

PAC Part IV (1)

FIFTEENTH KERALA LEGISLATIVE ASSEMBLY

**COMMITTEE
ON
PUBLIC ACCOUNTS
(2023-2026)**

SEVENTY SECOND REPORT

(Presented on^{12th} March, 2025)



**SECRETARIAT OF THE KERALA LEGISLATURE
THIRUVANANTHAPURAM**

2025

FIFTEENTH KERALA LEGISLATIVE ASSEMBLY

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on

**Paragraphs relating to Departments of Tourism, Water Resources,
Transport, Coastal Shipping & Inland navigation and Forest & Wild life
contained in the Reports of the Comptroller and Auditor General of India
for the years ended 31st March, 2013, 2015 and 2017 (Economic Sector).**

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COMMITTEE ON PUBLIC ACCOUNTS (2023-26)

COMPOSITION

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Shri. Selvarajan P.S, Joint Secretary

Shri. Jomy K. Joseph, Deputy Secretary

Smt. Beena O.M., Under Secretary

INTRODUCTION

I, the Chairperson, Committee on Public Accounts, having been authorised by the Committee to present this Report, on their behalf present the 72nd Report on paragraphs relating to Departments of Tourism, Water Resources, Transport, Coastal Shipping & Inland Navigation and Forest & Wildlife contained in the Reports of the Comptroller and Auditor General of India for the years ended 31st March, 2013, 2015 and 2017 (Economic Sector).

The Reports of the Comptroller and Auditor General of India for the years ended 31st March, 2013, 2015 and 2017 (Economic Sector) were laid on the Table of the House on 8th July, 2014, 28th June, 2016 and 30th November, 2018 respectively.

The Committee considered and finalised this Report at the meeting held on 7th February, 2025.

The Committee place on records our appreciation of the assistance rendered to us by the Accountant General in the examination of the Audit Report.

Thiruvananthapuram
..12th.. March, 2025.

SUNNY JOSEPH
Chairperson,
Committee on Public Accounts.

REPORT

TOURISM, WATER RESOURCES, TRANSPORT, COASTAL SHIPPING AND INLAND NAVIGATION, FOREST AND WILDLIFE DEPARTMENTS

3.9 Infructuous expenditure on wooden cottages

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

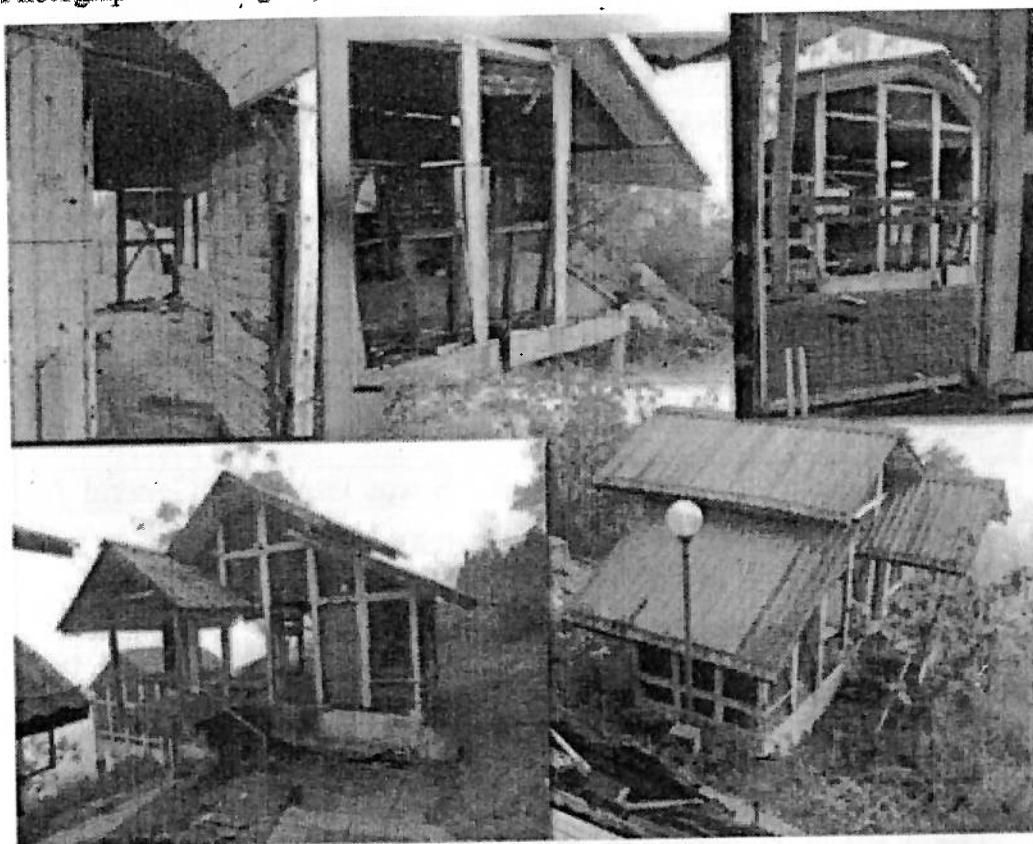
Government decided to construct a Tourist Complex at Ponmudi in Thiruvananthapuram district and AS was issued by General Administration (Tourism) department (August 2000) for construction of 15 wooden cottages at a cost of ₹1.17 crore utilising Central Assistance of ₹1.09 crore and State component of ₹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.

[Audit paragraph 3.9 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2013 (Economic Sector)]

[Note submitted by the Government on the above audit paragraph is included as Appendix II]

Excerpts from the Committee's discussion with departmental officials

1. When the Committee enquired about the details regarding the infructuous expenditure incurred for the construction of wooden cottages at Ponmudi, the Managing Director, Kerala Tourism Development Corporation replied that it was built by the Central Public Works Department and due to its design failure rendered an infructuous expenditure of ₹1.24 Crore. She added that in 2007, KTDC acquired the wooden cottages at Ponmudi, and during its inspection in 2009 it was found that those cottages were in damaged condition. Audit scrutiny revealed that the lack of proper maintenance and

laxity shown during the various stages of its construction also had contributed to its failure. She added that a permanent structure should have at least 30 years of life span and the CBI had made an enquiry against CPWD in that regard.

2. To a query of the Committee regarding the action taken as per the findings of the CBI investigation, the Managing Director, Kerala Tourism Development Corporation replied that the agency that carried out the construction of the cottages had been blacklisted.

3. The Committee enquired whether KTDC had taken any action to recover the loss incurred in the construction of cottages. The Managing Director, Kerala Tourism Development Corporation, replied that no compensation had been recovered and later KTDC renovated the cottages at its own expense. She further added that certain issues were identified in both the design and construction phases of the project. In the design of the project, it was suggested to use Pine wood, which was not suitable for high altitude areas like Ponmudi. Moreover, the Pine wood used for the construction was of low quality.

4. The Committee opined that in addition to blacklisting the agency some other actions should have been taken against them. The Managing Director, Kerala Tourism Development Corporation informed that vigilance case and construction issues did not come under the purview of the Tourism Department. Therefore, the case was referred to the Vigilance and Anti-Corruption Bureau and subsequently was transferred to the CBI. She further added that CBI had instructed to blacklist the executing agency responsible for the work and no other instructions had been given to impose any penal provision.

5. The Committee enquired whether the Tourism Department had assessed the quality of the cottages during the construction phase, who the person responsible for using substandard construction materials was and the reason for providing payment to the contractor without evaluating the quality of work.

6. The Committee viewed that the trend of undertaking the government works and abandoning them midway by many incompetent and untrustworthy empaneled agencies is on the rise and those who empaneled such institutions were equally responsible for the loss.

7. The Managing Director, Kerala Tourism Development Corporation informed that Tourism Department handed over the Project to KTDC in 2007 and KTDC had no role during the construction phase. Therefore, more information regarding the matter could only be given by the Tourism Department.

8. The Committee came to the conclusion that KTDC was not responsible for the defects caused during the various phases of construction and directed to get a detailed report from the Tourism Department regarding irregular construction of cottages, action taken to recover the loss sustained by Government, recommendations of CBI Investigation Report and the action taken as per the recommendations of the CBI Investigation Report.

Conclusions/ Recommendations

9. The Committee expresses displeasure over the non- diligence on the part of Tourism Department in assessing the quality of the wooden cottages at Ponmudi during the construction phase, before making payment to the contractor and urges to take measures to recover the loss sustained by Government from those responsible for the loss. The Committee also directs the Department to furnish immediately the details of action taken on the recommendations included in CBI Investigation Report.

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 five¹ inland navigation works

1 Improvement of boat route canal from Kumarakom to Muhamma, Vaikom to Thavanakkadavu,

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 bidder² 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 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 (Appendix III(I)).

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

[Audit paragraph 3.11 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2013 (Economic Sector)]

Cheepunkal to Mannanam, Muttar - Neelamperur canal and Kallara Feeder canal.

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

[Note submitted by the Government on the above audit paragraph is included as Appendix II]

Excerpts from the Committee's discussion with departmental officials

10. When the Committee enquired about the details regarding the audit paragraph, the Chief Engineer, Inland Navigation & Kuttanad Package replied that at the time of application of 'Schedule of Rates 2012', rental items were treated as departmental materials. Cement, steel and rental items were added only after applying tender premium. But at present DSR (Delhi Schedule of Rates) had come into force. When the tender was invited departmental materials were shown as 'zero' and it was a clerical error. Thereafter, when the actual tender was called, the contractor quoted 20% less amount. Then the rent of dredger, a departmental material was deferred and tender premium was applied. After that, the rental item was added and the total was taken. So the government had not incurred any infructuous expenditure in that regard.

11. When the Committee enquired about the amount to be paid to the contractor, the Chief Engineer, Inland Navigation & Kuttanad Package replied that the total cost of the said work was ₹80,81,400 and there were 5 such works amounting to a tune of ₹1crore. He added that the amount paid was not in excess and at that time the procedures were like that. The rate fixed by the PWD for cement and steel was being given to the contractors on producing the bill. He further added that the Department had given the rent as fixed by the Government and tender premium could not be applied on it. Hence it would not be considered as a loss.

12. The Senior Audit Officer informed that tender premium was applied on EPAC (Estimated Probable Amount of Contract) while tendering and in that case it was executed at the time of agreement. He added that contractor anticipated 42% below EPAC. But at the time of agreement tender rebate had been applied by deducting hire charges from EPAC and that resulted in undue benefit to the contractor.

13. The Chief Engineer, Inland Navigation & Kuttanad Package replied that the mistake happened was that, at the time of inviting tender

departmental materials were shown as 'zero' and later it was changed at the time of tender opening. He further added that the deduction cost of the departmental materials was not applicable in tender premium and in that case the rent of Dredger had been treated as departmental material.

14. The Senior Audit Officer pointed out that the agreement should have been prepared as per the tender conditions and the error in it had benefited the contractor unduly. He further informed that as per the prevailing rules, if an error had occurred in the tender condition, it should have been re-tendered.

15. The Chief Engineer, Inland Navigation & Kuttanad Package informed that tender premium was applied to all works excluding the cost of cement, steel and rental items. When the bill was submitted by the contractor, the cost of cement and steel were being paid at the rate fixed by the PWD and here the rent of dredger was added at the government rate and hence there was no loss.

16. The Senior Audit Officer informed that usually the departmental materials and rent were being considered for applying tender premium and in that case tender had not indicated that departmental materials or other equipment would be provided.

17. The Committee opined that caution should be taken for not repeating such mistakes in future and the explanations by the department were not in compliance with the objection pointed out in the Audit Report and the department tried to normalise the issue stating that it had occurred in the past. When the Committee enquired whether any undue benefit had been given to the contractor, the Senior Audit Officer replied positively.

18. The Senior Audit Officer pointed out that no departmental materials or equipment were provided in the work. The Chief Engineer, Inland Navigation & Kuttanad Package replied that departmental materials or equipment were not provided in the first case but they were provided in the second case. The Senior Audit Officer pointed out that the loss incurred to the government should be compensated.

19. The Senior Audit Officer informed that when the bids submitted by the contractor were above or below EPAC, the tender rate should be applied only after deducting the cost of departmental material and hire charges. Since the rate quoted by the tenderer was below the rate and no departmental material or equipment were provided, there was no need for cost reduction. Similarly, if cement and steel were supplied, the cost was given by the department and no money was expended from the contractor. So there was no profit or loss to the contractor. Therefore, tender rebate was applied after deducting those factors. That procedure prevailed in PWD until the Item Rate Contract came into force and it was described as percentage rate contract. The Senior Audit Officer also added that after the departmental materials were noted as zero in the tender notification, no change should have been made while placing the agreement and also observed that if mistakes were made in the tender process, re-tendering should have been done.

20. The Committee enquired whether a single bid would be accepted as no one had quoted despite tendering two or three times to which the Senior Audit Officer informed that according to the existing procedure, if it is a single bid it is rejected in the first instance and if it is also a single bid during second time, it will be accepted.

21. When the Committee enquired whether the provisions in the PWD manual were adhered to with regard to the tender premium, the Chief Engineer, Inland Navigation & Kuttanad Package replied that it had been done as per the PWD manual prior to 2013. But the clause could not be identified now.

22. Then the Committee examined the details regarding the audit objection which says the agreements were incorrectly executed for ₹4.59 crore instead of the correct amount of ₹3.54 crore. The Chief Engineer, Inland Navigation & Kuttanad Package submitted that the total PAC of a work was calculated by adding work portion and hire portion. Here the tender premium was applied only for the work portion.

23. Then the Senior Audit Officer pointed out the audit observation that the tender rebate due to be received by the government had been reduced as the agreement was executed against the tender condition. If there was a mistake, a new rate should have been fixed or the agreement should not have been made.

24. The Committee opined that the reply given before the Committee was not satisfactory and directed the Department to submit a detailed report about the audit objection according to PWD Manual and the prevailing guidelines.

Conclusions/ Recommendations

25. As the reply given before the Committee is not satisfactory, the Committee directs the Department to submit a detailed report about the remedial measures taken by the Department regarding the objections raised by Audit according to PWD manual and prevailing guidelines.

Performance Audit on Inland Water Transport in Kerala-Development of Waterways and Operation of Transport Services

2.1 Introduction

Inland Water Transport (IWT) is the most energy and cost efficient mode of transport and is best suited for moving bulk and hazardous goods. The components of IWT infrastructure are: (a) fair waterway and navigation facilities; (b) terminals, jetties and repair yards, with connectivity to mainland; and (c) vessels (barges, boats, jhankars etc.).

2.1.1 Inland Waterways in Kerala

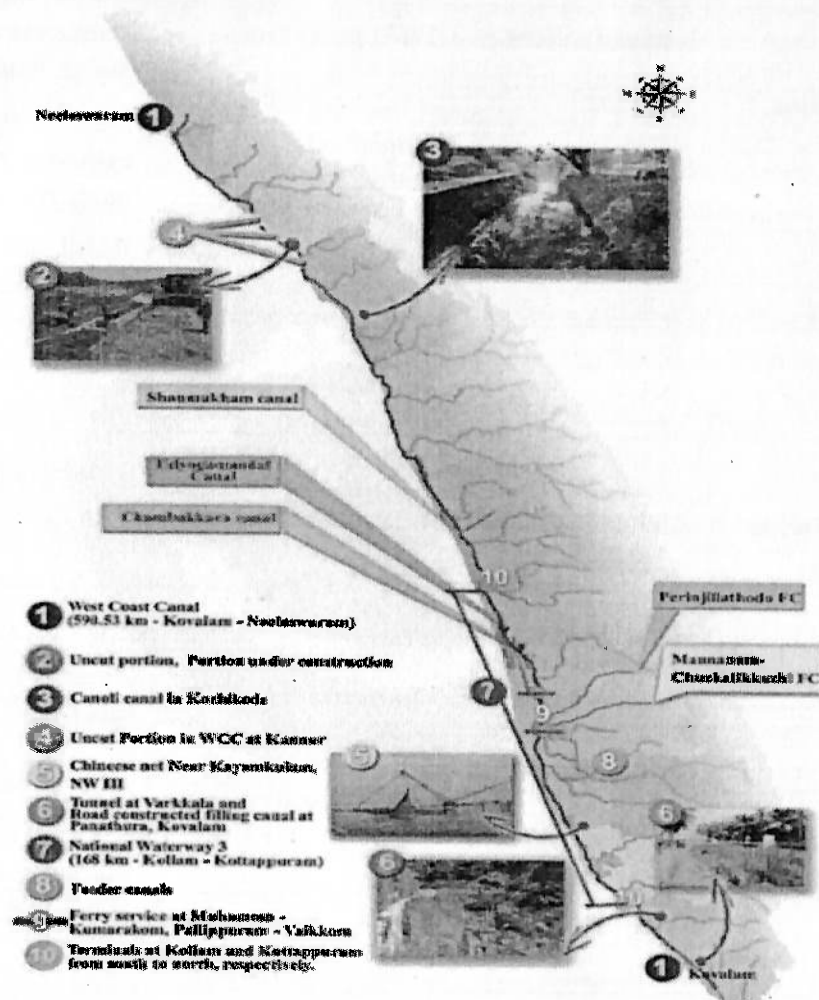
Kerala has a total length of 1,687 km long waterways. It includes 590 km of West Coast Canal (WCC) from Neeleswaram in the north of the State to Kovalam in the south. The remaining portion comprises of feeder canals/rivers. The unique feature of WCC is that it flows parallel to the Arabian Sea with openings to the sea at several places. Several important roads including National (NH 66³) and State highways are also either

3 NH 66 from Kanyakumari to Panvel (up to Kasargod it is parallel to WCC).

connected or run parallel to WCC. This geographical feature ensures connectivity of the canal to minor ports and to hinterlands.

A portion of WCC (205 km), from Kollam to Kottappuram (168 km) and two other canals in Kochi (Champakkara canal, 14 km and Udyogamandal canal, 23 km), constituting 12.15 per cent of the total IWT in Kerala, were declared by Government of India (GoI) as National Waterway-3 (NW-3) in the year 1993. This stretch is developed and maintained by the Inland Waterways Authority of India⁴ (IWAI).

Figure No. 1: Form of the State Waterway network



4 IWAI, established in October 1986 under the Ministry of Shipping, Road Transport and Highways of Government of India (GoI). It performs functions such as infrastructure development and regulation on NWs, conducting Techno-economic feasibility studies of waterways, advising GoI on IWT matters, assisting States in IWT development, etc.

2.1.2 Authorities in IWT Sector

The authorities/agencies executing various functions/components of IWT sector and their functional areas are summarised below.

