

CHAPTER IV

WORKS EXPENDITURE

SECTION A – REVIEW

IRRIGATION DEPARTMENT

4.1 Functioning of Irrigation Department

Highlights

Though Kerala is gifted with abundant river waters, only 17 per cent of cultivable land has been brought under irrigation. Budget and expenditure control system was grossly deficient and needs considerable improvement. Of 30 irrigation projects launched up to 1998, 14 were either incomplete or still under investigation. Time overrun of these projects ranged between 14 and 40 years and cost overrun ranged from nearly 3 to 60 times. Rs 39.68 crore was spent (March 2000) on five projects which were yet to be cleared by Central Water Commission. There was huge avoidable expenditure in the projects due to defective designs, delays in finalising designs and incorrect specifications. Returns from irrigation projects were insignificant compared to investment of Rs 2735 crore. The completed projects do not meet their revenue expenses. In some projects, establishment expenditure was very high compared to works expenditure. The department is overstaffed.

- While Rs 308.75 crore of budgeted funds could not be spent during 1996-2001, Rs 112.23 crore of contractors' pending bills remained unpaid. Superintending Engineer/Executive Engineer of Pazhassi Irrigation Project awarded works despite lack of budget provision. As a result, Rs 11.47 crore of contractors' bills remained unpaid.

[Paragraph 4.1.4(i) (a) & (iii)]

- Execution of 9 project works was not given due priority. The budgeted funds were reappropriated for other purposes during 1998-2001. In three other projects, there was persistent savings ranging from 13 per cent to 75 per cent.

[Paragraph 4.1.4(i) (b)]

- In 12 divisions contractors' claims for Rs 1.13 crore were irregularly paid out of 'Public Works Deposits' bypassing budgetary control system.

[Paragraph 4.1.4 (v)]

- In 13 projects under execution/investigation there was time overrun in the range of 14 to 40 years as of March 2001, leading to increase in cost by 3 to 60 times.

[Paragraph 4.1.5 A]

- Some of the important short-comings and irregularities brought out in recent Audit Reports included huge time and cost overruns leading to sharp decline in benefit cost ratio, low achievement of ayacut developed, huge establishment expenditure due to long gestation periods, profuse leakage of dams, execution of non-essential works and wastage of irrigation water.

[Paragraph 4.1.5 A]

- Number of designs finalised by the Design Wing declined from 32 in 1996-97 to 19 in 2000-01 while 24 designs were pending. Due to defective designs, change in specifications were required during execution of works leading to cost overrun/infructuous expenditure of Rs 6.05 crore in three projects.

[Paragraph 4.1.5 B]

- Expenditure on maintenance and repair of five projects in Palakkad District was in excess of the prescribed norms by Rs 1.87 crore.

[Paragraph 4.1.6 (i)]

- Rupees 44.02 crore spent on lining of canals under the various schemes was largely unfruitful as no additional ayacut was created to utilise the canal water.

[Paragraph 4.1.6 (ii)]

- Against potential of 3.45 lakh hectares created in 14 completed projects, potential of 2.80 lakh hectares was utilised. In three projects viz. Vazhani, Peechi and Neyyar projects, achievement was low.

[Paragraph 4.1.7]

- The department was overstaffed. Establishment expenditure in Banasuragar Project during 1996-1999 was Rs 75.45 lakh while practically no works were executed.
- Kallada Project, with 3 circles and 7 divisions, did not have adequate works. The CE (EEC) with 34 supporting staff was mostly passing the bills in respect of MI works.
- In the Investigation Division, Kannur, no significant work was performed while Rs 3.46 crore was spent on establishment during 1996-2001.

- **Due to absence of skilled personnel no work was undertaken in the Mechanical Division, Malampuzha, while Rs 57.15 lakh was spent on establishment during 2000-01.**
- **In four projects still under investigation, Rs 21.08 crore was spent on idle staff during 1996-2001.**

[Paragraph 4.1.8]

- **Water cess pending collection as of January 2001 amounted to Rs 2.40 crore. Though Irrigation Commission suggested revision of water cess on the fourth year of each Five Year Plan, no effective action was taken to revise the rates. The revenue obtained in eight completed projects did not even cover their operating and maintenance expenditure.**

[Paragraph 4.1.11 (ii) & (iii)]

- **Owing to non-completion of works/non-energisation of pump sets, 17 lift irrigation schemes could not be commissioned and expenditure of Rs 4.61 crore on them became unproductive.**

[Paragraph 4.1.12]

4.1.1 Introduction

Kerala is endowed with rich water resources. The annual yield of water from 44 rivers in the State was assessed to be 70300 million cubic metres. However, the State Government has not evolved an Irrigation Policy as of August 2001. The Irrigation Department implements various irrigation projects/schemes to meet the irrigation requirements of farmers. The department is also engaged in coastal protection works and flood control works in the State. Utilisable water was estimated at 42000 million cubic metres. As against 22.70 lakh hectares of cultivable land in the State, the total area provided with irrigation was only 3.90 lakh hectares (net) (17 per cent). Despite investment of Rs 2735 crore[#] as of March 2000, only seventeen per cent of the irrigable area in the State had been brought under irrigation.

4.1.2 Organisational set up

Secretary, Irrigation Department was in overall charge of the department assisted by ten Chief Engineers (CEs)^{*}. Works were executed through 68 Divisions under the supervision of 16 Circle Offices.

4.1.3 Audit coverage

Some aspects of the working of the department were reviewed during February-June 2001 covering the period 1996-2001 by test-check of the

[#] Source: Economic Review 2000

^{*} Chief Engineers in charge of Irrigation and Administration: (1), Projects: (3), Investigation: (1), Design: (1), Administrator (CADA): (1), EEC Project Co-ordination: (1), Mechanical:(1) and Vigilance Cell (Kallada Irrigation Project): (1)

records in the Administrative Secretariat, Offices of four CEs, six Circle Offices and 25 divisions.

4.1.4 Financial management and budgetary control

(i) Persistent under-utilisation of budget provision

a) Budget provision *vis-à-vis* expenditure during 1996-97 to 2000-01 was as under:

(Rupees in crore)

Year	Budget Provision			Expenditure			Savings		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
1996-97	261.63	98.49	360.12	234.11	86.80	320.91	27.53	11.68	39.21
1997-98	264.42	95.04	359.46	231.40	86.47	317.87	33.02	8.57	41.59
1998-99	276.68	118.71	395.39	224.53	108.39	332.92	52.14	10.33	62.47
1999-2000	290.35	129.34	419.69	228.48	105.91	334.39	61.87	23.43	85.30
2000-2001	271.60	116.93	388.53	207.57	100.78	308.35	64.04	16.14	80.18
Total	1364.68	558.51	1923.19	1126.09	488.35	1614.44	238.60	70.15	308.75

Despite savings, liability due on contractors' bills was also on the increase

The total savings of Rs 308.75 crore (16 *per cent* of the provisions) during 1996-2001 indicated unsatisfactory budgetary control. Even while there was significant savings, liability of Rs 112.23 crore on account of contractors' pending bills was not met. Had the unutilised provision been judiciously re-appropriated, this liability could have been mostly liquidated.

Budget allocation persistently unutilised

Reasons for under-utilisation of funds had not been furnished by CE/Government (July 2001). Nearly 16 *per cent* of funds provided was not utilised on an average during 1996-2001. While Non-Plan expenditure went up by 16 *per cent* during 1996-2001, Plan expenditure declined through the five years. Plan funds formed 70 to 83 *per cent* of the total unutilised provisions during the period of review. While 10 to 15 *per cent* of funds[#] provided for revenue expenditure remained unutilised during 1996-2001, non-utilisation of budgeted funds for capital expenditure increased from 8 *per cent* in 1996-97 to 29 *per cent* in 2000-01. Expenditure on capital works was slowed down during 1998-2001.

b) Some of the projects where substantial saving* in works expenditure occurred during the last three years 1998-2001 were as under:

Project/scheme	Saving (Rs in crore) and their percentage in brackets		
	1998-99	1999-2000	2000-01
Idamalayar Project	13.01 (43)	0.48 (19)	2.47 (19)
Kuriarkutty – Karappara Project	2.37 (69)	0.54 (41)	0.97 (77)
Kallada Irrigation Project	--	7.23 (39)	2.97 (16)
Banasurasagar	--	1.68 (68)	0.48 (21)
Chimoni – Mupli Scheme	--	2.14 (86)	0.99 (66)
Kabini Project	--	1.00 (10)	1.55 (15)
RCB Kanakkankadavu – NABARD assisted Scheme	0.67 (16)	3.47 (69)	0.47 (94)
RCB at Chamaravattom	--	1.57 (95)	4.10 (95)
Veliyamkallu causway	2.39 (71)	0.28 (34)	0.21 (25)

[#] Source: Appropriation Accounts for the period 1996-97 to 2000-01

* *Vide* Appropriation Accounts for the respective years

In addition, major savings persistently occurred under three other major schemes as mentioned below:

Project/scheme	Saving (Rs in crore) and their percentage in brackets		
	1998-99	1999-2000	2000-01
National Hydrology Project	3.75 (75)	6.77 (68)	3.99 (50)
Water Resources Revamping and Consolidation Programme	3.17 (45)	4.61 (31)	8.15 (41)
Accelerated Irrigation benefit Programme	1.95 (13)	5.97 (29)	6.22 (30)

The department furnished reasons for only a portion of savings in certain cases. Most of the savings was attributed to less expenditure due to non-completion of works, strict enforcement of economy measures ordered by Government, etc.

c) Scrutiny revealed that during 2000-01 though CE, Irrigation and Administration had sought Letter of Credit (LOC) for Rs 74.56 crore from Government against a budgetary provision of Rs 81.93 crore, Government issued LOC for Rs 56.37 crore (69 per cent of budget allotment) only.

