	Ayacut as per Division (in ha.)
1.	Ernakulam	136	141	12,500	12,460
2.	Thrissur	91	97	9,600	8,453
3.	Palakkad	37	41	4,572	3,901
	Total	264	279	26,672	24,814

Source: Divisional records/website

On pointing out the discrepancies CE accepted that the total number of schemes in the three divisions was 279 but did not provide data on effective ayacut presently available.

3.3.4.3 Drastic reduction in area under paddy cultivation

LISs were mainly intended for the benefit of paddy cultivation. Availability of water is a major requirement for paddy, as it requires regular water supply. Out of the total area under paddy cultivation, 0.55 lakh ha. has natural water supply, whereas 1.53 lakh ha. (73.61 *per cent*) was irrigated through various irrigation structures of major, medium and minor irrigation.

Paddy, a major crop of Kerala, was being cultivated in about 8.76 lakh ha. in 1975-76 according to the data of Bureau of Economics and Statistics (BES) but during the last several years the area under paddy cultivation had been declining drastically and it reached to the lowest level of 1.97 lakh ha. in 2012-13 as shown below:

Table 3.5: Progressive reduction in area under paddy cultivation

Sl. No.	Year	Area (in ha.)	Percentage of reduction
1.	1975-76	876022	-
2.	1985-86	678281	22.57
3.	1995-96	471150	46.22
4.	2005-06	275742	68.52
5.	2012-13	197277	77.48

The area under paddy cultivation had gone down over the years mainly because there has been a shift in terms of cropping area of paddy cultivation to other yields such as plantation, arecanut, coconut as well as conversion of paddy fields for non-agricultural purposes. One of the major objectives of LISs to increase the irrigation potential of paddy cultivation has thus become irrelevant now.

This was also evident in the reducing number of LISs commissioned recently. Most of LISs were constructed more than 30 years back considering the land use pattern and cropping pattern prevailed at that time. Only 10 schemes were commissioned during last 10 years of which three schemes were commissioned during the period covered in audit.

As per paragraph 21.1.4 of Kerala Public Works Department (KPWD) Manual, the ayacut of the LISs was to be identified and verified at the time of commissioning of the schemes. The achieved ayacut for the 459 schemes commissioned more than 30 years back as per departmental website was 38938 ha. However, test check of verified ayacut for three districts showed that most of the LISs were verified more than 30 years back and achieved ayacut may not be relevant now due to the changes in the land use pattern and reduction in paddy cultivation. This necessitates a further verification to find out effective ayacut presently available under LISs in order to assess their viability.

3.3.4.4 Increase in cost despite reduction in area under paddy cultivation

The construction and maintenance of LISs are attended to by the MI wing of Water Resources department. In addition to LISs the wing was in charge of the construction and maintenance of other MI structures like Class I and Class II schemes. For the purpose, as many as 2,168 staff were deployed to the wing (January 2014). However, the department was not keeping any separate data for expenditure on LISs. The expenditure on MI including LISs is increasing over the years despite decrease in area under paddy cultivation as indicated below:

Table 3.6: Expenditure details of LISs for the period from 2003-04 to 2012-13

Period	Expenditure (₹ in crore)		
	Revenue	Capital	Total
2003-04	40.26	0.62	40.88
2004-05	49.93	0.50	50.43
2005-06	50.08	0.82	50.90
2006-07	35.47	0.38	35.85
2007-08	61.82	2.55	64.37
2008-09	77.90	1.10	79.00
2009-10	64.27	1.61	65.88
2010-11	59.98	10.54	70.52
2011-12	53.63	30.75	84.38
2012-13	80.91	22.74	103.65

Source: Figures compiled by the Office of the PAG (A&E), Kerala.

3.3.4.5 LISs not handed over to farmers

KPWD Manual (Para 21.1.1 of Chapter XXI) stipulated that, MI works benefiting an area less than 200 acres (80 ha.) were to be maintained either by

lift irrigation co-operative societies or by the ryots themselves directly⁴³. However, out of 279 LISs in three districts, 156 schemes having irrigable area (ayacut) less than 80 ha. are still maintained by the department. Expenditure on maintenance, revamping and manpower engaged for their operation during the period 2009-10 to 2012-13 was ₹ 27.25 crore as shown in Table below, which was avoidable, had the schemes been transferred to the co-operative societies/ryots.

Table 3.7: Avoidable maintenance costs

(₹ in crore)

Districts	No. of LISs	2009-10	2010-11	2011-12	2012-13	Total
Ernakulam	72	2.88	3.45	3.18	3.07	12.58
Thrissur	62	1.72	2.98	3.48	3.56	11.74
Palakkad	22	0.16	0.51	1.53	0.73	2.93
Total	156	4.76	6.94	8.19	7.36	27.25

Source : Departmental data

3.3.4.6 Unfruitful expenditure on Lift Irrigation Schemes

Out of 279 LISs implemented in three districts, 19 LISs were not functioning for years ranging from two to 17 as of March 2013 for various reasons such as non availability of water near the pump house, damage occurred to motor and pump sets, breaching of canal portions, theft of motors and pump sets, litigation with private party against constructing canal in their land, project found unviable later etc; as indicated in **Appendix 3.1**. Out of the 19 non functional schemes implemented at a total cost of ₹ 4.74 crore, eight schemes could not even be commissioned till date (August 2013) in spite of spending an amount of ₹ 3.39 crore.

3.3.4.7 Avoidable payment of penalty on Electricity charges

Electric Motors and pump sets are used for lifting water from rivers and canals for feeding the ayacuts. Either High Tension (HT) for connected load of 100 KVA or more or Low Tension (LT) connections is provided to run the motors based on the Kilo Volt Ampere (KVA) of the motors installed in each pump house. As per clause 19 of Kerala State Electricity Board (KSEB) terms and conditions of supply 2005, every consumer should execute a service connection agreement on the occasion of availing fresh connection or whenever there were changes in connected load. Similarly for HT connections the consumer was to install Time of Day (ToD) meter. As per special conditions of “Schedule of tariff and terms and conditions for retail supply by KSEB” the maintenance and replacement of defective meters shall be done by licensees at their costs. On failure on this count KSEB would charge extra at the rate of 50 *per cent* of original tariff. As the department failed to fulfil the above conditions KSEB imposed penalty of ₹ 4.27 crore during the period from 2009-10 to 2012-13 as given in table below:

⁴³ Benefiting area < 200 acres but > 50 acres by Lift Irrigation co-operative societies, < 50 acres by ryots themselves directly or through Co-operative Societies.

Table 3.8: Details of avoidable penalty on electricity charges

Name of MI Division	No. of HT connection	Penalty for (₹ in crore)		Adjustments (penalty prior to 2010) (₹ in crore)	Total (₹ in crore)
		Meter fault	Non-execution of Agreement		
Ernakulam	16	1.56	0.78	1.12	3.46
Thrissur	7	0.12	0.11	0.15	0.38
Palakkad	6	0.17	Nil	0.26	0.43
Total	29	1.85	0.89	1.53	4.27

Source: Data furnished by department

Had the department taken timely action to execute agreements and replace the faulty meters, the penalty of ₹ 4.27 crore could have been avoided.

3.3.4.8 Payment of electricity charges without consuming electric power

LISs incur recurring maintenance cost and bulk of it is attributable to energy charges. As per clause 8 of the Schedule of Tariff and Terms and Conditions for Retail Supply by KSEB, electricity charges are levied based on actual consumption or minimum tariff amount whichever is higher. Further, minimum charges are imposed even if the plant or machines are not operated or no power is consumed. Thenampara LIS in Palakkad district partially commissioned in 2001 but stopped functioning in 2001 itself due to breach in the main canal which was completed partially. The department had been paying electricity charges at a minimum rate of ₹ 38,940 per month during the period of non-operation. The electricity charges paid from September 2001 to March 2013 without consuming any electric power was ₹ 54 lakh.

3.3.4.9 Idle expenditure under MIRPA and Special package

Government accorded sanction in November 2009 for revamping the existing LISs under Malabar Irrigation Package (MIRPA) and Special package for Ernakulam district. MI Divisions Ernakulam, Thrissur and Palakkad purchased 431 Motor and pump sets at a cost of ₹ 5.28 crore for 254 LISs during the period between 2011 and 2013. However, 187 motor and pump sets purchased for 116 LISs for which ₹ 2.75 crore has been incurred remained idle due to non-supply of soft starter, non-completion of civil and electrical works as detailed below:

Table 3.9: Details of idle motors and pump sets as on August 2013

Name of Division	No. of LISs taken for revamping	No. of Motor and pump sets purchased	Idling of motor and pump sets		
			No. of LISs	No. of motor and pump sets	Expenditure incurred (₹ in crore)
Ernakulam	127	224	6	10	0.17
Thrissur	90	133	90	133	2.14
Palakkad	37	74	20	44	0.44
Total	254	431	116	187	2.75

Source: Departmental data

Thus due to laxity of the department, the equipment purchased for ₹ 2.75 crore for augmenting irrigation potential was remaining uninstalled and hence could not be used for intended purpose.

The matter was reported to Government in September 2013; their remarks are awaited (January 2014). The department confirmed that the basic objective of LISs was to facilitate irrigation for paddy cultivation and that the area under paddy cultivation reduced considerably over years. However, the department stated that due to the distribution of water through canals there was rise in ground water table which in turn helped getting potable water in wells. This contention was not tenable as the objective of the scheme was to enhance irrigable area under paddy cultivation.

3.3.5 Conclusion

From the audit findings discussed above, it was concluded that;

- There was over budgeting for capital as well as revenue heads resulting in under utilisation of the funds allotted for the LISs.
- Department did not have a complete data regarding the effective ayacut now available for irrigation as verification of ayacut of the completed schemes was done years back.
- Many LISs were idle inspite of incurring huge expenditure for their construction.
- Department has been incurring avoidable expenditure in the form of penalty on electricity charges due to non replacement of faulty meters and non execution of agreement.
- Pumps and motors purchased for revamping the schemes are remaining idle in many cases due to non completion of civil and electrical works.
- The completed schemes having ayacut less than 80 ha. were not transferred to ryots as envisaged in the KPWD Manual. Owing to change of land use pattern and crop pattern the area of paddy cultivation has been reducing rapidly. Hence it is not likely to maintain the LISs unless there is active participation of ryots. Transfer of completed schemes to ryots would result in economical maintenance by retaining the highly warranted schemes alone due to direct participation of beneficiaries in the administration of LISs.

3.4 Irregularities in the execution of Regulator-cum-Bridge work

Extension of undue benefit of ₹ 2.43 crore to the contractor by facilitating supply of sand at reduced rate.

Government issued (June 2008) Administrative Sanction (AS) for construction of Regulator-cum-Bridge across Bharathapuzha at Chamravattom in Malappuram district at a cost of ₹ 113 crore (SoR 2008) under Rural Infrastructure Development Fund (RIDF) XIII of National Bank for Agriculture and Rural Development (NABARD). The project envisaged construction of a regulator having 70 vertically operated shutters and a bridge of 978 m length connecting Ponnani and Tirur town in Kochi-Kozhikode highway. Government issued Technical Sanction (TS) at an estimated cost of ₹ 119 crore (based on SoR 2008). While the work was nearing completion, the

Executive Engineer (EE) Project Division, Chamravattom reported (April 2010) to the Superintending Engineer (SE) that no provision had been made in the estimates for construction of side protection walls of the river banks and for connecting the bridge to the either banks of the river and hence the project would be incomplete. To incorporate the additional works, the AS was revised (August 2010) to ₹ 134 crore (based on SoR 2010).

Audit noted that as per the terms and conditions of the tender, contractor had to procure all materials required for construction works including river sand. As per agreement, the contractor was eligible to get ₹ 990 per cum. of river sand to be used in construction work. This works out to ₹ 1,285 per cum. after inclusion of contractor's profit and tender premium. As the river sand was not available in the market, the contractor sought (October 2009) permission of District Collector (DC), Malappuram, through EE to mine 28,000 cum. of river sand from the project site. At the first instance, DC allowed 5,171 cum. (7,756.5 MT) of sand for preliminary works at the rate of ₹ 634 per tonne which was the rate allowed for the works executed by Nirmithi Kendra⁴⁴. Considering the elements of contractor's profit and tender premium the cost of sand works out to ₹ 1,234 per cum. Against the allowed quantity of 5,171 cum., the contractor mined only 666.66 cum. As the sand was being sold to public for ₹ 317 per tonne (₹ 617 per cum. after inclusion of contractor's profit and tender premium) by the local *Panchayat*, the contractor requested the DC through EE to allow him to mine sand at the same rate which was also granted to the contractor for 50,000 cum. of sand. The DC, however, directed EE that in case the contract rate was more than the concessional rate, the difference should be recovered from the claim of the contractor. The contractor mined 36,283.34 cum of sand against the permitted quantity of 50,000 cum. But the department did not recover the differential amount (contractual rate minus concessional rate) from the contractor. Allowing contractor to mine 666.66 cum of sand at concessional rate and failure to comply with the direction to collect differential rate for 36,283.34 cum of sand had resulted in providing undue benefit to the contractor to the tune of ₹ 2.43 crore⁴⁵ (up to October 2011).

The matter was reported to Government in May 2013 and the reply from Government is awaited (December 2013).

PUBLIC WORKS DEPARTMENT

3.5 Execution of State Road Projects using Central Road Fund

3.5.1 Introduction

Central Road Fund (CRF) created under the CRF Act, 2000, envisages development and maintenance of various roads by GoI from cess collected on petrol and high speed diesel oil at the rate of ₹ two per litre. Subsequently in exercise of powers conferred under the Section 12 of the CRF Act, Ministry of Road Transport and Highways (MoRTH), GoI vide notification dated 10 July

⁴⁴ An autonomous body engaged in construction works.

⁴⁵ $(36,950 \text{ m}^3 \times ₹ 1,285) - (666.66 \text{ cum} \times ₹ 1,234 + 36,283.34 \text{ m}^3 \times ₹ 617)$

2007 made the CRF (State Roads) Rules, 2007 for the disbursement of CRF in respect of specified projects. Categories of works under the programme are as follows:

- State roads excluding rural roads i.e., construction of missing bridges, cross-drainage works, bye passes, parallel service roads along with National and State Highways; widening of two lanes; strengthening of weak pavement; rehabilitation of bridges and engineering aspects of road safety works;
- road projects of Inter-State Connectivity (ISC); and
- road projects of Economic Importance (EI) i.e., roads directly connecting important market places, economic/industrial zones, agricultural region, roads benefitting vulnerable section of the society and also roads leading to socially important infrastructure such as cremation grounds, orphanage etc.

Implementing agency for the schemes is Public Works Department (PWD) headed by Secretary to Government at Government level and CE, PWD (National Highways) and his officers and staff at departmental level.

CRF works were implemented in State from 2001-02 onwards. During the 12 year period up to 2012-13, 88 works relating to State roads having a length of 1,380.60 kms and five road projects of ISC having length of 97.3 kms were sanctioned by the MoRTH. Of these 76 State road works having a length of 1,219.395 kms and four roads of ISC having a length of 87.6 km were completed as on 31 March 2013.

The audit of Execution of State Road Works using CRF during 2008-09 to 2012-13 was carried out through test check of records during the period May 2012 to June 2012 in the offices of the CE, National Highways, all three circles and eight divisions covering 67.10 *per cent* expenditure (₹ 315.76 crore) of the total expenditure of ₹ 470.55 crore incurred during the period. In addition to the 48 road projects (**Annexure X**) sanctioned during 2008-13, the expenditure incurred on the ongoing projects are also test checked in audit. The audit findings with reference to non observance of the provisions of the CRF Act, 2000, CRF (State Road) Rules, 2007 and other Rules and codal provisions for planning and execution of works are discussed below:

3.5.2 Physical progress

The present position of projects sanctioned during the five year audit period from 2008-09 to 2012-13 are given in table shown below:

Table 3.10: Details of works sanctioned, completed and pending for the period 2008-13

	CRF State roads			ISC			Total		
	No.	Length in km	Sanctioned cost (₹ in crore)	No.	Length in km	Sanctioned cost (₹ in crore)	No.	Length in km	Sanctioned cost (₹ in crore)
Ongoing projects as on 31 March 2008	21	352.635	138.14	4	87.600	33.02	25	440.235	171.16
Projects Sanctioned during 2008-13	47	676.96	424.64	1	9.7	7.10	48	686.66	431.74
Total	68	1029.595	562.78	5	97.3	40.12	73	1126.895	602.90
Completed during 2008-13	56	868.395	433.44	4	87.6	33.02	60	955.995	466.46
De-sanctioned	2	0	6.29	0	0	0	2	0	6.29
Work not taken up	1	6.00	3.73	0	0	0	1	6.00	3.73
Ongoing Works	9	155.20	119.32	1	9.7	7.10	10	164.90	126.42

3.5.3 Financial outlay and expenditure

Year-wise position of budget allocation, receipt of funds from GoI, corresponding expenditure by GoK are given in table below:

Table 3.11: Details of budget provision, grants received from GoI etc.

Year	Budget provision	Sanctioned cost of projects by MoRTH	Funds released by GoI	Expenditure	(₹ in crore)
					Excess (+) / Savings (-) over BE (percentage in bracket)
2008-09	49.50	103.73	44.85	51.88	(+) 2.38 (4.81)
2009-10	58.70	85.68	60.12	58.40	(-) 0.30 (0.51)
2010-11	151.86	169.65	81.34	154.36	(+) 2.50 (1.65)
2011-12	51.04	0	4.44	51.12	(+) 0.08 (0.16)
2012-13	148.86	66.39	124.86	154.79	(+) 5.93 (3.98)
Total	459.96	425.45	315.61	470.55	

State Government incurred an expenditure of ₹ 470.55 crore, against which GoI reimbursed only ₹ 315.61 crore during the period from 2008-09 to 2012-13 leaving a shortfall in re-imbursement to the extent of ₹ 154.94 crore. The delay in taking up and completion of projects in compliance with CRF Rules resulted in short fall in release of fund by GoI. The flow of fund from GoI was dependent on the works executed and any failure to comply with the stipulations would affect adversely the flow of fund from GoI. The department has not maintained work wise details to facilitate any reimbursements in case of shortfall.