Table 2.1: Components, Functions and Authorities in IWT sector

IWT Sector components	Functional area	Government Departments/ Agencies/ PSUs entrusted with execution	Functions	Private sector involved or not?
Waterways	National waterway-3	IWAI under GoI	Development, maintenance & navigational support	No
	State waterways	Irrigation Department under GoK	Development, maintenance & navigational support	No
Inland water vessels	All inland waterways	Port Department under GoK ⁵	Regulation of inland water vessels	No
		Kerala State Inland Navigation Corporation (KSINC) and Steel Industries Kerala Limited (SILK), (Both PSUs)	Vessel manufacturing	Yes
		KSINC, State Water Transport Department (SWTD) of GoK	Vessel ownership and operations	Yes
		KSINC, SWTD, SILK	Vessel repairs/ maintenance	Yes
Terminals/ Jetties	National waterway-3	IWAI	Terminals/ Jetties - construction/ maintenance	No
	State waterways	Irrigation Department under GoK	Terminals/ Jetties - construction/ maintenance	No
	All inland waterways	KSINC, SWTD	Terminals/ Jetties - operation	Yes

5 Since 2010, Port Department has been issuing license to the vessels after ensuring the safety aspects.

2.2 Audit objectives

The objectives of the Performance Audit were to assess whether:

- there was effective utilisation of the abundant inland waterways and the infrastructure created; and
- passenger and cargo operations on inland waterways were economical, efficient and safe.

2.3 Audit criteria

The activities of IWT Sector were examined with reference to the following:-

- IWT Policy of Government of India, 2001;
- Kerala Inland Vessel Rules, 2010; and
- Kerala Public Works Department Manual.

2.4 Audit scope and methodology

The Audit commenced with an Entry Conference with Secretary to Government, Transport Department (TD) and Joint Secretary to Government, Water Resources Department (WRD), GOK on 22 August 2014 where the audit objectives and criteria were discussed and the audit methodology explained. The Audit was conducted between September 2014 and January 2015 and from October to November 2015 in WRD, office of the Chief Engineer (Irrigation & Administration) [CE(I&A)] and six⁶ out of eight divisions executing IWT works under the CE (I&A), Directorate of Inland Navigation and both division offices under the Directorate, KSINC, Directorate of SWTD covering the period 2010-15. The audit party also visited Port Office, Alappuzha, IWAI, Kochi, State Planning Board, National Transportation Planning and Research Centre (NATPAC), District Collectorates at Alappuzha, Kottayam, Kozhikode and Ernakulam and Directorate of Fisheries. Audit examined work files, progress reports and Government sanction files. As part of gathering audit evidence, joint inspections were also conducted along with the officials of Irrigation Divisions at Kottayam, Alappuzha and Thrissur. In the conduct of PA, certain activities which commenced prior to 2009 but were relevant to the period

6 Alappuzha, Ernakulam, Kottayam, Kozhikode, Malappuram and Thrissur

covered in audit have also been examined. Exit conferences were held on 10 March 2015 and on 8 September 2015 with the Secretary to Government, TD and Additional Secretary to Government, WRD during which audit findings were discussed. The replies from the State Government and Departmental officers have been taken into account while finalising the report.

2.5 Audit Findings

2.5.1 NW-3 and its utilisation

National Waterway-3 is an integral part of WCC and Inland Water Transport Infrastructure in Kerala. Smooth functioning of the IWT system requires coordinated efforts of waterway developers⁷. The Audit findings related to utilisation of NW-3 are discussed below:

- ***Under utilisation of developed waterways (NW-3)***

The Detailed Project Report (July 1992) for the development of NW-3 declared 'operational' in November 2007 had projected that cargo of around 41.73 lakh MT per annum could be transported through NW-3 by the year 2009-10⁸. NW-3, is running almost parallel to NH-66. IWAI had spent ₹228.60 crore during 1994-95 to 2014-15 for the development and maintenance of NW-3 and completed approximately 85 per cent capital dredging works. It had also established eight terminals in NW-3 with cargo handling facilities.

Audit analysis revealed that the potential of developed waterways remained under utilised as shown in Table 2.2.

Table 2.2: Cargo Movement in NW-3 during 2010-15

Sl.No.	Year	Quantity of cargo transported (in lakh MT)	Percentage of potential cargo transported
1	2009-10	06.83	16.37
2	2010-11	8.88	21.28

7 The developers include IWAI for NW-3, WRD, GoK for State Waterways, KSINC and SWTD.

8 The comparison of cargo transport was made with respect to DPR prepared by IWAI in 1992. In it the projections for cargo transportation were made only upto 2009-10. Hence, comparison was possible upto 2009-10.

3	2011-12	13.44	32.21
4	2012-13	12.36	29.62
5	2013-14	10.33	24.75
6	2014-15	10.15	24.32

Further, out of the total quantity of cargo transported during 2014-15 (10.15 lakh MT) through NW-3, 99.60 per cent (10.11 lakh MT) was through the Champakkara (14 km) and Udyogamandal canal (23 km) which were by-
routes⁹ of NW-3. Utilisation of the remaining portion of NW-3 was less than one per cent. Thus, the utilisation of inland waterways for cargo transportation was limited to merely 37 km of the NW-3 and the remaining 168 km of NW-3 was not being utilised at all.

Audit further noticed that Kochi Port situated near NW-3, had been handling around 216 lakh MT of cargo annually. Several PSUs¹⁰ situated in the close proximity (near to en-route) of NW-3 were transporting large volumes of cargo such as petroleum products, hazardous chemicals, fertilisers etc. by road. On being pointed out by Audit about the scope of shifting cargo transportation from roadways to waterways, Travancore Cochin Chemicals Limited (TCC) replied (July 2015) that material to Kerala Minerals & Metals Limited (KMML), Chavara could be transported by IWT if proper unloading facilities were established at KMML. Government stated (November 2015) that action will be taken to construct terminals and other infrastructure facilities at the location of KMML. The Indian Oil Corporation (IOC) stated (July 2015) that preliminary feasibility studies are being made to locate a suitable land alongside water front in between Kollam and Thiruvananthapuram to develop a small storage facility for positioning product through waterways from their major terminal and effecting further supplies to retail outlets/ consumers located in that area.

• ***Lack of policy directions by State Government for increased utilisation of NW-3***

Kerala State Inland Navigation Corporation (vessel operators) and IWAI had

⁹ The bye-route means the Champakara canal and Udyogamandal canal joining the NW-3 at Kochi.

¹⁰ Kerala Minerals and Metals Limited (KMML), Travancore Cochin Chemicals Limited (TCC), The Fertilisers and Chemicals Travancore Limited (FACT), Indian Oil Corporation Limited (IOCL), Bharat Petroleum Corporation Limited (BPCL), Hindustan Petroleum Corporation Limited (HPCL).

been seeking¹¹ Government directions for being made mandatory movement of hazardous cargo compulsory through waterways, introduction of subsidy scheme¹² for cargo movement through inland waters, adoption of norms for the movement of a fixed percentage of cargo of PSUs through waterways etc. for effective usage of NW-3. The Government, however, had not issued directions in this regard.

• ***Fishing nets affecting navigability in NW-3***

Fishing nets erected by fishermen in waterways¹³ have been hindering navigability through NW-3 ever since its formation in 1993. In the joint inspection conducted (July 2004) by IWAI and Fisheries Department in July 2004, 457 licensed and 714 unlicensed fish nets were found in NW-3. IWAI had been pursuing the matter of removal of fishing nets from NW-3 with GOK. Accordingly, after several rounds of discussion with fishermen communities, GOK decided to compensate the fishermen for removing licensed and unlicensed nets¹⁴ and had paid ₹10.32 crore as compensation till date (July 2015). The payment of compensation to unlicensed nets encouraged fishermen to erect such nets again. It was observed that 74 nets were still remaining in NW-3 as of July 2015 thereby affecting cargo movement.

The inability to remove all the fishing nets resulted in underutilisation of NW-3 even after incurring ₹228.60 crore for development and maintenance of the waterway.

Additional Chief Secretary, CSIND (November 2015) replied that Fisheries Department was taking measures to remove the fishing nets by paying compensation and the problem will be permanently solved only when there was regular movement of vessels. The reply was not tenable as both the

11 July 2004 (IWAI), June 2010 (IWAI), June 2011 (KSINC), September 2012 (IWAI), December 2013 (KSINC), March 2014 (KSINC) and February 2015 (IWAI).

12 As introduced for coastal shipping in January 2013 by GoK.

13 Fisheries Department of GoK had been issuing licence to fishermen for erecting fishnets in inland waterways till 1986.

14 At the rate of ₹0.10 lakh per licenced net (w.e.f. February 1999), ₹1.00 lakh per licenced net and ₹0.50 lakh per unlicenced net (w.e.f. February 2011) and ₹2.50 lakh per licenced net and ₹1.25 lakh per unlicenced net (w.e.f. June 2013).

envisaged activities i.e. complete removal of nets and vessel movement, were not taking place. As such, the objective of waterway utilisation had not been achieved.

Recommendation No. 1: Government may ensure policy intervention for mandatory movement of hazardous cargo by inland waterways; complete removal of encroachments and fishing nets and ensure availability of infrastructural facilities at locations suitable to PSUs for effective use of NW-3.

2.5.2 Development and maintenance of State controlled and managed waterways by Irrigation Department

The Irrigation Department is responsible for development and maintenance of canals and rivers forming part of State waterways. It undertakes works such as dredging, side protection works and construction of boat jetties and landings to ensure continuous navigability through inland waters. Various deficiencies observed during the execution of development and improvement works of State waterway are discussed below.

i) Poor progress in execution of development/ maintenance works

As per the instructions of Irrigation Department, IND was to carry out improvement works in WCC and feeder canals. Scrutiny of records relating to the period 2006-07 to 2014-15 revealed as under:

- **Waterways**

The overall physical progress in the WCC development/ maintenance work was poor as detailed below:

Table 2.3: Details of physical progress of waterway works

Particulars	(in kms)			
	Natural Waterway	Artificial Waterway	Uncut portion	Total
Available length	241.127	137.795	42.41	421.332
Planned length	92.345	131.05	17.61	241.05
Completed length	92.25	19.21	3.30	114.76

Source: Progress report of Irrigation Department

As of March 2015, only 27 per cent of total length had been completed at a cost of ₹118.60¹⁵ crore by the Department in a period of 10 years, mainly due to delay in land acquisition, survey and investigation. Failure to complete the planned length of artificial waterways and uncut portions had resulted in lack of continuous availability of waterways for navigation.

- **Canals and boat jetties**

Similarly, the achievement in number of canal works undertaken by the Irrigation Department during the period between 2006 and 2015 was poor as summarised in the table below:

Table 2.4: Details of number of canal works

(₹ in crore)

Particulars	Main canal works		Jetties, landings construction works		Feeder canal works		Total	
	No. of works	Expenditure	No. of works	Expenditure	No. of works	Expenditure	No. of works	Expenditure
Completed	153	142.73	122	14.09	52	37.41	327	194.23
In progress	25	21.65	02	0.18	11	8.16	38	29.99
Not arranged	37	0.00	29	0.00	0	0.00	66	0.00
Foreclosed, terminated, dropped etc.	37	17.78	05	0.00	0	0.00	42	17.78
Total	252	182.16	158	14.27	63	45.57	473	242.00

Source: Progress report of Irrigation Department

The Department was not able to arrange 37 main canal development works owing to the delay in the finalisation of tenders, technical sanctions and demarcation of canal boundaries. Likewise, 29 works of construction of boat jetties could not be arranged as the Department had failed to complete the tender procedure as well as the completion of the works before the close of 12th Finance Commission from where it was being funded.

As per clause 15.2.2(d) of the Kerala PWD Manual, the availability of hindrance free land is to be ensured prior to the award of tender. Audit analysis revealed that out of 37 main canal-development works which were foreclosed/terminated, nine works (length : 14.29 kms in artificial waterway)

¹⁵ Natural waterway – ₹9.57 crore; Artificial waterway - ₹96.71 crore and uncut portion - ₹12.32 crore.

were foreclosed/terminated due to failure of the Department in ensuring hindrance free land and 14 works (length: 11.26 kms in artificial waterway) were foreclosed/terminated due to expiry of 12th Finance Commission period. Of this, 10 works alone could be re-arranged so far.

ACS, CSIND stated (December 2015) that few works were tendered in anticipation of availability of land before commencement of work and admitted that delay in land acquisition and delay in payment to contractors were responsible for slow progress of work. The reply was not tenable since about 10 years had elapsed in such land acquisition and procedural issues.

ii) Encroachment of waterways

As per departmental instructions, the Junior Engineer should inspect the entire length of the navigation route at least twice every month to identify locations where there is insufficient draft or insufficient width or obstructions of any kind and take urgent remedial action. Particular care should be taken to prevent private persons from encroaching the navigable waterway by driving in fishing stakes or creating any other form of hazard to navigation. Such encroachments should be promptly got removed by seeking help of Revenue and Police Officers.

Audit scrutiny revealed that departmental instructions were not being adhered to properly for stopping encroachment of such land (Appendix III(2)). The instances of encroachments as on October 2015 noticed during review are mentioned below:

- **Thiruvananthapuram and Kollam district:** 1,128 families were residing along a length of 36.70 km of the waterways from Kovalam (Ch. 0.00 km) to Nadayara Kayal (Ch. 55.17 km).
- **Thrissur district:** 832 families were residing along the waterways at Kodungallur (214), Mukundapuram (78), Thrissur (97) and Chavakkad (443).
- **Malappuram district:** 18 shops were situated on the banks of PC Canal in Ponnani Taluk, which are to be removed.

The Irrigation Department also did not have comprehensive data as to the locations and extent of land encroached upon in the inland waterways in the State due to absence of survey and demarcation of boundaries of waterways which were to be done by Director of Survey Wing of Revenue Department and CE (I&A) of Irrigation Department respectively.

The only eviction carried out (August 2015) by the Department was the 7.86 km (eight chainages) from Eravipuram kayal to Ashtamudi kayal in the WCC with the help of Revenue Department.

Government replied that the cases of encroachments were being brought to the notice of the revenue authorities as and when noticed and action was being taken to evict them. The fact however, remains that the department took seven years to clear the encroachment in a small stretch of seven km on the banks of Kollam thodu (waterway connecting Eravipuram kayal to Ashtamudi kayal) in Kollam. Thus, the Department's efforts towards removing encroachments were not encouraging.

iii) Poor prioritisation of works

(a) In the waterway network, two adjoining natural waterways are connected with artificial canals to facilitate navigability in more areas. The depth, width and siltation of the natural waterway are high as compared to artificial canals. During monsoon, the waterways are filled up due to deposit of sand, silt etc. The simultaneous dredging of the both artificial and natural canals are of equal importance as the exclusion of one would affect the continuous navigability.

The Department carried out dredging operation in natural canals while dredging was not carried out largely in artificial canals. Out of 87 works (188.65 kms) involving dredging in different chainages taken up by the Department during 2006-15, 21 works (62.65 kms) were in natural waterway (₹9.78 crore) and 66 works (126 kms) were in artificial canals (₹111.60 crore). Though, the Department carried out cent per cent (62.65 km) of dredging operations in natural canals, only 15.25 per cent (19.22 km) of dredging operations was completed in artificial canals. Thus, lack of

prioritisation in dredging resulted in non-removal of large scale siltation in artificial canals impeding continuous navigability in the entire waterways. CSIND agreed with the audit observations.

(b) Audit noticed that, Irrigation Department had constructed (2008-10), 20 boat jetties between Kollam and Kovalam stretch of WCC by spending ₹3.07 crore, though waterways were not navigable and no public boat service was in operation whereas the priority should, have been on improvement of the waterways. Further, boat jetties were being constructed instead of cargo terminals, as waterways were to be developed with the main objective of shifting cargo transportation from road.

Government replied that the natural portion of waterway was already used by the public for navigation purpose and hence, construction of boat jetties was a matter of public interest. The reply was not tenable as the total connectivity between Kovalam and Kollam had not been established to operationalise the sector so far due to non-development of artificial canals in this stretch. Besides, a joint inspection by Audit with EE, IN Division, Kollam of the jetties revealed that five¹⁶ jetties out of 20 were in a dilapidated condition due to non-use as can be seen in the picture given below.

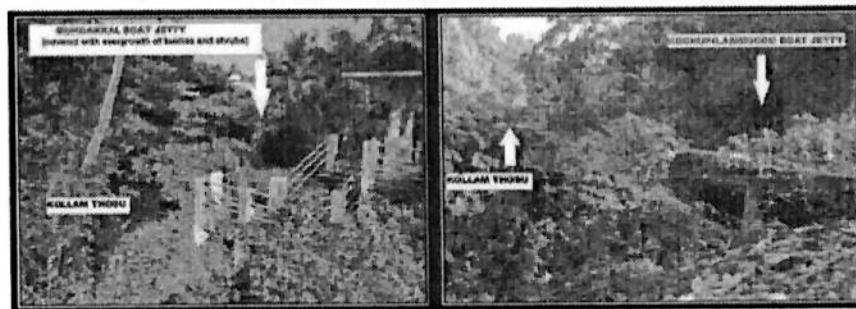


Figure 2: Dilapidated jetties along Kollam Thodu

The inadequate development of State controlled waterways can be attributed to the absence of a detailed policy and strategic plan.

Recommendation No. 2: Government may formulate a detailed strategic plan for leveraging its rich endowment of inland waterways. It must on priority undertake dredging works in both natural and artificial waterways and construct cargo terminals.

16 Chamakkada, Eravipuram kayal, Kochupilammoodu, Mundakkal and Thannikadavu

[Audit paragraphs 2.1 to 2.5.2 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2015 (Economic Sector)]

[Notes received from the Government on the above audit paragraphs are included as Appendix II]

Excerpts from the Committee's discussion with departmental officials

26. When the Committee wanted to know about the details regarding the audit paragraph, the Secretary, Water Resources & Coastal Shipping and Inland Navigation Department informed that the report regarding the audit reference was furnished in 2015 and after that there had been many changes. He added that 328 km out of 616 km of coastal inland waterways are National Waterways, and 258 Km are state waterways, of which 520 km are currently being navigated.

27. The Committee enquired about the present status of the Mahi-Valapattanam waterway. The Chief Engineer, Inland Navigation & Kuttanad Package informed that the Mahi-Valapattanam waterway was being constructed by Kerala Waterways and Infrastructure Limited (KWIL), a special purpose vehicle of the Department of Inland Navigation, which was funded by KIIFB. As there was an uncut portion in the waterway, it had been decided to carry out the construction process by shifting the alignment to the western side having maximum water. The work could be started only after receiving a proposal from the Konkan Tunnel Authorities on the construction of the tunnel.

28. The Secretary, Water Resources & Coastal Shipping and Inland Navigation Department further added that the alignment of the first cut had been finalised.

Conclusions/ Recommendations

29. No comments.

2.5.3 Improvements / maintenance of feeder canals

i) Execution of works in feeder canals not meeting prescribed standards

The Irrigation Department had been executing development and improvement works of various feeder canals joining NW-3 and the remaining parts of WCC in order to facilitate cargo and passenger movement. The Department had carried out improvement works in 53 feeder canals.