(ii) Deficient budgetary procedure and expenditure control

Secretary to Government in Irrigation Department is the Chief Controlling Officer. CE, Irrigation and Administration forwards the budget estimates to Government. There are 90 Drawing and Disbursing Officers in the department.

a) Estimation of funds wide off the mark

Budget estimates are required to be as accurate as practically possible and should neither be inflated nor underpitched. They have to bear a close approximation to the anticipated requirements assessed on the basis of past trends, liabilities to be discharged and that to be incurred in the ensuing year, etc. In the case of Supplementary Grant, they are to be obtained only when clearly anticipated and identified. These requirements were not met to a large extent while obtaining Supplementary Demand for Grants resulting in unnecessary/excessive provision as indicated below:

(Rupees in crore)

Year and nature of expenditure	Budget provision	Supplementary provision	Actual expenditure	Saving
1998-99				
Revenue	84.73	10.95	83.47	12.21
Capital	154.09	27.94	163.62	18.41
1999-2000				
Revenue	97.98	14.72	94.85	17.85
Capital	192.89	2.93	153.06	42.76
2000-01				
Revenue	97.97	1.19	84.41	14.75
Capital	192.06	2.59	138.53	56.12

Excessive provisioning and resultant savings indicated not only inefficient estimation of funds required for the year but also failure to judiciously utilise the available funds on works which were in advanced stages under projects languishing for long periods.

(b) Expenditure without provision

According to State Budget Manual, no expenditure should be incurred on a scheme/service without specific provision of funds therefor. It was, however, noticed that in several cases expenditure was incurred without budget provision as shown below:

Year	Nomenclature	Expenditure (Rupees in lakh)
1996-97	Thanneermukkom Project – Direction and Administration	15.71
1997-98	Direction and Administration – Establishment charges transferred from “2701 – 80 – General”	20.09
	Modernisation and Water Management	12.48
1998-99	Thanneermukkom Project – Direction and Administration	44.91
	Chimony Mupli scheme – Major works	6.00
2000-01	Chitturpuzha Irrigation Project – Direction and Administration	65.58

(c) Arrears in submission of Schedule of Settlement with Treasuries

The Schedule of Settlement with Treasuries (SST) is one of the important documents designed to ensure that all the cheques drawn and remittances made by the departmental authorities are properly accounted for by the treasuries. Timely reconciliation between departmental books and treasury account is imperative to detect fraud etc., if any. However, this work has not been attended to expeditiously with the result that balances were outstanding under PW Remittance and PW Cheques for long periods as shown below:

(Rupees in lakh)

Name of circle/division	Earliest period from which due	Amount outstanding as of July 2001	
		PW Remittances	PW Cheques
Minor irrigation circle, Thiruvananthapuram	April 1997	0.30	(-) 10.00
Kallada Irrigation Project, LB Division No.I, Punalur	June 1999	(-) 0.83	(-) 7.75
Irrigation South circle, Thiruvananthapuram	December 1999	0.30	8.54
KIP, RB VIII Division, Karunagapally	August 2000	5.07	3.24

(iii) Action Plan is disregarded

Government provided Rs 8.74 crore in the budget for 1999-2000 for various works under Pazhassi Irrigation Project and approved Action Plan for Rs 7 crore in December 1999. However, the Action Plan was flouted by the departmental officers. The Superintending Engineer/Executive Engineer/Assistant Executive Engineers arranged 402 works costing Rs 15.39 crore of which 161 works costing Rs 4.47 crore were not included in the Action Plan. Against those 402 works executed at Rs 20.15 crore, payment was made for Rs 8.68 crore, leaving an undischarged liability of Rs 11.47 crore. The Superintending Engineer, Project Circle, Kannur stated (May 2000) that execution of works outside the Action Plan was arranged, as requested by the

Many works were taken up by EEs outside the budget and Action Plan creating huge liability

farmers, local bodies and peoples' representatives. Thus evidently deviation from the Action Plan was resorted to at the junior levels without obtaining Government approval and additional funds. This also indicated that internal controls in the department to ensure compliance of Action Plans were not functional and the lower functionaries could ignore the Action Plans to suit local conditions.

iv) Avoidable lapsing of fund

Administrative delays led to non-utilisation of fund

Banasurasagar Project sanctioned in January 1999 was allotted funds of Rs 1.75 crore during 1999-2000 and LOC for Rs 1.56 crore was released in the last quarter of the year (January-March 2000). Works were commenced only in January 2000 due to administrative delays. Reappropriation of funds proposed by Chief Engineer (Projects I), Kozhikode was not sanctioned. Expenditure incurred on the project was Rs 77.05 lakh and Rs 78.89 lakh lapsed.

v) Irregular operation of Public Works Deposit

LOC system bypassed

In 12 out of 25 divisions test-checked, Rs 1.13 crore of contractors' claims was withheld during 1995-2000 while passing the bills, and booked under 'Public Works Deposit' for want of sufficient LOC. The amounts so withheld were not released during the same financial year. This resulted in over reporting of expenditure without actual payment and circumvented the LOC system. The payments were released during subsequent years after obtaining LOC.

vi) Miscellaneous Works Advances

Miscellaneous Works Advances (MWA) is a suspense head of account operated to record transactions on account of (i) sale of stores on credit pending realisation of cost, (ii) expenditure incurred on deposit works in excess of deposits received pending recovery of such expenditure, (iii) losses and excess in accounts awaiting recovery, regularisation or adjustments and (iv) other items of debits the allocation of which is not known or which cannot be adjusted until recovery is effected or write off ordered.

In Irrigation Department, the balances outstanding under MWA in 16 divisions as of March 2000 was Rs 54.23 lakh pertaining to the period from 1968-69 onwards (*vide* Appendix XXIV). The prolonged non-clearance of outstanding balances under MWA, needs to be looked into and action taken to recover the overdue amounts or adjust the debits to the concerned final head.

4.1.5 Programme implementation

A. Status of implementation of projects

Implementation of various major and medium irrigation projects was under the immediate jurisdiction of three CEs – (i) CE, Projects I at Kozhikode in charge of the projects in the six northern districts, (ii) CE, Projects II at Thiruvananthapuram responsible for the projects located in the remaining

eight districts and (iii) CE, Projects III at Kottarakkara exclusively for Kallada Irrigation Project (in Kollam District).