3.5.4 Planning

Audit scrutiny revealed that the primary requirement of survey and investigation for balanced development of infrastructure in the road network of the State [Rules 5 (5) of CRF Rules] was not available with the department. The department did not prepare any work plan, either annual or composite to execute the projects in a systematic manner. The department stated that the selection of projects was made on the basis of the requests of MLAs, MPs and Ministers. This led to various disparities in taking up CRF projects as mentioned below.

3.5.4.1 Regional imbalance in selection of road works

As per Rule 5(5) of CRF Rules, the project shall be selected with a view to have a balanced development of the road network in the entire State. However, no projects had been sanctioned in Idukki district of the State ever since the CRF schemes had been implemented in 2001 and in Wayanad since the last five years despite the fact that these districts share border with other States and are important for ISC. The district-wise details are as shown below.

Table 3.12 : Details of projects sanctioned during the period 2001-02 to 2012-13

Sl. No.	Name of district	Total	Sanctioned cost (₹ in crore)	Actual expenditure	State roads		ISC projects	
					Completed	Ongoing	Completed	Ongoing
1.	Thiruvananthapuram	17	164.28	173.58	16	1	-	-
2.	Kollam	1	7.85	4.35	0	1	-	-
3.	Alappuzha	2	17.75	12.08	1	1	-	-
4.	Pathanamthitta	1	8.45	11.44	1	0	-	-
5.	Kottayam	6	89.73	56.77	3	3	-	-
6.	Idukki	0	0	0	0	0	-	-
7.	Ernakulam	19	112.81	117.09	19	-	-	-
8.	Thrissur	4	21.21	21.54	4	-	-	-
9.	Palakkad	4	46.59	38.41	1	1	1	1
10.	Malappuram	9	79.78	59.49	8	1	-	-
11.	Kozhikode	13	59.04	47.98	12	1	-	-
12.	Wayanad	5	31.76	32.27	2	-	3	-
13.	Kannur	7	60.12	57.58	6	1	-	-
14.	Kasaragod	3	21.00	17.79	3	-	-	-
	Total	91	720.37	650.37	76	10	4	1

Audit observed that the department has not selected road works so as to have a balanced development as mandated by the Rules.

3.5.4.2 Projects on Inter-State Connectivity (ISC) and Economic Importance (EI) were ignored

During the period 2008-13, only one project⁴⁶ under the category of ISC was taken up whereas no projects under the category of EI had been taken up since 2001.

⁴⁶ Improvements to Kannannur Mercy College Mepparambu Kavilppadu olavacode road connecting NH 47 and NH 213 in Palakkad district.

3.5.4.3 Overlapping projects

MoRTH approved in principle (July 2010) execution of the 13.710 km of road comprising – ‘Improvements to Aluva - Paravur road from km 1/330 to 12/200 km’ and ‘Anchal –Vazhikulangara road from km 0/000 to 2/840 km’ under the category of EI at a cost of ₹ 8.10 crore. But another project viz ‘CRF - link road connecting NH 17 and NH 47 under the improvement to riding quality of Parur - Nedumbassery Airport road’ had also been sanctioned by MoRTH in November 2009. The second project includes the first road except the portion of ‘Anchal –Vazhikulangara road’ from km 0/000 to 2/840. Audit observed that proposal of the same road under two projects led to overlapping which eventually lead to halting one of the projects. Thus the absence of sound planning system eventually resulted in granting two sanctions for a single project.

3.5.4.4 Selection of NH projects using CRF allotment for State road projects

Projects required in NH roads are being funded by GoI directly. CRF allotment to States was meant for utilising on State roads. Audit revealed that the project ‘Construction of Dharmadom Bridge in NH 17’ in Kannur District which was completed at a cost of ₹ four crore was taken up by National Highways Division, Kannur using CRF. CE replied that due to sudden settlement of piers, the bridge was in the verge of collapse and that there was no provision made in Annual Plan and hence CRF was used immediately for the construction of bridge.

Audit observed that the bridge forming part of NH wing should have been constructed utilising funds allotted for NHs and the CRF meant for State roads could have been utilised for other eligible State road projects.

3.5.4.5 Projects proposed without ensuring availability of land

Rule 5 (3) of CRF Rules *inter alia* stipulates that the proposals shall include only those projects where land is available without any encumbrance. But the department prioritised and obtained sanction of MoRTH for two projects in two divisions⁴⁷ without ensuring the availability of unencumbered land/clear site. Various pre-requisites such as acquisition of land, clearance from forest department etc. were not obtained prior to taking up the project. This had resulted in lagging of projects or de-sanctioning of projects by MoRTH as shown below:

Table 3.13: Details of projects proposed without ensuring availability of land

Sl. No.	Name of projects	Year of sanction	Present position of the projects	Reason for non-availability of land	Amount involved (₹ in crore)
1	Anakayam bridge in Nedumbassery-Kodaikkanal road (NH division, Muvattupuzha)	October 2008	De-sanctioned by MoRTH (August 2011)	Want of clearance from GoI to divert Forest land for the construction	5.17

⁴⁷ Muvattupuzha and Kannur .

Sl. No.	Name of projects	Year of sanction	Present position of the projects	Reason for non-availability of land	Amount involved (₹ in crore)
				of bridge	
2	Ezhimala-Vellur-Padiyottuchal road-Pulingome from chainage 37/800km to 43/234 km including construction of bridge (NH Division, Kannur)	June 2005	Completed in March 2010 with a delay of more than two years. Delay resulted in enhancement of contract value by ₹ 1.61 crore.	Non shifting of utilities from the alignment of road	1.61

The award of project without ensuring the availability of unencumbered land not only resulted in non completion of project and escalation of cost but also delayed further grants by GoI.

3.5.4.6 Improper planning and evaluation of projects

Selection of the following projects without planning and absence of evaluation of benefit to public, resulted in dropping the project midway or remaining incomplete indefinitely after incurring ₹ 5.91 crore in two cases test checked in two divisions as shown below:

Table 3.14: Projects for which intended benefit could not be served

Sl. No.	Name of projects	Status/ expenditure incurred	Details of project	Audit observation
1	Ezhimala-Vellur-Padiyottuchal-Pulingome from chainage 37/800 km to 43/234 km including construction of bridge (NH Division Kannur)	Work completed on March 2010 Expenditure: ₹ 5.83 crore	The bridge is situated on the State border and ends in forest area of the State of Karnataka. The cost incurred for the construction of the bridge alone was ₹ 1.75 crore. The improvement of the road was given top priority stating that the road was the shortest link between Ezhimala Naval Academy and Bangalore from where infrastructure related requirements of naval academy was to be conveyed. The work could not be arranged beyond the border as the land is situated in forest area.	The project was wrongly prioritised and executed without considering the fact that the other end of the bridge was forest land of another State and as a result the expenditure for the bridge became idle. Though the work in the State of Kerala has been completed, the work in the State of Karnataka could not be arranged. The State Government should have co-ordinated with Government of Karnataka for the timely completion of work.
2	Construction of Kalpetta bye pass (NH Division Kozhikode)	Expenditure: ₹ 4.16 crore Balance work is being carried out by Roads Division,	In June 2006, construction of Kalpetta bye pass with provision for pavement was awarded using CRF in NH Division, Kozhikode. Owing to defective	The intention of CRF is to utilise the fund for development of the road as per Indian Road Congress/MORTH specification. But due to omission in providing

Sl. No.	Name of projects	Status/ expenditure incurred	Details of project	Audit observation
		Kalpetta	planning, sufficient quantity of various items work was not included in the estimate. Therefore the work was completed only up to embankment level with an expenditure of ₹ 4.16 crore. The balance work is being executed by roads wing of State PWD using State fund and the work has not been completed so far (June 2013).	sufficient items/quantities in the work, the bye pass has not materialised even after expending ₹ 4.16 crore from CRF. CE replied that the expenditure towards extra quantity of random rubble and hard rock excavation was assessed as ₹ 2.20 crore but there was no provision to meet the extra liability. Hence it was decided to close the project at formation level.

3.5.5 Delays

According to CRF (State Road) Rules, 2007 for the disbursement of the CRF in respect of specified projects, an individual project is required to be technically approved, financially sanctioned and awarded to contractor within a period of four months from the date of approval from GoI and period of completion should not exceed 24 months including tendering process.

Test check of records of three⁴⁸ implementing circles regarding the projects awarded during 2008-09 to 2012-13 revealed that there was delay in award of work by the department in respect of 41 projects ranging from one month to 34 months and hence the commencement of the project was delayed.

In two cases, the projects had to be awarded at higher costs. The cost overrun consequent on the delay in the award of project in two cases amounted to ₹ 2.08 crore as illustrated below:

- The project of Improvements of riding quality of SH 52 Palakkad - Pollachi road was sanctioned by MoRTH in June 2007 for ₹ 9.28 crore against the estimate of ₹ 8.79 crore. The lowest quoted (October 2007) rate was 12.97 *per cent* above the estimate rate. State Government approved (March 2008) nine *per cent* above estimate rate after a lapse of five months against the stipulated period of four months. But contractor was not willing to execute the project at the rate approved by the department. Subsequently, the work was re-tendered and awarded in January 2010 at 28 *per cent* above estimate rate after a lapse of 31 months from the date of sanction with an excess cost of ₹ 1.32 crore.
- The project of Improvements to Thrikkunnapuzha-Mavelikkara (via) Nangiarkulangara road was sanctioned by MoRTH for ₹ 7.02 crore in January 2011. The Estimated PAC of the work was ₹ 6.65 crore. The project was tendered with last date for submitting tender proposals as 28 February 2011. Financial bid was opened on 19 May 2011. The lowest offer received was ₹ 7.41 crore. As firm period of 120 days

⁴⁸ NH Central circle, Kochi, NH North circle, Kozhikode and NH South circle, Thiruvananthapuram.

from 28 February 2011 expired on 28 June 2011 the lowest bidder extended the firm period for further three months up to 29 September 2011. However, the department approved tender only in October 2011. The lowest bidder refused to take up the project. The department approved (April 2012) the offer of second lowest bidder with the agreed PAC was ₹ 8.17 crore. Audit revealed that delay in finalisation of tender within the firm period led to extra commitment of ₹ 0.76 crore.

3.5.6 Modification of specification in violation of sanction led to extra expenditure

As per para 1801.1.2 of KPWD Manual the specifications should not be changed during the execution of the project unless warranted due to technical reasons. Audit revealed that the alterations to the approved specifications were made without proper justification and resulted in avoidable extra expenditure of ₹ 42.68 lakh as detailed in table shown below:

Table 3.15: Details of projects with unjustified changes in specifications

Sl. no.	Name of projects	Expenditure incurred/ Status	Nature of projects	Audit observation
1	Improvement to Muvattupuzha-Theni road	₹ 5.41 crore project completed	The thickness of Bituminous Concrete (BC) as per the estimate approved by CE was 25 mm. Accordingly the quantity sanctioned was 1500 m ³ . While inviting tenders the thickness was enhanced from 25 mm to 30 mm by SE resulting in increase in the quantity of BC by 318.235m ³	SE has not furnished any technical reasons for the modification of the thickness except the plea that Tender schedule provided of thickness of 30 mm. Hence the change was unwarranted as no valid reason attributed to the change and this has resulted in excess expenditure of ₹ 21.12 lakh.
2	Improvements to Padanilam-Nanminda road	₹ 8.83 crore project completed	The scrutiny of the project file of CRF 2010-11 under NH Division, Kozhikode, showed the Surface Dressing was provided as extra item and was executed on WMM for allowing traffic. The item of Surface Dressing was not provided in the project sanctioned estimate of MoRTH.	As per MoRTH specification 112.2 the contractor should have done the project of widening road by allowing traffic along part width of existing road by providing treated shoulders on the side where project was not progressing. The treatment on shoulders included providing of Granular Sub Base (GSB) and surface dressing over it. As per MoRTH specification 112.6 such treatment was an incidental item of project and should be the responsibility of the contractor and should not be paid separately. Hence payment for the same as an extra item was unwarranted. The extra expenditure works out to ₹ 13.52 lakh.
3	Strengthening and improvements to Azhichilam-Faroke college-Faroke Chungam	₹ 2.18 crore project completed	In the sanctioned estimate (May 2009) of the project, the area to be widened is 6597 m ² and area of existing road to be raised by laying Built up Spray Grout (BUSG) was	(i) Road widening was proposed with the courses of layers of GSB, WMM, BM and BC. But deviating from original sanction an additional course

Sl. no.	Name of projects	Expenditure incurred/ Status	Nature of projects	Audit observation
	Road connecting Calicut Bye pass and NH 17.		1,304 m ² . On execution, the area to be widened was limited to 2,529.54 m ² due to insufficient land width and quantity of BUSG (in area) enhanced to 36,793.47 m ² citing execution of BUSG in entire area to increase in crest thickness.	<p>of BUSG was provided in the widened area of 2,529.54 m² instead of 1,304m² as provided in the original estimate.</p> <p>This has resulted in an avoidable expenditure of ₹ 5.39 lakh.</p> <p>(ii) Before applying bituminous courses, tack coat was to be applied on existing bituminous layer and prime coat on non bituminous layer as per MoRTH specification. However in violation of the same, prime coat was applied over both bituminous and non bituminous areas before applying BUSG. Avoidable expenditure due to providing prime coat instead of tack coat for an area of 22221.73 m² was ₹ 2.65 lakh.</p>

3.5.7 Absence of a monitoring system

The expenditure incurred for projects utilising CRF is reimbursed from GoI subject to restrictions such as;

- i) Expenditure to the extent of 110 *per cent* of sanctioned cost of a project.
- ii) Project should be commenced within four months and completed within 24 months of sanction.

Reimbursement from GoI (₹ 315.61 crore) was far short (₹ 154.94 crore) of expenditure incurred (₹ 470.55 crore), as detailed in Table 3.11. Audit revealed that CE, NH or the State Government had neither project wise reimbursement details nor reason for shortage of reimbursement. Further, Government did not take timely action to arrange the projects within four months so that projects could be completed within 24 months. Government replied that the shortage of reimbursement was not taken up with GoI and that there is no system of informing shortage of reimbursement. It was also stated that the department does not have a system of maintaining project -wise reimbursement.

Audit recommends that there should be a mechanism to monitor progress of projects sanctioned and reimbursement from MoRTH so that the Government would be able to get the amount reimbursed from GoI in time.

3.5.8 Impact

Sl.No.	Particulars	Reference to para	Amount (₹ in crore)
1	Overlapping projects	3.5.4.3	8.10
2	Selection of NH project using CRF allotment for State road projects	3.5.4.4	4.00
3	Projects proposed without ensuring availability of land	3.5.4.5	6.78
4	Improper planning and evaluation of projects	3.5.4.6	5.91
5	Delays	3.5.5	2.08
6	Modification of specification in violation of sanction led to extra expenditure	3.5.6	0.43
Total			27.30

3.6 Inadmissible payment to contractor for works not executed

Over payment of ₹ 0.91 crore by the EE due to improper assessment of actual work executed

The Superintending Engineer (SE), Roads and Bridges, North Circle, Kozhikode awarded two Road improvement works namely 'Improvements to Karyavattom-Alanallor road' (Work-I) and 'Mankada-Pattikkad road' (Work-II) in Malappuram district with Estimated Probable Amount of Contract (EPAC) of ₹ 2.15 crore as detailed below:

(₹ in crore)			
Particulars	Work I	Work II	Total
Date of Award	July 2005	August 2004	
EPAC	1.08	1.07	2.15
Accepted rate	17.99 per cent below EPAC	27.92 per cent below EPAC	
Contract amount	0.93	0.78	1.71
Revised EPAC	1.65	1.80	3.45
Date of completion	February 2007	August 2007	
Claim preferred by the contractor	1.44	1.37	2.81
Amount paid to the contractor	1.19	0.91	2.10
Month of payment	June 2008	May 2007	
Balance payment due	0.25	0.46	0.71

In June 2007 Audit objected to the revised estimate as it exceeded the powers of the SE. EE, Roads Division Manjeri therefore paid ₹ 2.10 crore limiting the payment within the sanction amount of ₹ 2.15 crore. Aggrieved by non-

receipt of balance amount, the contractor moved the High Court. In the counter affidavit filed, the EE admitted the claims of the contractor, based on which the High Court ordered (27 August 2009) to release the balance amount. The department effected payment of balance amount of ₹ 0.71 crore in May 2011.

Audit scrutiny of records of the Division revealed that:

1. A departmental scrutiny of work was ordered (October 2010) and conducted in January 2011/April 2011 to assess the actual work executed by the contractor. It was found that ₹ 2.10 crore paid before the Court's intervention was actually in excess of the work done by ₹ 19.85 lakh (₹ 17.51 lakh for work I + ₹ 2.34 lakh for work II). It is evident from this that the EE admitted the excess payment without proper measurement of work actually done. Further, by filing an affidavit admitting the contractor's claim for a further amount of ₹ 0.71 crore, the EE was responsible for a total excess paid amount of ₹ 0.91 crore.
2. The Court while giving direction (August 2009) for payment had opined that it is open to the Government to take appropriate steps against the contractor if the work had not been completed satisfactorily. Based on the belated scrutiny conducted by the department in January 2011/April 2011, the department could have recovered the excess paid amount from the contractor. Instead they chose to file a writ petition which was not necessary to effect the recovery.

The matter was reported to the Government in July 2012. The Government replied (October 2013) that the withheld amount was released based on orders of the High Court and that the delinquent officers were punished for the erroneous sanction of revised estimates. Government also stated that a writ appeal was filed in the High Court for recovering the excess amount from the contractor. The second part of the reply is not acceptable due to the fact that the High Court had given an order that gave room for recovery of amounts for work not done by the contractor and there was no need for the department to approach the Court.