Audit scrutiny revealed that improvement works of 17 feeder canals (Appendix III(3)) were not taken up as per the approved standard norms¹⁷ of Irrigation Department, but were based on requests from public representatives and local residents. In fact, these 17 feeder canals required major rectification works such as removal of rail over bridge, road over bridge, etc. hindering navigability. Thus, the improvement works carried out were not useful since major rectification works were left unattended causing obstructions in cargo and passenger movement.

ii) Lack of subsequent maintenance of improved feeder canals

Joint inspection of seven of the 53 improved feeder canals (three in Alappuzha District, three in Kottayam District and one in Thrissur District), revealed that though the Department had spent ₹6.95 crore on their improvement, these canals were not in navigable conditions due to lack of subsequent maintenance (Appendix III(4)).

Though the initial developments were made by the Irrigation Department, the subsequent maintenance was to be done by LSGIs concerned. Audit observed that LSGIs had failed to formulate any norms for improvement and subsequent maintenance of feeder canals.

GOK accepted the audit observation and stated that hereafter, the feeder canals would be taken up for renovation as per IWA norms for facilitating transportation. The fact, however, remains that expenditure of ₹6.95 crore already incurred during September 2008 to July 2014 on the seven works did not serve the intended purpose.

17 Minimum width - 14 metre, minimum draft -1.70 metre, minimum vertical clearance - five metre

2.5.4 Multiplicity of agencies leading to lack of direction, co-ordination and monitoring

The activities of inland navigation in the State are regulated by Chief Engineer (Irrigation & Administration). Besides, GOK formed an Inland Navigation Directorate (IND) in 2005 under CE (I&A) headed by a Director for development and maintenance of inland waterways. The West Coast Canal passes through the jurisdiction of eight Irrigation Divisions of which only two Divisions¹⁸ are under the control of the Director, IND. The remaining six divisions of Irrigation Department are under the control of SEs in the respective Circles. Thus, IND has no control over a length of 207 km of WCC coming under Thrissur, Malappuram and Kozhikode Irrigation Divisions. Similarly, feeder canal in four districts viz. Alappuzha, Ernakulam, Kottayam and Thrissur are under the respective Irrigation Divisions.

The activities of inland waterways and navigation are carried out by three Government agencies as detailed below:

- i) Irrigation Department, including IND, for development of State Waterways;
- ii) KSINC for cargo operations; and
- iii) SWTD for passenger operations.

Apart from the leading role played by Irrigation Department and SWTD, the agencies/Departments such as LSGIs, Revenue, Fisheries, Tourism, Transport etc. have various roles in the activities connected with the maintenance, development and utilisation of Inland Waterways. Audit examination revealed that the roles and responsibilities of these agencies were not clearly defined by GOK resulting in overlap, non-coordination and delayed responses, avoidance of responsibility etc. Multiplicity of agencies and Departments and lack of co-ordination amongst them was a major contributing factor for poor development and operation in the waterways leading to instances of encroachments by public, erection of fish-nets in waterways impeding the movement of vessels, non-removal of water hyacinth, non-dredging of boat

18 Divisions at Kollam (covering Thiruvananthapuram and Kollam Districts) and at Kannur (covering Kannur and Kasaragod Districts)

channels as required by SWTD, operation of unsafe vessels and existence of unsafe jetties in waterways.

GOK stated that various works were being monitored by convening meetings of all concerned Departments such as Revenue, Fisheries, Tourism and Transport. Reply was not tenable because despite such meetings, the issues such as lack of continuous navigability, non-removal of encroachment and fishnets, idling of boat jetties, low draft in NW-3 and boat service channels etc. were yet to be addressed in a meaningful manner.

Recommendation No. 3: Government needs to constitute an Apex Authority to monitor activities of the different departments concerned with Inland waterways for timely development and maintenance of waterways including removal of various obstacles in waterways.

[Audit paragraphs 2.5.3 and 2.5.4 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2015 (Economic Sector)]

[Notes received from the Government on the above audit paragraphs are included as Appendix II]

Excerpts from the Committee's discussion with departmental officials

30. The Committee approved the reply furnished by the Department.

Conclusions/ Recommendations

31. No comments.

2.6 Cargo transport operations in Inland Waterways

GOK established Kerala Shipping and Inland Navigation Corporation Limited (KSINC)¹⁹ as a State PSU for transportation of goods and passengers in inland waters within and outside the State of Kerala. The KSINC had eight barges for transportation of cargo as on 31 March 2015. Private players were also in the field.

Cargo transportation remained the major revenue segment for KSINC, followed by tourism boat service, boat construction and repair etc. KSINC

¹⁹ Incorporated on 7 July 1989 by amalgamating Kerala Inland Navigation Corporation Ltd. (established in 1975) and Kerala Shipping Corporation Ltd. (established in 1974).

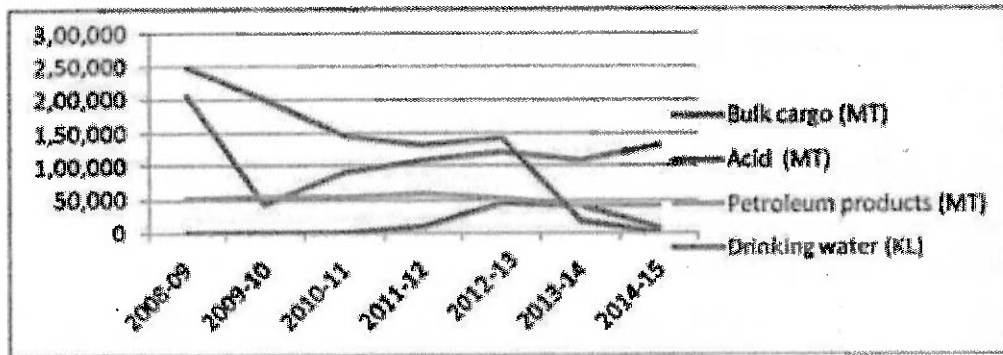
was incurring operating loss throughout the period covered by Audit and the accumulated loss stood at ₹13.01 crore as on 31 March 2015.

Audit noticed various deficiencies in cargo transportation which are discussed in succeeding paragraphs.

2.6.1 Deficiencies in executing transportation contracts of bulk cargo and acid leading to consequential loss of business

The cargo transport operations of KSINC showed a decreasing trend compared to 2008-09 as shown in Chart 2.1 below:

Chart 2.1: Details of cargo transport operations by KSINC



During the period 2009-15, The Fertilisers and Chemicals Travancore Limited (FACT), Kochi, a Central PSU had awarded three biennial contracts for transportation of bulk cargo (Sulphur and Rock Phosphate) and two biennial contract for transportation of Phosphoric acid from Kochi Port at Willingdon Island to its divisions at Ambalamedu and Udyogamandal through NW-3²⁰ using barges.

The work for the transportation of 10.45 lakh MT of cargo was awarded by FACT to the KSINC. However, KSINC could transport only 7.37 lakh MT (70 per cent of the contracted quantity). The shortfall in quantity transported resulted in loss of revenue of ₹368.62 lakh to KSINC.

The Government replied that adequate quantity was not available for transportation at all the times in the godowns of FACT and whatever quantity available was being shared with the other private operators. Test check of daily closing stock data of FACT for the year 2014-15 indicated that adequate quantity was available for transportation for more than 90 per cent of the days.

20 Champakkara canal of 13 km and Udyogamandal canal of 24 km which are part of NW-3.

KSINC was not able to transport the quantity awarded mainly due to its own inefficiencies such as high turnaround time of barges, non-utilisation of full capacity of barges, non-availability of barges due to excess repair time taken etc. as discussed below.

- **Excessive time taken for completion of trips**

The Managing Director of KSINC had formed a Committee (January 2009) to fix standard time required for transporting bulk cargo to FACT. Though the Committee had recommended a standard time of 15 hours per trip for carrying bulk cargo to FACT, no further action was taken in the matter to implement this recommendation. While quoting in the tender of FACT for the transportation of bulk cargo, the KSINC had, however, estimated that 24 hours would be required for a trip by each vessel.

Audit found that only 465 (38 per cent) out of 1,234 trips operated during the five year period (2010-15) were within 24 hours. In respect of the balance 769 trips, the average time taken was 36 hours per trip. Audit further noticed that private sector barges had been completing the trips with lesser time.

Audit further found that, in some of the trip sheets, though reasons for taking excess time such as low draft in the channel, tidal variations, fish nets in waterway, etc. were mentioned, the reasons were too general in nature and not specific. Apparently, the Management of KSINC had not made use of these trip sheets for possible improvement in the operations. KSINC admitted the Audit findings that the time taken for completion of trip was high.

- **Non-utilisation of full capacity of barges**

During 2010-15, KSINC used two barges for transportation of bulk cargo to FACT. Audit, however, noticed from Barge Operation Register that on several occasions, the quantity carried by barges was less than their capacity, as given below:

1. Barge Athulya with a carrying capacity of 600 MT operated 637 trips during 2010-15 of which 269 trips were with load less than its capacity.

2. Barge Bhagya with a capacity of 300 MT operated 597 trips during 2010-15 of which 149 trips were operated with load less than its capacity.

On account of the above there was under-utilisation of 12,738 MT (6.20 per cent) of cargo carrying capacity.

While admitting audit observation, GOK replied that operation at reduced capacity was due to low draft in the channel (at Thevara in Champakkara Canal forming part of NW-3) and KSINC had taken up the issue with IWAI for ensuring sufficient draft.

- ***Non-operation of trips targeted***

KSINC had targeted to transport (September 2011) 500 MT of phosphoric acid per day from Willingdon Island to FACT Ambalamedu and Udyogamandal by taking two trips per day per barge with the two barges in possession. However, as against 3,274 trips targeted (2010-15), KSINC operated 606 trips (18.5 per cent) only due to non-cooperation of operating staff. Though barge operating staff were repeatedly directed by the management to complete two trips per day per barge, adequate progress could not be achieved.

While KSINC stated that the operating staff was not heeding to management's directions, GOK replied that situation had since improved and now the barges were taking two trips on most days. Audit, however, noticed that there was no desired improvement as the number of trips operated during the first half of 2015-16 was 92 only as against scheduled 120 trips in 60 days of operation.

- ***Delay in repair of barges***

KSINC had not fixed any norms regarding the time required for dry dock repair of vessels. Audit noticed that, compared to the time of two months fixed when repair work was proposed for outsourcing, there was considerable delay in repair of their own vessels at SWC as shown below.

Table 2.5: Details showing delay in repair of barges

Sl. No.	Barge	Withdrawal from service for repair	Due date for completing repair works	Actual date of restarting service	Delay (in months)	Impact of delay
1.	Bharatha	8 October 2009	8 December 2009	28 April 2010	4.5	During this period, KSINC could not offer adequate number of barges suitable for POL ²¹ transportation, which caused a loss of revenue of ₹65.46 lakh to KSINC.
2.	Bhama	5 May 2010	5 July 2010	28 October 2010	3.5	
3.	Bharatha	31 January 2012	31 March 2012	13 July 2012	3.5	
4.	Bhama	4 November 2012	4 January 2013	10 November 2013	10	
5.	Archana	10 November 2013	10 January 2014	5 November 2014	10	

Audit further observed that due to delay in repairing its vessels on time though found repairable, barges were either disposed of as scrap or repaired incurring additional expenditure as shown in Appendix III(5).

Government replied that labour issues created by trade unions in the Slipway Complex caused delay in completing repair works. They further stated that KSINC was finding it difficult to take decision as whether to go in for repair or for scrapping. However, it was observed in Audit that BoD had decided to go for repair but this decision was not implemented in time. This worsened the condition of barges and ended up in scrapping.

Recommendation No. 4: KSINC may consider installation of GPS in the vessels to facilitate monitoring of their movement and to detect causes for delay, which may help in reduction in time for completion of trips. Repairs of vessels must be completed on schedule to minimise idle time.

[Audit paragraphs 2.6 and 2.6.1 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2015 (Economic Sector)]

[Notes received from the Government on the above audit paragraphs are included as Appendix II]

Excerpts from the Committee's discussion with departmental officials

32. Regarding the Audit Paragraph, the Managing Director, Kerala Shipping and Inland Navigation Corporation Limited informed the

21 Petrol, oil and lubricant.

Committee that the barges were being operated by KSINC and the transportation of oil from IOC & BPC to the vessels and materials from the vessels to FACT through waterways were done by them. He added that the audit observations were about the excessive time taken to complete the trips and also the additional duties taken by the crew. He further deposed that the staff members had to perform two duties and sometimes even up to three after eight hours of duty time. He went on to say that private sector barges were also operating in the available water ways and if they were loading or unloading, KSINC staff had to wait for them to complete the work and such factors would affect the hours of operation of the barges. He further stated that it would be difficult for them to discontinue the benefits that the workers had been receiving for years, and it would also be difficult for them to monitor the trips on a daily basis, especially as the employees had been performing their duties effectively. Bunkering and cargo movements to FACT were the main source of income as far as KSINC was concerned. Labourers were mostly casual workers with daily wages and they were being paid incentive for completion of duty with required speed.

33. When the Committee enquired about the issue related to FACT the Managing Director, Kerala Shipping and Inland Navigation Corporation Limited replied that Phosphoric acid and sulphur were supplied to FACT by KSINC. Later, when the tender for phosphoric acid was notified, a private party had won the tender at a lower rate. They were able to get the tender at a lower rate may be because they brought a barge with a higher capacity and appointed migrant labourers on the barge. KSINC did not quote at a lower rate because of the risk of loss.

34. When the Committee further asked whether the depth was sufficient for vessel movement in NW-3, the Managing Director, Kerala Shipping and Inland Navigation Corporation Limited replied that lack of adequate depth was the major concern of the vessels and IWAI was responsible for ensuring adequate depth. If the depth is not sufficient, the barges would get grounded at the shallow areas.

35. The Chief Engineer, Inland Navigation and Kuttanad Package added to the discussion that the department works in synchronization with IWAI and they were unable to work properly due to non-availability of land for dumping the silt.

Conclusions/ Recommendations

36. No comments.

2.7 Passenger transport operations in Inland Waterways

Public passenger water transport services (ferry services) in inland waters of Kerala are run by three bodies/departments viz: State Public Works Department, Local Self Government Institutions and State Water Transport Department.

2.7.1 Performance of SWTD in IWT sector

SWTD operates passenger boat services from 14 operating centres²² in the inland waterways covering six districts of the State. As of 31 March 2015, SWTD had been operating 51 schedules consisting of 49 public passenger / ferry service and two tourism oriented schedules.

Audit findings relating to SWTD are given in the succeeding paragraphs:

2.7.1.1 Increasing loss of SWTD

The operational statistics of SWTD revealed that its losses were increasing year after year (from ₹18.78 crore in 2010-11 to ₹34.64 crore in 2014-15) and the accumulated loss as on 31 March 2015²³ was ₹345.30 crore. The average loss per km operated had increased from ₹90.74 to ₹154.37 (70 per cent increase) during the five year period. The major reasons for increasing loss were uneconomic operation of services, reducing number of passengers, inefficient fleet management, etc. as discussed in succeeding paragraphs.

22 Alappuzha, Changanassery, Edathuva, Ernakulam, Kavalam, Kollam, Kottayam, Muhamma, Nedumudy, Panavally, Parassinikkadavu, Pulinkunnu, Payyanur and Vaikom.

23 Provisional

2.7.1.2 Uneconomic operation of services

The fuel cost per km of operation was ₹42.26 in 2012-13 and ₹51.26 in 2013-14 against which the Earning Per Kilometre (EPKM) was only ₹23.04 and ₹31.73 respectively. Audit analysis revealed that none of the passenger schedules operated by SWTD were able to meet even the fuel cost of operation due to inadequate number of passengers as explained below.

- ***Reducing number of passengers***

The total number of passengers travelled by SWTD boats decreased from 242 lakh in 2000-01 to 144.16 lakh in 2014-15 (40.4 per cent). It had good passenger patronage only in those places where the origin and / or destination of trip is located near places²⁴ connected by road.

Audit also noticed that attempts at boosting passenger traffic by tying up with two tourism schedules and two-wheeler carrying boats were also not able to attract more passengers.

The GOK/ SWTD attributed the decrease in passenger traffic to the increased road connectivity and consequent reduction in scope of operations of the Department. It was further replied that the boat services were being operated with the social objective of providing transport facilities to those who were residing in water logged areas.

- ***Increased cost of operations***

Around 66 per cent of the total expenditure of SWTD was related to salary and establishment expenditure and 30 per cent for fuel. While the average revenue from a passenger during 2014-15 was ₹5.28, the expenditure incurred by SWTD per passenger was ₹29.31. Thus, the GOK had to carry a financial burden of ₹24.03 for each passenger. Thus, ferry services being operated by SWTD were uneconomic.

2.7.2 Inefficient fleet management in SWTD

At the end of March 2015, SWTD was having 84 boats (29 wooden boats and

24 Source: NATPAC Study Report, 2013

55 steel boats). Audit noticed that one third of the fleets (28 boats) were under repair. The extent of delays in repair and their impact are explained below.

- ***Repair of boats delayed abnormally***

The SWTD has repair facilities (Slipways) at Alappuzha and Ernakulam capable of carrying out major repair of six and two boats respectively, at a time. A period of three months was fixed for major repair for each boat. The excess time taken during 2010-15 for major repair ranged from two to 28 months at Alappuzha and from three to 18 months at Ernakulam, resulting in loss of 13,860 operating days. The SWTD had not maintained any data regarding the reasons for delay.

The GOK replied (October 2015) that fixing three months period for executing major repair works as a whole was not logical as it depended upon a variety of factors. The reply was not tenable as the norms were fixed after considering all such factors. Moreover, while approving the proposal for outsourcing repair works of SWTD, Transport Department had also fixed (September 2002) three months time for repair of boats.

SWTD switched over to the use of steel boats in the place of wooden boats for safety reasons from 2004. However, it did not carry out in-house repair of the steel boats and thus 18 boats were awaiting repair for period ranging from one month to five years as of March 2015.

Audit noticed that, on account of prolonged docking, all the steel boats were in deteriorated condition.



During the period 2010-15, SWTD had acquired 29 steel boats from SILK²⁵ at a cost of ₹12.84 crore. Of these, 18 boats were purchased during October 2010 to March 2014 at a time when nine to 26 wooden and steel boats were pending repair. Audit observed that had the repair been carried out in time, purchase of 18 new steel boats costing ₹7.93 crore during this period could have been avoided.

Audit further noticed that during the period 2009-13, cost of repair had doubled²⁶. As a result, SWTD has to bear a minimum additional financial liability of ₹45 lakh in respect of 10 steel boats docked during November 2009 to January 2013.

SWTD pointed out (April 2015) lack of sufficient infrastructure facility and staff as reasons for not repairing steel boats. It further stated that a new slipway was constructed at Alappuzha for the purpose. Audit noticed that the additional slipway constructed at a cost of ₹1.82 crore had not been utilised till March 2015 though its trial run was conducted in January 2013. Meanwhile, SWTD had issued (February 2015) work order for outsourcing the repair work of steel boats. Audit observed that there was no justification for keeping steel boats idle for period ranging up to five years as SWTD could have made the required arrangements for repair in time either at its own yard or by outsourcing.