The State Planning Board fixes priority for implementation of the incomplete projects depending on the availability of funds, every year. Monitoring of project implementation is done by the State Planning Board and the evaluation of the projects is conducted by the Investigation, Design and Research Board (IDRB). Out of 30 Major and Medium Irrigation Projects taken up for execution in the State since 1947, 16 projects* were completed. Nine projects were under various stages of execution and 5 projects under investigation stage. The details in respect of 14 projects (On-going: 9 and under investigation: 5) are given below:

Sl. No.	Name of Project	Year of sanction	Estimate (Rs in crore)		Year of last revision	Cost escalation (in percentage)	Expenditure up to March 2000 (Rs in crore)	Expected to be irrigated (net)	Physical achievement
			Original	Revised					
On-going									
1	Pazhassi	1962	4.42	150.00	1999	3293	144.83	11525	6348
2	Karapuzha	1979	7.60	253.00	1999	3228	169.91	5221	
3	Kanhirapuzha	1961	3.65	140.00	1999	3735	97.37	9713	7266
4	Kuriyarkutty Karappara	1978	10.36	197.00	1999	1427	11.27	17488	
5	Idamalayar	1981	17.85	412.00	1999	2208	101.13	14394	
6	Muvattupuzha	1974	20.86	515.00	1999	2368	300.81	17737	
7	Kallada	1961	13.28	725.00	1999	5356	584.82	61630	35602
8	RCB Thrithala	1998	19.00	26.60	1999	40	3.92	1303	
9	Banasurasagar	1979	8.00	50.00	1999	525	3.90	2800	
Under investigation									
1	RCB Chamravattom	1985	13.27	120.00	1999	804	5.79	3106	
2	Attappady Valley	1970	4.76	161.00	1999	3282	9.12	4347	
3	Chaliyar	1981	10.61	645.00	1992	5979	6.52	73240	
4	Meenachil River Valley	1981	35.00	128.00	1996	265	5.06	9960	
5	Vamanapuram	1981	19.82	260.00	1996	1211	13.19	8800	

Time overrun (14 to 40 years) and cost over run (nearly 3 to 60 times)

As of March 2000, Rs 1457.64 crore was invested by Government on these 14 projects. The time overrun in completion (except one project) ranged between 14 and 40 years as of March 2001 and the consequential cost overrun was approximately 3 to 60 times. Failure to complete the projects on time resulted in exorbitant cost overrun and denial or delayed delivery of intended irrigation benefits. Delayed completion also entailed infructuous expenditure due to changes in cropping pattern and reduction in ayacut over the years.

Project implementation of some of the major irrigation projects was reviewed in audit from time to time and major findings featured in previous Audit Reports. Some of the more important and commonly found drawbacks,

* Chalakudy, Cheerakuzhi, Chimoni, Chitturpuzha, Gayathri, Kanakkankadavu, Kuttiady, Malampuzha, Mangalam, Neyyar, Pamba, Peechi, Periyar Valley, Pothundi, Vazhani & Walayar

deficiencies and irregularities in project execution brought out in recent Audit Reports are listed below:

Deficiency /irregularity in implementation	Name of irrigation project	Reference to Report for the year ended 31 March and audit paragraph (in bracket)
i) Endemic time and cost overrun resulting in steep decline in benefit cost ratio making many projects economically unviable	Pazhassi Muvattupuzha Valley Idamalayar Kanhirapuzha Karapuzha Chimony	1992 (4.1) 1994 (4.1) 1995 (4.1) 1996 (4.1) 1997 (4.1) 1999 (4.1)
ii) Low physical achievement of ayacut compared to that envisaged in the project documents despite massive investment of project funds, down sizing the projected ayacut midway of execution of the project by reducing canal lengths, erroneous target of ayacut to be achieved etc.	Pazhassi Kuttiady Muvattupuzha Valley Idamalayar Kanhirapuzha Karapuzha	1992 (4.1) 1993 (4.1) 1994 (4.1) 1995 (4.1) 1996 (4.1) 1997 (4.1)
iii) Idle establishment expenditure because of unduly long gestation period	Chaliyar River Valley Karapuzha Chamravattom	1990 (4.12) 1997 (4.1) 1992 (4.3)
iv) Failure to diversify cropping pattern as originally envisaged to derive maximum benefit commensurate with the massive investment of funds	Pazhassi Kuttiady	1992 (4.1) 1993 (4.1)
v) Profuse leakages in dam posing danger to its structural stability and safety, huge avoidable expenditure on rectification charges and lower utilisation of the storage capacity leading to diminishing irrigation potential	Kuttiaday Kanhirapuzha Chimony	1993 (4.1) 1996 (4.1) 1999 (4.1)
vi) Execution of non-essential works disregarding the directions of superior officers	Chimony Kallada	1999 (4.1) 1999 (4.5)
vii) Arrangement of works bypassing open tender system	Karapuzha	1997 (4.1)
viii) Wastage of Irrigation water as 'run off' due to overlapping of ayacut or non-development of ayacut	Chimony	1999 (4.1)

B. Poor performance by Investigation and Design wing

In order to strengthen the Investigation and Planning wing Government entrusted (September 1991) the work with the CE, Investigation and Planning. The CE (D&R), IDRB was to be in-charge of design, research, technical examination of project reports, monitoring, quality control and evaluation.

i) Poor performance of Design wing

The Design wing of IDRB is headed by a CE who is assisted by 7 Executive Engineers, 17 Assistant Executive Engineers and 46 Assistant Engineers. Designs of structures estimated to cost above Rs 30 lakh were to be done by this wing. It was seen that number of designs finalised by CE (Designs) decreased from 32 in 1996-97 to 19 in 2000-01, while number of pending designs increased from 4 in 1997-98 to 24 in 2000-01 as shown below:

Particulars	Period				
	1996-97	1997-98	1998-99	1999-2000	2000-01
Designs finalised	32	31	21	21	19
Designs pending	6	4	7	10	24

Chief Engineer, IDRB requested (March 2001) Government to initiate action to evaluate the functions of the wing. While examining audit paragraph on Pazhassi Irrigation Project (*vide* paragraph 4.1 of Report for the year ended 31 March 1992) the Committee on Public Accounts recommended (April 1999) to strengthen and revamp the Investigation wing with modern technology.

In March 1998, the wing purchased and installed (July 1998) computers worth Rs 32.85 lakh as part of the modernisation programme of IDRB. However, no design packages (software) were available for preparing complete design of the irrigation structures.

ii) Post agreement changes in design resulting in cost overrun

Change in design during execution of works led to cost overrun of Rs 4.89 crore

a) On the basis of a tentative design, Superintending Engineer (SE), Minor Irrigation North Circle, Kozhikode awarded (October 1992) construction of Regulator-cum-Bridge and approach at Kavanakkallu (Minor Irrigation Division, Malappuram) to a contractor for an amount of Rs 7.90 crore. On receipt of the final design, based on detailed site investigation, the scope of work was drastically changed (October 1996) resulting in the upward revision of estimate and expenditure as of March 2000 aggregating to Rs 14.29 crore. This included an expenditure of Rs 1.50 crore on two approaches entrusted to the contractor as extra items. Excluding the cost escalation admissible to the contractor, the cost overrun on the work amounted to Rs. 4.89 crore. Thus, work was awarded by the department to the contractor on defective design.

Change of specification while the work was in progress caused extra expenditure of Rs 70.22 lakh

b) Under Pazhassi Irrigation Project, 15 lining works in the vulnerable reaches of the main canal were arranged during 1997-99 at a cost of Rs 1.46 crore. While the works were under execution, the project authorities felt the need to change the thickness of lining to avoid breaches. Accordingly, the estimates were revised upward. Expenditure incurred on the works came to Rs 2.16 crore, which was 48 *per cent* in excess of the agreed value of contract. Inadequate site surveys leading to change in the scope of work resulted in cost overrun of Rs 70.22 lakh.

(iii) Extra expenditure due to defective investigation

Defective investigation led to infructuous expenditure of Rs 46.01 lakh

The supply of water to Moolathara regulator of Chitturpuzha project was being made from Parambikulam-Aliyar project (PAP) under PAP agreement with Tamil Nadu. Anticipating release of tailrace water from Karapara Hydroelectric project on its commissioning, it was decided (1980) to extend the Moolathara Right Bank Canal of Chitturpuzha project for a length of 32.625 km with a view to utilising the surplus water. The first phase of widening for a length of 4.125 km was undertaken during 1984-86 at a cost of Rs 89.86 lakh. As per the revised proposals submitted in March 2000, further extension of this canal beyond 4125 metres was very costly as a large tunnel had to be constructed. The Valiavallampathy Branch canal, which takes off from Chainage 2013 metre was, therefore, proposed to be widened to rejoin at Chainage 6100 metre of the old alignment. The defective investigation

rendered the expenditure on the canal excavation from Chainage 2013 metre to 4125 metre at a cost of Rs 46.01 lakh infructuous.