3.7 Time and cost overrun due to delay in revision of a faulty design

Absence of adequate field work and subsequent delay in revising design in construction of a bridge resulted in time overrun by more than six years and cost overrun of ₹ 13.79 crore.

Public Works Department issued (September 2004) AS for the construction of Mattool-Madakkara bridge across Mattool river in Kannur district under the RIDF X scheme of NABARD at an estimated cost of ₹ 11.50 crore (based on 1999 SoR). The work consisted of construction of a 259.43 m bridge having seven spans approved by Design Research Investigation and Quality control Board (DRIQ). The length of approach road was 475 m on Madakkara side of which 250 m passes through water logged area and for a length of 508 m on Mattool side.

The work was technically sanctioned (November 2004) for an estimated cost of ₹ 9.79 crore. The work was awarded (March 2005) to M/s.Kerala State Construction Corporation Ltd. (KSCC) by SE, Roads and Bridges, North Circle, Kozhikode at 20.50 *per cent* above the estimate rate at an agreed EPAC of ₹ 11.11 crore. The work was to be completed by April 2007.

The land was handed over to the contractor on 5 April 2005 for construction work. The contractor commenced the work and requested (May 2005) the department to change the scope and design of the work by extending the bridge to cover the portion of the approach road over the water logged area at an estimated extra cost of ₹ 9.18 crore. Total cost of original works and extra works (including tender excess) was ₹ 20.29 crore. As no decision on his proposal was taken, the contractor stopped the work (June 2006) after completing six pile groups incurring an expenditure of ₹ 3.78 crore. The Division submitted (August 2006) a revised design of bridge to cover approach road. Government rejected the said proposal in August 2007 and directed the department to complete as originally designed and estimated.

However, based on a subsequent report of the CE (R&B) (December 2008), Government issued (February 2009) revised AS for ₹ 31.78 crore (based on 2008 SoR) including provision for payment already made amounting to ₹ 3.78 crore for executed item of work. CE approved the revised estimate for ₹ 31.78 crore incorporating 11 extra items which covered the construction of bridge proper over the water logged area. Government also conceded the demand of the contractor for rate revision and sanctioned revised rate at 10 *per cent* over the estimate for the balance work which resulted in escalating the total contract value to ₹ 34.08 crore. The payment made to the contractor (upto January 2014) amounted to ₹ 33.65 crore. The work was completed in February 2014.

The defective design in the project and undue delay in revision of estimates to remedy the same resulted in cost escalation of ₹ 13.79 crore⁴⁹ and time overrun by more than six years (as of February 2014).

The matter was reported to Government (July 2013); their reply has not been received (March 2014).

3.8 Undue benefit to a contractor

Extra expenditure of ₹ 0.80 crore due to calculation of rates for 'extra item' based on SoR 2010 instead of SoR 2007 and mistake in reckoning the distance from source of material to the work site

Government issued AS (August 2006) for the work of Improvement of 16100 metres of Kottayam-Kumarakom-Thaneermukkom road in three⁵⁰ reaches at an estimated cost of ₹ 6.91 crore under RIDF XI Scheme of NABARD for tourism development. The work was technically sanctioned for an estimated cost of ₹ 6.80 crore based on 2004 SoR. The SE, Roads and Bridges, South

⁴⁹ ₹ 34.08 crore - ₹ 20.29 crore

⁵⁰ Reach-I : Baker Junction to Illickal bridge – 4,200 metres.
Reach-II : Illickal bridge to Kumarakom boat jetty – 7,200 metres.
Reach-III: Boat jetty to Pennar bridge-4,700 metres.

Circle, Thiruvananthapuram invited tenders on three occasions between January 2007 and May 2008, but all the three tenders could not be finalised either due to incomplete bids or reluctance by contractors to extend firm period.

The work was tendered for the fourth time during June 2009 and was awarded (November 2009) to a contractor⁵¹ at 65 *per cent* above the estimates. The Agreed Probable Amount of Contract amounted to ₹ 9.53 crore. The work was completed in December 2011 and total payment of ₹ 18.76 crore was made.

The original proposal for the base course of the road was ‘Water Bound Macadam’⁵², (WBM). During execution of the work (November 2010) the base course was changed from WBM to ‘Wet Mix Macadam’⁵³ (WMM) for the reason that the WMM would be better considering the type of soil, more durable and better for the life of pavement. The revision of base course from WBM to WMM was treated as an ‘extra item’ and the rate was worked out to ₹ 1,355/cum based on SoR 2010. The quantity of WMM actually executed was 22,938.385 cum and amount paid on the same was ₹ 5.13 crore.

The Audit scrutiny of records in this regard in the office of the CE, Roads and Bridges, Thiruvananthapuram revealed the following:

- The change from WBM to WMM was decided after ascertaining the site conditions, nature of soil, the connectivity of the road from Kumarakom with other part of the town, the state of road during monsoon season etc. The department had ignored the site condition while preparing the original estimates and awarding the work. Hence this had to be assigned as an ‘extra item’.
- For effecting the changes in the base course from WBM to WMM, the rates as per SoR 2010 were adopted instead of SoR 2007. This was a violation of tender conditions which stipulate that the rate of ‘extra item’ should be arrived at applying the rates as per original tender on which the tenders were invited. As a result there was an excess expenditure of ₹ 53.91 lakh (**Annexure XI**).
- Similarly, it was noticed that while changing the base course from WBM to WMM, it required three types of Bolder Stone (BS) to be transported to the site. However, while calculating the conveyance charges of BS the distance was reckoned as 36 kms against the actual distance of 30 kms. The conveyance charges of BS for one cum. of WMM for 30 kms worked out to ₹ 385.97 as per SoR 2007. But in the computation of rates, for extra items, it was incorrectly reckoned as ₹ 443.78, the difference being ₹ 57.81 for one cum. of WMM. The resultant excess payment worked out to ₹ 26.47 lakh (**Annexure XI**).

⁵¹ Shri.K.V.Joseph & sons, Kurickkal house, Edappally village, Ernakulam.

⁵² WBM : A paved surface having compressed layer of clean crushed coarse aggregate mechanically interlocked, voids filled with binding materials with the assistance of water.

⁵³ WMM : it is a road base material consisting of crushed rock usually pre-mixed with controlled amount of water for adequate compaction.

Thus the calculation of rate of extra item in violation of contract conditions resulted in extension of undue benefit of ₹ 80.38 lakh to the contractor.

On this being pointed out the CE stated (July 2013) that the computation of extra items on the basis of SoR 2010 was a mistake and that action would be taken in due course.

TOURISM DEPARTMENT

3.9 Infertuous expenditure on wooden cottages

Adoption of unsuitable design for construction of wooden cottages at Ponmudi resulted in infertuous expenditure of ₹ 1.24 crore.

Government decided to construct a Tourist Complex at Ponmudi in Thiruvananthapuram district and AS was issued by General Administration (Tourism) department (August 2000) for construction of 15 wooden cottages at a cost of ₹ 1.17 crore utilising Central Assistance of ₹ 1.09 crore and State component of ₹ 0.08 crore. The works were to be executed through CPWD as deposit work stipulating the completion of work in 12 months.

The CPWD commenced the work in September 2003 on the basis of drawings and designs prepared by an empanelled architectural consultant of the Tourism department. The work was completed in December 2005 at a cost of ₹ 1.24 crore. Tourism department ordered in June 2007 to hand over all newly built cottages along with the old cottages and dormitories in the vicinity at Ponmudi to KTDC to operate a viable hotel within a shortest possible time. The cottages were handed over by CPWD after two years in December 2007.

The KTDC inspected the cottages and reported (February 2009) that these cottages were in damaged condition and hence, it could not operate the hotel (March 2014). A Committee of experts from CPWD, the architectural consultants engaged for this work and KTDC examined (April 2009) the condition of cottages and found that the structures had badly deteriorated due to exposure to severe weather conditions and non-occupancy of the cottages for more than three years since its construction.

The present condition of the cottages are as depicted in the photographs below:

Photographs of cottages (taken on 10 August 2013)



Audit scrutiny of the records of the Directorate of Tourism revealed the following.

- There was undue delay in the commencement and completion of the work. Though the AS was issued by General Administration (Tourism) department in August 2000, the work was commenced only in September 2003 i.e. after a delay of 37 months and completed in December 2005 against 12 months stipulated completion time. The Tourism department did not pursue with the CPWD for the timely completion of the work.
- The design of wooden cottages was not site specific taking into consideration the weather conditions at Ponmudi.
- The works completed by CPWD in December 2005 was handed over only in December 2007; after a delay of 24 months.
- No clear cut responsibility for maintenance of the cottages existed with the result that after their completion in December 2005 there was no regular maintenance especially of the wooden structures. Consequently, due to direct exposure to severe weather, the wooden structure of the cottages deteriorated and got badly decayed affecting the stability of the cottages and making them unfit for any profitable use.
- Though the department accorded sanction for construction of a tourist complex at Ponmudi in August 2000, the department decided only in June 2007 (after seven years) to operate a hotel through KTDC under the department.

Thus poor design and choice of material compounded with lack of maintenance and indecisiveness regarding manner of putting them to use led to deterioration and decay of the cottages making them unsuitable to be operated by the Tourism department thereby rendering the expenditure of ₹ 1.24 crore as infructuous.

The matter was reported to the department (October 2011) and to Government (July 2012); their reply has not been received (May 2014) despite reminders in October and November 2013 and March 2014.

WATER RESOURCES DEPARTMENT

3.10 Idle investment on incomplete irrigation projects

3.10.1 Introduction

Irrigation department⁵⁴ has taken up 25 major and medium irrigation projects to divert water for irrigating the ayacut⁵⁵ area. These projects consist of

- Water storage structures like dams/barrages/regulators
- Canal system consisting of main canals taking off from the reservoir, branch canals for taking water from main canals to distributaries which would feed water to the ayacut.

Of the 25 Projects, five major/medium irrigation projects viz. Muvattupuzha Valley Irrigation Project (MVIP), Idamalayar Irrigation Project (IIP), Karappuzha Irrigation project (KRP), Banasura Sagar Irrigation Project (BSP) and Attappilly kadavu Regulator cum Bridge (ARCB) are lying incomplete. Total cost of these projects originally envisaged was ₹ 89.19 crore. The same was revised several times, the latest cost estimate being ₹ 2,270.30 crore (25 times). Total expenditure so far (March 2013) incurred was ₹ 1,568.10 crore.

Audit reviewed implementation of three of the five projects during previous years as detailed below.

Name of the Project	Year of Audit Report	Paragraph Number of Audit Report (Civil)
MVIP	1983-84	4.1
	1993-94	4.1
IIP	1994-95	4.1
KRP	1984-85	4.1.5
	1996-97	4.1

The scope of present audit includes all the above five incomplete projects.

Audit verified the records pertaining to the period from 2008-09 to 2012-13 relating to construction and maintenance of the projects kept in seven divisions and the controlling offices like Office of the SEs and CEs to look into various reasons for failure to complete the projects and cost escalation.

⁵⁴ The field department under water resources department of Government.

⁵⁵ Cultivable land that could be irrigated by the waters of a project.

3.10.2 Physical and Financial Status

3.10.2.1 Physical status

The canal system comprised main canals taking off from the reservoir, branch canals for taking water from main canals to distributaries which would feed water to the ayacut. The canals had not been completed resulting in time over run. Project details at a glance are depicted in table below:

Table 3.16: Status of projects as on 31 March 2013

Particulars	MVIP	IIP	KRP	BSP	ARCB	Total
Name of the River	Thodupuzha River	Periyar	Karappuzha	Karumanthodu at Padinjarathara	Kurumali River	
Nature of Water storage structures	Dam	Barrage	Dam	Dam of KSEB	Regulator	
Districts irrigated	Kottayam Ernakulam and Idukki	Ernakulam and Thrissur	Wayanad	Wayanad	Thrissur	
Project commenced	1975	1981	1978	1999	2008	
Period of completion originally fixed (in years)	10	10	5	4	2	
Proposed year of completion	1985	1991	1983	2003	2010	
Original project cost (₹ in crore)	20.86	17.85	7.60	37.88	5.00	89.19
Revised project cost (₹ in crore)	939	694	441.50	185.50	10.30	2270.3
Expenditure (₹ in crore)	851.23	378.74	291.04	42..85	4.24	1568.10
External assistance received for the project	154.964 ^s	nil	48.32 [@]	nil	4.24 [^]	207.524
Proposed length of canals (in km)	363.473	204.458*	128.93	73.395	No canal	770.256
Length of canal constructed (in km)	301.783	92.666*	47.67	2.905	No canal	445.024
Percentage completed	83.03	45.30	36.97	3.96	Not applicable	57.78 ⁵⁶
Length of canal on which water distribution commenced for irrigation (in km)	247.345	0 [#]	10.82	nil	No canal	258.165
Ayacut originally envisaged (Ha)	17400	20200	4650	2800	1490	46540
Revised ayacut envisaged (Ha)	19237	14394	5600	2800	2250	44281
Ayacut irrigable (Ha)	15202	0 [#]	601.09	0	0	15803.09
Ayacut percentage achieved	87.36	0	12.92	0	0	33.96

⁵⁶ The figure represents percentage of length of canal constructed (445.024 kms) over the proposed length of canals (770.256 kms)

Particulars	MVIP	IIP	KRP	BSP	ARCB	Total
Overall status	Dam and main canals completed. Major portion of other canals completed.	Barrage already completed. Main canal to be completed.	Dam completed. Main canals completed.	Dam completed. Main canal to be completed.	Water storage structure to be completed.	

Source: Departmental figures, finance accounts, [§] AIBP assistance, ^{*}including modification of existing CRBC and CLBC: [#] trial run alone conducted in March 2013 upto 23rd km; [@]NABARD loan ₹ 45.60 crore and AIBP ₹ 2.72 crore: [^] NABARD loan ₹ 4.24 crore.

The department was able to complete only 58 per cent of the proposed length of canal that could possibly irrigate only 34 per cent of the ayacut area planned despite huge cost and time overruns.

3.10.2.2 Financial status

The project is funded from the own resources of State Government, funds received from GoI as Accelerated Irrigation Benefit Programme (AIBP) and NABARD. All the assistance from GoI are included in the Consolidated Fund of State and budgeted under Grant “XXXVIII- Irrigation”. The total expenditure for the projects as on 31 March 2013 was ₹ 1,568.10 crore.

Funds provided in Revised Budget⁵⁷ and fund utilised as of March 2013 in respect of the selected five projects is furnished in table below.

Table 3.17: Fund allocation and expenditure –project wise details

(₹ in crore)								
Particulars	Expenditure upto 31 March 2008	2008-09	2009-10	2010-11	2011-12	2012-13	Total	Upto date Expenditure
MVIP								
Budget		14.83	11.40	31.62	16.31	25.13	99.29	
Expenditure	711.70	30.55	12.29	30.58	27.59	38.52	139.53	851.23
IIP								
Budget		31.47	14.36	13.62	10.00	15.63	85.08	
Expenditure	280.33	36.34	20.83	15.79	12.19	13.26	98.41	378.74
KRP								
Budget		16.87	20.90	13.65	6.02	5.24	62.68	
Expenditure	259.99	12.40	4.04	5.20	4.92	4.49	31.05	291.04
BSP								
Budget		8.90	5.59	5.79	7.50	6.08	33.86	
Expenditure	21.42	9.27	4.16	2.18	2.71	3.11	21.43	42.85
ARCB								
Budget		0	0	1.00	1.52	0	2.52	
Expenditure		0	0.61	1.72	1.91	0	4.24	4.24
Total								
Budget		72.07	52.25	65.68	41.35	52.08	283.43	
Expenditure	1,273.44	88.56	41.93	55.47	49.32	59.38	294.66	1,568.10

Project wise audit findings are given in succeeding paragraphs:

⁵⁷ There are separate minor heads for projects under major heads 4700 for MVIP, IIP and BSP and 4701 for KRP and ARCB.

3.10.3 Muvattupuzha Valley Irrigation Project (MVIP)

3.10.3.1 Profile of MVIP

The project is intended to provide irrigation to an area of 17,400 ha. for three harvests of crops of paddy a year in Idukki, Ernakulam and Kottayam districts by utilising the tail race waters⁵⁸ from Moolamattam power house of Idukki Hydro Electric Project released to Thodupuzha River. The Irrigation department constructed (1994) Malankara dam across Thodupuzha River for storing water to irrigate 17,400 ha. area. To take the water to ayacut on both left and right banks of the Thodupuzha River, two main canals taking off from the dam for a length of 65.437 km was constructed completely (2007). From the main canal the water is diverted to the ayacut through six branch canals having a length 57.154 km and 58 distributaries taking off from the branch canals for a length of 240.882 km. However, as on 31 March 2013, 61.668 km length of canal is yet to be completed even after lapse of 37 years of commencement of the project.

3.10.3.2 Time and cost overrun

The project MVIP commenced in 1975, was scheduled to be completed in 1985; but the construction of canals was still going on as of 31 March 2013 with a time overrun of 27 years. Time lag of 27 years on project resulted in revision of project cost on six occasions. In the latest revision in 2011, it was raised to ₹ 939 crore. When compared to the original cost of ₹ 20.86 crore the cost had escalated by ₹ 918.14 crore; cost escalation being 4,401 *per cent*. Cost escalation during the audit period was ₹ 98 crore.

3.10.3.3 Planning of physical features

Designing the physical features of the projects is the first step in planning. For designing the physical features, an investigation is necessary. Based on the investigation, design is carried out, hydraulic particulars⁵⁹ fixed and design drawing prepared. Individual works are estimated based on the design drawing. Any laxity in this regard would definitely result in delay in implementation of the projects. A test check of work files revealed that these steps were often overlooked in planning the projects as narrated below:

a) In MVIP, the structures of canals were designed without considering the hydraulic particulars of branch canals. In Karikode distributary, the upstream was narrower than the down stream. Resultantly, the cross section and bed slope for major portion of Karikode distributary was of a higher water discharge than what was available from the parent canal. The discharge of parent canal (Peruva) was 3.752 cum per second whereas the discharge of Karikode distributary was five cum per second. This has resulted in re-designing the canal which in turn resulted in non execution / completion of works.