2.7.3 Navigation channels were not dredged

In the Report of the E. Mytheenkunju Commission of Enquiry (Thekkady Boat Tragedy, September 2009) it was emphasised that navigable waterways shall be properly maintained by dredging and removing obstacles.

More than 50 per cent of the waterways used by SWTD for boat operation were facing the problem of inadequacy of draft. Though SWTD had been requesting the Irrigation Department for dredging of these waterways for the past several years, dredging work was yet to be arranged (December 2015). Audit also noticed that there was no system in place to assess the safety of

25 Steel Industries Kerala Limited, a State Government PSU.

26 Estimated PAC as per Schedule of Rates for repair of boats.

navigation channels by any authority. Further, in the absence of coordinated efforts among the multiple agencies currently existing in inland water sector, passenger transport operation in inland water was prone to accidents.

GOK/SWTD replied that Irrigation Department had been requested to execute dredging works in navigation channels and SWTD had been working with the initiative for ensuring coordinated efforts with related agencies. The reply was not acceptable as dredging work had not been completed so far (March 2015) by Irrigation Department.

Recommendation No. 5: In order to increase operational efficiency and cost optimisation, GOK may consider instituting PPP arrangements in passenger services for efficient operations.

2.8 Conclusion

Despite being energy and cost efficient with least carbon footprint, the State of Kerala has failed to fully leverage its abundant inland waterways. The Government did not issue directions about using waterways for cargo movement and prohibition of movement of hazardous cargo by road. Due to lack of infrastructural facilities, various PSUs were not shifting cargo movement from road to waterways. GOK failed to address issues like availability of hindrance free land, obstacles like fishnets and encroachment for development of waterways. There was no apex authority to monitor implementation of development works. Dredging works were not prioritized which prevented thorough navigability in waterways. The number of passengers using waterways has been decreasing. A comprehensive strategic plan to address these issues needs to be formulated and notified on priority.

[Audit paragraphs 2.7 to 2.8 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2015 (Economic Sector)]

[Notes received from the Government on the above audit paragraphs are included as Appendix II]

Excerpts from the Committee's discussion with departmental officials

37. When the Committee enquired about the details regarding the audit

paragraph, the Secretary, Water Transport Department gave a brief description about the potentials and constraints of the water transport services in the State. As a result of the Covid-19 pandemic, the use of public transport had been reduced drastically. One of the problems faced by the water transport at that time was the shortage of repair facilities and there were no dry docks or slipway facilities. Two slipways were opened in 2015 and a dry dock in 2017. After the Thekkady disaster of 2010, a system called steel coat used in ships had also been introduced in boats. He also added that steel coat required different type of protective mechanisms. Firstly, it should be painted at regular intervals but when the work was tendered it would take too much time and secondly, cathodic protection was applied to huge vessels but was not being done properly. Another problem was related to the delay in the maintenance in slipways. At present instructions were being given for preparing estimates during the time of periodic maintenance.

38. While discussing about the operational expenses, he added that operational expenses of the boats would be reduced. The operational expense of Diesel engines are ₹75 per km and at present the department had successfully developed a solar boat named 'Aditya' and it costs only ₹4 per km and had made substantial savings. Currently 9 such boats were being built and sanction had already been given for making 7 such boats. As it was a department, it had its own limitations and things would become better with the introduction of water metro services. He further added that the operational efficiency of the water transport could be effectively improved by the introduction of control rooms, GPS, Electronic ticket Machine etc.

39. When the Committee enquired whether the slipways were functional, the Director, Water Transport Department replied that permission had been given for the construction of a slipway capable of repairing 5 boats at a time and a dry dock capable of repairing 4 boats at a time. The work of slipway was completed in 2015 and that of Dry Dock in 2017 and during last year, 27 boats were repaired within three months.

40. When the Committee enquired about the construction of workshop at Ayiti, the Director, Water transport Department informed that since there

was no workshop in Payyannur region, permission was taken to build a workshop at Ayiti. The construction work was done by SILK. Difficulties were faced in loading the boat during the construction period itself and the payment was rejected consequently where upon the defects were rectified by SILK at their own expense. It was further informed that the construction of the remaining workshops would be completed within six months. He further added that the Solar boats launched in 2017 to reduce the operational expenses were successfully operating. With the advent of solar boats, the operational cost reduced to ₹4/Km. Therefore, a proposal was made in the last budget to convert 50% of the total boats into solar boats. The operational expense could be highly reduced while converting diesel boats to solar.

41. When the Committee enquired whether it was possible to operate solar boats during rainy season, the Director, Water Transport Department replied positively and added that since hybrid technology was being used, it could be operational in the rainy season also. In the rainy season, lithium ion battery used in the boat could be charged using grid charging and it would cost below ₹ 500/- per day. For the past 5 years, the solar boat services were being operated during the monsoon season as well. He added that permission was given for operating smaller boats of 30 passenger capacity in areas where passengers were less. Eleven areas had been identified and the construction of four boats were undergoing and the use of smaller boats could also reduce the number of crew.

42. The Committee noticed that the department in its reply regarding audit para 2.7.1.1 stated that from the financial year 2013-2014, per day revenue collection was showing an upward trend on the back drop of the recent fare revision and enquired when the income decreased. The Director, Water Transport Department answered that the income decreased during the covid period.

43. Then the Committee observed that as per the audit report the revenue loss was ₹18.78 crore in 2010-11 and it had increased to ₹34.64 crore in 2014-15. But as per the report made available before the Committee, the department indicated that per day revenue collection was increasing and

enquired about the reason for the increase in loss even though the per day revenue collection had increased. The Director, Water Transport Department replied that the daily collection varied according to the number of passengers. In addition, the department was responsible for paying the salaries of the employees and the increase in salary and cost of diesel would affect the revenue significantly. He added that the minimum charge at that time was ₹2/Km and the expenditure could not be compensated even if there is an increase in collection. He added that the expense associated with Diesel cost and salary was very high and due to that it was decided to conduct a study on solar boats.

44. He further stated that there were many places where boat services could not be stopped and in places where no private transport facility was available, the department was obliged to continue the service even with very few passengers.

45. The Committee further noticed that the fuel cost had increased from ₹42.26/km in 2012-13 to ₹51.26/km in 2014. Income had also increased by ₹7/Km and the loss associated with the fuel was only about ₹2/Km. But the loss was recorded as double and enquired about the reason for that huge loss. The Director, Water Transport Department replied that as per the prevailing rules, 5 crews were appointed for the operations of a single boat and it could not be changed. The salary was fixed by the government and when there was a salary hike at the government level, it would be implemented in the department and that also affects the revenue.

46. To a query of the Committee regarding the salary hike from 2011 to 2014, the Director, Water Transport Department replied that the year wise details were not available at that time. Then the Committee expressed its displeasure in not submitting relevant details to the Committee. The Director further informed that in 2014-15, the amount expended for salary, fuel cost and other ancillary expenses including maintenance was ₹27.93 crore, ₹12.91 crore and ₹14 crore respectively. The revenue collected at that time was only about ₹8crore and that was the reason for the loss.

47. The Committee further opined that there would be proportionate increase in salary and fuel cost every year. But the figures mentioned were not proportional and it should be examined.

Conclusions/ Recommendations

48. No comments.

Performance Audit on Implementation of Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Act, 2003

3.1 Introduction

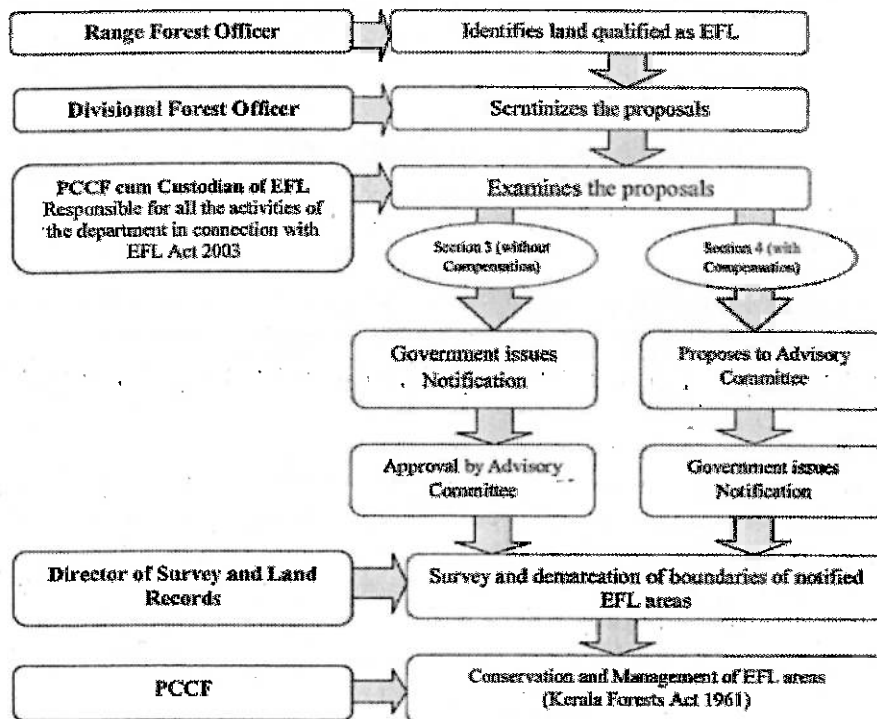
Government of Kerala (GOK) passed the Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Ordinance, 2000 to vest in the Government, the identified ecologically fragile lands in the State of Kerala and for the management of such lands with a view to maintaining ecological balance and conserving the biodiversity. Subsequently, the Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Act, 2003 (hereinafter referred to as the EFL Act) was enacted with effect from June 2000. As per the EFL Act, any forest land held by any persons and lying contiguous to or encircled by a Reserved Forest or a vested forest which is predominantly supporting natural vegetation is termed as Ecologically Fragile Land. The notified lands shall be deemed to be Reserved Forest under Kerala Forest Act 1961. Land to the extent of 14,905.17 Ha (Appendix III(6)) was notified under Section 3 of EFL Act and 5.23 Ha land was notified under Section 4 till July 2015.

Ecologically fragile lands are vested under Sections 3 or 4²⁷ of the EFL Act. Under Section 3, the ownership and possession of all ecologically fragile land held by any person or any other form of right over them shall stand transferred to and vested in the Government by way of notification. Under Section 4, the Government shall have the authority to notify any land satisfying to be ecologically fragile land, based on the recommendations of the Advisory Committee²⁸. In respect of land vested under Section 4, the owner thereof shall be eligible for compensation for the said land including the permanent improvements thereon.

27 Vesting of EFL is either by paying compensation (Section 4) or without paying compensation (Section 3)

28 A Committee notified by Government under Section 15 of the EFL Act having State wide jurisdiction which identifies and recommends whether the land qualifies for EFL under Section 3 or 4.

3.1.1 Organisational chart showing the administration of EFL



3.2 Audit Objectives

Audit was carried out with the objectives to analyse:-

- whether the Department was able to identify and vest in Government, land qualified as EFL, under Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Act, 2003 in a planned manner; and
- whether the land vested in the Government under the EFL Act 2003 has been conserved by the Department to ensure ecological balance and bio- diversity.

3.3 Audit Criteria

The Audit criteria were adopted from the following sources:

- 1) Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Ordinance 2000,
- 2) Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Act, 2003 and its Amendment Act, 2009,
- 3) Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Rules, 2007,
- 4) Kerala Forest Act, 1961

3.4 Audit Scope and Methodology

The PA on Implementation of EFL Act covering the period 2000 to 2015 was conducted from May 2015 to October 2015 to evaluate the implementation of various activities such as notification and conservation of ecologically fragile land in the State. The records relating to implementation of the EFL Act available with the Government and in the EFL wing of Forest Department, its field offices and Directorate of Survey and Land Records were scrutinized.

The Department has 25 Territorial Divisions and 11 Wildlife Divisions. The areas notified under EFL are in 18 Territorial Divisions and three Wildlife Divisions. Based on the extent of land notified as EFL, the PA covered six ²⁹ Territorial/ Wildlife Divisions for field audit which were selected by sampling using Probability Proportional to Size and Without Replacement (PPSWOR) technique. In addition to examination of records of selected divisions, Audit team conducted joint physical verification at KP Estate-Silent Valley, Pachakkanam Estate at Thekkady, Sankarangode private agricultural land at Nilambur South and mangrove sites at Kannur which are proposed / notified under Sections 3 and 4 of the EFL Act.

3.5 Audit findings

3.5.1 Non-identification of EFL

The EFL Act was enacted with the main objective of vesting in the Government, EFL identified in the State for the management of such lands with a view to maintaining ecological balance and conserving the bio-diversity. The Act, however, did not specify any time frame for completing this task. The department had also not prepared any action plan for executing this task in a concerted manner. Consequently the Department had failed to identify all the ecologically fragile lands in the State so far (as of January 2016). EFL lands were being identified in a piece-meal manner and notified only when some cases were reported by Range Forest Officer to the DFO. Audit observed that 14,910.40 Ha (Appendix III(6)) land has been notified in 133 notifications with effect from the year 2000 onwards based on proposals received by the Custodian from the field offices across the State.

29 Mannarkkad, Nenmara, Nilambur South, Palakkad, Silent Valley National Park and Wayanad South.

During the exit conference, the ACS agreed with the audit findings and stated that the non-survey of forest land was a major issue due to shortage of manpower being faced by Revenue Department, which was to conduct such surveys. ACS also stated that directions have been issued to the field officers of Forest Department to keep travelling, exploring and conducting physical verification to identify lands qualified as EFL in their respective ranges.

3.5.2 Delay in notification of identified land

Audit noticed that out of the proposals for EFL notification received from the field offices, 163.1901 Ha involved in 18 cases (Appendix III(¶)) were pending decision in Custodian's office since 2008 due to non-furnishing of complete details from the field offices (Range Offices/Divisional Forest Offices). Nine³⁰ field officers had submitted proposals to the Custodian without ascertaining the factual position. As a result, the processing and issue of EFL notification was inordinately delayed which ultimately affected the management of such land.

ACS replied that the Custodian of EFL had initiated action for collecting the required details for processing the notification. The reply was not acceptable since the Department had initiated action to assess the actual extent of the land only after 15 years.

Recommendation No. 1: Government may initiate action to obtain details of the total EFL in the State by preparing an action plan and notify the same at the earliest, to maintain the ecological balance and to conserve bio-diversity.

3.5.3 Non-acquisition of private forest under Section 4 of the EFL Act

Audit noticed that 30 proposals involving 393.6377 Ha of private land to be notified as EFL under section 4 of the Act were pending with the Custodian since 2008. The proposals were referred to the Advisory Committee only in October 2015 after a delay of seven years. The Department had not acquired even a single private forest by paying compensation despite lapse of 15 years since the introduction of the EFL Act. It was further noticed that the Advisory

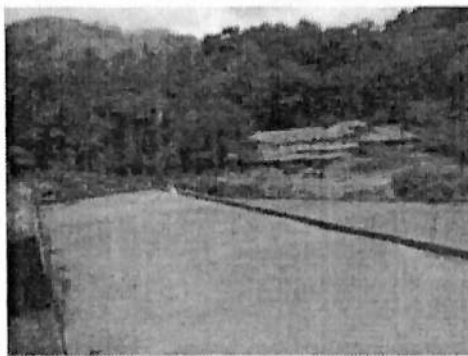
30 DFOs of Kozhikode, Mannarkad, Marayur, Nenmara, Nilambur North, Nilambur South, Palakkad, Thrissur and Wayanad South.

Committee had not been re-constituted between 2010 and 2014 after the expiry of the term of the first Committee in 2010 which was constituted in 2007. All this delayed the process of notification of 393.6377 Ha of EFL thereby affecting the achievement of the intended purpose of the Act.

Audit further noticed that in respect of two cases included in the selected samples and another one instance noticed from the media, 399.64 Ha of land were pending notification as discussed below:

(a) KP Estate - lying inside Silent Valley National Park

The Silent Valley National Park, a Wildlife Division at Palakkad, formed in 1984, is a unique preserve of natural rainforests comprising an area of 23,752 Ha. The KP Estate is a private property having 141.64 Ha land lying inside Silent Valley National Park. Audit observed that the planters were cultivating various crops without paying attention to the surrounding bio-diversity. Five Diesel pumps (16 HP), chemical fertilizers and vehicles were being used inside the forest which adversely affected the evergreen ecology. The River Kunthi runs through the private estate and the use of chemical fertilizers, pesticides and fungicides inside the estate had caused widespread water and soil pollution. These private operations within the National Park were detrimental to the conservation of bio- diversity of the surrounding forest.



Canopy cleared and buildings constructed for cultivation activities



Canopy cleared for roads

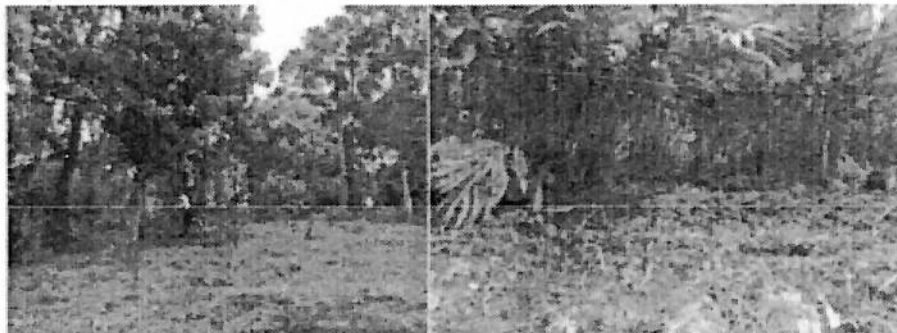
On the request of the Wildlife Warden, Silent Valley National Park, Mannarkkad, valuation of the KP Estate was done by Revenue Department which fixed (December 2010) the value at the rate of ₹2.02 lakh per acre for land with roads and ₹1.21 lakh per acre for land without roads. However, due

to the absence of Advisory Committee since 2010 followed by inaction after its re-constitution (2014), the estate was yet to be acquired by Forest Department. The Government had not furnished specific reply in this regard.

(b) Down Ton Estate, Pachakkanam lying inside Periyar Tiger Reserve

Down Ton Estate, Pachakkanam having 208 Ha of land with a private cardamom estate is enclosed in the Periyar Tiger Reserve (PTR), Thekkady in Idukki District. In order to avoid the possible clear felling of trees, fragmentation and selling of the estate property by the owners and to protect the bio-diversity of the PTR, a proposal for the acquisition of the estate was submitted to the Field Director (PTR) by the Wildlife Preservation Officer (Thekkady) but it could not materialise for want of funds as compensation was required to be paid. Subsequently, the Custodian had also not taken follow-up action for vesting the land under the control of the Government of Kerala till date (January 2016).