4.1.6 Maintenance of irrigation system

i) According to Kerala Public Works Department Manual, all completed irrigation projects including minor irrigation structures costing over Rs 1 lakh are to be maintained by the department according to the norms fixed by Government. Expenditure on maintenance of five completed projects in Palakkad District by two irrigation divisions was higher than the rate fixed by Government as shown below:

Project	Total ayacut in hectares	Per hectare cost approved by Government	Per hectare expenditure actually incurred (in rupees)			
			1996-97	1997-98	1998-99	1999-2000
Malampuzha, Mangalam and Pothundy maintained by Irrigation Division, Malampuzha	29507	Rs 180 (up to February 1999), Rs 240 (from March 1999)	193	240	311	268
Gayathri and Walayar maintained by Irrigation Division, Chittur	9487	-do-	416	617	594	401

Maintenance expenditure far exceeded the approved norms

The per hectare maintenance expenditure incurred under the Walayar project was the highest (Rs 617 as against the norm of Rs 180 to Rs 240 per hectare). The total excess expenditure due to excess maintenance cost was Rs 1.87 crore. Besides, in three projects under Malampuzha Division Rs 2.61 crore was additionally spent for special maintenance during the period 1997-2000.

ii) Expenditure incurred on Revamping and Consolidation Programme in 16 projects during 1991-2001 was as shown below:

S1. No.	Number of projects on which the programme was implemented	Period of implementation	Source of fund	Expenditure (Rs in crore)
1.	6	1991-95	World Bank aided National Water Management Project	23.98
2.	9	1998-2001	State Plan Scheme (Planning Board approved)	17.36 (up to December 2000)
3.	1	1996-99	NABARD	2.68

Despite extensive lining of canals to prevent loss of water, additional ayacut was not achieved

Scrutiny revealed that though major portion of the above expenditure was incurred on lining of canal works to prevent loss of water additional ayacut was not created. Executive Engineer, Irrigation Division Chittur stated that the canal system was in a dilapidated condition and hence, the investment was meant for stabilising the system on the ayacut. This was not tenable as huge amounts had already been spent on annual maintenance and repair charges on a regular basis for stabilising this system. As such, further expenditure of Rs 44.02 core on Revamping and Consolidation Programme was not justified and served no useful purpose.

Non-realisation of cost for services rendered for last five years

iii) In January 1991, Government sanctioned construction of a Mini Hydel Project at the barrage in Pamba Irrigation Project at Maniyar and allotted the work to a private firm. According to the agreement between KSEB and the firm, royalty for use of water from the barrage and cost of component for the controlled release of water was payable by the firm to KSEB, whereas Irrigation Department was maintaining its barrage and controlling release of water incurring an expenditure of Rs 14.23 lakh for the last 5 years. In the absence of any agreement between the firm and Irrigation Department in this regard, service charges could not be realised from the firm by the department.

4.1.7 Irrigation potential created and utilised

As of March 2001, the cumulative investment on major and medium irrigation projects in the State was Rs 275.42* crore. Fourteen completed major/medium irrigation projects were brought under Command Area Development Authority (CADA) between 1985 and 1993. The achievement of potential utilised (PU) reported to GOI by CADA was 2.80 lakh hectares (gross) against the potential created (PC) of 3.45 lakh hectares (81 per cent) as of March 2000. In three projects, achievement of PC was low (Vazhani - 35 per cent, Peechi – 54 per cent and Neyyar – 67 per cent). The fact of unreliable reporting of achievement of PC and PU by CADA was commented upon in paragraph 7.13.7 of the Report of the Comptroller and Auditor General of India for the year ended 31 March 1998. Government stated (September 1998) that as there was no specific norm, calculation of PC and PU was based on certain assumptions.

4.1.8 Management of human resources

(i) Over staffing

As of March 2001, Irrigation Department has 7196 staff (Technical – 3900; Non-Technical 3296). Out of 68 divisions, 57 are working divisions. Even while many staff were underutilised without adequate works to attend to, the department recruited 712 staff (Technical 344; Non-Technical 368) during 1996-2001. According to norms fixed by GOI in September 1990, establishment expenditure on irrigation projects was not to exceed 15 per cent of works expenditure including expenditure on investigations. A scrutiny of the records in four projects revealed that establishment expenditure was very high *vis-a-vis* works expenditure. Establishment expenditure constituted 41 per cent to 94 per cent of works expenditure in these projects during 1996-2001 *vide* table below:

Name of Project	Period of expenditure	Sanctioned staff strength	Establishment expenditure (Rs in lakh)	Works expenditure (Rs in lakh)	Percentage of establishment expenditure to works expenditure
Chimony Muply Scheme	1996-2001	67	199.02	485.67	41
Kallada Irrigation Project	1997-2001	2164	5265.91	7303.30	72
Kuriarkutty Karappara Irrigation Project	1997-2001	84	126.00	134.53	94

* Source: Statement No.13 of Finance Accounts 2000-01

Establishment expenditure was Rs 14.39 crore in Kallada project while works expenditure was Rs 11.92 crore

In Banasurasagar Project, establishment expenditure incurred during 1996-99 was Rs 75.45 lakh while works expenditure was insignificant, being Rs 0.14 lakh only. Under Kallada Irrigation Project which is under execution since 1961 there were one CE (Projects III), three Circle Offices and seven divisions. As against the expenditure of Rs 14.39 crore on their establishment during 1999-2000, work expenditure was only Rs 11.92 crore. Thus there was excess deployment of staff in the project without adequate work.

The CE (Project Co-ordinator), European Economic Community (EEC) with supporting staff of 34 was engaged only in passing of bills in respect of works undertaken with EEC assistance which were attended to by Minor Irrigation (MI) Divisions, though MI divisions were under CE (Irrigation and Administration). Thus he was not engaged in any substantive technical work.

Posts of Deputy Chief Engineers created without norms

There are no clear norms for creation/continuance of the post of Deputy Chief Engineers/Superintending Engineers. In one case, works of two mechanical divisions were controlled by two Deputy Chief Engineers and one Chief Engineer. In the Mechanical Division, Malampuzha, no works were undertaken for want of technical personnel though its main activities included fabrication, erection and repair works of regulator gates of mechanical structures and repair works of tools and plant of Irrigation Department.

(ii) Unnecessary retention of an establishment and consequent payment of idle wages

The project office under a SE (Project Director) formed in 1986 exclusively for the Externally Aided Project - Kuttanad Water Balance Study Project was discontinued with effect from 31 March 1990 on submission of the project report to Government in December 1989. However, the office continued to function with nine staff for a period of ten years without any specific duty to be performed. Finally, Government ordered (June 2000) redeployment of the staff by forming the office of the Co-ordinator, External Aided Schemes. The newly created office, however, ceased to function in July 2000. The expenditure of Rs 84.90 lakh incurred on the Cell for the period April 1990 to July 2000 was infructuous.

iii) Infructuous expenditure on a dormant investigation division

Investigation Division without work spent Rs 3.46 crore on staff salary

One Investigation Division functioning at Kannur was entrusted with the investigation of 12 major projects in 1996-97. None of the works has been completed so far (June 2001). Out of investigation works on 160 check dams entrusted to the division during the period 1997-2001, investigation in respect of three check dams only has been completed during 1999-2000. Against the sanctioned staff strength of 160, the division was having 84 staff in position as of March 2001. No tangible work had been done by the divisions in the last five years while expenditure incurred on staff was Rs 3.46 crore. The department attributed non-completion of the work to non-allotment of required funds and non-availability of technical staff and vehicles.

iv) A division for canal formation was idle for five years

100 employees were paid idle wages of Rs 3.88 crore for 5 years

Periyar Valley Irrigation Project (PVIP) started in 1956 was partially commissioned in 1967 after completion of 94 *per cent* of the distributaries at a cost of Rs 100.55 crore. The project was declared completed and brought under Command Area Development Programme from March 1992. Though a division at Aluva with 100 staff was functioning exclusively for canal formation work, the entire staff were idling since March 1992, as no work had been executed by the Division thereafter. The idle wages paid to the staff for five years from April 1996 to March 2001 amounted to Rs 3.88 crore.

v) Lack of skilled workers led to idling of mechanical division

Irrigation Department has two Mechanical Divisions at Thannermukkam and Malampuzha. These divisions were to attend to mechanical works of the department. In Malampuzha Division, there was no skilled workers although 64 posts of skilled workers were sanctioned as of March 2001. As such, the machinery, tools and plant in the workshop remained idle for the last 5 years. The annual establishment expenditure on other staff during 2000-01 was Rs 57.15 lakh (1 Executive Engineer, 4 Assistant Executive Engineers, 8 Assistant Engineers and other administrative staff).

vi) Idle staff on investigation of projects

In the five projects under investigation, 399 staff (Technical: 221, Non-technical: 178) were idling as of March 2001. No target date for completion of the investigation works has been fixed. Expenditure of Rs 21.08 crore incurred on establishment in respect of 4 divisions during 1996-2001 was largely unfruitful as no tangible work was done by the staff during this period. The details are given in the following table.