⁵⁸ Water pumped out of the hydro power plant after power generation.

⁵⁹ The parameters used to design various aspects of canals like width, depth, slope, lined or unlined beds and sides, types of structures, etc.

b) The contract for Mammalassery distributary of MVIP work was awarded (1999) without finalising the design of aqueduct⁶⁰ (chainage 1460 m to 1770 m). But on finalising the design (2001) contractor was not willing to do the work with the existing rates in the contracts. During execution of the re-tendered works it was found that the design was not suitable to the soil condition and hence it was revised in 2009. The work is going on (June 2013) based on the revised design.

3.10.3.4 Implementation

The implementation of a project starts after proper completion of planning at the initial stage of the projects. Any lapse in planning would result in defective implementation of the project. The defects in implementation as noticed in Audit are discussed in the ongoing paragraphs.

a) Delay in land acquisition

The land acquisition for the projects should have been completed prior to the awarding of the works. Since the project MVIP was scheduled to be completed in 1985 land acquisition should have been completed well in advance for the timely completion of work. The extent of land to be acquired at the end of March 2008 was 25.672 ha. Audit found that the extent of land acquired during the period 2008-09 to 2012-13 was only 18.370 ha. leaving a balance extent of 7.302 ha. of land still to be acquired.

The delay in land acquisition resulted in prolonging the completion of the project.

b) Slow progress in awarding the canal works

The status of completion of branch canals and distributaries are tabulated below:

Table 3.18: Status of canal system (Branches and distributaries)

	Total length of canal to be completed as on 31 March 2008	Canal formation works completed in each year					Length of canal completed within five years	Total length to be completed as on 31 March 2013
		2008-09	2009-10	2010-11	2011-12	2012-13		
Branch canal	9.875	0	4	1.178	0.664	1.114	6.956	2.919
Distributaries	72.491	1.2	5.507	2.7	2.787	1.523	13.717	58.774
Total	82.366	1.2	9.507	3.878	3.451	2.637	20.673	61.693

Total length of canal left incomplete in MVIP as on 31 March 2008 was 82.363 km. The project authorities were able to award works for a length of 26.683 km (32.40 per cent) to the contractors who were able to complete 20.673 km (25.10 per cent) canal formation work during the last five years. The department could not award the balance 55.680 km canal work for execution till 31 March 2013. The slow progress in awarding resulted in non-completion of canal construction works.

⁶⁰ An artificial channel for conveying water, typically in the form of a bridge supported by tall columns across a valley.

Despite stipulation of 10 year period for completion of the project in the first DPR the project was incomplete (March 2013). Audit found that the delay was due to non-availability of land, non finalisation of estimate/revised estimate and other reasons as highlighted in table below:

Sl. No.	Name of canal/work with chainage	Details of works	Reason for delay in award/completion of work	Present status (31 March 2013)	Audit observation
Delay due to non-availability of land					
1	Anicadu east minor distributary ch 0 m to 1855 m	Agreement for the formation of the distributary was awarded in July 2004 for a contract amount (1999 SoR) of ₹ 2.48 crore. But due to non availability of land the site was not handed over to the contractor. The land was fully received in December 2009 only.	Contractor was not willing to execute the work at the agreed rate due to non-revision of rates. The estimates were revised based on 2009 SoR and the SE recommended (December 2011) to entrust the work to the original contractor at 2009 SoR.	In June 2012 contractor expressed his unwillingness to execute the work at 2009 SoR. Hence SE directed (August 2012) the EE to revise the estimate as per 2012 SoR. The estimate was not revised so far.	Defective planning resulted in non-acquisition of land which in turn resulted in non-completion of canal and non-achievement of ayacut of 100 ha.
2	Edayar distributary chainage 0 m to 4,215 m	Work was awarded in 2004 for an amount of ₹ six crore without getting land.	Department was unable to hand over the land due to non availability of land. Land was received in January 2010 only.	The contractor had expressed his willingness to execute the work at 2009 SoR and the fact communicated to Government in June 2011. Now department is trying to get the work executed through the same agency at 2010 SoR.	The work remained incomplete and hence ayacut of 265 ha. left un- irrigated.
Delay due to non finalisation of estimate/revised estimate					
3	Piravam Branch Canal (PBC) from chainage 4,150 m to 6,604 m (Expenditure: ₹ 1.49 cr.)	The work awarded (June 1995) for an amount of ₹ 1.35 crore at 54 per cent above on 1992 SoR. This was held up from 1996 due to vigilance enquiry against the award of work. Later, the work was entrusted (January 2007) based on Government orders at 45 per cent above 1999 SoR; scheduled month of completion was January 2008.	Contractor did not complete the work in time. SE did not extend the contract duration as the contractor was not willing to execute supplemental agreement with the condition that no enhancement rate would be asked for the works to be executed during the extended period. The contract was terminated only in July 2012.	Estimate of balance work amounting to ₹ 80.38 lakh had been submitted to CE. P II (February 2013) for getting sanction which is yet to be obtained.	There was inordinate delay of four years for termination and hence the work could not be rearranged at risk and cost liability of the contractor. SE replied that if the work had been terminated, the balance work required rate revision and much delay might have occurred on rearrangement. Reply of SE is not tenable for the reason that had the work been terminated and the balance work arranged on time, excess cost could have been recovered from the original contractor by invoking risk and cost clause in the agreement.

Sl. No.	Name of canal/work with chainage	Details of works	Reason for delay in award/completion of work	Present status (31 March 2013)	Audit observation
4	Manjoor distributary chainage 782 m to 981 m	The work was awarded in 2007.	Works involved siphon for crossing Railway for which two types of pipes having a diameter of 1300 mm and 800 mm were required as outer and inner pipes of siphon of which inner pipe was not included in the estimate. Revision of estimate subsequently to include the necessary items led to termination of work without risk and cost of the contractor (May 2009).	Balance work amounting to ₹ 34 lakh could not be rearranged so far due to non finalisation of estimate of balance work.	An amount of ₹ 46.44 lakh spent on partially completed structures remained unfruitful. The failure to incorporate the item for “inner pipe” in the estimate resulted in delay of six years.
5	Kidangoor distributary – aqueduct ch 3,770 m to 3,970 m	The construction of canal from ch 3,200 m to ch 49,00 m was awarded in October 2007. Open foundation was proposed in the sanctioned estimate.	While excavating (2009) for foundation hard soil strata was not met with as the strata was loose clayey soil. The contract was terminated in March 2011 as the contractor asked for rate enhancement and as the design was not finalised.	Design was finalised and estimate of balance work forwarded to CE in January 2013 for sanction for CE. An amount of ₹ 1.61 crore already incurred for the work.	Defective investigation led to the non- arrangement of work which in turn resulted in non-achievement of entire ayacut of 360 ha
6	Elanji distributary ch 0 to 3,415 m (Expdr: ₹ 3.89 cr.)	Work awarded in December 1998. Work was standstill from March 2008. Later due to delay in completion of work contract was terminated in June 2010	SE was not able to obtain the fresh estimate from EE.	Balance work was not tendered yet.	The work remained incomplete and hence ayacut of 152 ha. left unirrigated.
Delay on account of other reasons					
7	Ezhuthonipadom aqueduct at over railway line of Ettumanoor Branch Canal ch 18,220 m to 18,275.5 m	The Railway agreed to undertake the staging, shuttering and signaling work for concreting over rail portion by railway itself. For the purpose, irrigation department had remitted an amount of ₹ 90.76 lakh (₹ 52.49 in March 2008 and ₹ 38.27 in October 2008) to Railways.	The work for the concrete work of the aqueduct tendered thrice (March 2011, March 2013 and April 2013). But tenders were not finalised so far due to non availability of offer/ favourable offers and hence Railway terminated the staging work awarded by them.	Railways requested (March 2013) the irrigation department to arrange the staging work along with concrete work as it was not feasible to synchronize both works if they were arranged separately. But, Irrigation department proposed (June 2013) to arrange the works separately again.	Audit observed that an amount of ₹ 90.76 lakh was blocked up with Railways for the last five years due to non-arrangement of work. It is also felt that arranging staging and shuttering work and concrete work separately was most unscientific and possibility of getting favourable offer is remote due to the difficulty of synchronising both the works.

3.10.3.5 Idling of expenditure

As the water is brought to the ayacut through canals on the system of gravitational flow, the canal work should have been arranged in such a manner that the works in upstream completed first. Failure to arrange the work in order of priority right from feeder has resulted in construction of canals of 43.037 km at a cost of ₹ 35.53 crore (**Appendix 3.2**) without connectivity.

Resultantly, water could not be distributed to an ayacut of 1695 ha. of land where the construction of canal works were idling. Hence, an amount of ₹ 35.53 crore is blocked without serving intended purpose.

3.10.4 Idamalayar Irrigation Project (IIP)

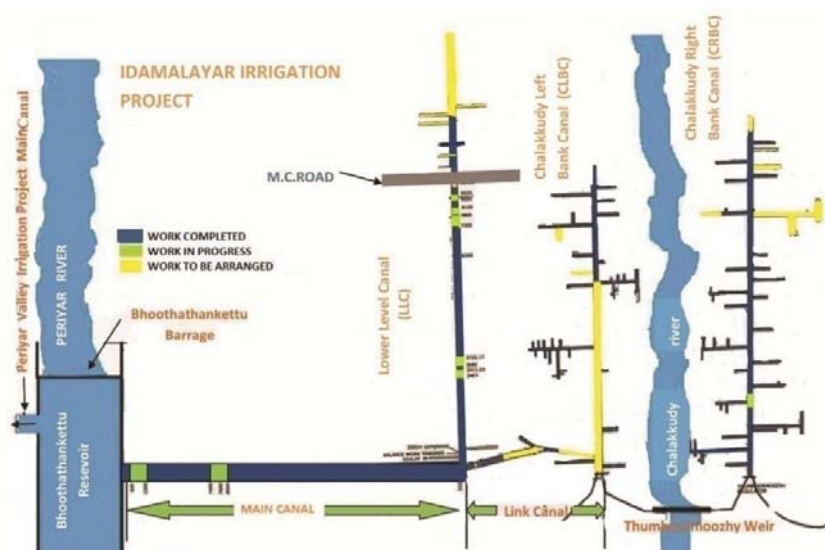
3.10.4.1 Profile of IIP

The IIP has two features.

- Utilising tail race water of Idamalayar Hydro Electric Project for irrigating the agriculture fields of right bank of Periyar River.
- Diverting water to the left bank canals (LBC) of the existing Chalakudy River Diversion Scheme (CRDS) and delink the LBC from CRDS which was being fed from Thumboormoozhi reservoir of the CRDS.

For the above purpose, the water is collected first in Bhoothathankettu Barrage of Periyar Valley Irrigation Project (PVIP). On delinking LBC of CRDS more water would be available in Thumboormoozhi reservoir of existing CRDS which would be released solely to ayacut of right bank canals (RBC). Hence the works involved in the projects are the construction of:

- Main canal (MC) of 32.28 km length taking off from the right bank of the Bhoothathankettu Barrage
- Low level canal (27.30 km) for drawing water from the MC
- Link canal (7.58 km) for drawing water from the MC and
- Re-modeling of the existing left and right bank canals of the CRDS, including construction of additional branches and distributaries to carry the augmented flow to serve additional areas, renovation of the existing canal systems under LBC and RBC of CRDS.



The low level canal (LLC) feeds an ayacut of 4,672 ha. in the right bank of the Periyar River. The MC having a direct ayacut of 999 ha. would be joined with

the existing LBC of CRDS through link canal to create an additional ayacut of 209 ha. on the left bank of Chalakudy River. The entire water now available under CRDS would be diverted to the RBC of the CRDS, thereby creating an additional ayacut of 8,514 ha. on the right bank of the Chalakudy River. Thus the total additional ayacut envisaged under the IIP is 14,394 ha.

3.10.4.2 Delay in implementation and resultant cost overrun

The project IIP was commenced in 1981 and scheduled to be completed within a period of 10 years. But the project is still under progress. Time lag of 21 years on project resulted in revision of project cost on four times taking the cost from ₹ 17.85 crore to ₹ 694 crore with a cost escalation by ₹ 676.15 crore (3,788 *per cent*). The cost enhancement between 2007 (₹ 539.50 crore) and 2012 (₹ 694 crore) was ₹ 154.50 crore. Audit observed that department had not formulated proper planning to the effect that the projects were completed in a phased manner within the time frame and at the cost proposed which led to time and cost overrun as explained in succeeding paragraph.

3.10.4.3 Delay in finalisation of design of canals due to non completion of investigation

Investigation is the first step to design a project. Only after investigation the detailed design could be prepared. But the project authorities failed to conduct investigation for finalising the alignment of some stretches of new canals LLC and new canals CRBC of CRDS. The absence of investigation hampered further progress in the execution of the formation of canals.

3.10.4.4 Slow progress of land acquisition

The assessment of exact area of land required for the purpose of construction of canals can be done only after the finalisation of alignment and design of canals. Owing to delay in finalisation of alignment the land acquisition process also was not started for formation of new branches LLC and new branches CRBC of CRDS. Besides, delay in various process of land acquisition also contributed non-completion of land acquisition in time.

The extent of land to be acquired at the end of March 2008 was not assessed so far due to non finalisation of alignment of new canals of RBC of CRDS. Audit found that land was not acquired during the period 2008-09 to 2012-13 for new branches LLC and new branches CRBC of CRDS.

3.10.4.5 Slow progress in works

During the period the department could award only 2.165 km of canal works. As on 31 March 2013 length of canal works to be completed was 111.792 km. The slow progress in awarding the work resulted in non-completion of canals.

Table 3.19: Status of formation and re-modelling of canal system

	Total length of canal completed as on 31 March 2008	Total length of canal to be completed as on 31 March 2008	Canal formation works completed in each year					Length of canal completed within five years	Balance length to be completed as on 31 March 2013	Percentage
			2008-09	2009-10	2010-11	2011-12	2012-13			
Main canal	15.107	17.171	0.7	5.626	2.135	4.478	2.958	15.897	1.274	7.42
Link canal	2.2	5.380	0	0.461	0	0.132	0	0.593	4.787	8.90
Low level canal (LLC)	10.086	17.214	1.1	1.072	0.011	0	0	2.183	15.031	87.32
Branches of LLC	0	26	0	0	0	0	0	0	26	100
Modification of CLBC	1	3.1	0	0	0	0	0	0	3.1	100
Modification of CRBC	45.6	2.6	0	0	0	0	0	0	2.6	100
Branches of CRBC and CLBC	0	59	0	0	0	0	0	0	59	100
Total	73.993	130.465	1.8	7.159	2.146	4.610	2.958	18.673	111.792	85.69

The department was able to award only 2.165 km of canal works and constructed 18.67 km of canals during five year period after incurring an expenditure of ₹ 98.41 crore.

Reason for slow progress of arranging work were due to non-availability of land, non finalisation of estimate/revised estimate and other reasons as given in the table below:

Sl. No.	Name of canal/work with chainage	Details of works	Reason for delay in award/completion of work	Present status (31 March 2013)	Audit observation
Due to delay in land acquisition and non-finalisation of estimate					
1.	Link canal 2000 m-7575 m	Construction of 4.787 km link canal to be arranged.	Land not acquired to the extent of 11 ha.	Revised proposal forwarded to Government (November 2011) for getting sanction for taking land under urgency clause in respect of chainage from ch 2000 m to 3000 m .	Delay in finalisation of land acquisition resulted in non-completion of the work.
2	Low level canal	Work for construction of LLC from chainage 10,490 m to 12000 m was arranged in June 2004.	Later, work was terminated (March 2009) due to non availability of land for crossing Main Central road. Estimate for the reach of road crossing was not finalised.	Work is standstill.	Audit observed that delay in finalisation of estimate and land acquisition led to the non-completion of the canal.
Due to other reasons					
1	Low level canal chainage 80 m to	The work was arranged in	The work was terminated in	Estimate for ₹ 79.6 lakh submitted to	Lack of co-ordination

Sl. No.	Name of canal/work with chainage	Details of works	Reason for delay in award/completion of work	Present status (31 March 2013)	Audit observation
	715 m.	April 2000.	November 2009 without risk and cost due to non-shifting of high tension line by KSEB. Later, work was re-tendered thrice (October 2010, November 2010, and March 2011). In last tender the lowest offer was 87 per cent above estimate rate. But Government approved 40.10 per cent only which was not acceptable to the contractor. Hence the work was not started.	CE (January 2013) for getting Technical sanction.	between Irrigation department and KSEB led to the non-re-arrangement of work of 635 m in the opening portion of LLC resulting in idling the construction of downstream portion of the LLC.

3.10.4.6 Idle expenditure on the project

The expenditure incurred so far was ₹ 378.74 crore in 31 years. The expenditure incurred was mainly for construction of canal system comprising MC, LLC, LC and re-modeling of CLBC and CRBC. But the construction work of MC was not completed so far. Though CC lining⁶¹ of works in some reaches within 23 km are still to be completed, a trial run was carried out (March 2013). It was revealed in audit that a trial run of partially completed structures alone would not contribute for serving the ayacut due to the following reasons.

- Reaches between 0.625 to 1.350 km and 7.400 to 8.000 km of the MC were not completed
- There were incomplete portion in the initial chainage link canal and Low Level Canal.
- Construction of link canal was not completed yet due to failure to acquire 11 ha. land.

As water distribution could not be effected for irrigation under the project, an amount of ₹ 378.74 crore incurred for the project remained unfruitful.

3.10.5 Karappuzha Irrigation project (KRP)

3.10.5.1 Profile of KRP

Karappuzha Irrigation Project in Wayanad district was taken up in 1978 for increasing production of rice by 22,550 MT. The project envisaged construction of a dam across Karappuzha river at Vazhavatta along with canal system. The construction of the dam was completed. However, the department neither completed nor arranged any canal formation work during the last five years.

⁶¹ Cement concrete lining works done through earthen canal.

3.10.5.2 Delay in implementation and resultant cost overrun in KRP

The project KRP was commenced in 1978 and scheduled to be completed within a span of five years.