Audit noticed that the entire cultivation in the estate was solely dependent on the use of chemical fertilizers, fungicides, pesticides etc. which contaminated Kullarthodu – a stream flowing through the estate. It was also posing threat to the wildlife and human beings. Further, the present owners were running a commercial resort in the name of Down Ton Heritage Homestay inviting tourists for trekking. The roads leading to the estate were passing through the PTR and were being used for commercial purposes by the estate owners. Such use of Reserved Forest was a clear violation of Section 2 of Forest (Conservation) Act 1980 which imposes restriction on use of forest land for non-forest purpose.



Canopy cleared for cardamom cultivation

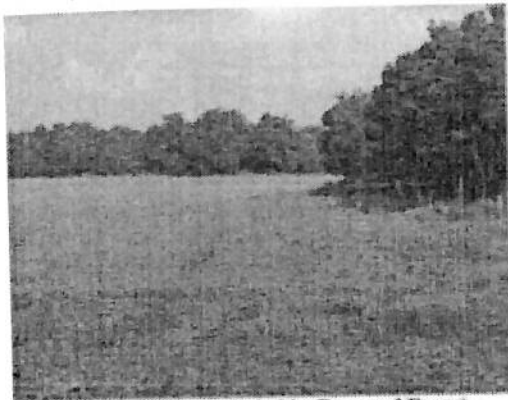
Cardamom cultivation inside the Estate with power fencing

Audit observed that the Range Forest Officer (Vallakadavu) had forwarded (February 2014) a proposal to Deputy Director (PT), Periyar East Division, Thekkady for notifying the entire 208 Ha of estate land under EFL Act. However, the Custodian had failed to take steps to notify the land which resulted in continued depletion of forest ecology.

(c) Sankarangode private agricultural land under DFO, Nilambur South

An area of 50 Ha of land (New Block No.118 - Survey No.01 to 23) lies within the New Amarambalam Reserve under the Padukka Forest Station, Karulayi Range Forest Office of Nilambur South Division. The land which was surrounded on all sides by Reserved Forest was an elephant corridor. The only way to reach the land was by crossing through the surrounding Reserved Forest. The land was being used by its owners for cultivation and had constructed buildings in the said land for their stay and used the surrounding Reserved Forest to graze their cattle. As the grazing of cattle inside Reserved Forest adversely affected the forest and wildlife ecology, the Range Forest Officer had forwarded proposals (January 2008) to DFO for notification of the land under the EFL Act.

Audit noticed that though the proposal for notification under the EFL Act was forwarded by the Range Forest Officer during January 2008, the same was forwarded by the DFO, Nilambur South to the CCF, Eastern Circle, Palakkad only in November 2014, i.e. after a delay of six years. The proposal was still pending as it was wrongly sent to the CCF, Palakkad instead of to the Custodian under the EFL Act. Audit noticed that though an amount of ₹100 lakh was available (August 2008) with the Custodian as Reserve Fund for acquisition of EFL, due to its non-utilisation, the funds had lapsed in the same year. In spite of the initiative (August 2008) taken by the Range Forest Officer for acquiring the land, the inordinate delay on the part of the DFO (Nilambur South) in forwarding the proposal to the Custodian had resulted in non-acquisition of land thereby causing further damages to the forest ecology and lapse of fund of ₹100 lakh. Justification for delay in forwarding the proposal by the DFO to the Custodian had not been furnished till December 2015.



Private estate encircled by Reserved Forest



Deer from surrounding forest grazing inside the estate

ACS accepted the Audit findings during the exit conference and stated that the said land would be acquired only after ensuring availability of sufficient funds for the purpose as at present, the Department was facing shortage of funds for acquisition of private forests. ACS further stated that the Department would keep exploring new avenues for raising funds. The reply was not acceptable since the proposals had been pending since 2008 and during all these years, the ownership of this land remained vested with individual owners instead of with Forest Department right from the promulgation of Ordinance in 2000.

Recommendation No. 2: Government may initiate action to provide sufficient funds for acquisition of land under EFL Act without any further delay.

3.5.4 Non-Acquisition of private mangrove forests under EFL Act 2003

Mangroves are salt tolerant plant community found in tropical and sub-tropical inter tidal regions and are unique eco-systems which provide habitat for various migratory birds and breeding and feeding ground for many aquatic species. Mangrove forests are proved to be capable of acting as a protective belt against the tsunami waves and as such require effective conservation and scientific management intervention. Under Section 4(1) of Kerala Forests Act, 1961, Government is empowered to declare any land as a Reserved Forest. Therefore, the Department also needs to conserve the mangrove eco-system as per the EFL Act.

Audit noticed that the Department had neither a comprehensive data about the extent of mangrove forests in the State nor an action plan to conserve the same. Though the Forest Department had been submitting proposals for the acquisition of private mangrove forest under Section 4(1) of the EFL Act comprising 140.80 Ha in Kannur district to the Government since 2007, it did not fructify so far. The absence of an Advisory Committee during 2010-14 to identify the mangrove forest as per Section 15 of the EFL Act resulted in delay in identifying the mangrove forest and notifying it as EFL. Even after the re-constitution of the Advisory Committee in June 2014, the above extent of mangrove forest was not identified by the Department for which no justification has been given despite being requested by Audit (June 2015).



Mangroves destroyed at Kannur District

Destruction of Mangrove area

Thus, due to lack of adequate data about mangrove forest in the State and its acquisition, the fragile eco-system of mangrove forest was further prone to destruction and degradation while the Department was not able to conserve them.

ACS accepted the Audit observation that private mangrove forest in the State had not been identified and vested in GOK. He further stated that the acquisition and conservation of mangrove forest was a new concept. Recently, the Department had taken over 238.92 Ha of mangrove forest (Government land) in Kannur district under the Kerala Forest Act 1961. He also added that the details of private mangrove forest in the State were being collected for acquisition under EFL Acts.

Recommendation No. 3: Government needs to take urgent necessary action to identify all the mangrove forests and prepare a management plan for their conservation.

3.5.5 Non-restoration of 17.48 Ha of EFL at Nenmara

An extent of 17.48 Ha of land under Nenmara Forest Division, was notified as EFL in October 2000 based on the EFL Ordinance, 2000. Meanwhile, the occupant of the land had approached (January 2004) the Hon'ble High Court and obtained an order to revoke the notification within four weeks. As per the legal opinion (August 2004), even if the property had been de-notified, the Government had an higher option of notifying the property as per the provisions of the EFL Act 2003.

Audit noticed that the Custodian, complying partially with the legal opinion, had de-notified (April 2004) the land but failed to re-notify the land till date for no specific reasons after the EFL Act had come into force. Hence, the land was still remaining with the owners with the effect that the land, which was once notified as ecologically fragile, was devoid of any protection and scientific conservation as intended by the EFL Act due to failure of the Department in re-notifying the land as EFL.

ACS accepted the Audit observation and stated that the de-notification was ordered by the Hon'ble High Court during 2004 when the ordinance had lapsed and hence the entire extent of EFL was de-notified. ACS assured that action would be taken to remedy the situation. However, the legal opinion that the land could be vested again after the enactment of the Act was not complied by the Department so far.

Recommendation No. 4: Government may initiate steps to re-notify the de-notified land without any delays.

3.5.6 Issue of NOC for registration of sale deed of lands proposed for EFL notification at Mannarkkad

In the Mannarkkad Forest Division, Audit noticed an instance of issuance of No Objection Certificates (NOC) by the DFO, for obtaining possession certificates for lands which were proposed to be notified as ecologically fragile lands.

It was observed that the following plots of land falling under Attapadi Range of Mannarkkad Division were proposed by DFO (May 2007 and June 2014) to be notified as ecologically fragile land under Section 3 of EFL Act 2003.

Table 3.1: Details of land proposed by DFO for notification as EFL

Sl.No.	Survey No.	Extent of Land (in Acre)	Location
1	1130/13pt	9	Puthur village
2	1130/13pt	15	
3	1130/13pt	8	
4	1130/13pt	15	
5	1130/13pt	12	
	Total	59	

Audit observed that the above lands were not notified till date. As the proposal was pending, the DFO, Mannarkkad, relying on reports of Range Officer (RO), issued (2012) NOCs to the owners to register the ownership deed of the plots in the office of the Sub-Registrar as requested (July and December 2012) by the owners. The NOC also stated that the plots did not qualify as 'forest'.

Audit observed:

- The NOCs issued by the DFO based on the report of the RO was not in order. Since NOCs were issued, the owners had sought (March 2009) exemptions from notifying the land and had obtained possession certificates and started clear felling the trees.
- Subsequently in May 2015, the DFO in-charge of the Division had cancelled the NOCs issued by the then DFO during 2012 and the matter was reported to the revenue authorities. But the lands were yet to be notified as EFL and taken over by Government.
- No action was taken by the Custodian against the DFO who had granted NOCs for land proposed for EFL in an unauthorized manner.

ACS accepted the audit observation and stated that all the NOCs issued were subsequently cancelled and that action would be taken against the person concerned.

3.5.7 Delay in survey of notified EFL area and non-inclusion of EFL in Management Plan

Section 6 of the EFL Act, 2003, envisaged that, within such time as may be prescribed, the Custodian shall cause to demarcate the boundaries of ecologically fragile land vested in Government under Sections 3 and 4.

Further, as per Rule 8(3) of the EFL Rules 2007, all lands notified shall be demarcated by the Custodian showing the survey and sub-division number, boundary particulars etc. by erecting permanent cairns along the boundaries within a period of two years from the date of publication (February 2007) of Rules. As per Section 16 of the EFL Act 2003, EFL is required to be managed by the Forest Department as per Management Plans³¹. The survey of forest land in each Division was required to be conducted by the Assistant Director, Forest Mini-Survey Cell, Kozhikode upon the requests made by the DFOs concerned. The failures noticed in this regard are brought in the following paras:

- ***Lack of Coordination between Forest and Revenue Departments***

Audit observed that even after fifteen years from the implementation of the Act, the Department had not included the activities on management of EFL in the Management Plan or Annual Plan of Operation (APO) and also had not completed demarcation process except 306.74 Ha (June 2015). However, the DFOs had not made specific requests to the Assistant Director, Survey Cell to get the notified EFL area surveyed. Similarly, the Custodian had also not taken up the matter with the Director of Surveys and Land Records, Revenue Department to work out a plan to conduct the survey of EFL area (comprising of 14,910.40 Ha spread over Kerala) within the time frame. The lapse in conducting survey of the remaining land primarily rest with DFOs as the Surveyors are attached to the DFOs.

On this being pointed out, ACS stated that due to the shortage of adequate staff for survey work, Government had approved (October 2015) a proposal from Forest Department to impart training to its field staff at Survey Training School in Survey Wing of Revenue Department who in turn could conduct the survey of forest areas under the supervision of Survey Department. The reply was not acceptable, as the steps taken by the Department to train the forest personnel would not be fruitful as Kerala Survey Act was not amended making the forest personnel competent to conduct survey operation.

31 Management Plan is part of a working Plan which is written scheme of management aiming at a continuity of policy and action and controlling the treatment of forest in a scientific manner.

- ***No penal provisions for delay in demarcation of EFL***

As per Rule 8(2) of EFL Rules 2007, the Custodian could extend the time of two years for demarcation of EFL from the commencement of the EFL Act for justifiable reasons. But the EFL Act was silent about the penal provisions in the Rules for fixing liability for non-conduct of survey within the fixed time frame. As a result, the survey activities and demarcation of EFL were delayed indefinitely and hence EFL already notified could not be effectively managed to maintain ecological balance conserving the biodiversity.

ACS replied that EFL are managed in the same manner giving thrust to arresting the degradation factors and protection of the forest as of the adjoining natural forest area of the Division. In addition, directions were issued to Field Officers to get the EFL area surveyed through the Forest Mini Survey Unit and in order to avoid the delay in doing survey, steps were being taken to train the forest personnel through the Survey Wing of the Revenue Department. The reply was not tenable since the management of EFL said to be undertaken related to only general protection works such as fire protection works, booking of offences etc. under various Forest Acts and not the special protection works so as to maintain the forest in a scientific manner. In case, the EFL are protected in the same manner as of the adjoining forest, the Department should have included the protection works of EFL in the Working Plan.

Recommendation No. 5: Government may take steps to notify the said lands and include it in its Working Plan for further protection and conservation.

3.5.8 Monitoring and Evaluation

According to EFL Act 2003, the lands to be vested as EFL under GOK's control were to be managed in an integrated and uniform manner within their ecological boundaries in accordance with the management plans based on sound scientific principles. The scrutiny of records revealed that the lands vested had not been included in the Annual Plan of Operations (APO) of the Divisions for maintenance in a scientific manner. On this being pointed out in Audit, the Custodian stated that EFL was automatically taken as part of the

protection working circle of the approved Working Plan of the division and as and when Working Plan was revised, EFL area would be taken in area account of the divisions.

3.6 Conclusion

Despite a lapse of 15 years from the commencement of the EFL Act, the Department did not have a database of lands which could be notified as EFL, thereby hampering the protection of these areas and their consequent conservation and development. The survey and demarcation of boundaries which were to be completed within the stipulated time was delayed due to lack of co-ordination between Forest Department and Revenue Departments. The Department was not able to prevent the private plantations which were encircled by Reserved Forest and delay in acquiring such land caused threat to the ecology. Mangroves which were fragile and highly productive ecosystem found along the coasts were exposed to the risk of degradation due to absence of comprehensive data and an action plan to conserve them.

[Audit paragraphs 3.1 to 3.6 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2015 (Economic Sector)]

[Notes received from the Government on the above audit paragraphs are included as Appendix II]

Excerpts from the Committee's discussion with departmental officials

49. While considering the above audit paragraphs, the Principal Secretary, Forest and Wild Life Department informed that the identification of Ecologically Fragile Land (EFL) had been delayed but steps had been taken to rectify it. He added that out of 18 proposals for EFL notifications, 11 proposals were notified and 7 proposals were rejected.

50. The Committee commented that EFL Act was considered to be strict as far as farmers were concerned. The Principal Secretary, Forest and Wild life Department informed that according to the current Supreme court Ruling, a new notification had been issued for Eco Sensitive Zone (ESZ). He

added that no other State had accurately identified the areas and prepared the survey number and map of the structures and collected accurate data according to that notification. Steps were being taken to conduct field verification incorporating all departments by providing the said data to the LSGD. The EFL notification came into effect when there was no Eco Sensitive Zone notification. The State Government had also filed a review petition in the Supreme Court stating that the Eco Sensitive Zone should not be implemented as such in our State.

51. When the Senior Audit Officer enquired whether any action plan had been prepared, the Principal Secretary, Forest and Wild life Department replied positively and added that steps were being taken to include EFL in the working plan and further deposed that 150 beat forest officers had been given training for demarcating the notified areas as per Survey and Boundaries Act and the entire map of the forest area had been digitized at present. Geofencing was being resorted to so as to avoid complications with fence installation and that could prevent future encroachments.

52. When the Committee wanted to know whether the Advisory Committee had been constituted, the Custodian of EFL, Forest and Wild life Department replied that an Advisory Committee comprising of 15 members was reconstituted on 03-02-2022 under the Chairmanship of Principal Chief Conservator of Forests.

53. He also submitted that the EFL Act was framed when the department failed in certain important cases under the Kerala Private Forests (Vesting and Assignment) Act, 1971 and it was first introduced as an ordinance. The Act was enacted with effect from 2005 and the definition of EFL had been changed in the Act by clearly defining land and that the plantations where long rotation crops such as tea, coffee, pepper, etc, were cultivated were exempted from the purview of the Act.

54. He further pointed out that AG's observation was that EFL remained unidentified even in 2015 and clarified that 16030 hectares of land had been notified as EFL and 1180 hectares had been de-notified as per the decisions in various cases. At present, out of the 14841 hectares of land notified as EFL, about three thousand hectares are yet to be demarcated. When the Revenue Department started the digital survey, the records were also requested from the Forest Department. These data will be consolidated as part of the integration of the records of Revenue and Forest Departments. Another audit objection was that disciplinary action should be taken against the DFO for issuing NOC for the proposed EFL in the Mannarkkad Forest Division. The NOC was issued based on the certificate given by the Range Officer which had been cancelled and disciplinary action had been taken against the Range Officer and the DFO. Later DFO was acquitted and punishment of censure had been given to the Range Officer.

55. The Committee inquired whether the aforesaid land had been utilized for any other purposes on the basis of the NOC. The custodian, EFL, Forest department replied in the negative and added that the NOC given in 2014 was cancelled in 2015.

56. The Principal Secretary, Forest and Wild Life Department agreed to the suggestion by the Committee that practical remedial measures might be taken by incorporating ESZ (Eco-Sensitive Zones), ESA (Ecologically Sensitive Area) and EFL (Ecologically Fragile Land) and stated that Kerala is the only State that preserves most area of forest land and maintains accurate data. Survey number of the structures had been prepared and field verification was also being conducted to ensure accuracy. He suggested that the existing areas of forest land should be protected by geo-fencing.

57. The Custodian of EFL, Forest and Wild life Department added that there was also audit references relating to the acquisition of private estates and private mangrove areas. Since it was decided not to acquire private

estates under EFL, it had been acquired under RKDP (Rebuild Kerala Development Programme). And as per the existing Government Order the private mangrove areas should not be acquired under EFL.

Conclusions/ Recommendations

58. No comments.

4.5 Procurement of sub-standard dredgers resulted in their underutilisation.

Failure of the departmental technical committee in ensuring that the dredgers supplied by the contractor matched the required specifications and configuration resulted in supply of sub-standard dredgers unfit for the intended purpose, making ₹7.58 crore spent on their purchase unfruitful.

The Government accorded (January 2008) administrative sanction for purchase of a cutter suction dredger (CSD) model 'IHC Beaver 300 C' for the use of the Irrigation Department at an estimated cost of rupees four crore. The Chief Engineer, Irrigation (Mechanical) (CE) invited (April 2008) tenders, against which only one response was received. The Technical Committee (TC) constituted by the Government (August 2008) to evaluate the tender, rejected (December 2008) the bid since the important parameter on dredger output "minimum 100 m³ of solids per hour at a distance of 500 meters with static head of 7.5 meters" was not met.

Meanwhile, the Managing Director of Kerala Shipping and Inland Navigation Corporation Ltd (KSINC), a State owned Public Sector Undertaking, approached (November 2008) the Secretary to the Chief Minister, who also happened to be the Chairperson of KSINC, stating that KSINC was capable of constructing the dredger required by the Department and requested for award of the work to them. KSINC also made the same request to the Additional Chief Secretary, Water Resources Department, who forwarded it to the Irrigation Department for remarks (December 2008). The CE in his reply (February 2009) observed that KSINC did not have experience in the field of design or construction of CSD, but recommended the purchase directly from KSINC in relaxation of the provisions of Store Purchase

Manual citing time constraints provided they made a tie-up with a firm having proven experience in the field.