Name of Project	Number of idle staff			Establishment expenditure during 1996-2001 (Rs in crore)	Remarks
	Technical	Non-Technical	Total		
Vamanapuram Irrigation Project	84	66	150	10.09	Works on the project had not been started due to non-availability of land and inadequacy of funds.
Meenachil River Valley Project	77	53	130	5.40	Though 20 years have elapsed since its sanction no work had been undertaken on the project for want of clearance from Central Water Commission and Government of India.
Chamravattom Project	23	17	40	3.50	Government constituted Chamravattom Regulator Authority in February 2000 for implementation of the Project. Even after the constitution of the Authority the division was continuing and no action was taken to redeploy the staff (September 2001).
Chaliyar Project	29	27	56	2.09	Location of the site has not been finalised (March 2001).
Attappady Valley Irrigation Project	8	15	23	Not available	No clearance from Central Water Commission has been obtained.

4.1.9 Stores management

i) Lax control over procurement and use of departmental stores

Irrigation Department has no separate stores division. According to Government orders, no departmental material need be supplied to works for which the SEs are competent to accord technical sanction (value up to Rs 45 lakh) and the contractors are required to procure the materials. Even in respect of other works, the departmental officers asked contractors to procure materials from open market due to non-availability of funds. Cost of the materials was reimbursed to the contractors subsequently on hand receipts. Thus, compliance with the prescribed procedures regarding custody, issue and use of departmental materials were not ensured by the divisional officers. It was noticed that in two projects, two contractors were paid Rs 2.45 crore against fictitious claims towards supply of cement and steel by the divisional officers as shown below:

Name of Project	Departmental materials (quantity and No. of bills)	Cost (Rs in crore)	Period of supply	No. of contractors involved	Reference to audit paragraph
Chimony Dam Project	Cement 2325 tonnes 87 bills	0.53	July 1994- May 1995	Two	4.1.12 of Report for the year ended March 1999
Karapuzha	Cement 6495.95 tonnes 658 bills	1.92	1994-95 and February - March 1996	Two	5.1 of Report for the year ended March 2000

ii) Idling stores, plant and machinery

On completion of a project, the vehicles and other plant and machinery acquired for the project are required to be transferred to other on-going projects or disposed of in auction. In 4 project divisions and one mechanical division, machinery worth Rs 1.57 crore was rusting as these were neither transferred nor disposed of (Appendix-XXV).

4.1.10 Tardy functioning of Kerala Engineering Research Institute

Kerala Engineering Research Institute (KERI) at Peechi, Thrissur under a Director (Superintending Engineer) with seven Research and one Publication Divisions was formed in 1960. The objective of the Institute was to create a Technological Brain Center with provision for conducting various experimental and analytical studies.

A Coastal Engineering Field Studies Division with three sub-divisions functioning at Thrissur was also brought under this Directorate from 1992. As of March 2001, 169 staff members (94 technical and 75 administrative) were working under this wing. Expenditure incurred on staff of the Institute during 1996-2001 amounted to Rs 8.02 crore.

CE, IDR B stated that lack of fund and belated issue of LOC for recurring research expenditure, non-availability of qualified and interested personnel, inadequate infrastructural facilities etc. adversely affected research and development activities.

Research activities entrusted with other agencies

Two soil investigation works (value: Rs 58.04 lakh) and an environmental impact study (value: Rs 25 lakh) were entrusted to other agencies by the department/Government during 1998-2000. The Department had proposed (November 1999) restructuring of the Institute at a cost of Rs 5.8 crore to curb idling of staff.

4.1.11 Irrigation Revenue

i) Betterment levy

For want of unified irrigation law, collection of betterment levy not made

Betterment levy at specified rates is charged on the difference between the increase in the capital value of each class of land and the cost of making such land fit for advantageous utilisation. For want of unified law, Government kept in abeyance (1996) collection of betterment levy. No legislation has been enacted in this regard as of June 2001.

(ii) Water cess

Failure to conduct joint verification resulted in heavy leakage of irrigation revenue

When a project, scheme or work is completed, the ayacut achieved is jointly verified by the irrigation and revenue authorities prior to the demand raised on water cess. The total ayacut achieved till the end of 1999-2000 was 3.90 lakh hectares (net)*. On the basis of the average water cess of Rs 74.30 per hectare, the revenue collectable was Rs 2.90 crore per annum, whereas the demand for 1999-2000 was raised to the extent of Rs 84.39 lakh only. The heavy shortfall in collection of water cess was attributable to absence of joint verification of ayacut achieved.

As of January 2001, Rs 2.40 crore was pending collection as water cess

As at the end of January 2001, water cess pending collection was Rs 2.40 crore against a demand of Rs 2.93 crore, out of which, Rs 1.22 crore was under remission or return of recovery notice and Rs 15.96 lakh under stay orders. The departmental officers did not take any action to collect the balance amount of Rs 1.02 crore.

iii) Poor receipts from completed projects

According to the recommendation of Irrigation Commission (1972), irrigation works should give an annual income equal to the annual cost of operation so that the burden on the cost of providing irrigation was not passed on to the general tax payer. For this, Commission suggested a review and revision of rates on the fourth year of implementation of each Five Year Plan. Though Government set up an inter-departmental committee in 1978 for review of water cess rates on a continuing basis, no effective action was taken in this regard so far (June 2001). Irrigation projects failed to generate returns to sustain their operations.

Revenue expenditure far exceeded the revenue yield persistently

Even in respect of 8 irrigation projects, which were declared as commercial, the aggregate revenue receipts (Rs 13.29 crore) did not cover their total working expenses and maintenance charge (Rs 19.70 crore) during the period from 1996-97 to 1999-2001. Interest on capital charged was Rs 77.70 crore.

* 'net' and 'gross' depend on the number of crops raised in an year in the cultivable area

The excess expenditure of Rs 84.11 crore was an extra burden on the exchequer.

iv) Non-assessment of ayacut under Minor Irrigation

Non-assessment of area benefited led to loss of irrigation cess of Rs 19.59 lakh per annum

In respect of three Minor Irrigation divisions, out of an ayacut of 42625 hectares achieved and reported by them, only 16262 hectares could be jointly verified as of March 2001. Non-assessment of 26363 hectares of ayacut for collection of irrigation cess resulted in loss of revenue of Rs 19.59 lakh per annum, calculated at an average rate of Rs 74.30 per hectare.

v) Loss on short-supply of water

Short supply of water to industrial units resulted in revenue loss of Rs 4.20 crore

Periyar Valley Irrigation Project envisaged supply of 17.70 million cubic metre of water to the Cochin Division of Fertilizers and Chemicals Travancore Limited (FACT) during October to May every year. The actual supply during the 4 years ended 2000 was, however, 2885.11 crore litres as against 7080 crore litres of water to be supplied as per agreement. Based on the rate of Re.1 per cubic metre, fixed by Government in March 1990, the loss of revenue was Rs 4.20 crore.

4.1.12 Other topics of interest

i) Idle investment on lift irrigation schemes

An expenditure of Rs 4.61 crore incurred on 17 Lift Irrigation Schemes (LIS) relating to 4 Minor Irrigation divisions was rendered unfruitful due to non-completion of civil works and non-energisation of pump sets (Appendix - XXVI). The delay in commissioning ranged from 1 year to 17 years.

ii) Encroachment of Project land

In four project areas, 182.71 acres* of land were encroached upon by private individuals. However, no effective action had been taken by the Department/Government to evict the encroachers.

The above points were referred to the Chief Engineer, Irrigation and Administration and the Secretary to the Government, Irrigation Department in July 2001 for reply within 6 weeks. Replies have not been received from them (October 2001).

* Karapuzha: 125 acres, Malampuzha: 50 acres, Chitturpuzha: 3.5 acres and Attappady Valley Irrigation Project: 4.21 acres

SECTION B – PARAGRAPHS

FISHERIES AND PORTS DEPARTMENT

4.2 Avoidable extra expenditure due to change of quarry

Selection of a construction firm not possessing licence for use of explosives necessitated change of quarry and avoidable extra expenditure of approximately Rs 93 lakh.

In January 1995, Superintending Engineer (SE), Harbour Engineering North Circle, Kozhikode awarded the work on construction of breakwaters for Azheekkal Cargo Harbour in Kannur District to a firm for completion within June 1997 for a contract amount of Rs 9.04 crore.

As per agreement, the quarry at Ramanthali was the approved source for granite stones required for the work at Mattul side. While the work at Mattul side was in progress, the Revenue Divisional Officer, Thalassery in August 1997 restrained the firm from quarrying with explosives at Ramanthali as they did not possess a licence to use explosives. Consequently, the firm stopped the construction activity in October 1997. Attempts made by the departmental officers to obtain 'No Objection Certificate' for storage of explosives failed. To resolve the impasse, Government constituted a Committee of Secretaries and based on its recommendation, sanctioned (August 1999) the department's proposal to bring the entire stone from Sivapuram quarry, 75 km away from the site. SE executed (December 1999) a supplementary agreement with the contractor for conveyance of stones from the latter quarry for Rs 5.72 crore. Thus, the total value of the work through these two contracts worked out to Rs 14.76 crore. The work has not been completed as of February 2001.