Time lag of 29 years on project resulted in revision of project on five times and cost enhanced from ₹ 7.60 crore to ₹ 441.50 crore with a cost escalation of ₹ 433.90 crore (5,709 *per cent*). During the period between 2009 and 2012 the cost enhancement was ₹ 49 crore. Audit observed that department had not formulated proper planning to the effect that the projects could be completed in a phased manner within the time frame and at the cost proposed which led to time and cost overrun.

3.10.5.3 Slow progress of land acquisition in KRP

The project area required was 1481 ha. of land. Though the project was to be completed within five years in 1983, the land acquisition was not completed even by 2013. As on 31 March 2013, the department acquired 1,378.762 ha. of land leaving 102.238 ha. of land. The extent of land acquired during the period from 2008-09 to 2012-13 was only 14.9766 ha. which represented only 12.78 *per cent* of total 117.2146 ha. of land to be acquired as on 31 March 2008. The department stated that the progress in the work was hampered following a public demand and that the work may be resumed only after ascertaining the necessity of future acquisition of land. In this connection, the SE's office informed that the minutes of the meeting directing to acquire land only after public survey was not received from the Collectorate so far (August 2013).

3.10.5.4 Slow progress in arranging works in KRP

Total length of canal left incomplete in KRP as on 31 March 2008 was 81.26 km. The project authorities failed to arrange or to complete any length of canal formation works during the period 2008-09 to 2012-13. To a query in audit, the project authorities stated that no works were arranged by the department during the period between 2008-13. However, the department was not able to furnish any justification for not arranging the work even though land was available for construction of distributaries in some cases test checked by audit.

Status of canal system is as shown below.

Table 3.20: Status of canal system

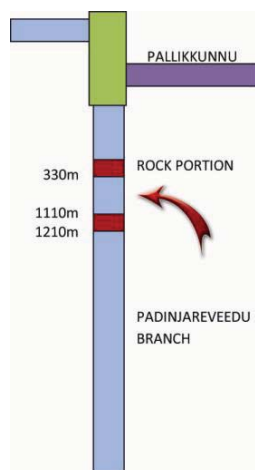
Category	Total		Completed as on 31 March 2013		Percentage completed	
	Numbers	Length (in km)	Numbers	Length (in km)	Numbers	Length (in km)
Main canal	2	25.545	2	25.545	100	100
Branch canals	5	43.24	1	20.005	20	46.27
Distributaries	21	60.145	1	2.120	4.760	3.52
	28	128.93	4	47.67	14.29	36.98

3.10.5.5 Non receiving of grant of AIBP

Central assistance under Accelerated Irrigation Benefit Programme (AIBP) was available for certain ongoing works in particular years in order to complete projects in a phased manner so that irrigation benefit reached to the public early. Funding for the years subsequent to first year will be based on the confirmation of expenditure of the previous years.

In KRP, GoI provided grant of ₹ 2.72 crore under AIBP for 2006-07 for 15 components. Audit found that bills of eight out of 15 works included under the AIBP were neither submitted nor finalised so far. Non finalisation of bills of works coming under AIBP led to loss of assistance under AIBP from 2007-08 onwards. Thus, due to negligence on the part of department, the State was deprived of any assistance in subsequent years in respect of this project.

3.10.5.6 Non commencement of water distribution due to poor execution of canal work



Though the construction of entire length of 25.545 km of main canal was completed, water distribution was not possible in Left Bank Main Canal (LBMC) beyond the chainage from 5 km due to blockage in cut and cover from 10.175 km and 15 km and excessive seepages in LBMC. Similarly, the water distribution was not commenced beyond 3.7 km of Right Bank Main Canal (RBMC) due to damages and seepages in RBMC. Therefore, water distribution was not possible in 36.85 kms and hence an expenditure of ₹ 63.87 crore (Appendix 3.3) remained blocked up for five years. Similarly, in Padinjareveedu branch canal the work had to be terminated due to detection of exposed hard rock between chainage 0/000 km to 0/430 km. As a result

the work pertaining to the above chainage was re-aligned and the land acquisition work is in progress. Thus due to the lapses in investigation, the work was delayed for five years.

3.10.6 Banasura Sagar Irrigation Project (BSP)

3.10.6.1 Profile of BSP

Kerala State Electricity Board (KSEB) constructed a dam across Karamanthodu at Padinjarathara in Wayanad district to store 6.7 TMC feet⁶² of water, of which 1.7 TMC ft of water would be used to irrigate the field by constructing canals. The project envisages to irrigate 2,800 ha. of land with increased food production of 8,838 tonnes of paddy annually.

3.10.6.2 Delay in implementation and resultant cost overrun

The project was commenced in 1999 and scheduled to be completed within a span of four years. The department was able to complete less than one *per cent* of canal work in five years after incurring an expenditure of ₹ 21.43 crore. Time lag of nine years on project resulted in upward revision of project cost two times from ₹ 37.88 crore to ₹ 185.50 crore with a cost escalation of ₹ 147.62 crore (390 *per cent*). The cost escalation during the audit period was by ₹ 58.50 crore. Audit observed that department had not formulated proper planning to the effect that the projects could be completed in a phased manner within the time frame and at the cost proposed which led to time and cost overrun. There was no intervention of higher authorities to fill the vacancies of technical staff in BSP which affected the progress of works.

⁶² Thousand million cubic feet.

3.10.6.3 Slow progress of land acquisition in BSP

The total land required for the project was 72.462 ha. Though the land acquisition procedure had to be completed prior to the arrangement of the work, the department was able to acquire only 20.209 ha. of land in 13 years after incurring ₹ 42.85 crore.

As seen from the table, the extent of land acquired during the audit period 2008-09 to 2012-13 was only 5.7306 ha. which represented only 9.88 *per cent* of requirement.

Table 3.21: Details of land acquisition for the last five years

Total land to be acquired as on 31 March 2008 (in ha.)	Land acquired in last five years (in ha.)						Percentage of land acquired with respect to total balance land to be acquired	Balance land to be acquired (in ha.)
	2008-09	2009-10	2010-11	2011-12	2012-13	Total		
57.984	1.2275	3.4478	0	0	1.0553	5.7306	9.88307	52.2534

(Source: Departmental figures)

The department attributed the shortage of staff for survey, investigation as well as delay in getting land acquisition compensation, to the delay in land acquisition.

3.10.6.4 Slow progress in awarding works in BSP

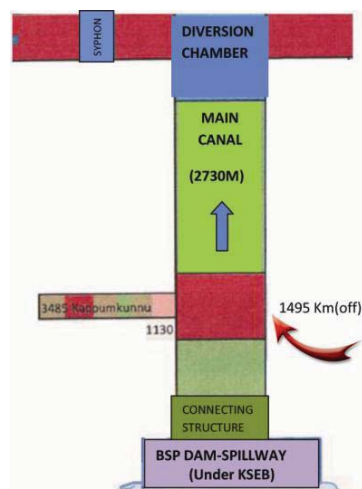
Total length of canal left incomplete in BSP as on 31 March 2008 was 71.185 km. The project authorities completed only 0.695 km canal formation work during the last five years leaving a balance length of 70.490 km of canal to be completed. During the period, the department could award only 1.615 km of canal construction works. The slow progress in arranging the work resulted in non-completion of canals. The delay in land acquisition, revision of estimates /design after awarding works and delay in approving revision of estimates and non-deployment of required number of technical staff in BSP for preparation of estimate /revised estimate led to delay.

Table 3.22: Status of canal system

	Total length of canal to be completed as on 31 March 2008	Canal formation works completed in each year					Length of canal completed within five years	Total length to be completed
		2008-09	2009-10	2010-11	2011-12	2012-13		
Main canal	0.520	0	0	0	0.150	0	0.150	0.370
Branch canal	14.420	0	0	0	0	0	0	14.420
Distributaries	56.245	0	0	0	0.545	0	0.545	55.700
Total	71.185	0	0	0	0.695	0	0.695	70.490

(in km)

3.10.6.5 Defective investigation



The work of canal construction from ch 1130 m to 1500 m of main canal was awarded in October 2004 stipulating the period of completion in October 2006. During the course of execution, it was noticed that the open foundation proposed at Piers⁶³ P2 to P4, P7 and P8 was unsuitable due to the soil strata at the proposed site. Hence the open foundation was changed to Pile foundation. Thus due to lapse in investigation, the work had to be stopped after incurring an expenditure of ₹ 47.86 lakh. The work is at stand still (31 March 2013).

3.10.6.6 Termination of work due to non-handing over of site

Process of land acquisition and construction programme was not synchronized. In BSP, 12 canal formations works costing ₹ 16.88 crore were awarded on or before 2008 with a period of completion of six to 18 months. Consequent on non finalisation of land acquisition process there was delay in handing over/non handing over of site to the contractors which resulted in stoppage/delay in execution of work. Hence, these works were terminated and remain to be rearranged. Audit observed that had the land acquisition been synchronized with work awarded, the work could have been arranged in 2010 and completed by 2012.

3.10.6.7 Idle expenditure

As on 31 March 2013, an amount of ₹ 42.85 crore was spent on BSP. However, water distribution could not be commenced due to non completion of main canal from ch 1130 m to 1500 m. More importantly the irrigation department had fixed the Minimum Drawdown Level⁶⁴ (MDDL) for irrigation supply is 760.075 m above Mean Sea Level (MSL) which was the off take level of main canal. However, data available with the KSEB revealed that water level in the reservoir was lower than the off take level fixed for BSP during March 2007 to May 2007 (average 755.4 m), April 2008 to May 2008 (average 755.7 m), April 2009 to May 2009 (average 755.7 m) and May 2010 (756.3 m). This confirms that the project work would be ineffective even with the commissioning of the project.

3.10.7 Attappillykadavu Regulator cum Bridge (ARCB)

3.10.7.1 Idle expenditure due to non completion of the project

Construction of ARCB was awarded in June 2008 with a period of completion as 24 months. After completing 70 per cent of the work, work was held up

⁶³ Pillars of bridge.

⁶⁴ Height from MSL at which the outlet to be provided on the dam for drawing water for irrigation purpose.

from 31 March 2012 due to non-availability of fund from NABARD. Delay in completion of the project was attributed to continuous flow of water in the river, revision of design and non availability of sufficient land for approach road. An amount of ₹ 4.24 crore was spent for the project so far and ₹ six lakh payable to the contractor. It was estimated by EE that the balance work would cost ₹ six crore at 2012 SoR. Thus the cost escalation would be 106 *per cent* when compared to AS of ₹ five crore. Audit observed that as major portion of the work viz. erection of shutter was not commenced, no irrigation potential was created. Hence the entire expenditure of ₹ 4.24 crore spent on the project remained unfruitful.

3.10.8 Conclusion

Delay in land acquisition, poor investigation, execution and contract management coupled with ineffective monitoring led to huge time and cost overruns and creation of idle infrastructure.

3.11 Undue benefit to a contractor in five inland navigation works

Non-execution of agreements as provided for in tenders resulted in granting undue benefit of ₹ 1.03 crore to contractor in five canal improvement works undertaken in Kottayam district.

The Director, Inland Navigation, Water Resources department, Kollam (Director) invited tenders (February 2011) for five⁶⁵ inland navigation works for improvement of five stretches of boat route / feeder canals in Kottayam district under RIDF XVI programme of NABARD. The EPAC of all the five works were ₹ 5.38 crore. The work involved deepening the canal bed using suitable mechanical means and depositing the spoil conveniently at suitable places sufficiently away from the banks at contractor's own risk including hire charges of dredger or any other mechanical means, cost of oil etc.

As per Notice Inviting Tenders (NIT), bidders were required to work out their workable rates independently and submit their bids quoting only a single fixed percentage rate above or below or at par with the Net PAC (NPAC). In all the five works put to tender, there was no supply of departmental machinery or materials and thus the EPAC and NPAC were the same.

The lowest offers in all the five tenders were from a single bidder⁶⁶ and the quoted rates ranged between 20 and 42 *per cent* below the EPAC. The single bidder was awarded the contract at the rate quoted by him. The Director, executed the agreements (February –March 2011) applying the rebate ranging from 20 to 42 *per cent* on EPAC quoted by the bidder after allowing hiring charges thereby bringing the agreement value to ₹ 4.59 crore.

Audit scrutiny of the contract agreements and payments made revealed that the agreements were incorrectly executed for ₹ 4.59 crore as against ₹ 3.54

⁶⁵ Improvement of boat route canal from Kumarakom to Muhamma, Vaikom to Thavanakkadavu, Cheepunkal to Mannanam, Muttar - Neelamperur canal and Kallara Feeder canal.

⁶⁶ Southern Dredging Company (P) Ltd., Flat No.905, Pioneer Towers, Marine Drive, Kochi 682031.

crore which should have been the contract value as per the terms and conditions of the NIT. Based on the actual work done, the contractor was paid ₹ 4.52 crore against ₹ 3.49 crore by allowing deduction of hiring charges of dredgers which was inadmissible. This led to excess payment of ₹ 1.03 crore (**Annexure XII**).

The matter was pointed out to the department in June 2013 and reported to Government in August 2013; their replies are awaited (March 2014).



Thiruvananthapuram,
The

(Dr. BIJU JACOB)
Accountant General
(Economic and Revenue Sector Audit), Kerala

Countersigned



New Delhi
The

(SHASHI KANT SHARMA)
Comptroller and Auditor General of India

ANNEXURES

Annexure I

Projects approved in SLSC, not proposed in DAP/Agenda Notes (Reference: paragraph 2.1.5.2 (i), Page 14)

Sl. No.	Name of the project	Name of the district and implementing department/ agency	Cost of project (₹ in lakh)
SLSC dated 08.01.2008			
1	Providing free artificial insemination service to milch animals	Thiruvananthapuram (KLDB)	13.50
2	Infrastructure development for broiler breeding farm	Thiruvananthapuram (KSPDC)	145.00
3	Providing artificial insemination service to milch animals	Kollam (KLDB)	13.50
4	Infrastructure development of Karingali and Peruvethchal puncha <i>padasekharams</i>	Alappuzha (KLDB)	140.00
5	Providing artificial insemination service to milch animals	Alappuzha (KLDB)	13.50
6	Providing artificial insemination service to milch animals	Pathanamthitta (KLDB)	13.50
7	Providing artificial insemination service to milch animals	Kottayam (KLDB)	13.50
8	Providing free artificial insemination to milch animals	Idukki (KLDB)	13.50
9	Providing free artificial insemination to milch animals	Ernakulam (KLDB)	13.50
10	Providing free artificial insemination to milch animals	Thrissur (KLDB)	13.50
11	Providing artificial insemination to milch animals	Malappuram (KLDB)	13.50
12	Providing artificial insemination to milch animals	Kozhikode (KLDB)	13.50
13	Providing free artificial insemination to milch animals	Kannur (KLDB)	13.50
SLSC dated 13.11.2008			
1	To meet the 'critical gap' for the project of setting up a unit for manufacture of cattle feed at Karunagappally at a total project cost of ₹ 35 crore	Kollam (KFL)	400.00
2	To support, renovation, modernisation and creation of additional facilities – one time grant to Maranalloor Ksheera Vyavasaya Sahakarana	Thiruvananthapuram (Dairy Development)	35.00

Sl. No.	Name of the project	Name of the district and implementing department/ agency	Cost of project (₹ in lakh)
	Sanghom Ltd. No. 3994, Thiruvananthapuram.		
3	Scheme for developing natural resource by Ayiramthengu Fish Farm	Kollam (FIRMA)	22.00
4	Glucosamine project at Ambalapuzha	Alappuzha (Matsyafed)	50.00
5	Renovation/expansion of Kaipamangalam fresh water prawn hatchery	Thrissur (Matsyafed)	17.00
6	Renovation of prawn hatchery at Mopla bay	Kannur (Matsyafed)	51.00
SLSC dated 14.06.2010			
1	Improvement of Chathanad – Cherai farm outer bund for the development of aqua culture activities (Total cost – ₹ 10 cr.) First year cost	Ernakulam (Fisheries)	200.00
2	Sustainable fisheries development for rural development in Puthenvelikkara Grama Panchayat – Total cost ₹ 77.95 lakh	Ernakulam (Fisheries)	33.60
SLSC dated 26.09.2011			
1	Development of cool season vegetables in Vattavada and Kanthallur under Idukki package	Idukki (SHM)	1,600.00
2	Popularisation of temperate fruit crop – “Idukki fruit belt” (five components)	Idukki (SHM)	856.30
3	Modernisation of cattle feed plant – Pattanakkad	Alappuzha (MILMA)	150.00
4	Popularisation of cassava bio pesticide against borer pests of banana in the three districts of Kerala	Thiruvananthapuram (CTCRI) Kasaragod, Thiruvananthapuram (KVK, CISSA)	50.00
5	Musiris harithagramam, Pallippuram	Ernakulam (PAO/ Dept. of Agriculture)	425.00
6	Poultry feed mixing plant at Mala at a total cost of ₹ 700 lakh	Thrissur (KSPDC)	100.00
SLSC 19.05.2012			
1	Mushroom cultivation – to be implemented through BSS in 28 clusters of 50 farmers each (₹ 22,500 x 1400 unit = ₹ 315 lakh. 50% of assistance of RKVY)	Thiruvananthapuram (SHM)	157.50
2	Balance work of Muthalapozhy Fishing Harbour (Original cost ₹ 13.66 crore (in 2000). Additional amount required for completion ₹ 31.02 crore. First year requirement ₹ 7 crore)	Thiruvananthapuram (Harbour Engg.)	700.00

Sl. No.	Name of the project	Name of the district and implementing department/ agency	Cost of project (₹ in lakh)
3	Project submitted by AHADS : (1 to 12 items) total cost ₹ 1,238.55 lakh	Palakkad (Agriculture)	556.51
4	Comprehensive development of kole wetland (total cost ₹ 414.20 crore). RKVY share for three years ₹ 114.20 crore – First year cost	Thrissur (Agriculture)	4750.00
5	Desilting at Kottayam Chira (Malabar) <i>panchayat</i>	Kannur (KLDB)	118.49
6	Establishing a goat farm at Badiyadukka	Kasaragod (Animal Husbandry)	237.87
7	Establishing high tech layer breeding farm (total cost - ₹ 600 lakh)	Kasaragod (KSPDC)	100.00
SLSC dated 15.04.2013			
1	Productivity improvement of Rice @ ₹ 3000/ha. towards input assistance	All Districts (Agriculture)	3375.00