The Government reconstituted (June 2009) the TC to evaluate the bid and allied matters regarding the purchase of CSD. The TC studied (August 2009) the proposal of KSINC and sought some clarifications regarding specifications.

After evaluation of the clarification furnished (September 2009) by KSINC, which was silent on the solid discharge per hour, TC unanimously recommended (September 2009) the proposal of KSINC for approval to the Government. The Government issued (February 2010) AS and TS for the purchase of two CSDs at an estimated cost of ₹3.79 crore each. The Irrigation Department issued (March 2010) supply order to KSINC and executed an agreement which also contained the following specifications.

- Main Engine – Caterpillar 3406C 298 KW (400 HP) @ 1800 RPM with fresh water cooling system with least fuel consumption.
- Dredge pump – METSO 2MM, Capacity 1500 m³ /hour. Dredging capacity minimum 100 m³ of solids per hour at a distance of 500m with static head 7.5m.

KSINC requested (November 2010 and January 2011) departmental approval for changing the specification of the main engine and dredge pump citing recommendation of the manufacturers who stated that the engine as per the original specification was not suitable for dredging application and that the dredge pump mentioned in the original specification was meant for mining purpose only.

KSINC claimed (April 2011) that the alternate pump recommended was capable of discharging 1500 m³ /hour. The TC recommended the alternatives suggested by KSINC and the Government accepted the recommendations and issued (June 2011) the order. Audit observed that there was no cost reduction despite change in specifications.

KSINC delivered the dredgers on 20 June 2012 and 30 June 2012 respectively after trial runs (22 March 2012 and 29 March 2012) by the Irrigation Department, without ascertaining their dredging capacity.

Following reports (January 2013) from the Executive Engineer, Irrigation Mechanical Division, Alappuzha on the under-performance of the new dredgers, the CE decided (February 2013) to conduct a performance trial and directed (14/06/2013) that the same be conducted while the dredgers were working for any departmental works. Accordingly, the Department conducted the performance trial in February 2015 i.e. two years after the decision to do so was made by the CE, when a suitable site for testing was available. The test confirmed the dredge output to be 50m³ of solid/hour at a distance of 250m, which was half the required capacity. Meanwhile, the warranty period of the dredgers already expired in June 2013.

A Technical team constituted (October 2015) by the Government to evaluate the performance of the dredgers, in their report (August 2016) observed that the design configuration of components provided by KSINC was not satisfactory. They found the dredgers to be under-performing and stated that modifications were neither economical nor feasible. Scrutiny of the relevant records revealed the following:

- The TC failed to critically examine the suitability of the design components proposed by KSINC. The clarification given by KSINC to the TC on the dredge pump did not contain any information on the “solid content of discharge per hour”, for want of which the same committee rejected the earlier single bid. Despite this, the TC unanimously recommended (September 2009) the proposal of KSINC to the Government.
- KSINC claimed that the pump recommended by it was capable of discharging 1500 m³ /hour, while the manufacturer’s data sheet mentioned a capacity of only 790.10 m³/hour.
- As per Clause (b) of the agreement signed by KSINC, during the warranty period if the goods supplied by the contractor were discovered not to conform to the description and quantity specified in the order attached to the agreement, the Government was entitled to reject the goods at the contractor’s risk. The Irrigation Department did not conduct detailed performance trial covering the dredging capacity

before accepting the dredgers and so failed to enforce the agreement clause to its advantage.

- Due to the reduced output, dredging works undertaken were found not to be economically viable. After confirmation of their reduced dredge output (March 2015), till 31 December 2017, the two dredgers were used only for 30 and 55 days respectively for dredging purpose as against the initial projection of 20 days per month.

The entrustment of work to KSINC with no proven capability is indicative of poor exercise of diligence in conducting technical evaluation and selection of supplier. Thus failure of the TC in assessing the feasibility of the specifications proposed by KSINC resulted in supply of sub-standard dredgers at a cost of ₹7.58 crore which did not serve the intended purpose. The department forfeited the opportunity of rectifying defects of the dredgers at the expense of KSINC by not conducting their performance trail before taking them over from KSINC before expiry of the guarantee period.

The matter was referred to the Government in December 2017. The Government is yet to reply to the audit observations.

[Audit paragraph 4.5 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2017 (Economic Sector)]

[Notes received from the Government on the above audit paragraph are included as Appendix II]

Excerpts from the Committee's discussion with departmental officials

59. When asked about the audit paragraph, the Chief Engineer, Inland Navigation and Kuttanad package informed the Committee that in order to purchase a dredger for an amount of ₹4 Crore, the Irrigation Department accorded administrative sanction on 29.01.2008 and technical sanction on 23.04.2008 and tender was invited accordingly. But the tender committee rejected the tender as it was a single bid. Meanwhile, KSINC (Kerala Shipping and Inland Navigation Corporation Ltd) had approached with a proposal to build and supply the same and the Government forwarded the said proposal to the Chief Engineer, Irrigation (Mechanical) for evaluation.

The Chief Engineer, Irrigation (Mechanical) in its reply stated that KSINC did not have enough experience in the field of designing and manufacturing of the dredgers. KSINC re-submitted the proposal and after re-examination, the Chief Engineer, Irrigation (Mechanical) recommended for the purchase on 12.10.2009. Then the Government revised the administrative sanction for an amount of ₹7.58 crore and sanction was accorded for the purchase of two dredgers at an estimated cost ₹4 crore each. Subsequently, the Irrigation department signed an agreement with KSINC on 24.02.2010 and began the work. He further added that even before that, KSINC approached the Irrigation (Mechanical) with a suggestion to alter the specification of the main engine and dredge pump citing that the proposed specification was not appropriate for dredging application and that the dredge pump mentioned in the original specification was meant for mining purpose only. After the evaluation of the technical committee the modification was approved by the Government and special sanction had been given for the advance payment of ₹7.58 crore to KSINC. He added that two dredgers were handed over to the Department on 20-06-2012 and 30-06-2012. It was the responsibility of KSINC for handing over the dredger to the Department after carrying out the performance test and trial run. But the trial conducted in presence of the mechanical engineers to evaluate the functioning of the dredgers found that the equipment was functioning, but its capacity (100m³/hr) could not be ascertained as it was not being dredged at the full capacity and no performance test was conducted by KSINC during the warranty period and the warranty period expired on 30.06.2023. As a manufacturer/supplier, it was the responsibility of KSINC to prove the output i.e. 100m³/hr as per the specification, when it was handed over to the Department. Even though the Department wanted to conduct a trial run/performance test, KSINC rejected the request stating that they did not have the equipment to conduct the performance test and the department had to meet the cost for the same. When the Committee enquired whether the performance test was conducted after the expiry of the warranty period, the Chief Engineer, Inland Navigation and Kuttanad Package replied in the positive.

60. To the further queries of the Committee, the Managing Director, Kerala Shipping and Inland Navigation Corporation Limited replied that the dredger was handed over in the presence of the departmental officials with their consent. The capacity of the dredger could be determined after a continuous operation of 8 to 10 hours and required 1600m³ of soil and the availability of soil was a problem at that time. Moreover, land for depositing the dredged soil was also to be found out. Since KSINC was unable to find the available sand, departmental assistance was requested but no action was taken from their part. She added that periodical maintenance was required for the proper functioning of the equipment, but the records of KSINC revealed that proper maintenance was not done by the Irrigation Department and the inexperience of the employees to operate the hydraulic system also adversely affected the performance of the dredgers. No such problems were detected during the time of delivery of the dredgers

61. The Committee noticed that even though the Irrigation Department reported the lack of experience of KSINC in dredger construction, the latter was given the task of construction and wanted to know whether the KSINC itself had done the work or it outsourced the work to any other agency. The Managing Director, Kerala Shipping and Inland Navigation Corporation Limited replied that the work was being tendered by KSINC.

62. The Chief Engineer (Mechanical), Irrigation Department further informed the Committee that when dredging was conducted using hydraulic dredger in the work of Purapallikavu bund in the presence of KSINC, discharge of only 50m³ of solid/hour was obtained. Since mechanical dredgers were used in the Irrigation Department, it was the responsibility of the manufacturing company to provide adequate training to the employees.

63. The Committee observed that the dredger was manufactured and handed over to the Irrigation Department in 2012 and a performance trial was requested to be conducted only in 2013 and it was conducted only in 2015 after the expiry of warranty period.

64. The Chief Engineer (Mechanical), Irrigation Department informed the Committee that as a manufacturer, KSINC was responsible for conducting

a trial run at the location specified by the department. But when dredging was done at the Purapallikavu bund, overheating and poor performance occurred. So, KSINC was requested in writing to rectify the defects, but even with repeated requests they had done the repair work only once. Even after that, only 50m³ of solid/hour discharge was obtained. The repeated requests in writing to rectify the defects were rejected by KSINC stating that it could not be done, as the warranty period had expired. At present, the said dredger with the above output capacity was being used for bund works executed by the department.

65. The Managing Director, Kerala Shipping and Inland Navigation Corporation Limited clarified that the warranty period had expired when Irrigation department submitted the requests for repair, to which the Chief Engineer (Mechanical), Irrigation Department informed that a request in writing to rectify the defects was submitted by the Executive Engineer supervising the performance of the dredger before the expiry of warranty period, but no response was obtained from the part of KSINC. Only when the request was forwarded through the Chief Engineer, KSINC had done the repair work once.

66. The Managing Director, Kerala Shipping and Inland Navigation Corporation Limited added that KSINC demanded the Irrigation Department to pay the amount of repairing work as the warranty period was over. The Committee pointed out that as per the agreement, KSINC had to construct and supply a 100m³/hour capacity dredger. On the contrary, the output of the delivered dredger was only 50m³/hour capacity and commented that it should be replaced. The Committee also opined that KSINC had the responsibility to repair the machine within the warranty period.

67. The Managing Director, Kerala Shipping and Inland Navigation Corporation Limited informed the Committee that the trial run was conducted at a place near the seashore and it may be the reason for getting an out put of only 50m³/hour.

68. To another query of the Committee, the Chief Engineer (Mechanical), Irrigation Department replied that the Dredger having the

specification of 100m³/hour capacity was requested in order to meet the requirements of the Irrigation Department. According to the agreement, 400HP@1800 RPM 3406C model engine had initially been proposed to meet 100m³/hour discharge, but later the specification was modified and a 400HP@2100 RPM 3606B model engine was placed to meet 100m³/hour discharge.

69. The Committee further observed that both KSINC and Irrigation Department were responsible in this regard. The Committee expressed its dissatisfaction over the inertia on the part of the KSINC in taking timely action against the company, which could not fulfill the required specification as per the agreement.

70. When the Senior Audit Officer asked the details regarding the present status of the dredger, the Chief Engineer (Mechanical), Irrigation Department informed that revenue to the tune of ₹57 lakh had been generated by renting out the said dredger for essential works like excavating bund work and private purposes. He also added that at present only one dredger was operational and the other one was locked at the Drydock workshop in Alappuzha from 2021 onwards. He further informed the Committee that the maintenance works of the dredger was undergoing.

71. The Committee recommended to take urgent steps for getting the dredger in working condition and to conduct an enquiry regarding the lapses occurred in the procurement of hydraulic dredgers. The Committee also suggested to examine whether it was advisable to get such equipment on rent instead of spending huge amount of money for their procurement and maintenance.

Conclusions/ Recommendations

72. The Committee notices that the entrustment of work to KSINC with no proven capability in dealing with drudgers is indicative of poor exercise of due diligence in conducting technical evaluation and selection of supplier. The Committee notices that the failure of the Technical

Committee in assessing the feasibility of the specifications proposed by KSINC resulted in supply of substandard dredgers at the cost of ₹7.58 crore. The Committee expresses its dissatisfaction over the failure of the Department in taking timely action against KSINC, which resulted in forfeiting the opportunity of rectifying defects of the dredgers at the expense of KSINC, by not conducting performance trial before taking them over from KSINC or before the expiry of the warranty period. Hence, the Committee recommends that urgent steps should be initiated for getting the dredger in working condition and an enquiry should be conducted regarding the lapses occurred in the procurement of hydraulic dredgers. The Committee also directs that a detailed report covering the above aspects should be made available within two months.

Thiruvananthapuram,
12th..... March, 2025.

SUNNY JOSEPH,
Chairperson,
Committee on Public Accounts.

APPENDIX I

SUMMARY OF MAIN CONCLUSION/ RECOMMENDATION

Sl. No.	Paragraph No.	Department Concerned	Conclusion/ Recommendation
1	9	Tourism	The Committee expresses displeasure over the non- diligence on the part of Tourism Department in assessing the quality of the wooden cottages at Ponmudi during the construction phase, before making payment to the contractor and urges to take measures to recover the loss sustained by Government from those responsible for the loss. The Committee also directs the Department to furnish immediately the details of action taken on the recommendations included in CBI Investigation Report.
2	25	Coastal Shipping & Inland Navigation	As the reply given before the Committee is not satisfactory, the Committee directs the Department to submit a detailed report about the remedial measures taken by the Department regarding the objections raised by Audit according to PWD manual and prevailing guidelines.
3	72	Coastal Shipping & Inland Navigation	The Committee notices that the entrustment of work to KSINC with no proven capability in dealing with drudgers is indicative of poor exercise of due diligence in conducting technical evaluation and selection of supplier. The Committee notices that the failure of the Technical Committee in assessing the feasibility of the specifications proposed by KSINC resulted in supply of

			<p>substandard dredgers at the cost of ₹7.58 crore. The Committee expresses its dissatisfaction over the failure of the Department in taking timely action against KSINC, which resulted in forfeiting the opportunity of rectifying defects of the dredgers at the expense of KSINC, by not conducting performance trial before taking them over from KSINC or before the expiry of the warranty period. Hence, the Committee recommends that urgent steps should be initiated for getting the dredger in working condition and an enquiry should be conducted regarding the lapses occurred in the procurement of hydraulic dredgers. The Committee also directs that a detailed report covering the above aspects should be made available within two months.</p>
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APPENDIX III
APPENDICES FROM AG'S REPORT

STATEMENT ON REMEDIAL MEASURES TAKEN IN SUBSEQUENCE OF THE REPORT OF THE C.A. ON ECONOMIC SECTOR FOR THE YEAR ENDED ON MARCH 2013

Audit para	Observations	Remedial Measures Taken
3.9	<p>Infructuous Expenditure on Wooden Cottages</p> <p>Adoption of unsuitable design for construction of wooden cottages at Ponmudi resulted in infructuous expenditure of Rs.1.24 crore.</p> <p>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.</p> <p>The design of wooden cottages was of site specific taking into consideration the weather conditions at Ponmudi.</p> <p>The works completed by CPWD in December 2005 was handed over only in December 2007; after a delay of 24 months.</p>	<p>The delay occurred in taking over of the property was due to the delay in transferring the newly constructed cottages along with the additional facilities to make the operation of the resort viable and convenient. During the intervening period the possession of the cottages were with the CPWD and they had the obligations to maintain it until the effective handing over took place. In engineering parlance, it is unbelievable and unacceptable that a newly constructed property is damaged within a short period of 1 ½ years due to lack of maintenance.</p> <p>As evident from the inspection report of the technical team, wood material used by CPWD for the construction was of very poor quality which resulted in the deterioration of the property within such a short span.</p> <p>The construction of the cottages at Ponmudi was</p>

No clear cut responsibility for maintenance of the 1-3 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 ability of the cottages and making them unfit for any profitable use.

Though the department accorded sanction for the 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.

delayed due to some technical reasons from the side of CPWD. Hence taking over of the building was also delayed. There was also a confusion over the managing agency. At first it was decided to run it as part of Government Guest House and later it was decided to hand it over to M/s KTDC for the benefit of more common tourist. Even though CPWD claims that the works were completed physically on 31.12.2005, it had flaws which needed to be rectified. It was clear from the letter of CPWD dated 5.6.2007 in which they have reported that the rectification works as proposed in the Joint Inspection on 24.3.2007 by MD, KTDC has been completed during May 2007. It may also be noted that the responsibility for upkeeping the structure, till it is taken over formally, is vested with the executing agency. Even since CPWD claimed that the structure is complete, it was not in operational condition which was pointed out in every inspections. . Therefore, eventhough there was delay in

deciding the operating agency due to various administrative reasons, this delay cannot be attributed as a cause for the failure of the structure. Also a structure which is of permanent nature becoming unfit just within two years due to severe weather condition is not justifiable. This only shows the poor material and workmanship.

It may also be noted that necessary instructions have been given to the Director, Tourism to blacklist the executing agency M/s Vasthushilpalaya, Thiruvananthapuram from the panel of consultants in future on the recommendations of the CBI, which is investigating this case. On the basis of the above explanation, pending audit paras in respect of the construction of wooden cottages at Ponmudi may be dropped.

UIC

SHAJU P K

**Additional Secretary to Govt
Tourism Dept
Govt Secretariat T V M**

69

GOVERNMENT OF KERALA
Coastal Shipping & Inland Navigation (A) Department

*Action Taken on the observations contained in the Audit Report
(Economic Sector) for the year ended 31st March 2013)*

Sl. No	Para No	Observations of the Public Accounts Committee	Reply to the Observations
1	3.11	<p><u>Undue Benefit to a Contractor in five Inland Navigation Works</u></p> <p>Non – execution of agreements as provided for in tenders resulted in granting undue benefit of Rs. 1.03 crore to contractor in five canal improvement works undertaken in Kottayam District.</p> <p>The Director, Inland Navigation, Kollam invited tenders (February 2011) for five 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 Rs. 5.38 crore. The work involved deepening the canal bed using suitable</p>	<p>Basic allegation in the audit para is that the tender premium was not applied for the hire charges of Contractor's own dredgers and such incorrect computation lead to incorrectly executed agreement which in turn caused undue payment to the Contractor. The total estimated PAC of all the five works together worked out as Rs. 5.38 Cr. In the audit para, it is said that, based on the actual work done, the Contractor was paid Rs. 4.52 Crore against Rs. 3.49 Crore by allowing deduction of hiring charges of dredgers which was inadmissible.</p> <p>The total estimated PAC of all the five works together worked out as Rs.5.38 Crores. As per notice inviting the tenders, the bidders have the option to quote their rates above, below or on par with estimate PAC. The tender variation is to be adopted on the amount calculated after deducting the cost</p>

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 bidder and the quoted rates ranged between 20 and 42 percent 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 in rebate from 20 to 42 percent on EPAC quoted by the bidder after allowing hiring charges thereby bringing the agreement value to

of departmental materials and hire charges of departmental machinery. There was no supply of departmental materials for the works, but machinery was included. **A clerical error occurred with regard to hire charges of departmental machinery while preparing the tender schedule. As such the net PAC was calculated, include the hire charges of machinery erroneously.**

The clerical error occurred while preparing the tender schedule was rectified at the time of execution of agreement. This can be explained by explaining the calculation of Net PAC and accepted PAC of one among the five works, ie, "Improvement to Boat Route canal from Kumarakam to Muhamma in Kottayam District". The foot note (ii) shown below the Tender Schedule stated that **'I/We also agree that the Tender excess/deduction may be applied on the amount calculated after deducting the cost of departmental materials and hire charges of departmental tools and plants from the total amount worked out at the rate given in the schedule of rates'**. In the Tender Schedule of this work, the estimated PAC is **Rs. 80,81,430/-** and having of the clerical error, there was no reduction of cost of departmental materials or machinery

Rs. 4.59 crore.