Scrutiny revealed that as per the original contract the firm was to take out the licence under Explosives Act, 1940 for storing explosives required for rock blasting. Further, no claim towards extra lead for conveyance of material was to be entertained on the ground of non-availability of materials at the approved quarry. Instead of invoking these conditions Government bailed out the contractor and the SE accordingly executed the supplemental agreement providing for subsequent change of quarry which led to avoidable extra expenditure of Rs 93 lakh on account of conveyance charges as of February 2001.

The matter was referred to Government in May 2001; reply has not been received (October 2001).

IRRIGATION DEPARTMENT

4.3 Wasteful expenditure due to delay in commencement of mechanical works

Failure in not synchronising execution of mechanical works with civil works resulted in wasteful expenditure of Rs 35.15 lakh for formation of a fresh ring bund.

Superintending Engineer and Deputy Chief Engineer (Mechanical) Irrigation, Thiruvananthapuram entrusted (September 1997) the work 'design, fabrication, supply and erection of the shutters for the bridge-cum-regulator' at Kanakkankadavu in Ernakulam District to a firm for a contract amount of Rs 1.08 crore. The contract stipulated that the firm should furnish the design and drawings of the shutters alongwith calculation in respect of each and every component and the work started only after getting approval of the same from the concerned authorities. The contract, however, did not prescribe any time frame for submission of the design and drawings by the firm.

In November 1997, Executive Engineer (EE), Irrigation Division, Ernakulam, who was in charge of the civil works, intimated EE in charge of Mechanical Wing, Malampuzha that a ring bund for executing the civil works in the river was expected to be ready by the end of November 1997 and that expenditure on construction of fresh ring bund could be avoided if mechanical works were executed before demolition of the existing ring bund.

The contractor furnished the design and drawings only in March 1998, i.e. six months after entrustment of the work. Chief Engineer (CE), Design Wing approved the design only between May 1998 and January 1999. However, in June 1998 the ring bund formed for constructing the civil works breached in the monsoon floods, necessitating formation of a new ring bund for executing the mechanical works.

Based on the request of CE (Mechanical) in September 1998, EE, Irrigation, Ernakulam arranged the construction of a fresh ring bund for executing mechanical works. The work was completed in June 1999, at a cost of Rs 35.15 lakh. Only after that, the shutters of the regulator were erected in January 2000.

Thus, failure of Deputy Chief Engineer (Mechanical), Irrigation in not stipulating a time frame for furnishing the design and drawings, delay on the part of CE (Design Wing) in approval of the design and lack of co-ordination between the Department's Civil and Mechanical Wings delayed the works which resulted in an extra expenditure of Rs 35.15 lakh on formation of a fresh ring bund.

The matter was referred to the Chief Engineer, Irrigation and Administration in January 2001 and to the Secretary to the Government (June 2001). Replies have not been received (October 2001).

4.4 Unjustified benefit to contractors

Contractors were paid Rs 55.25 lakh for carriage of excavated earth meant for sale to them. This expenditure was not contemplated in the specifications in the notice inviting tenders and was thus an undue favour to the contractors.

Superintending Engineer (SE), Irrigation Circle, Kozhikode awarded the works on 'Improvements and protection of Canoli Canal' in Kozhikode District in 14 reaches to 12 contractors between September 1997 and December 1998 at a total estimated cost of Rs 6.84 crore. One of the items in all the contracts was earth work excavation for deepening the canal and conveyance of the excavated earth to a place of contractors' choice. The cost of excavated earth was to be recovered from the contractors at the rate of Rs 3 per 10 cubic metres. Total quantity of earthwork excavation was estimated at 125157 cubic metres and the rates per cubic metre included in the tender documents were Rs 655 in three contracts, Rs 635 in seven contracts and Rs 243 in four contracts.

Audit scrutiny revealed that the rates of Rs 655 and Rs 635 included Rs 392.15 for conveying the cut earth by head load for a distance of 250 metres, whereas the rate of Rs 243 did not include the element for head load conveyance. As the excavated earth was meant to be sold to the contractors, payment of conveyance charges of such earth by head load was not justified and was an undue aid to the contractor. The estimated avoidable expenditure on this account was Rs 55.25 lakh. Of this, Rs 38.32 lakh was paid (between March 1998 and July 1999) to the contractors as of May 2001.

SE maintained (January 2001) that the charges included in the rates were for conveying the material after excavation to suitable dumping places from where contractors got possession of the excavated earth and that no charges for conveying the material beyond the dumping points were included in the rates. This was not tenable as the specification of items did not envisage dumping of excavated earth temporarily and its eventual removal by contractors to their places of choice. The matter calls for investigation.

The matter was referred to the Chief Engineer, Irrigation and Administration in March 2001 and to the Secretary to Government in June 2001. Replies have not been received (October 2001).

4.5 Inadmissible payments to contractor

Contractor was unjustifiably paid Rs 40.47 lakh for incidental work of shoring and the cost of sand obtained free from river site.

Superintending Engineer (SE), Siruvani Project Circle, Palakkad awarded a contract for construction of a regulator-cum-bridge across Bharathapuzha at Velliyamkallu (Palakkad District) to a contractor in May 1999 to be completed within 24 months for a contract amount of Rs 9.55 crore. As of January 2001,

Rs 4.80 crore was spent on the work. Scrutiny (January 2000) revealed inadmissible payment of Rs 40.47 lakh as discussed below.

i) According to the contract, the rates were inclusive of the charges for all incidental works, such as shoring, bailing of water, scaffolding etc. In November 1999, the contractor demanded extra payment for shoring to protect the sides of trenches excavated for apron concreting. In the supplemental agreement executed in June 2000, SE included shoring as an extra item for a length of 782 metres at the rate of Rs 3255 per metre. The extra avoidable payment on this account worked out to Rs 26.17 lakh.

ii) The estimated requirement of sand for concreting work was 17306 cubic metres and as per the tender document the sand was to be obtained locally. The rates for different items involving use of sand provided the cost of sand at Rs 85.80 per cubic metre for cement work and Rs 36.30 per cubic metre for filling. Audit scrutiny revealed that the contractor was using sand from the river bed free of cost and therefore the SE unjustifiably allowed the rate inclusive of cost of sand. Based on the estimated quantity of sand to be used on the work, the contractor derived an undue gain of Rs 14.30 lakh for the unjustified cost of sand. As execution of the work was supervised by the Executive Engineer at field level and the contract agreements were concluded by SE, they were responsible for allowing such an inadmissible benefit to the contractor.

The matter was referred to the Chief Engineer, Irrigation and Administration in March 2001 and to the Secretary to Government (July 2001). Replies have not been received (October 2001).

4.6 Unfruitful expenditure on supply of water to a thermal power station

Even before Government approved the proposal to supply water to the thermal power project, Executive Engineer unnecessarily spent Rs 24.05 lakh on land acquisition and purchase of steel.

Chief Engineer (CE), Projects II, Thiruvananthapuram allotted (November 1998) Rs 76.50 lakh for the work of remodelling of the main canal and extension of distributary No.21 of Cheppad branch canal to supply water to the Kayamkulam Thermal Power Project* in Alappuzha District. Based on technical approval by the CE, Executive Engineer (EE), Pamba Irrigation Project Division, Chengannur spent Rs 24.05 lakh on survey and investigation (Rs 2.08 lakh), land acquisition (Rs 10.83 lakh) and procurement of steel (Rs 11.14 lakh) as of March 1999. Scrutiny of the minutes of a meeting of the officers of the State Government and functionaries of NTPC held in November 1999 revealed that no feasibility study for supply of water was done before according technical approval to the scheme by the CE. As the alignment for extension of the canal was not determined and demarcation of land to be taken in advance possession was not carried out, land acquisition for

* A project under the aegis of National Thermal Power Corporation Limited (NTPC)

the work was stalled. Since March 1999 no further work was undertaken as the work was held in abeyance by Government pending fresh feasibility studies regarding availability of water during lean seasons, cost effectiveness, alignment of canals, etc.

Thus, hasty action of EE on incurring expenditure on preliminaries for the work while Government did not clear the proposal for the work resulted in unfruitful expenditure of Rs 24.05 lakh for more than 2 years. EE stated (March 2001) that 13.45 tonnes of steel (Rs 1.88 lakh) was transferred to other works and that the remaining quantities would be given to other projects.

The matter was referred to Government in July 2001; in reply Government stated (August 2001) that disciplinary action against the EE was underway for not obtaining administrative sanction.