(Source: Minutes of the SLSC meetings)

List of Abbreviations used

KSPDC	-	Kerala State Poultry Development Corporation
KLDB	-	Kerala Livestock Development Board
SHM	-	State Horticultural Mission
KVK	-	Krishi Vigyan Kendra
CTCRI	-	Centre for Tuber Crops Research Institute
FIRMA	-	Fisheries Resource Management Society
KFL	-	Kerala Feeds Limited

Annexure II

Sanction of projects without proper Detailed Project Reports (Reference: paragraph 2.1.5.2 (ii), Page 15)

Sl. No.	Date of SLSC	Name of Project	Agency	Assistance under RKVY (₹ in lakh)	Expenditure incurred as on 13.02.2014 (₹ in lakh)	Status
1	18/03/2011	Medium scale dairy units in Government farms KE/RKVY-CROP/2011/779	Animal Husbandry	41.10	20.00	Completed
2	18/03/2011	Projects under the special programme for protein supplement KE/RKVY-DDEV/2012/837	Dairy	112.50	112.50	Completed
3	18/03/2011	Projects under the special programme for protein supplement KE/RKVY-ANHB/2012/838	KLDB	48.47	48.47	Completed
4	18/03/2011	Projects under the special programme for protein supplement KE/RKVY-ANHB/2012/839	Milma	300.00	300.00	Completed
5	18/03/2011	Popularisation of cassava bio pesticide against borer pests of banana in three districts of Kerala KE/RKVY-CROP/2012/840	CTCRI	50.00	50.00	Completed
6	18/03/2011	Modernisation of cattle feed plant – Pattanakkad KE/RKVY-ANHB/2012/841	Milma	150.00	150.00	Completed
7	18/03/2011	Project for the development of cool season vegetables in Vattavada and Kanthalloor, Idukki district under Idukki package (18 components) KE/RKVY-CROP/2012/842	SHM	1,164.05	1,164.05	Completed
8	18/03/2011	Project proposal for 'Idukki fruit belt' popularisation of temperate fruit crops in Idukki district (five components) KE/RKVY-CROP/2012/843	SHM	606.30	606.30	Completed
9	18/03/2011	Musiris Harithagramam in	Agriculture	200.00	25.00	Completed

Sl. No.	Date of SLSC	Name of Project	Agency	Assistance under RKVY (₹ in lakh)	Expenditure incurred as on 13.02.2014 (₹ in lakh)	Status
		Pallippuram Panchayat KE/RKVY-CROP/2012/844				
10	18/03/2011	Feed mixing plant at Mala KE/RKVY- ANHB/2012/845	KSPDC	100.00	100.00	Completed
11	18/03/2011	RKVY Seed Garden Complex Munderi, Malappuram proposal for excavation of trenches along fencing line KE/RKVY- NONF/2011/846	Agriculture	7.00	0.00	Abandoned
Total				2779.42	2576.32	

(Source: Minutes of SLSC meetings & RDMIS)

Annexure III
Submission of Inflated Utilisation Certificate
(Reference: paragraph 2.1.6.1, Page 18)

Sl. No.	Project	Implementing Agency	RKVY assistance	Fund released	Unspent amount ₹ in lakh	Expenditure	Amount of Utilisation as reported
1	Matsyakeralam programme	Special Officer, Matsyakeralam	300.00	300.00	269.18	30.82	300.00
2	Bull spermatozoa sexing and Commercialising sexed semen in India for uplifting the National Dairy sector	KLDB	525.00	525.00	524.00	1.00	525.00
3	Establishment of Aquarium complex and training cum awareness centre at Odayam	ADAK	350.00	350.00	300.00	50.00	350.00
4	Glucosamine Project	Matsyafed	239.00	125.00	125.00	0.00	125.00
5	Improvement to Chathanad Cherai Bund	KSCADC	1000.00	760.00	424.68	335.32	760.00
6	Establishment of a hi-tech layer breeding farm at Kuriyottumala	KSPDC	700.00	350.00	298.87	51.13	350.00
7	Matsyasarudhi	Special Officer, Matsyakeralam	1001.25	1001.25	610.59	390.66	1001.25
8	Jaivasree project for promotion of self sufficient villages	Animal Husbandry department	1017.50	527.50	226.53	300.97	527.50

Sl. No.	Project	Implementing Agency	RKVY assistance	₹ in lakh			Amount of Utilisation as reported
				Fund released	Unspent amount	Expenditure	
9	Ksheerasamrudhi	Animal Husbandry department	178.00	79.00	66.01	12.99	79.00
10	Cage farming in reservoirs under NMPS	FIRMA	668.00	295.00	274.80	20.20	295.00
11	Establishment of multispecies eco hatchery under NMPS	FIRMA	605.00	150.00	149.44	0.56	150.00
12	Aqua culture activities under Matsyakeralam (13 components)	Special Officer Matsyakeralam	300.00	300.00	116.5	183.50	300.00
13	Pig rearing	M P I	20.00	445.85	359.96	85.89	445.85
14	Pig rearing scheme	M P I	44.00				
15	Construction of MPI Pig farms	M P I	30.00				
16	Bio gas Plant	M P I	10.00				
17	Pig rearing by farmers	M P I	15.00				
18	Establishment of Pig Satellite units in Kerala	M P I	237.00	5,208.60	3,745.56	1,463.04	5,208.60
19	Establishment of a deep freezer in MPI to increase the storage capacity	M P I	90.70				
Total			7,330.45	5,208.60	3,745.56	1,463.04	5,208.60

(Source: Data collected from field offices)

Annexure IV
Status of Projects
(Reference: paragraph 2.1.7, Page 20)

Sector	Total Projects			Completed			Ongoing			Not yet Implemented			Abandoned		
	No.	Cost	Expenditure	No.	Cost	Expenditure	No.	Cost	Expenditure	No.	Cost	Expenditure	No.	Cost	Expenditure
		₹ in crore	₹ in crore		₹ in crore	₹ in crore		₹ in crore	₹ in crore		₹ in crore	₹ in crore		₹ in crore	₹ in crore
NRM	42	26.53	17.10	41	26.37	17.08	1	0.15	0.03						
AGRE	152	76.34	42.43	133	54.84	42.43	17	20.14	0.00	1	0.36	0.00	1	1.00	0.00
AMEC	36	105.99	64.92	33	75.62	54.32	2	27.77	10.60				1	2.60	0.00
ANHB	179	176.77	157.83	168	152.74	153.75	6	20.72	4.08	4	3.07	0.00	1	0.23	0.00
CROP	101	210.56	183.60	93	204.45	183.41	4	0.82	0.20				4	5.30	0.00
DDEV	50	25.52	24.38	45	18.00	17.36	5	7.52	7.02						
EXTN	47	29.22	18.52	42	22.23	13.86	3	6.40	4.66				2	0.60	0.00
FINM	3	1.90	1.90	3	1.90	1.90									
FISH	125	152.72	111.05	117	112.32	97.66	7	39.71	13.39				1	0.69	0.00
HORT	93	135.35	119.69	84	129.16	119.47	9	6.19	0.22						
IPMT	5	1.88	1.17	5	1.88	1.17									
IRRI	23	21.01	4.60	16	8.58	4.50	3	9.30	0.10				4	3.13	0.00
ITEC	1	0.32	0.06	1	0.32	0.06									
MRKT	26	10.60	11.18	26	10.60	11.18									
NONF	20	5.35	2.77	15	2.54	2.40	3	1.74	0.36				2	1.07	0.00
ORFM	12	3.57	2.00	12	3.57	2.00									
OTHR	10	4.80	0.76	8	2.09	0.66	2	2.71	0.10						
SEED	13	5.52	3.97	13	5.52	3.97									
SERI	9	1.24	0.91	9	1.24	0.91									
COOP	2	0.20	0.05	1	0.05	0.05	1	0.15	0.00						
Total	949	995.39	768.90	865	834.02	728.14	63	143.32	40.76	5	3.43	0.00	16	14.61	0.00

(Source: RDMIS)

Annexure V
Calculation of Short Recovery of Value of Blasted Rubble
(Reference: paragraph 2.1.7.2, Page 22)

Quantity of rock blasting executed 20,296.122 m³ (up to CC IV & part)
Quantity of blasted rubble (as per Standard Data Book) 20,296.122 x 1.5 times =
30,444.78 m³

Bill No	Quantity of rubble (m ³)	Rate (₹/m ³)	Value (₹)	Amount Recovered (₹)	Short Recovery (₹)
1	2	3	4 (2 x 3)	5	6 (4 – 5)
CC II	4478.325 m ³ x 1.5	270	1813722	139052	1674670
CC III	11301.251 m ³ x 1.5	420	7119788	474653	6645135
CC IV	4516.546 m ³ x 1.5	420	2845424	160970	2684454
Total	30444.78		11778934	774675	11004259

Labour charge paid for lead and lift
Rate 10 m³ - ₹ 756 + 10 % CP = ₹ 831.60
Labour charge paid ₹ 831.60/10 m³ x ₹ 20296.122 = ₹ 1687826
Less tender deduction @ 16 % = ₹ 270052
Balance = ₹ 1417774
Total Excess Payment ₹ 11004258 + ₹ 1417774 = ₹ 12422032

ANNEXURE VI

SAMPLING

(Reference: paragraph 2.2.2; page 31)

Database: For undertaking the Performance Audit of the Kuttanad Package, a database of projects was prepared on the basis of the status-report for the month of March 2013 (consisting of projects name, cost of sanctioned DPR, and Expenditure-incurred). The database so prepared (attached herewith) consist of 75 projects, out of which 22 projects are zero-expenditure projects (i.e., no expenditure is incurred therein, as on 31 March 2013).

Total cost of sanctioned DPR of 75 projects included in Kuttanad Package stands at ₹ 1,165.75 crore as up to 31 March 2013, whereas, the total-expenditure incurred on these 75 projects stands at ₹ 178.60 crore (as up to 31 March 2013).

Sampling-procedure adopted:

The sampling is based on the expenditure (₹ in crore) incurred as on 31 March 2013. The procedure adopted for sampling is as described below:-

Sampling-Method = ‘Random Stratified Sampling’, using IDEA software.

Stratified-field = ‘Expenditure (in crore)’

Stratum-interval = ₹ four crore with lower-limit = 100,

thus, providing us with 3-strata, viz.,

> 1.00 to 4.00 1st stratum

> 4.00 to 8.00 2nd stratum

> 8.00 3rd stratum

Sample-size taken = 50% in 1st stratum
75% in 2nd stratum, and,
100% in 3rd stratum.

With above framework, the sampling was done, which provided a list of 16 projects covering 80 *per cent* share of the total funds utilised (expenditure) up to 31 March 2013, under Kuttanad Package, as shown in the table below:-

Sl. No.	Stratum (₹ in crore)	No. of records in database	Sample size		% share of stratum, in the total population	% share of sample, in the total population
			% target taken	No. selected		
1	>1.00 to 4.00	12	50	6	13.00	5.63
2	>4.00 to 8.00	7	75	5	23.22	16.95
3	>8.00	5	100	5	57.60	57.60
Total		24		16	93.82	80.18

“Total population” = up-to-date expenditure (as on 31 March 2013) under Kuttanad Package

Random Number Seed = 28,857

Thus, 16 works were selected for Performance Audit through sampling. Besides, one work with “zero expenditure” up to 31 March 2013, namely “KEL-II: Mitigation of

floods in group 9-5 *padasekharams* in Kuttanad region” was also included for Performance Audit.

Justification for including “Zero expenditure works”:

The work “KEL-II: Mitigation of floods in group 9-5 *padasekharams* in Kuttanad region” with zero expenditure (up to 31 March 2013) was included for Performance Audit, owing to its importance in strengthening the agriculture-based livelihoods and impact on ecological security.

Department-wise list of works selected through the random stratified sampling method for conducting the performance audit of Kuttanad Development Package

Sl. No.	Department	Name of Project	Expenditure incurred as on 31 March 2013 (₹ in crore)	Stratum
1	Irrigation	Regulation of flood water in Kayal and near C & D and Rani-Chithira blocks	30.42	3
2	Irrigation	Construction /Strengthening of outer bunds (KEL-I: mitigation of floods in 14 <i>padasekharams</i> in Nedumudi Panchayat)	11.72	3
3	Irrigation	Construction /Strengthening of outer bunds (KEL-II: mitigation of floods in Group 9 - 5 <i>padasekharams</i> in Kuttanad region)	0	3
4	Irrigation	Construction of Bridge-cum-Regulator across Kariyar river in Thalayazam panchayat	8.41	3
		Total	50.55	
5	Agriculture	Agriculture Mechanisation (Purchase of pump-sets and agro-machinery for use by farmers of Kuttanad)	43.65	3
6	Agriculture	First paddy cultivation in Onattukara	5.57	2
7	Agriculture	Integrated management of coconut holdings and enhancement of productivity in Kuttanad region	7.27	2
8	Agriculture	Integrated Pest Management, &, Soil Nutrient Management with thrust on conservation	2.44	1
		Total	58.93	
9	State Horticulture Mission	On farm income enhancement from Garden Land of Kuttanad with horticulture	7.96	2
		Total	7.96	
10	Kerala Agricultural University	Strengthening of Regional Agriculture Research Station (ORARS), Kayamkulam	1.16	1
11	Kerala Agricultural University	Environmental Surveillance Centre for wetland farming system in Kuttanad	1.32	1
12	Kerala Agricultural University	Strengthening research of KAU	1.02	1
		Total	3.50	
13	Kerala Livestock Development Board	Project for artificial-insemination	1.27	1
		Total	1.27	

Sl. No.	Department	Name of Project	Expenditure incurred as on 31 March 2013 (₹ in crore)	Stratum
14	Fisheries Resources Management Agency (FIRMA)	Eradication & utilisation of water-hyacinth	8.68	3
		Total	8.68	
15	Animal Husbandry	Strengthening of Duck-farm at Niranam	4.37	2
16	Animal Husbandry	Comprehensive and sustainable animal-husbandry practices for Kuttanad	5.10	2
		Total	9.47	
17	Soil Conservation	Mitigation of agrarian distress in Kuttanad regions through eco-restoration	2.83	1
		GROSS TOTAL	143.19	

Table depicting the number of projects of each department (along with expenditure) and that selected for performance audit (along with expenditure covered)

(₹ in crore, as up to 31 March 2013)

Sl. No.	Sector	Number of Projects			Total Expenditure	Selected for audit	
		Total	Selected for audit (through random stratified sampling)			Expenditure	Coverage (%)
			No. of projects	Coverage (%)			
1	Irrigation	15	4	27	54.07	50.56	93.51
2	Agriculture	17	4	24	67.49	58.94	87
3	State Horticulture Mission	2	1	50	7.96	7.96	100
4	Kerala Agricultural University	9	3	33	8.22	3.5	43
5	Animal Husbandry	8	2	25	13.43	9.47	71
6	Kerala Livestock Development Board	3	1	33	2.21	1.27	57
7	Fisheries	9	0	0	4.79	No works in sample	
8	Agency for Development of Aquaculture, Kerala (ADAK)	2	0	0	6.69	No works in sample	
9	Fisheries Resources Management Agency (FIRMA)	1	1	100	8.68	8.68	100
10	Forest	2	0	0	1.72	No works in sample	
11	Tourism	1	0	0	0.50	No works in sample	
12	Soil Conservation	1	1	100	2.83	2.83	100
13	LSG (with ATREE, Health department)	3	0	0	0	No works in sample	
14	Health	1	0	0	0	No works in sample	
15	SUCHITWA MISSION	1	0	0	0	No works in sample	
	Total	75	17	23	178.60	143.21	80.18

Annexure VII
Physical status of the Projects undertaken by the departments/Agencies
implementing Kuttanad Development Package approved in July 2008
(Reference: paragraph 2.2.7.2(i); page 34)

Sl. No	Department/ Agency	Schemes/Activities	Status as on August 2013
1.	Irrigation	Modernisation of TMB and TSW	The revised DPRs to be submitted by State Government.
	-do-	Regulation of flood water in <i>Kayal</i> and near C&D and Rani-Chithira Block	Not completed.
	-do-	Restoration of KWS, Onattukara and Thuravur-Pattanakkad rivers, canals, drains and water bodies	Out of 12, five watersheds tendered, two under scrutiny of Technical Sanction Committee and estimates for five under preparation. Extension for execution of completing tender process requested up to 31 December 2015.
	-do-	Construction/strengthening of Outer bunds Modified as “ Construction of outer bunds/strengthening of outer bunds (in phasing as under):- (i) KEL-I (ii) KEL-II (iii) KEL-III (iv) Phase-II (v) Phase-III (vi) Phase-IV	Two works out of 14 under KEL I completed. No work under KEL II complete. Only two works out of 231 completed under KEL III. DPRs of Phase II, III, IV unapproved. ¹
2.	Agriculture	Agriculture Mechanisation.	KAICO has purchased 150 combine harvesters, 100 tractors, and 92 power tiller. The engineering wing of Agriculture department has supplied 296 motors and 108 petty para. Purchased machineries for custom hiring units
	-do-	Onattukara- Fallow land cultivation, input assistance, minor infrastructure, promotion of Sesamum cultivation	421.59 ha. fallow land cultivated. Input assistance to 9230 farmers, 12 minor works, 592.36 ha. have been covered under sesamum cultivation.
	-do-	Project proposal for production and distribution of quality of seeds.	2,296 MT seeds distributed, Seed processing. Two Seed processing plants and godowns being constructed at Mavelikkara and Pandalam, Godown at Pandalam completed. 100 farmer's training conducted.
3	Soil survey department&	Support for research stations for soil test based fertilizer application, distribution of	7,500 health cards have been distributed. The DPR for three

¹KEL I, KEL II, KEL III are codes assigned by the Ministry of Water Resources, GoI, to the approved schemes for construction/strengthening of outer bunds of *padashekharams*.