Audit scrutiny of the contract agreements and payments made revealed that the agreements were incorrectly executed for Rs. 4.59 crore as against Rs. 3.54 crore which should have been contract value as per the terms and conditions of the NIT. Based on the actual work done, the contractor was paid Rs. 4.52 crore against Rs. 3.49 crore by allowing deduction of hiring charges of dredgers which was inadmissible. This led to excess payment of Rs. 1.03 crore (Annexure XII).

shown in tender schedule. Hence, the net PAC is same as the Estimated PAC, ie, **Rs. 80,81,430/-** itself. Contractor is supposed to quote his tender premium for this net PAC.

However , while preparing the Agreement Schedule, the hire charges for departmental Dredger involved in this work ie, Rs. 37,24,432/- was deducted from the Estimated PAC. Then, the net PAC comes to Rs. 43,56,998/-. The quoted rate of the contractor is 20% below the estimate rate. Hence, 20% of the Net PAC (ie., Rs. 8,71,400/-) was deducted from the Estimated PAC Rs. 80,81,430/-. Then the Accepted PAC comes to Rs. 72,10,030/- only.

Otherwise the 20% deduction was made in the overall amount , the net PAC would be Rs. 64,65,144/-. **Even though the mistake was happened in preparing tender schedule, correct procedure was mentioned at the foot note of the tender schedule. So the contractors were aware of the method of computation of tender premium and accordingly they quoted for the work. So this cannot be viewed as an incident causing loss of public money. Same procedure was adopted for the remaining four works also.**

Since the method of computation is clearly stated in the foot note of the Tender Schedule, there is no procedural error

			<p>or any loss of public money. Copies of Tender schedule and Agreement schedule are attached as Annexure-A and Annexure-B .</p> <p>Considering the above explanation the audit objection may be dropped.</p>
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S. MURALEEDHARAN
PEN : 101386
Joint Secretary to Govt.
Resources Dept.
Secretariat, T. p.m.
8-71-2517459

#3 True Copy of Tender Schedule
Annexure A

Name of work: NARARI HOUBA - IMPROVEMENTS TO DEPT RIVER CANAL FROM KULLIYATHI TO MATHURAI IN KOTTAYAM DISTRICT
 Tender no. 7/DIR/INDT/2010-11

Item no	Quantity	Description	Unit	Rate Rs	Rate in words	Amount Rs
1	2	3	4	5	6	7
Appendix - A: deepening the canal						
1	1,16,700	m3 Deepening the canal bed using suitable mechanical means and depositing the spoil conveniently at suitable places sufficiently away from the banks /public places at contractor's own risk including dumping for the use of local panchayat authorities for their developmental activities, as per the direction of departmental officers including hire charges of dredger or any other mechanical means, cost of oil etc.complete (Cost of the useful sand if any found after testing of samples will be recovered from the contractor's bill as per GO 20/2008/CSIND dated 19.05.2008 or as per GO (Rt.) no. 62/2009/CSIND dated 25.11.2009).	10 m3	589.00	Rs. Five hundred and eighty nine only	68,73,630
Appendix - B: supply and installation of FRP conventional buoys						
2	4	Nos Supplying and installation of 1300 mm dia FRP conventional buoys along with skirting, Daymark chain system, Danforth anchor with solar operated LED light and moving system for 12 month, fabrication and installation of Antitheft security cages etc complete as per technical specification and as per the direction of departmental officers at site etc. complete.	1 Nos	3,01,950.00	Rs. Three lakhs one thousand nine hundred and fifty only	12,07,800
Total Rs.						80,81,430

Estimate PAC Rs. 80,81,430
 Deduct cost of departmental materials Rs. -
 Net PAC Rs. 80,81,430
 (Rs. Eighty Lakhs eighty one thousand four hundred and thirty only)

 Director
 Inland Navigation Directorate, Kollam
 (For and on behalf of the Governor of Kerala)

Quoted rate of Contractor

(i). I/We agree to execute the work at
 1. Estimate rate
 2. 20 % below estimate rate **(TWENTY PERCENT BELOW ESTIMATE RATE)**
 3. _____ % above estimate rate less cost of department materials to be supplied at and recovered at the rate given in the conditions enclosed.

(ii). I/We also agree that the tender excess deduction may be applied on the amount calculated after deducting the cost of department materials and hire charges of departmental tools and plants from the total amount worked out at the rate given in the schedule of rates

(iii). I/We also agree that in the case of tender percentage quoted by the contractor, only the first two digits coming after the decimal will be considered.
 Note: Score off words not required if both above and below are left scored/unscored, quoted rate will be considered below estimate rate.

Tender schedule set no. _____ No. of corrections..... NIL No. of over writing..... NIL

Scoring 20% below EPR.
Standard 12/2/11
Dia

Signature: _____
 Name and Address of the contractor: **Sunil Sivadason, Managing Director, Southern Dredging Co. Ltd, Flat No. 905, Pooheer Towers, Marine Drive, Kollam-686 002**
 CONTRACTOR: _____

Handwritten notes and stamps:
 RECEIVED
 HEAD DRAFTSMAN
 IRRIGATION DIVISION
 KOTTAYAM

Appendix B

True Copy of Agreement Schedule

IRRIGATION DEPARTMENT
Agreement Schedule

Name of work: NABARD RIDF XVI - Improvements to Boat Route Canal from Kumarakom to Muhamma in Kottayam District
Tender no.7/DIR/INDT/ 2010-11

Item no	Quantity	Description	Unit	Rate Rs	Rate In words	Amount Rs
1	2	3	4	5	6	7
Appendix - A: deepening the canal						
1	1,16,700 m3	Deepening the canal bed using suitable mechanical means and depositing the spoil conveniently at suitable places sufficiently away from the banks /public places at contractor's own risk including dumping for the use of local panchayat authorities for their developmental activities, as per the direction of departmental officers including hire charges of dredger or any other mechanical means, cost of oil etc.complete (Cost of the useful sand if any found after testing of samples will be recovered from the contractor's bill as per GO 20/2008/CSIND dated 19.05.2008 or as per GO (Rt.) no. 62/2009/CSIND dated 25.11.2009).	1000 m3	589.00	Rs. Five hundred and eighty nine only	68,79,630
Appendix - B: supply and installation of FRP conventional buoys						
2	4 Nos	Supplying and installation of 1300 mm dia FRP conventional buoys along with skirting, Daymark chain system, Danforth anchor with solar operated LED light and moving system for 12 month, fabrication and installation of Antitheft security cages etc complete as per technical specification and as per the direction of departmental officers at site etc. complete	1 Nos	3,01,950.00	Rs. Three lakhs one thousand nine hundred and fifty only	12,07,800
Total Rs.						80,87,430

Deduct Hire charges for Department Dredger Rs. 37,24,432
 Net PAC Rs. 43,56,998
 Deduct (20% Below) (8,71,400)
 Add Hire charges for Department Dredger 37,24,437
 Accepted PAC 72,10,030

Rupees Seventy two Lakhs Ten Thousand and Thirty only.

M. Shankaran
Director

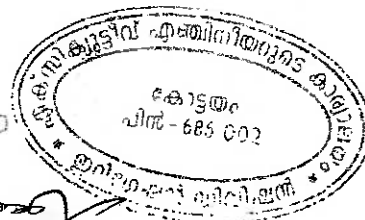
Inland Navigation Directorate, Kottayam
(for and on behalf of the Governor of Kerala)

This work was awarded to Sri. Sunil Sivadasan, Managing Director, Southern Dredging Company (P) Ltd., Flat No. 905, Pioneer Towers, Marine Drive, Kochi-21 at 20% below Estimate rate.

I agree to execute the above work at 20% below estimate rate

Signature
Name and Address of the contractor

CONTRACTOR
SOUTHERN DREDGING COMPANY (P) LTD



Sunil Sivadasan
Managing Director

True copy
abstract of
Shankaran
SHANKARAN
HEAD DRAFTSMAN
IRRIGATION DIVISION
KOTTAYAM.

M. Shankaran
DIRECTOR

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GOVERNMENT OF KERALA

Coastal Shipping & Inland Navigation (A) Department

Statement of Remedial Measures Taken on the Recommendations contained in the Audit Report (Economic Sector) of Public Accounts Committee (2014-16) ended on March 2015

Sl. No	Para No	Recommendations of the Committee	Action Taken by the Government
1	2.5.1	Government may ensure policy intervention for mandatory movement of hazardous cargo by inland waterways; complete removal of encroachments and fishing nets and ensure availability of infrastructural facilities at locations suitable to PSUs for effective use of National Waterway-3	<i>The development, maintenance and providing navigation support along the National Waterways are entrusted with the Inland Waterways Authority of India (IWAI), a statutory body under the Ministry of Shipping, Government of India. Government of Kerala is actively considering the recommendation related to policy intervention for mandatory movement of hazardous Cargo by Inland Waterway. Issues related to multiple handling of Cargo as it moves from Inland Waterways to road have to be resolved first. District Collectors are empowered to ensure complete removal of encroachments and fishing nets as per existing rules in force.</i>
2.	2.5.2	Government may formulate a detailed strategic plan for leveraging its rich endowment of Inland Waterways. It must on priority undertake dredging works in both natural and artificial Waterways and construct cargo terminals.	<i><u>i. Poor progress in execution of development/Maintenance Works :</u> About 389 km out of 590 km of West Coast Canal (ie. 65%) including NW-3 has been made navigable so far. In order to achieve the target of making the entire WCC navigable, works in yet another 201 km. is to be completed. Out of the 43.60 km length of uncut portion Vadamkara – Mahi canal formation of a length of work (17.61 km) is arranged in five reaches. Revised estimates for Reaches II, III & IV incorporating some necessary extra items is under consideration. Canal formation work in Reach-V is in progress. On completion of the above five reaches, 17.61 Km in this stretch can also be made navigable as per National waterway standards.</i>

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Investigation works for the reach of fixing the alignment (Ist and IIIrd uncut reaches of the Mahe - Valappattanam Canal) is completed and land acquisition for 3 uncut portion are to be started in consultation with District Revenue Administration.

Construction of already arranged boat jetties have been completed. 5 nos. of work which could not be completed during the 12th FC award period due to various reasons have been arranged using state (plan) fund.

ii. Encroachment of Waterways :

Canals and land are under the direct control of Assistant Engineers and subordinate officers. Enlisting of encroachments is done by the field officers and reported to Revenue Authorities for necessary action for eviction. Eviction by Revenue Authorities in Kollam thodu portion of TS Canal has been carried out and the renovation work there is now in progress. For eviction of encroachments from other canal reaches the same is to be surveyed and demarcated by the revenue authorities. Also a comprehensive rehabilitation project is necessary to evict and rehabilitate encroachers in canal portions of Thiruvananthapuram, Kollam, Thrissur and Malappuram District, so as to carry out the Waterway renovation work smoothly. Survey and demarcation by Revenue Department is currently underway and has been completed in southern Trivandrum.

iii. Poor Prioritisation of Works :

To make a reach navigable it is necessary to dredge the natural water body as well as renovate the artificial canal. As such priority is decided, and simultaneously natural canal dredging and renovation of artificial canal in between natural waterbodies is carried out.

Under the 12th Financial Commission Award, 34 Boat Jetties were constructed in Kovalam-Kollam Sector including six boat jetties for Tourism

			<p>Department and thirteen Jetties in Ashtamudi Kayal for operating SWTD Boat Services.</p> <p>The Boat Jetties were constructed in public interest to meet their local transport demand. So investment can be treated as for the service sector as per public demand.</p> <p>The basic objective of improving waterways is to shift the traffic load of roads to waterways. For the development of waterways, works such as deepening and side protection of canals, construction of boat jetties for passenger and houseboats movement, landing for Jungars, bridges etc. were planned and executed. List of works for which Administrative Sanction has been issued in the last two years is enclosed.</p>
3.	2.5.4	<p>Government needs to constitute an Apex Authority to monitor activities of the different departments concerned with Inland waterways for timely development and maintenance of waterways including removal of various obstacles in waterways.</p>	<p>The development, maintenance and providing navigation along National Waterways are entrusted with IWAI, a statutory body under the Ministry of Shipping. Currently the CSIN Department oversees the Development, Monitoring and Utilisation of Inland Waterways of the State. The State has also resolved to institute a special purpose vehicle for timely development and maintenance of Waterways.</p>
4.	2.6.1	<p>KSINC may consider installation of GPS in the vessels to facilitate monitoring of their movement and to detect causes for delay, which may help in reduction in time for completion of trips. Repairs of vessels must be completed on schedule to minimize idle time.</p>	<p>i. Excess time taken for each trips :</p> <p>KSINC agrees with the finding of the audit that the barges are taking more time to complete trips. But there is a limit in initiating disciplinary action for the delay as the services depend on a variety of factors like current in the channel, low tide / high tide occurrences, loading and unloading of other barges etc. and the employees blames these factors for the delay.</p> <p>KSINC have introduced an incentive system for taking more trips on a day by providing additional duties if more than one trip is taken on a day.</p>

GPS is also installed on vessels to detect unnecessary delay of barges.

ii. Non-utilization of full capacity of barges :

The quantity that can be carried depends on several factors.

Draft of the canal is not uniform. In times of low tide, the barge has to carry lower quantity otherwise it will get grounded at the shallower areas. IWAI is unable to maintain draft in NW-3.

KSINC have taken up the matter of low draft with IWAI many times and further follow ups are made to ensure sufficient draft for vessels.

When a barge is reaching maintenance time, it will be forced to carry less quantity due to the structural weaknesses.

iii. Non-Operation of trips as targeted :

The situation of acid transportation has improved considerably as can be seen from the following figures.

Period	Total No. Trips	No. of double Trips	Percentage
2015-16	211	169	80.00%
2016-17 upto July	130	112	86.00%

iv. Delay in repair of barges and loss of business opportunities :-

The main factors for the delay are Labour issues created by outside unions, issues related to PF and ESI compliance by sub-contractors, stringent administration of the new I.V. Rules which came in to effect in 2010. KSINC have overcome most of these issues and now repairs are scheduled using PERT Charts and completed within a reasonable to press back the vessels for service.

v. Recommendation No. 4 Installation of GPS in the vessels for monitoring their movement :

Accepting the recommendation, KSINC had installed GPS on Cargo Barge Athulya on a trial basis. Subsequently GPS is installed on 3 more barges. Further VHF is available in 650 Tonne Oil barge which is used for outer bunkering using which vessel can be tracked. Thus tracking system is installed on 5 barges and only two barges remain, on which GPS will be installed, if necessary, at the time of next dry-docking.

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2.7.3

In order to increase operational efficiency and cost optimization, Government of Kerala may consider instituting PPP arrangements in passenger services for efficient operations.

This recommendation has arisen from the finding related to delays in dredging of Water Ways used by SWTD. The recommendation is noted for action by SWTD. Most of the SWTD boat operations are in natural waterways. Hence the dredging work in natural waterways is necessitated and carried out more than that in artificial canals subject to availability of funds.

THARA SAMUEL
Additional Secretary
Water Resources Dept.
Govt. Secretariat
2518769 / 2324070

LIST OF WORKS FOR WHICH ADMINISTRATIVE SANCTION HAS BEEN ISSUED IN THE LAST TWO YEARS

Year	Government Order No.	Name of Work
2015	G.O.(Rt) 04/2015/CSIND dated, 31/01/2015.	Construction of Boat Jetty cum Office building at Pallikunnu Bhajana Mandam along Badagara-Mahe Canal.
2015	G.O.(Rt) 06/2015/CSIND dated, 25/03/2015.	Development of Vadakkumpad River in Kozhikode District
2015	G.O.(Rt) 10/2015/CSIND dated, 27/03/2015.	Construction of two bridges across Parvathy Puthanar on the way to Government Hospital at Kollaperu vazhy and School at Karikkakom Vayanasala through KEL.
2015	G.O.(Rt) 26/2015/CSIND dated, 15/10/2015.	Construction of Double lane road bridge at Thekke Arayathuruthu across TS Canal near Ch. 35.970 km.
2015	G.O.(Rt.) 28/2015/CSIND dated, 29/10/2015.	Construction of '6' Foot Bridges across Badagara-Mahe Canal.
2015	G.O.(Rt.) 30/2015/CSIND dated, 12/11/2015.	Re-Construction of Kallupalam Bridge across TS canal at Kollam and Development of Waterway connecting IT Park, Kundara to National Waterway-III-at Kollam.
2016	G.O.(Rt) 01/2016/CSIND dated, 01/01/2016.	കൊല്ലം-കോട്ടപ്പുറം ജലപാത കമ്മീഷൻ ചെയ്ത് ചരക്ക് ഗതാഗതം ആരംഭിക്കുന്നതിലേക്ക് ഉദ്യോഗമണ്ഡലിലും സ്ഥിരം ബർത്തം മറ്റ് സൗകര്യങ്ങളും നിർമ്മിക്കുന്നതിനും കോവിൽത്തോട്ടം പാലം നിർമ്മിക്കുന്നതിന് KMML -ന്റെ വിഹിതം തൽക്കാലം സർക്കാരിൽ നിന്നും അനുവദിച്ചും ഉത്തരവ്.
2016	G.O.(Rt) 09/2016/CSIND dated, 08/03/2016.	Development of TS canal (Kollamthodu) from Kachikadavu to Jalakeli Kendram.
2016	G.O.(Rt) 14/2016/CSIND dated, 18/04/2016.	Construction of Double Line Road Bridge at Vadakke Arayathuruthu across TS Canal near Ch: 36.560 and at Kadakom in Chirayinkil Panchayath.
2016	G.O.(Rt) 18/2016/CSIND dated, 14/06/2016.	Construction of lock cum bridge across Badagara-Mahe Canal at Moozhikkal, Kozhikkode.