PUBLIC WORKS AND TRANSPORT DEPARTMENT

4.7 Extra expenditure due to delay in acceptance of cheaper offer

Non-acceptance of the lowest offer received in the tender call in October 1995 entailed an estimated extra expenditure of Rs 34.45 lakh.

In October 1995, Superintending Engineer (SE), Buildings and Local Works Circle, Kozhikode invited offers from seven pre-qualified tenderers for construction of buildings for the Industrial Training Institute, Kasaragod at an estimated cost of Rs 2.20 crore. Of the four bids received, the lowest offer was for Rs 3.36 crore at 89 *per cent* above estimate rates. Chief Engineer, Buildings and Local Works recommended (December 1995) the lowest offer for acceptance. The Government Tender Committee (GTC), however, recommended (January 1996) the acceptance of the tender with a reduced tender premium of 80 *per cent* on the hope that the reduced rate would be acceptable to the contractor inspite of his expressed unwillingness thereto. Government accepted the recommendation of the GTC in February 1996. However, the tenderer backed out (February 1996) expressing his unwillingness to take up the work at the reduced rate of 80 *per cent*.

The SE retendered the work only in December 1996 and awarded (February 1997) the work to another contractor for a contract amount of Rs 3.71 crore, being 47.90 *per cent* above revised estimate rates (based on July 1996 SOR*). The work was in progress as of January 2001. Delayed retendering resulted in extra expenditure of Rs 34.45 lakh.

Government stated (September 2000) that the Tender Committee was guided by past experience when the contractors had accepted reduced tender premium recommended by it and that tenderers were not consulted while taking decision on tenders.

* Schedule of Rates

The matter was referred to the Chief Engineer, Buildings and Local Works in November 2000 and to the Principal Secretary to the Government, Public Works Department (April 2001). Replies have not been received (October 2001).

4.8 Extra expenditure due to delay in approval of the revised estimate

Delays in finalising the revised estimate based on the modified design and plan of the school building resulted in extra expenditure of Rs 27.60 lakh to Government.

In May 1991, Superintending Engineer (SE), Buildings and Local Works, Kozhikode awarded construction of a building for Government Ganapath High School, Feroke in Kozhikode District at a contract amount of Rs 46.86 lakh stipulating the date of completion as June 1993. When work was commenced in January 1992, architectural plan of the building was modified by SE to provide more accommodation as the high school was upgraded (1990-91) into a Vocational Higher Secondary School. After completing the entire structural portion of the building at a cost of Rs 74.83 lakh as per the revised plan, the contractor stopped the work in June 1995 as payments due to him were withheld for want of revised administrative sanction. Chief Engineer, Buildings and Local works moved (July 1996) Government for revised administrative sanction to the work. Government accorded sanction only in March 1998 for Rs 79 lakh. Payments were released to the contractor in March 2000.

The contractor expressed (October 1998) his unwillingness to carry out the balance works[#] in view of the increase in cost of materials and labour and demanded relief from the contractual obligations. Based on Government Arbitration Committee's recommendations (May 1999) Government closed the contract in August 1999 without risk and cost to the contractor. The value of the items of work left incomplete by the original contractor was assessed by EE at Rs 19.58 lakh. SE arranged execution of the balance works in December 1999 for Rs 47.90 lakh which were completed in January 2001.

Scrutiny revealed that though the contract was awarded in May 1991 and the contractor commenced execution of work as per modified plan, revised estimate to suit the modified plan was prepared by SE only in December 1995. SE took six months to seek revised Administrative sanction, which was accorded by Government after a delay of 20 months. SE took another 5 months to arrange execution of the balance works. Thus, construction of the school building started in January 1992 was completed after 9 years with cost overrun of Rs 27.60 lakh.

The matter was referred to Government in April 2001; reply has not been received (October 2001).

[#] Included sunshades, parapet walls, plastering, flooring, providing doors and windows and other finishing works

4.9 A bridge lying unused for more than a year

A bridge was constructed at Rs 3.11 crore without acquiring land for the approach roads. The bridge is lying unused with little prospect of the approaches coming up in near future.

Kerala Public Works Department Manual enjoins upon the authorities concerned to ensure before award of work that land would be ready for being handed over to the contractor. The required land either should have already been acquired or be otherwise available or land acquisition proceedings should have reached a fairly advanced stage, when it could reasonably be anticipated to make available the land before the contractor starts the work.

Superintending Engineer (SE), Roads and Bridges, North Circle, Kozhikode did not observe these provisions while awarding the work of construction of Kothypallykandi bridge across Kallai river and its approaches to a contractor in July 1995 for a contract value of Rs 4.02 crore. The period of completion prescribed in the contract was 30 months, i.e. within January 1998 which was further extended upto 31 March 2000. Construction of the bridge was completed in July 2000 and Rs 3.11 crore paid to the contractor till December 2000. Work on formation of approaches for a total length of 1.8 km has not commenced as of August 2001 since 6.39 acres of land required for approaches has not been acquired. The bridge is lying unused since July 2000. According to the SE, the land acquisition proceedings involved eviction and rehabilitation of 264 families. A rehabilitation project (cost: Rs 2.32 crore) prepared by Chief Engineer, Roads and Bridges in March 1998 was rejected by Government in August 1999. Fresh proposals to rehabilitate the residents have not been forwarded (August 2001). The prospect of resumption of the remaining work in near future is not known. Thus the expenditure on the bridge is totally unfruitful as of now.

Thus, award of the contract before ensuring availability of land for approaches resulted in blocking of funds amounting to Rs 3.11 crore.

The matter was referred to Government in May 2001; reply has not been received (October 2001).

4.10 Extra expenditure due to administrative delays

Failure of the Government to act upon the recommendation of Government Tender Committee to accept a cheaper offer led to estimated extra expenditure of Rs 58.61 lakh.

Superintending Engineer (SE), Roads and Bridges Circle, Kozhikode invited (December 1995) tenders from four pre-qualified tenderers for construction of a bridge across Karimpuzha river at Koottilakkadavu in Palakkad District. SE recommended (January 1996) the offer of the single tenderer 'A' for the contract amount of Rs 1.94 crore at 195 *per cent* above the estimate

(1992 SOR[@]). Government Tender Committee (GTC), however, decided (January 1996) to invite fresh open tenders. On retender in February 1996, the lowest offer was at 107 *per cent* above the estimate rates (contract amount: Rs 1.51 crore) and GTC recommended (March 1997) acceptance of the offer. Though Chief Engineer, Roads and Bridges solicited (April 1997) formal Government orders, Government did not take a decision in the matter for nearly two years. No reasons were on record to show why Government did not take a decision on the recommendation of GTC. Thus, the second tender was allowed to lapse. After revising the estimate based on 1996 SOR, SE again invited tenders in March 1999. Of the four tenders received, the lowest rate quoted was 59 *per cent* above estimate (Rs 2.09 crore) from the same contractor 'A' - whose earlier offer was rejected by GTC in January 1996. Government, accepted (December 1999) the offer as recommended by GTC and work was awarded by SE in December 1999 for Rs 2.09 crore.

Government's failure to issue orders on the recommendation of GTC made in March 1997 led to delay of more than 19 months in awarding the work and extra expenditure of Rs 58.61 lakh at the award stage.

The matter was referred to Government in May 2001; reply has not been received (October 2001).

4.11 Unjustified extra expenditure due to marble flooring

Marble flooring was substituted for cement mortar entailing additional liability of Rs 41.74 lakh.

In March 1998, Superintending Engineer (SE), Buildings and Local Works, Thiruvananthapuram awarded construction of a building for the examination wing of the Directorate of Technical Education at Thiruvananthapuram for an agreed contract amount of Rs 1.35 crore. The sanctioned estimate of the work provided for flooring of the building with cement mortar at an estimated cost of Rs 2.18 lakh*. In November 1999, SE executed a supplemental agreement with the contractor, which *inter alia*, substituted cement concrete with mosaic and marble adenga for flooring at an estimated cost of Rs 43.92 lakh* (more than 20 times of the original estimated cost of Rs 2.18 lakh). There was no specific request of the user department for change of specifications. Sanction from higher authorities was also not obtained by SE for the change of specification and the revised estimate. The change in flooring entailed an estimated additional financial liability of Rs 41.74 lakh. The flooring work of the building was in progress as of May 2001.

Provision in Kerala Financial Code prohibit extravagance in spending Government money and therefore departmental officers are expected to avoid all ostentations in office buildings. Substitution by marble flooring for cement floor for an ordinary office building at heavy cost and subsequent to award of the work was irregular and unjustified. Such post-contractual changes

[@] Schedule of Rates

^{*} Inclusive of tender premium of 75 *per cent*

involving 1915 *per cent* of the original tendered amount vitiated the sanctity of the tender and deprived the department of the opportunity of getting better competitive rates.