Sl. No	Department/ Agency	Schemes/Activities	Status as on August 2013
	Agriculture department	soil health cards, establishing a floating test lab in Kuttanad region.	floating labs is with Ministry of Agriculture.
	Department of Agriculture	Pest forecasting and early warning service, CAP storage structures, Training for youth in skilled agri jobs, establishing and supporting agri-clinics in Kuttanad.	65 structures being constructed, 38 completed. Trainings and workshops conducted on pest management. Targetted 11 agri-clinics established.
	-do-	Production bonus enhancement in Purakkad kari, Integrated management of coconut holdings, coconut revival programme for health and productivity, DoA, DoF and KAU jointly train and build capacity of farmers.	Fund for bonus transferred to Purakkad Karinila Vikasana Agency. Of the targeted 7500 ha. for cut and removal of diseased/ senile palm 5875 ha completed.
4	State Horticulture Mission	On farm income enhancement from garden land with horticulture and value addition in cluster based market linked activities.	3825 farmers have been provided with subsidy for expansion of banana, pineapple, cut flowers, loose flowers, pepper, nutmeg, cocoa, vermin compost, bee keeping etc. Establishing of Seed Infrastructure at Kozha, Pandalam & Mushroom production unit at Pathanamthitta completed.
5	Kerala Agriculture University	Promoting location –specific research for encouraging profitability from rice farming and enhancing livelihood security of farmers.	A new short duration rice variety “Pratyasa” was released. Training imparted to farmers.
	-do-	Strengthening of ORARS, Kayamkulam	Strengthening of lab complex, renovation of existing lab and training hall including seed production unit & mobile agro clinic cum mobile lab established.
	-do-	Promoting semi-solid jaggery in Upper Kuttanad region.	Worked out the standards for grading Pathiyan sarkkara.
	-do-	Productivity enhancement by energy efficient biodiversity based farming models in Kuttanad	Completed
	-do-	Environmental surveillance centre for wetland farming system in Kuttanad.	Water samples collected from 11 locations for 30 months were analysed. This is the first comprehensive study covering Kuttanad ecosystem for long term on diverse and critical environmental parameters.
	-do-	Establishment of Centre for Farm Machinery Research, Development and Training.	Under implementation
	-do-	R&D for eradication and utilisation of water hyacinth	Weed harvester developed. Further improvements are on trial. Tools for

Sl. No	Department/ Agency	Schemes/Activities	Status as on August 2013
			harvesting water hyacinth developed.
	-do-	R&D on coconut tree climbing machine.	Not done. No expenditure.
6	Animal Husbandry	The capacity enhancement of Duck hatchery at Niranam	Completed
	-do-	Providing insurance cover to duck - Payment of full subsidy on insurance premium	Completed
	-do-	Induction of high yielding animals	Physical status not given
	-do-	Female calf rearing	-do-
	-do- (Kerala Livestock Development Board)	Artificial insemination (AI), Estrous synchronization (ES). Induction of goats (changed to duck rearing scheme)	Artificial Insemination fully achieved, Estrous Synchronisation to 1160 animals
7	Fisheries Department, ADAK & Matsyafed	Paddy fish integration, revival of productivity of pearl spot, cluster based cage culture, ranching involving large scale hatchery reared production of post larvae fish hatcheries for raising adequate number of finger lings, conservation of fresh water prawns and karimeen, ornament fish culture, cold storage facility and training	All schemes accomplished other than cold storage. Cold storage facility for fishing communities – Two started functioning. Two completed. Training imparted.
8	Environment- Forest department & FIRMA and KAU	Augment the Pathiramanal mangrove forest	Implemented by Forest department 1,00,000 mangrove seedlings planted in the Vembanad eco system.
	-do-	Eradication & utilisation of water hyacinth	200110.59 cum of weeds removed. 50 vermicompost units established. 379 persons trained. One bio gas plant established at Kottayam
	-do-	Use of domestic toilet linked to ferro-cement septic tanks and roof water harvesting.	Not implemented
9	Tourism Department	Upgradation of tourist facilitation centre and farm tourism	Being implemented.
10	XIII Finance Commission	22 proposals sanctioned for ₹ 235.194 crore	
	i. Irrigation	Orumuttus creation of 33 permanent Kottachira across Kariyar- Construction of Bridge cum Regulator across Kariyar River in Thalayazam Panchayat	Being implemented. 73 per cent achieved.
	ii. -do-	Orumuttus creation of 33 permanent Kottachira across Kariyar- Modernisation of dilapidated regulators of Pattanakkad region in Alappuzha District	Revised project for ₹ 5.14 crore. Work will be completed by August 2014.
	iii. -do-	Construction of AC Canal from Manackalchira to Onnamkara	Sanctioned by SLEC. Outlay for 2012-13 is ₹ 5 crore. Work tendered.
	iv. Suchitwa Mission	Sanitation coverage for Kuttanad by construction of Ecosan toilets	Not implemented.

Sl. No	Department/ Agency	Schemes/Activities	Status as on August 2013
v.	Agriculture	Integrated Pest Management and Soil nutrient Management with thrust on conservation	Progress not furnished in the status report.
vi.	-do-	Special one-time assistance for initiating cultivation in fallow land in 100 ha.	₹ 49.9 lakh (2011-12) fully utilised. ₹ 108.16 lakh released (2012-13), ₹ 75 lakh utilised. 34.73 ha. additionally achieved.
vii.	District Panchayat, Alappuzha & ATREE	Participatory Water Management through Reverse Osmosis Technology.	Not implemented.
viii.	-do-	Participatory Management of Fish Sanctuaries for sustainable fishery in Vembanad.	Progress not furnished in the status report.
ix.	Fisheries	Revival of productivity of Pearl Spot and Giant Prawn on life cycle approach in Vembanad Ecosystem.	Progress not furnished in the status report.
x.	Animal Husbandry	Strengthening of Duck farm at Niranam.	Revised DPR was submitted to the SE, PWD by AH Department. The SLEC held on 15 December 2012 approved the revised action plan for ₹ 1,285.26 lakh.
xi.	-do-	Comprehensive and Sustainable Animal husbandry practices for Kuttanad.	Progress not furnished in the status report, but for the amount utilised under calf subsidy programme.
xii.	Forest	Biodiversity Conservation in Vembanad Wetland system.	No progress reported in respect of the five components in the project. Only fund distributed to Alappuzha and Kottayam for 2012-13 shown.
xiii.	Taluk Head Quarters Hospital, Pulinkunnu	Drinking water facility at Taluk HQ Hospital, Pulinkunnu.	Progress not furnished in the status report.
xiv.	Strengthening of research of the Kerala Agricultural University	Five projects (one each for RARS, Kumarakom, Rice research station Monkompu, Agricultural research station, Thiruvalla, ORARS, Kayamkulam and Rice Research station, Vytilla).	Progress not furnished in the status report.
xv.	Agency for Development of Aquaculture, Kerala (ADAK)	Restoration of Agro-ecosystems of Kuttanad through sustainable Aquaculture (four projects).	Progress not furnished in the status report.
xvi.	-do-	Seed ranching in open water of Kuttanad.	Progress not furnished in the status report.
xvii.	Soil Conservation	a. Renovation of 170 ponds with cost outlay of ₹ 9.08 crore.	52 ponds renovated (32 in Alappuzha, 15 in Kottayam, five in

Sl. No	Department/ Agency	Schemes/Activities	Status as on August 2013
			Pathanamthitta)
		b. Well curbing-1560 open wells- Cost outlay ₹ 3.37crore	1254 nos. achieved (749 in Kottayam, 505 in Pathanamthitta)
		c. Construction of parapets in 245 wells – cost outlay ₹ 0.50 crore	115 nos. in Pathanamthitta
		d. Supply of fruit and medicinal plants with cost outlay of ₹ 0.21 crore	2,690 nos. of fruit and medicinal plants supplied in Kottayam District.
		e. Planting of 1.70 lakh vetiver seedlings along bunds with cost outlay of ₹ 0.76 crore	26,504 running meter (rm) achieved (Alpa-14,930 rm, Ktym-7,110, PTA- 4464 rm)
		f. Training and administrative expenses for ₹ 1.3 crore	₹ 27.27 lakh utilised. Training imparted to officials, elected local body members and persons from Kuttanad region for creating awareness on ecological restoration by renovation of ponds and well curbing.
	xviii. LSGD and Health	Supply of drinking water by RO plants in Kuttanad	One at Edathua started functioning. Installation of RO plant at Thakazhy and Champakulam progressing.

Annexure VIII
Statement of Estimated Cost of DPRs prepared by Irrigation department
(Reference: paragraph 2.2.9.1; page 38)

Sl. No.	Name of Project	Estimate amount of DPR (₹ in crore)
1.	Mitigation of floods in the <i>padasekharams</i> of Nedumudi <i>Panchayat</i>	24.76
2.	Regulation of flood water in <i>Kayal</i> and near C & D and Rani-Chithira blocks	118.91
3.	Mitigation of floods in Group nine - five <i>padashekharams</i> in Kuttanad region	
4.	Mitigation of floods in 231 <i>padashekharams</i> in Kuttanad region	379.15
5.	Restoration of KWS, Onattukara and Thuravoor-Pattanakkadu rivers, canals, drains and water bodies	252.75
6.	Phase II (mitigation of floods in 421 <i>padashekharams</i> in Kuttanad region)	1525.39
7.	Phase III (mitigation of floods in 335 <i>padashekharams</i> in Kuttanad region)	801.44
8.	Phase IV (mitigation of floods in 187 <i>padashekharams</i> in Kuttanad region)	382.39
9.	Modernisation of Thaneermukkom bund	255.34
10.	Improving the efficiency of TSW and leading channel	13.49
11.	Construction of Bridge-cum-Regulator across Kariyar in Thalayazham <i>Panchayat</i>	25.20
12.	Modernisation of dilapidated regulators of Pattanakad region in Alappuzha District	5.14
13.	Construction of AC canal from Manackalchira to Onnamkara	20.69
Total		3,804.65

Annexure IX
Tables showing excess amount incurred by Government due to incorrect
computation of subsidy
(Reference: Paragraph 3.2 ; Page 53)

Category	Rate of subsidy given (per quintal)	Rate of subsidy to be given (per quintal)	Excess subsidy (per quintal)	Quantity on which subsidy was given (in MT)	Excess amount paid (in ₹)
2010-11					
APL (Rice)	690	683.17	6.83	67027	45,77,944
APL (Wheat)	470	465.35	4.65	14317	6,65,740
BPL (Rice)	420	415.84	4.16	389608	1,62,07,692
BPL (Wheat)	270	267.33	2.67	102118	27,26,550
Total					2,41,77,926
2011-12					
APL (Rice)	690	683.17	6.83	429267	2,93,18,936
APL (Wheat)	470	465.35	4.65	111810	51,99,165
BPL (Rice) upto 31.08.11	420	415.84	4.16	180040	74,89,664
BPL (Rice) from 01.09.11	520	514.85	5.15	259317.6	1,33,54, 856
BPL (Wheat)	270	267.33	2.67	118293.5	31,58,436
Total					5,85,21,057
2012-13					
APL (Rice)	690	683.17	6.83	443556	3,02,94,874
APL (Wheat)	470	465.35	4.65	105479	49,04,773
BPL (Rice)	520	514.85	5.15	413660	2,13,03,490
BPL (Wheat)	270	267.33	2.67	117746	31,43,818
Total					5,96,46,955

Grand Total : ₹ 14,23,45,938/-

Annexure X

Projects sanctioned during 2008-13
(Reference: Paragraph 3.5.1 ; Page 62)

Sl. No	Name of work	Divisions	Job No.	Amount of Central assistance approved for the work (₹ in lakh)	Expenditure (₹ in lakh)
1	2	3	4	5	6
Completed Works					
1	CRF Improvements to Areacode - Tirurkad Road from km. 2/500 to 34/500	Malappuram	CRF-43-KL-2008	1447.12	1498.00
2	CRF 2007-08 Improvements to Thalassery Anjarakandy Road	Kannur	CRF-44-KL-2008	788.03	761.84
3	Improvements to Kaloor - Kottappuram road between Km. 0/00 to 12/000	Muvattupuzha	CRF-46-KL-2008 dt. 14.10.08	431.38	425.63
4	Improvements to Muvattupuzha - Theni road between Km. 3/765 to 15/750	Muvattupuzha	CRF-47-KL-2008 dt. 14.10.08	534.85	540.80
5	Improvements to Kothamangalam Kottapady Muttathupara road from km 0/00 to 10/00	Muvattupuzha	CRF-48-KL-2008 dt. 14.10.08	416.34	387.91
6	Improvement to Nellikuzhi - Thrikariyoor Nadukani - Oonjapara road from Km 0/00 to 12/400	Muvattupuzha	CRF-49-KL-2008 dt. 14.10.08	367.69	367.16
7	Bhoothathankettu-Vadattupara-Anakayam road	Muvattupuzha	CRF-50-KL-2008 dt. 12.1.09	189.68	201.68
8	CRF 2008-09 Strengthening and improvements to Azhichilam - Farook College - Farook Chungam road connecting NH 17 Calicut Bypass and NH 17 in Kozhikode district	Kozhikode	CRF-56-KL-2008 dt. 2.3.09	221.51	217.59
9	CRF 2008-09 Improvements to riding Quality of Kondotty - Edavannappara road from Km 0/00 to 11/450	Malappuram	CRF-57-KL-2008 dt. 2.3.09	758.86	754.00
10	CRF 2008-09 Improvements Pandikkad Kumaramputhur road from Km 0/00 to 29/700	Malappuram	CRF-58-KL-2008 dt. 2.3.09	1614.00	1600.00
11	CRF strengthening the weak pavement by providing 50 mm Bm and 25 mm Ac from Ayamkonam -NH junction- Manampur-Kavalayur-	Thiruvananthapuram	CRF-59-KL-2008 dt. 2.3.09	702.74	658.70

Sl. No	Name of work	Divisions	Job No.	Amount of Central assistance approved for the work (₹ in lakh)	Expenditure (₹ in lakh)
1	2	3	4	5	6
	Cheruniyur-Palachira-Nadayara-Sivagiri Road in Thiruvananthapuram district				
12	Improvement to riding quality of Kottappuram Kakkanchery road	Malappuram	CRF-62-KL-2009 dt. 20.11.09	199.45	216.00
13	Pallichal -Venganoor - Vizhinjam road	Thiruvananthapuram	CRF-63-KL-2009 dt. 20.11.09	1502.76	1574.74
14	Strengthening of Mini bypass road	Kozhikode	CRF-67-KL-2009 dt. 20.11.09	245.92	254.94
15	Improvement of Mavvor - Koolimadu road MDR	Kozhikode	CRF-52-KL-2008 dt. 12.1.09	951.28	727.41
16	CRF Improvements to Alappuzha - Kuravilangadu road from Kuravilangadu to Thanneermukkam	Muvattupuzha	CRF-42-KL-2008	1316.14	2789.58
17	CRF 2008-09 Improvements and strengtheing of Thiruvangoor - Kuniyilkadavu -Atholi road connecting NH 17 and SH 38	Kozhikode	CRF-54-KL-2008 dt. 2.3.09	139.76	107.16
18	Markaz Cherotty Nagar Mini bypass road connecting two MDRs	Kozhikode	CRF-53-KL-2008 dt. 2.3.09	120.88	69.51
19	Link road connecting NH 17 and NH 47 - improvements to riding quality of Paravur Nedumbassery - Airport road	Kodungalloor	CRF-64-KL-2009 dt. 20.11.09	1169.07	1107.00
20	Improvements to riding quality of Vaikom - Poothotta - Kanjiramattom -Thalappara road	Muvattupuzha	CRF-60-KL-2009 dt. 20.11.09	1295.65	1139.81
21	Thalassery - Baveli road	Kannur	CRF-61-KL-2009 dt. 20.11.09	1480.92	1331.74
22	Improvements to Arakuzha-Vazhakulam Neerampuzha-Kaloor road Km 0/000 to 14/200	Kodungalloor	CRF-65-KL-2009 dt. 20.11.09	585.38	608.62
23	Improvements to Vazhakode - Plazhi in Thrissur district	Kodungalloor	CRF-66-KL-2009 dt. 20.11.09	1015.44	996.97
24	Improvements to the Pala Town-Koothattukulam road from Ch 0/000 to 23/300 (via Uzhavoor in Kottayam district).	Muvattupuzha	CRF-KL-2010-11-077 dt. 7.12.2011	1232.22	1349.52
25	Improvements Nedumangad Puthenpalam- Venjaramoodu Attingal-Mananakku road	Thiruvananthapuram	CRF-KL-2010-11-079 dt. 21.01.2011	1501.11	1544.33
26	Improvements to Manjeswaram Ukkada road from ch:25/000 to 39/500	Kasargod	CRF-KL-2010-11-080 dt. 21.01.2011	551.09	573.03

Sl. No	Name of work	Divisions	Job No.	Amount of Central assistance approved for the work (₹ in lakh)	Expenditure (₹ in lakh)
1	2	3	4	5	6
27	Improvements to Chelari - Parappanangadi -MDR in Malappuram district	Malappuram	CRF-72-KL-2010 dt. 15.10.2010	523.93	576.00
28	Improvements to Akkulam - Sreekaryam - Kudappanakkunnu - Kundamankadavu - MDR in Thiruvananthapuram district	Thiruvananthapuram	CRF-073-KL-2010 dt. 21.10.2010	2210.00	2651.85
29	Improvements to Farroke-Karuvanthuruthy road	Kozhikode	CRF-KL-2010-11-083 dt. 21.01.2011	347.27	321.29
30	Improvements to Madathil-Edur-Keezhpally road in Kannur district	Kannur	CRF-74-KL-2010 dt. 27.10.2010	753.48	731.95
31	Improvements to Padanilam-Nanminda in Kozhikode district	Kozhikode	CRF-70-KL-2010 dt. 30.9.2010	814.90	882.74
32	Improvements to km 0/000 to 15/000 of Hosdurg-Panathur road (SH 56)	Kasargod	CRF-KL-2010-11-084 dt. 21.01.2011	898.50	544.39
33	Strengthening of Calicut beach road - Coastal Highway	Kozhikode	CRF-68-KL-2009 dt. 20.11.09	1073.02	537.94
34	Improvements to Karipur airport-Edavannapara-Thrikalayoor-Mahasivaskshetram-Nellikaparamba road between 0/000 to 6/000	Kozhikode	CRF-KL-2010-11-081 dt. 21.01.2011	543.20	270.39
35	Construction of Pala town bypass road including a new bridge across Lalam Thodu, ch 0/000 to 24/160 (via Ramapuram) in Kottayam district	Muvattupuzha	CRF-KL-2010-11-076 dt. 7.12.2010	1586.00	1537.88
	Sub Total			29529.57	29858.10
Ongoing works					
36	Improvements to the Dharmadom-Melur-Mamakkunnu-Kadachira road in Kannur district	Kannur	CRF-69-KL-2010 dt.30.9.2010	932.58	735.52
37	Strengthening the weak pavements by providing 50 mm BM and 25 mm BC from Neyyar Dam to Shorlakode of Nedumangad SH road in Thiruvananthapuram district	Thiruvananthapuram	CRF-71-KL-2010 dt.2.11.2010	1275.89	309.76

Sl. No	Name of work	Divisions	Job No.	Amount of Central assistance approved for the work (₹ in lakh)	Expenditure (₹ in lakh)
1	2	3	4	5	6
38	Improvements to Kuzhalmannam-Kottayil-Odanur-Mundur road connecting NH 47 (new NH66) and NH 213(new NH 966) in Palakkad District	Malappuram	CRF-075-KL-2010 dt. 3.12.2010	1597.88	584.00
39	Construction of a new bridge parallel to the existing iron bridge at Kollam town at Km 494/800 of NH 47	Kollam	CRF-KL-2010-11-078 dt. 21.01.2011	784.50	435.00
40	Improvements to Thrikunnapuzha, Mavelikara via Nangyarkkulangara 0/000 to 15/300	Alappuzha	CRF-KL-2010-11-082 dt. 21.01.2011	702.00	0
41	Improvement of Mannarkkad-Puthupally-Church-Vakathan-Thengara-Nalukkudy-Peruvanthuruthy road connecting NH 208and MC Road and bypassing Kottayam Town and Changanassery Town	Muvattupuzha	CRF-KL-2012-087 dt. 10.09.2012	2000.00	0
42	Improvements to Poovarani-Pala-Hospital Junction - Puthenpallikkunnu-Kappil Junction-Mundupalam-Pendanamvayal	Muvattupuzha	CRF-KL-2012-088 dt 10.09.2012	600.00	0
43	Improvements to Kondotty-Kolappuram road in Malappuram District	Malappuram	CRF-KL-2012-089 dt 10.09.2012	1800.00	0
44	Poonjar- Erumely 0/000 to 36/000	Muvattupuzha	CRF-KL-2012-090 dt 10.09.2012	2239.00	0
	Sub total			11931.85	2064.28
ISC work (Ongoing)					
45	Improvement to the Kannanur Mercy college-Meparambu-Kavilpadu-Olavakode road connecting NH 47 and NH 213 in Palakkad district	Malappuram	ISC -KL-2010-005 dt 3.12.2010	709.70	1.72
Work not taken up					
46	CRF - 2007 - 08 Improving Riding Quality of Calicut - Beypore Port connectivity from 0/00 to 6/00	Kozhikode (roads)	CRF-55-KL-2008 dt.2.3.2009	372.65	0
De-sanctioned works					
47	Nedumbassery Kodaikkanal Road-construction of Anakkayam Bridge	Muvattupuzha	CRF 45-KL-2008 dt. 14.10.2008	517.09	0

Sl. No	Name of work	Divisions	Job No.	Amount of Central assistance approved for the work (₹ in lakh)	Expenditure (₹ in lakh)
1	2	3	4	5	6
48	Foot over bridge on both sides of narrow bridge across Panamkutty river at ch.283/317 NH 49	Muvattupuzha	CRF 51-KL-2008 dt.12.01.2009	112.37	0
	Total			43,173.23	31,924.10

Annexure XI

Statement of requirement and work out of excess payment of different materials for the executed quantity of 22938.385 cum of Wet Mix Macadam (Reference: paragraph 3.8; Page 73)

Item I - 45 mm to 22.4 mm	
Eligible rate for 1 cum as per 2007 SoR	₹ 508.25
Actual rate for 1 cum paid to contractor	₹ 641.50
Excess per 1 cum	₹ 133.25
Requirement of 45 mm to 22.4 mm @ 30 per cent	89.100 cum
Hence, requirement for 1 cum of WMM	89.100/225 = 0.396 cum
For 22938.385 cum of WMM	0.396 X 22938.385 = 9083.60 cum (A)
Excess rate paid per cum	₹ 641.50 (-) ₹ 508.25 = ₹ 133.25 (B)
Excess paid amount for 9083.60 cum [(A) X (B)]	₹ 12,10,389
Item II – 22.4 mm to 2.36 mm @ 40 per cent	
Eligible rate for 1 cum as per 2007 SoR	₹ 382.45
Actual rate for 1 cum paid to contractor	₹ 484.50
Excess per 1 cum	₹ 102.05
Requirement of 22.4 mm to 2.36 mm @ 40 per cent	118.800 cum per 225 cum of WMM
Hence, requirement for 1 cum of WMM	118.800/225 = 0.528 cum
Hence for 22938.385 cum of WMM	22938.385 cum X 0.528 = 12111.47 cum (A)
Excess rate paid per cum	₹ 484.50 (-) ₹ 382.45 = ₹ 102.05 (B)
Excess paid for 12111.47 cum [(A) x (B)]	₹ 12,35,975
Item III – 2.36 mm to 75 microns @ 30 per cent	
Eligible rate for 1 cum as per 2007 SoR	₹ 72.00
Actual rate for 1 cum paid to contractor	₹ 100.00
Excess per 1 cum	₹ 28.00
Requirement of 2.36 mm to 75 microns @ 30 per cent	89.100 cum per 225 cum of WMM
Hence, requirement for 1 cum of WMM	89.100/225 = 0.396 cum
For 22938.385 cum of WMM	22938.385 cum X 0.396 = 9083.60 cum (A)
Excess rate paid per cum	₹ 100 (-) ₹ 72 = ₹ 28 (B)
Excess paid amount for 9083.60 cum [(A) X (B)]	₹ 2,54,340
Total excess for items (I+II+III) (₹ 12.10 lakh + ₹ 12.36 lakh + ₹ 2.54 lakh)	₹ 27.00 lakh
Add 10 per cent contractor's profit	₹ 2.97 lakh
Total	₹ 29.97 lakh
Add 10 per cent Overhead charges	₹ 3.00 lakh
Total	₹ 32.97 lakh
Add 65 per cent tender excess	₹ 32.97 X 165 %
	₹ 53.91 lakh

**Statement of eligible conveyance rate for broken stones 45 mm and below as per
2007 SoR**

Specified source as per descriptive specification sheet of the agreement		Pattithanam
Distance to site		30 kms
Broken stones 30 km by lorry (Pattithanam)		
For upto 10 kms		₹ 146.40
Balance 20 kms @ 7.30 /km		₹ 146.00
Total		₹ 292.40
For 225 cum of WMM requirement of BS		
45 mm to 22.4 mm @ 30 per cent	89.100	
22.4 mm to 2.36 mm @ 40 per cent	118.800	
2.36 mm to 75 microns @ 30 per cent	89.100	
Total	297 cum	
For 1 cum of WMM (297/225)	1.32 cum	
Hence rate for 1 cum of WMM		₹ 292.40 X ₹ 1.32= ₹ 385.97 (A)
Specified source as per descriptive specification sheet of the agreement		Pattithanam
Distance to site		36 kms
Broken stones 36 km by lorry (Pattithanam)		
For upto 10 kms		₹ 146.40
Balance 26 kms @ 7.30 /km		₹ 189.80
Total		₹ 336.20
For 225 cum of WMM requirement of BS		
45 mm to 22.4 mm @ 30 per cent	89.100	
22.4 mm to 2.36 mm @ 40 per cent	118.800	
2.36 mm to 75 microns @ 30 per cent	89.100	
Total	297 cum	
For 1 cum of WMM (297/225)	1.32 cum	
Hence rate for 1 cum of WMM		₹ 336.20 X ₹ 1.32= ₹ 443.78 (B)
Excess paid per 1 cum of WMM		₹ 443.78 (B) – ₹ 385.97 (A) = ₹ 57.81
For 22938.385 cum of WMM		22938.385 X ₹ 57.81 = ₹ 13.26 lakh
Add 10 per cent overhead charges		₹ 1.33 lakh
Total		₹ 14.59 lakh
Add 10 per cent contractor's profit		₹ 1.46 lakh
Total		₹ 16.05 lakh
Add 65 per cent tender excess		₹ 10.42 lakh
Total excess paid		₹ 26.47 lakh

Annexure XII
Details of inadmissible deduction of hire-charges paid to five inland navigation works
(Reference: paragraph 3.11; Page 92)

Sl. No.	Name of the work	Estimated PAC ² (in ₹)	Lowest tender value ³ Rebate quoted with respect to EPAC	Contract value in agreements after adjusting hire charges ⁴ (in ₹)	Payments made (in ₹)	Eligible amount according to audit observation on actual executed quantity (in ₹)	Excess Expenditure (6-7) (in ₹)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Improvements to Muttar-Neelampoor canal in Changanacherry Taluk	97,55,401	56,58,133 (-) 42%	81,35,056	74,61,197	51,89,447	22,71,750
2.	Improvements to Kallara feeder canal in Kottayam district	99,12,310	57,49,140 (-) 42%	82,65,903	82,61,955	57,46,394	25,15,561
3.	Improvements to boat route/feeder canal from Cheepunkal to Mannanam in Kottayam district	1,39,03,517	80,64,040 (-) 42%	1,15,94,182	1,15,94,182	80,64,040	35,30,142
4.	Improvements to boat route/feeder canal from Kumarakom to Muhamma in Kottayam district	80,81,430	64,65,144 (-) 20%	72,10,030	72,03,878	64,59,725	7,44,153
5.	Improvements to boat route/feeder canal from Vaikom to Thavanakkadavu in Kottayam district	1,21,55,338	94,81,164 (-) 22%	1,07,19,845	1,07,06,660	94,69,501	12,37,159
Total		5,38,07,996	3,54,17,621	4,59,25,016	4,52,27,872	3,49,29,107	1,02,98,765

² Net PAC was also the same as dredgers etc. were not supplied.

³ The value of the contract as per audit calculation

⁴ Erroneously allowed in agreements executed.

APPENDICES

APPENDIX 1.1

Year-wise break up of outstanding Inspection Reports as on 30 June 2013 (Reference: paragraph 1.7.1; Page 8)

Year	Agriculture Department			Forest Department			Total		
	No. of outstanding g IRs	No. of outstanding g paras	No. of paras for which first reply has not been received IR Paras	No. of outstanding IRs	No. of outstanding g paras	No. of paras for which first reply has not been received IR Paras	No. of outstanding IRs	No. of outstanding paras	No. of paras for which first reply has not been received IR Paras
Upto 2008-09	135	908	19 156	145	212	11 28	280	1120	30 184
2009-10	100	370	20 82	82	188	10 23	182	558	30 105
2010-11	49	224	13 88	78	164	22 47	127	388	35 135
2011-12	79	413	49 218	59	190	15 54	138	603	64 272
2012-13	5	17	3 9	5	11	5 11	10	28	8 20
Total	368	1932	104 553	369	765	63 163	737	2697	167 716

Appendix 3.1

Details of Non commissioned schemes and Non functional schemes as on August 2013 (Reference: paragraph 3.3.4.6; Page 58)

Sl. No.	Name of LIS	Ayacut (ha.)	Year of Commissioning	Expenditure			Year from idling	Reason for non functioning/idling
				Civil, electrical and mechanical (₹ in lakh)	MIRPA (₹ in lakh)	Total (₹ in lakh)		
(A)	Non commissioned schemes							
1.	Thenampara	440	Not commissioned	83.44	Nil	83.44	2001 (12)	Non completion of main canal for 700 m and breach of main canal
2.	Chadayampara	36	Not commissioned	12.37	Nil	12.37	2008 (5)	Want of electric connection
3.	Kakkupady	96	Not commissioned	19.55	Nil	19.55	2001 (12)	Theft occurred in 2001 and electrical items were stolen. The <i>panchayat</i> authorities resolved to abandon the scheme as the utility of the scheme was considerably reduced due to conversion of ayacut area to residential area.
4.	Kukkumpalayam	52	Not commissioned	7.24	2.10	9.34	2007 (6)	Want of rectification of damaged pumpsets. During trial run mud with sand and pebble entered into the pumpset making it non operational
5.	Mangalamkulam poopathy Harijan colony	154	Not commissioned	41.25	Nil	41.25	2008 (5)	Want of rectification work for the leakage found in the pipeline. As the pipeline came under the PWD road, rectification was possible only after digging up the road. Fearing public protest, the attempt was abandoned.
6.	Pynoorkayal	148	Not commissioned	42.56	Nil	42.56	2000 (13)	Partial completion of canal as court decreed not to construct a portion of the canal through private land as prior permission was not obtained from the owner of the land.
7.	Kondazhijal kottamuri	290	Not commissioned	76.08	Nil	76.08	1996 (17)	Non completion of major works such as construction of pump house, cistern, electrical and mechanical works. Project found unviable.
8.	Thottumugham	820	Not commissioned	54.11	Nil	54.11	2009	Non completion of flume for a length of 1391 m. Only 425

Sl. No.	Name of LIS	Ayacut (ha.)	Year of Commissioning (₹ in lakh)	Expenditure			Year from idling	Reason for non functioning/idling
				Civil, electrical and mechanical (₹ in lakh)	MIRPA (₹ in lakh)	Total (₹ in lakh)		
	Total (A)			336.60	2.10	338.70	(4)	m completed against 1816 m required.
(B)	Non Functional Schemes							
9.	Koodallur	162	1965	11.94	0.44	12.38	2006 (7)	Non availability of water near pump house
10.	Velliyanikal kadavu	93	1977	10.74	Nil	10.74	2002 (11)	Non availability of water near pump house
11.	Mannannoor	77	1995	17.50	1.80	19.30	2006 (7)	Want of maintenance of electrical installation, such as delivery pipe line, canal and overhauling of motor pump
12.	Kanakkannur	22	1996	5.75	0.30	6.05	2004 (9)	Want of motor repair. Electricity disconnection
13.	Chemmananthode	58	1996	58.24	20.81	79.05	2008 (5)	Want of motor repair. Electricity disconnection
14.	Chalayur	50	1983	3.27	1.38	4.65	1999 (14)	Motor and pumpset damaged.
15.	Chengamanadu II	72.24	1949	3.19	-	3.19	2011 (2)	No irrigation activity in the ayacut area.
16.	Chathamattom	112	2006	NA	NA	NA	2011 (2)	Scarcity of water. If pumping is done Kerala water Authority cannot pump drinking water as both schemes use single source
17.	Karimughal	56.25	1986	NA	NA	NA	1998 (15)	Source of water not enough for pumping
18.	Chakkalathodu	73.24	1972	NA	NA	NA	2009 (4)	Source of water not enough for pumping
19.	Piraroor No II	26.8	1950	NA	NA	NA	1998 (15)	Source of water not enough for pumping
	Total (B)			110.63	24.73	135.36		
	Total (A)+ (B)			447.23	26.83	474.06		

Appendix 3.2

Construction cost of completed canals where water distribution is not possible due to non completion of upstream reach

(Reference: paragraph 3.10.3.5; Page 82)

Sl. No.	Name of canal	Chainage where water distribution not commenced due to non completion of upstream reach (in km)	Length of canal (in km)	Cost of construction (₹ in crore)	Ayacut (in ha.)
1.	South kakkad distributary	0.000 to 11.34	11.34	14.91	476
2.	Ettumanoor Branch Canal	18.275 to 18.525	0.250	3.87	Not assessable
3.	Kurumullor distributary	0.000 to 7.045	7.045	1.25	400
4.	Manjoor distributary	0.891 to 3.080	2.189	3.86	250*
5.	Kidangoor MD	3.920 to 7.953	4.033	Not available	Not assessable
6.	Koothattukulam distributary	3.725 to 7.975	4.250	3.16	Not assessable
7.	Kuruppanthara distributary	3.433 to 4.065	0.632	Not available	Not assessable
8.	Kizhumuri distributary	0.000 to 3.690	3.690	3.97	100
9.	Mammalassery distributary	1.800 to 7.098	6.298	3.73	369*
10.	Muvattupuzha branch canal	10.210. to 11.875	1.665	0.32	Not assessable
11.	Kizhakkekara distributary	0.000 to 1.645	1.645	0.46	100
		Total	43.037	35.53	1695

* Considerable portion of the canal included. Hence the ayacut taken.

Appendix 3.3

Construction cost of completed length of canals in KRP where water distribution not commenced

(Reference: paragraph 3.10.5.6; Page 88)

Sl. No.	Name of canal	Chainage where water distribution not commenced (in km)	Length of canal (in km)	Cost of construction (₹ in crore)
1.	Left bank main canal	5.000 to 16.74	11.740	25.83
2.	Right bank main canal	3.700 to 8.805	5.105	7.35
3.	Padinjareveedu branch canal	0.430 to 8.94*	8.510	14.15
4.	Kolliyl branch canal	0.000 to 2.995	2.995	10.14
5.	Kariambady branch canal	0.000 to 8.500	8.5	6.40
		Total	36.85	63.87

*Work is to be arranged from 0.00 to 0.430