The above matter was referred to the Chief Engineer, Buildings and Local works in March 2001 and to the Secretary to the Government in July 2001. Replies have not been received (October 2001).

4.12 Unjustified acceptance of a contract at higher rate

The contract was awarded at a tender premium of 42 *per cent* against the quoted premium of 32 *per cent* with extra liability of Rs 37.99 lakh at the award stage.

In response to the tender call (February 1996) by Superintending Engineer (SE), Buildings and Local Works Circle, Thrissur for construction of 350 bedded ward for Ayurveda College Hospital at Thripunithura nine bids were received. The lowest offer quoted was 32 *per cent* above estimate rate. The lowest bidder, claimed in a separate letter dated 8 January 1997 (the last date for receipt of tenders) that his quoted rate of 32 *per cent* was subject to the conditions that the department should ensure timely supply of cement and steel required for the work and payment of bills within 15 days of their submission. He informed SE that his quoted rate should be reckoned as 42 *per cent*, if these two conditions were not accepted by the department. Government Tender Committee (GTC) recommended (March 1997) acceptance of the lowest offer at 42 *per cent* for an agreed amount of Rs 7.39 crore on the plea that fulfilling the conditions was not possible. Government accepted (May 1997) the GTC recommendations. The work was awarded to the contractor in September 1997, stipulating the date of completion in March 2000. Till March 2001, Rs 4.23 crore was paid to the contractor.

Conditions in the Notice Inviting Tenders (NIT) permit the tenderers to quote only a single rate, in the tender, in the form of an overall percentage over departmental rate. These conditions further stipulate that the rate so indicated in the quoted sheet of the tender shall not be varied under any circumstances. Hence, contractor's letter of 8 January 1997 to SE enhancing his originally quoted rate in the event of non-acceptance of a set of conditions specified in the same letter, *prima facie* violated the tender conditions.

However, instead of acting as per rules, the contractor was irregularly allowed unjustified extra premium of Rs 37.99 lakh. The possibility of malpractice in this case cannot be ruled out. The matter calls for investigation.

The matter was referred to the Chief Engineer, Buildings and Local Works in January 2001 and to the Principal Secretary to Government, Public Works Department in July 2001. Replies have not been received (October 2001).

4.13 A hospital for women and children lying unused for five years

Construction work of a hospital for women and children, substantially completed in 1996 at a cost of Rs 89 lakh is lying unused for 5 years.

Construction work of a building for Women and Children Hospital at Palakkad taken up in December 1992 at a cost of Rs 73.58 lakh, for completion by December 1994 was stopped at an advanced stage by the contractor in March 1996 due to non-supply of materials and non-payment of bills by the department. Chief Engineer, Buildings and Local Works stated (January 1999) that progress of the work was slow for want of funds. It was noticed that no funds for this work were provided from 1996-97 onwards. Government Arbitration Committee recommended (January 1999) termination of the contract without risk and cost and Superintending Engineer, Buildings and Local Works, North Circle, Kozhikode closed the contract in September 1999. The balance works* had not yet started as of September 2001. Expenditure on the incomplete building was Rs 89.36 lakh (as of May 1999). A revised estimate for Rs 1.92 crore submitted to Government in December 1999 by Chief Engineer was pending for approval as of January 2001.

Thus, the hospital building almost completed at a cost of Rs 89.36 lakh was lying unused for 5 years for failure to arrange required funds. The completion of the work was uncertain as the work was not resumed even 5 years after it was left incomplete.

The matter was referred to the Chief Engineer, Buildings and Local Works in November 2000 and to the Principal Secretary to the Government in July 2001. Replies have not been received (October 2001).

4.14 Wasteful expenditure on construction of a bridge

Departmental officers did not properly supervise the construction work of a bridge and paid the contractor for sub standard work. The work got delayed by 7 years and Rs 35.30 lakh was wasted.

Progress of work of construction of Mukkannankadavu bridge across Nellippuzha river in Palakkad District awarded to a contractor in July 1992 at a cost of Rs 43.67 lakh, for completion by March 1994, was not satisfactory. Hence, the Superintending Engineer (SE), Roads and Bridges Circle, Kozhikode terminated (February 1996) the contract at the risk and cost of the contractor. Rupees 29.92 lakh were paid (March 1994) to the contractor for the work executed by him.

Inspection of the partially constructed structure (August 1998) by the Structural Engineering Research Centre (SERC), Chennai revealed (December 1999) that the piers and abutments were weak due to lower strength values of in-situ concrete and presence of excessive voids and these

* included plastering, flooring, sanitary, water supply, electrification, etc.

were not suitable for constructing the deck super-structure, in view of the uncertainty on the quality of concrete and depth of well foundation. Despite such defective construction by the contractor, no liability has been fixed against the contractor and departmental officers responsible for supervisory lapses and for having authorised payment to contractors despite substandard work. In April 2001, SE awarded the work of re-construction of the bridge on lump sum contract basis to another contractor for Rs 1.75 crore. The responsibility to ensure quality and economy of Government work rested with the departmental officers concerned. The Assistant Engineer in charge of execution of work was to supervise the work frequently. Provision also existed for supervision of work by the Executive Engineer and SE. As such the responsibility to ensure quality of work devolved on those officers.

Thus, due to poor quality work, failure in supervision and unjustified release of payment to contractor despite substandard work, Rs 35.30 lakh (including Rs 5.38 lakh paid to SERC for inspection work) spent on the work became a waste and the work was delayed by more than 7 years at the award stage.

The matter was referred to the Chief Engineer, Roads and Bridges in February 2001 and to the Secretary to Government in July 2001. Replies have not been received (October 2001).

4.15 Unauthorised aid to contractor

Post contractual changes in the size of islands to be formed for well sinking resulted in unauthorised aid of Rs 30.02 lakh to contractor.

The work on 'Construction of Nelliadikadavu bridge' in Kozhikode District awarded by the Superintending Engineer (SE), Roads and Bridges Circle, Kozhikode to a firm in February 1996 for a contract amount of Rs 2.77 crore was completed in January 2000 at a cost of Rs 3.11 crore. Audit scrutiny revealed that extra payment of Rs 30.02 lakh was made to the firm outside the scope of the contract.

Based on an estimate approved by the Chief Engineer (CE), Roads and Bridges in January 1995 an agreement (February 1996) was concluded by the SE for formation of islands of size 13.50 metres x 8 metres with average height of 2.30 metres around 7 pier points for sinking foundation wells, at Rs 42600 per island. In February 1997, CE changed the specification for the islands by enlarging the island size to 14.5 metres x 9 metres with average height of 2.60 metres on the ground that the islands originally proposed would not withstand the heavy flow of water in the stream and islands of bigger size were required to provide enough working space around the outer ring of the wells. As against 7 islands, the firm constructed 9 islands. The construction of two extra islands for abutments was not envisaged in the original agreement and not approved by competent authority (CE). For formation of the enlarged islands, Rs 2.30 lakh per island was granted which was exorbitant compared to the originally accepted rate of Rs 0.43 lakh per island.

Post-contractual changes in the number and specifications of the islands to be formed at rates more than five times of the originally agreed rate resulted in extra expenditure of Rs 30.02 lakh which constituted an unintended aid to the contractor. The following points were noticed:

i) The original estimate was based on investigations done in 1987. There was no change in this estimate before the award of work in February 1996. The changes in number and size of the islands to be formed were attributed to the vast changes in the site conditions. Such vital changes in the scope of work after award of the work and during execution, indicated that the estimate was approved by the CE without adequate examination of the ground conditions.

ii) According to Kerala Public Works Department Manual, in cases where the works are arranged after a lapse of 2 years since preparation of the estimates, it is incumbent upon Assistant Engineer (AE)/Executive Engineer (EE) to re-examine the site conditions and to recast the estimate, if necessary, to accommodate major variations in the site conditions. No such re-verification of site conditions by AE/EE before arranging the work after a lapse of more than eight years, was carried out. Nor was such re-examination insisted upon by the CE who approved the obsolete estimates necessitating major change in the scope of work at the post agreement stage at a huge extra cost.

iii) The argument that the changes were necessary to enable island formation and to provide additional working space was not tenable as the contractor was to satisfy himself about the workability aspect before tendering for the work. There was no evidence to suggest that the contractor did not do so in this case. Hence, such post contractual changes amounted to unintended gratuitous favour to the tenderer.

The matter was referred to the Chief Engineer, Roads and Bridges in May 2000 and to the Secretary to Government in July 2001. Replies have not been received (October 2001).