GOVERNMENT OF KERALA
Coastal Shipping & Inland Navigation (A) Department

**Statement of Remedial Measures Taken on the Recommendations contained in the Audit Report
(Economic Sector) of Public Accounts Committee (2014-16) ended on March 2015)**

Sl. No	Para No	Observation of the Committee	Reply to Observation
1	2.5.3 i)	<p><i>Improvements / maintenance of feeder canals :</i></p> <p>Execution of works in feeder canals not meeting prescribed standards: The Irrigation Department had been executing development and improvement work of various feeder canals joining NW-3 and the remaining parts of WCC in order to facilitate cargo and passenger movement. The department had carried out improvement works in 53 feeder canals. Audit scrutiny revealed that improvement works of 17 feeder canals (Appendix 2.2) were not taken up as per the approved standard norms of Irrigation Department, but were based on requests from public representatives and local residents. In fact, these 17 feeder canals required major rectification works such as removal of rail over bridge, road over bridge etc. hindering navigability. Thus, the improvement works carried out were not useful since major rectification works were left unattended causing obstructions in cargo and passenger movement.</p>	<p>i) Irrigation department had been undertaking the development of feeder canal in view of the limited financial resources. In the Kuttanad and upper Kuttanad area of Alappuzha and Kottayam district there is lack of road network and surface transportation facility due to the peculiar nature of the region. People depends on water transport and their own country boats for passenger movements. There is a number of canal network in Kuttanad area including feeder canal to the National Waterway 3 and State waterway. There was request of the public as well as public representation including local MLA, to develop these canal routes to make it more navigable with minimum requirement of the local navigation as these are the only one transportation means in Kuttanad area. Hence these feeder canals were taken up on a priority basis in accordance with traffic potential and necessity of the public in that area .</p>

	<p>ii) Lack of subsequent maintenance of improved feeder canals: Joint inspection of seven of the 53 improved canals (three in Alappuzha District, three in Kottayam District and one in Thrissur District), revealed that though the department had spent Rs. 6.95 crore on their improvement, these canals were not in navigable conditions due to lack of subsequent maintenance (Appendix 2.3) Though the initial developments were made by the Irrigation Department, the subsequent maintenance was to be done by LSGIs concerned. Audit observed that LSGIs had failed to formulate any norms for improvement and subsequent maintenance of feeder canals. Government of Kerala accepted the audit observation and stated that hereafter, the feeder canals would be taken up for renovation as per IWA norms for facilitating transportation. The fact, however, remains that expenditure of Rs. 6.95 crore already incurred during September 2008 to July 2014 on the seven works did not serve the intended purpose.</p>	<p>ii) There is lack of subsequent maintenance due to paucity of maintenance fund. The fund allotted in budget for the maintenance work for irrigation structure in every year is very low. The lack of fund for maintenance of these type of works will affect the up keeping of the canal developed. It may be better to entrust the subsequent maintenance of developed feeder canal to LSGI. A detailed study is required in terms of draft, width, vertical clearance existing infrastructure traffic potential and various surveys necessary for assessment of bottle necks and hindrances deriving development standard for each canal. A study with NATPAC is organized for classifying the feeder canals, finalization of standards and norms for various categories of canals and preparation of master plan for the development of feeder canals. In future the development work of feeder canal can be taken up based on the NATPAC study report and canals to be taken up for development can be prioritize based on the NATPAC study report.</p>
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S. MURALEEDHARAN
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Govt. Secretariat, Thiruvananthapuram.
0471-2517459

Appendix 2.2
Details of Feeder canals improved without adequate width and having bridges of low vertical clearance
(Reference: Paragraph 2.5.3(i);Page:18)

Sl.No.	Division	Name of Feeder canal *	Width (m)	No. of bridges with low vertical clearance	Amount (₹ in lakh)
1.	Alappuzha	Kumbalathankarythodu	10.85	-	63.06
2.		Kattachirathodu	1.80	-	76.10
3.		Chandiroorthodu	2	1	37.73
4.		Chethipozhy	8	-	6.50
5.	Kottayam	Lappalam	-	1	195.77
6.		Muttom- Changanacherry canal	-	5	53.85
7.		Chethipuzha	-	1	58.05
8.		Muttar- Neelamperoor canal	-	3	74.61
9.		Kodur river	-	11	110.14
10.		Neendoor canals	-	1	146.99
11.		Kallara canal	-	3	82.62
12.		Chullithodu	-	1	28.91
13.		Appanchira canal	-	2	57.78
14.		Perinjillathodu	-	3	110.66
15.		Valiyathodu	-	4	142.81
16.		Kariyar link canal	-	1	157.88
17.		Thrissur	Shanmugham canal	6 to 8	-
Total					1517.96

Appendix 2.3
Details of feeder canal where joint inspection was conducted by Audit
(Reference: Paragraph 2.5.3(ii);Page:18)

Sl. No.	District	Name of FC	Nature of work	Date of completion	Amount (₹ in lakh)	Present Condition (November 2014)
1	Alappuzha	Madayanthodu	Desilting, removal of water hyacinth	24 October 2008	82.21	Completely covered with water hyacinth. Width and depth of the canal in most places were less than the standard required.
2	Do	Kumbalathankary	Side protection, deepening	30 July 2009	63.05	Getting thick with water hyacinth. Width is only 10.85 m and depth 0.80 m
3	Do	Ambalapuzhathodu	Desilting, side protection, and removal of water hyacinth	27 September 2008	65.80	Thickly covered with water hyacinth, low bridges, no navigability
4	Thrissur	Shanmughamthodu	Desilting, side protection	30 January 2010	114.50	No connectivity throughout the year. A salt water barrier is there between WCC and the Feeder Canal (FC). Narrow canal.
5	Kottayam	Valiyathodu	Protection of left bank, desilting.	19 July 2014	142.81	Two low railway bridges, work done on one side alone while other side of Kaduthuruthy bridge is shallow, full of dirt. Water weeds are fastly growing in the recently improved area.
6	Do	Perinchillathodu	Side protection and desilting	19 January 2013	110.66	Thickly covered with water hyacinth and waste thrown in to the FC.
7	Do	Mannanam-Chuzhalykkuzhy	Deepening	31 August 2011	115.94	Three km towards Mannanam was full of water weeds, rock preventing navigability.
TOTAL					694.97	

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PAC Paed-10(2)

Detailed Report on Audit Paras.

2.7.1. Performance of State Water Transport Department in IWT Sector

Sl. No	Audit Para Action	Action Taken Report
1	<p data-bbox="304 383 820 472"><u>2.7.1.1. Increasing Loss of State Water Transport Department</u></p> <p data-bbox="304 472 820 1211">The operational statistics of SWTD revealed that its losses were increasing year after year (from Rs.18.78 crore in 2010-11 to Rs. 34.64 crore in 2014-15) and the accumulated loss as on 31 March, 2015 was Rs. 345.30 crore. The average loss per km operated had increased from Rs. 90.74 to Rs. 154.37 (70 percent increase) during the five year period. The major reasons for increasing loss were uneconomic operation of services, reducing number of passengers, inefficient fleet management, etc. as discussed in succeeding paragraphs.</p>	<p data-bbox="820 383 1466 2038">The functioning of this department is highly service oriented. The audit comment that the department loss are increasing year by year is not correct. From the Financial Year 2013-14, per day revenue collection is showing an upward trend on the back drop of the recent fare revision. It may further be noted that the passenger fare revision was implemented in the department after a lag of 12 years period. During the said period a number of fare revisions were effected in KSRTC. Several proposals were forwarded to government pleading for ticket fare revision of Boats in State Water Transport Department. But the rate was not revised. The increasing operational cost on account of constant diesel price hike, periodic pay revision of employees, price hike of spare parts etc. is not tallying with the nominal and constant ticket collections, naturally, the loss will enhance. But at the same time, the department is providing passenger service by plying cruises connecting various water logged areas where the inhabitants are having no other mode of transportation and the private operators always abstain from such ventures due to poor returns and huge, operating cost. The Government views such facts very compassionately, that is why such services are sustained in spite of frequent operating loss. Similarly, the department has taken productive steps to mitigate such operating loss by introducing more revenue fetching tourist cum passenger services at various tourism potential</p>

areas namely Alappuzha-Kollam service See Kuttanad circular service etc. Moreover, certain services covering shortest water routes so as to mitigate road traffic woes namely Vaittila - Kakkanad and these services were widely accepted by commuters. The department gears upto start more such services at suitable points. Also, the department has been successfully operating a Solar Powered Vessel named as " Aditya" at Vaikom -Thavanakkadavu ferry and such least polluting vessels are likely to be built and taken to service in the near future as the passengers are now having tendency to turn face to the more polluted and congested road traffic and prefer to such eco friendly cruise. All these are of a good symbol of reducing the department operating cost considerably in the near future.

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2.7.1.2. Uneconomic Operations of Services.

The fuel cost per km of operation was Rs. 42.26 in 2012-13 and Rs. 51.26 in 2013-14 against which the Earning Per Kilometre (EPKM) was only Rs.23.04 and Rs. 31.73 respectively. Audit analysis revealed that none of the passenger schedules operated by SWTD were able to meet even the fuel cost of operation due to inadequate number of passengers as explained below.

*Reducing number of passengers

The total number of passengers travelled by SWTD boats decreased from 242 lakh in 2000- 01 to 144.16 lakh in 2014-15 (40.4 per cent).. It had good passenger patronage only in those places where the origin and/or destination of trip is

Reducing number of Passengers.

Presently, road transport is possible in some remote areas with the execution of new bridges and roads which led to a plummet in the number of passengers taking benefit of Inland boat service. But the department can not cut off the number of jetties and services as there is only a decline in the number of passengers and not as a whole. When there is a single commuter on board the department will have to operate the service even though the service is found non lucrative as the passenger on board is having no other option of transportation.

This is the factor affecting the gap between EPKM and CPKM.

- Increased cost of Operations.

In addition to the facts as explained above, it may also note that the landtransport sector is becoming more congested, time consuming, risky and

located near places connected by road. Audit also noticed that attempts at boosting passenger traffic by tying up with two tourism schedules and two-wheeler carrying boats were also not able to attract more passengers. The GOK/SWTD attributed the decrease in passenger traffic to the increased road connectivity and consequent reduction in scope of operations of the Department, it was further replied that the boat services were being operated with the social, objective of providing transport facilities to those who were residing in water logged areas.

- Increased cost of operations

Around 66 per cent of the total expenditure of SWTD was related to salary and establishment expenditure and 30 per cent for fuel. While the average revenue from a passenger during 2014-15 was Rs.5.28, the expenditure incurred by SWTD per passenger was Rs.29.31. Thus, the GOK had to carry a financial burden of Rs. 24.03 for each passenger. Thus, ferry services being operated by SWTD were uneconomic.

woeful day by day on account of undue increase in no. of vehicles in spite of dilapidated road conditions and the road capacity is nearing a saturation level. These factors make the commuters rely on public Inland Water Transport Services with comparatively cheap, comfortable and less risky. As and when the National Water ways project comes fulfilled and more Solar Powered Vessels kick off service, the department shall chalk out more feasible projects like cargo transportation, ferry services and so on. All these aspects shall lead to a gradual decline in the cost of operations.

3	<p><u>2.7.2. Inefficient fleet management in State Water Transport Department</u></p> <p>At the end of March 2015, SWTD was having 84 boats (29 wooden boats and 55 steel boats). Audit noticed that one third of the fleets (28 boats) were under repair. The extent of delays in repair and their impact are explained below.</p> <ul style="list-style-type: none"> • Repair of boats delayed 	<p>* <u>Repair of boats delayed abnormally</u></p> <p>In addition to the already existing department slipways, a new dry dock system at Ponjikkara, Alappuzha has been newly completed and a further modernisation and renovation work there on has been kick started in addition to the completion of a new slipway at Ayitti, Payyannur Region. When all these infrastructure come to a full fledged operating level, the time taken for executing boat repair works</p>
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abnormally :

The SWTD has repair facilities (Slipways) at Alappuzha and Ernakulam capable of carrying out major repair of six and two boats respectively, at a time. A period of three months was fixed for major repair for each boat. The excess time taken during 2010-15 for major repair ranged from two to 28 two to 28 months at Alappuzha and from three to 18 months at Ernakulam, resulting in loss of 13,860 operating days. The SWTD had not maintained any data regarding the reasons for delay. The GOK replied (October 2015) that fixing three months period for executing major repair works as a whole was not logical as it depended upon a variety of factors. The reply was not tenable as the norms were fixed after considering all such factors. Moreover, while approving the proposal for outsourcing repair works of SWTD, Transport Department had also fixed (September 2002) three months time for repair of boats. SWTD switched over to the use of steel boats in the place of wooden boats for - safety reasons from 2004. However, it did not carry out inhouse repair of the steel boats and thus 18 boats were awaiting repair for period ranging from one month to five years as of March 2015. Audit noticed that, on account of prolonged docking, all the steel boats were in deteriorated condition. During the period 2010-15, SWTD had acquired 29 steel boats from S1LK at a cost of Rs.12.84 crore. Of these, 18 boats were purchased during

shall be plummeted considerably. Moreover, fixing three months period for executing major repair work as a whole is not logical as it depends on a variety of factors namely timber and nature of cruising area, cause of repair, deterioration level etc. May also vary from vessel to vessel. So the time taken for executing major repair works may extend from 3 to 6 months depending on the above factors.

October 2010 to March 2014 at a time when nine to 26 wooden and steel boats were pending repair. Audit observed that had the repair been carried out in time, purchase of 18 new steel boats costing Rs. 7.93 crore during this period could have been avoided. Addit further noticed that during the period 2009-13, cost of repair had doubled . As a result, SWTD has to bear a minimum additional financial liability of Rs. 45 lakh in respect of 10 steel boats docked during November 2009 to January 2013. SWTD pointed out (April 2015) lack of sufficient infrastructure facility and staff as reasons for not repairing steel boats. It further stated that a new slipway was constructed at Alappuzha for the purpose. Audit noticed that the additional slipway constructed at a cost of Rs. 1.82 crore had not been utilised till March 2015 though its trial run was conducted in January 2013. Meanwhile, SWTD had issued (February 2015) work order for outsourcing the repair work of steel boats. Audit observed that there was no justification for keeping steel boats idle for period ranging up to five years as SWTD could have made the required arrangements for repair in time either at its own yard or by outsourcing.

4 2.7.3. Navigation Channels were not dredged.
 In the Report of the E.Mytheenkunju Commission of Enquiry (Thekkady Boat Tragedy, September 2009) it was emphasised that navigable waterways shall be properly

Dredging of navigation channels comes fully under the jurisdiction of Irrigation Department and this department can just point out the dredging requirements with the Irrigation Department and the Government. This department is taking its optimum efforts in finding such inadequate draft

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maintained by dredging and removing obstacles. More than 50 per cent of the waterways used by SWTD for boat operation were facing the problem of inadequacy of draft. Though SWTD had been requesting the Irrigation Department for dredging of these waterways for the past several years, dredging work was yet to be arranged (December 2015). Audit also noticed that there was no system in place to assess the safety of navigation channels by any authority. Further, in the absence of coordinated efforts among the multiple agencies currently existing in inland water sector, passenger transport operation in inland water was prone to accidents. GOK/SWTD replied that Irrigation Department had been requested to execute dredging works in navigation channels and SWTD had been working with the initiative for ensuring coordinated efforts with related agencies. The reply was not acceptable as dredging work had not been completed so far (March 2015) by irrigation Department. Recommendation No. .5; In order to increase operational efficiency and cost optimisatioii, GOK may consider instituting PPP arrangements in passenger services for efficient operations.

areas and channels which require urgent dredging works and timely intimating the same with the authorities concerned. This department is also in the opinion of making a coordinated efforts among the multiple agencies currently in Inland Water Sector in tidng over such obstacles.

2.8 conclusion

Despite being energy and cost efficient with least carbon footprint, the State of Kerala has failed to fully leverage its abundant inland waterways. The

2.8 CONCLUSION

Inland Water Transport Sector is having a growing potentiality with wide opportunities in handling cargo movement, tourism operations, passenger service operations and so on. The construction of adequate

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Government did not issue directions about using water ways for cargo movement and prohibition of movement of hazardous cargo by road. Due to lack of infrastructural facilities, various PSUs were not shifting cargo movement from road to waterways. GOK failed to address issues like availability of hindrance free land, obstacles like fishnets and encroachment for development of waterways. There was no apex authority to monitor implementation of development works. Dredging works were not prioritized which prevented thorough navigability in waterways. The number of passengers using waterways has been decreasing. A comprehensive strategic plan to address these issues needs to be formulated and notified on priority.

infrastructure and terminal facilities at appropriate points and enforcement of law to make compulsory on transportation of hazardous cargo utilising Inland Water Transport, timely execution of dredging works at appropriate points etc. are inevitable.



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**Statement of Action Taken on the observations
contained in the Report of the Comptroller & Audit
General of India for the year ended on 31.03.2015**

Para No.	Observations	Action Taken
3.5.1	<p>Non-Identification of EFL</p> <p>The EFL Act was enacted with the main objective of vesting in the Government, EFL identified in the State for the management of such lands with a view to maintaining ecological balance and conserving the bio-diversity. The Act, however, did not specify any time frame for completing this task. The Department had also not prepared any action plan for executing this task in a concerted manner. Consequently the Department had failed to identify all the ecologically fragile lands in the State so far (as of January 2016). EFL lands were being identified in a piecemeal manner and notified only when some cases were reported by Range Forest Officer to the DFO. Audit observed that 14,910.40 Ha (Appendix 3.1) land has been notified in 133 notifications with effect from the year 2000 onwards based on proposals received by the Custodian from the field offices across the State.</p> <p>During the exit conference, the ACS agreed with the audit findings and stated that the non-survey of forest land was a major issue due to shortage of manpower being faced by Revenue Department, which was to conduct such surveys. ACS also stated that directions have been issued to the field officers of Forest Department to keep travelling, exploring and conducting physical verification to identify lands qualified as EFL in their respective ranges.</p>	<p>Identification of EFL lands got delayed due to various reasons. EFL land is under the ownership and possession of private persons. Identifying Ecologically Fragile Lands which is under private ownership is a time consuming process. In some cases EFL is included in Vested Forest Cases also. Those land can be notified as EFL after field inspection and detailed survey only after the completion of legal procedure. In few cases, survey of lands also cause inordinate delay in notifying EFL lands especially if revenue land is involved. Kerala Forest Department has identified and imparted survey training to field staff for undertaking survey in such lands without delay. Majority of EFL lands were identified in Eastern and Northern Circles. Survey is being carried out on priority basis based on court direction in EFL cases.</p>

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Action taken report on the observations contained in the Report of the Comptroller and Auditor General of India for the year ended 31 March, 2015 (Performance Audit on implementation of Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Act, 2003)

Para No:	Observations	Action Taken
3:5:2	<p>Delay in notification of identified land</p> <p>Audit noticed that out of the proposals for EFL notification received from the field offices, 163.1901 Ha involved in 18 cases were pending decision in the Custodian's Office since 2008 due to non-furnishing of complete details from the field offices. As a result, the processing and issue of EFL notifications was inordinately delayed which ultimately affected the management of such land.</p>	<p>Out of 18 proposals 3 proposals notified and published in Kerala Gazette, 4 proposals notified and notification sent to Government Press for publication in Kerala Gazette, 2 proposal files closed and 9 proposals yet to be clarified from sub office. Details of action taken files are given below in Annex ure IV. Hence two months time is required to clarify the balance files for taking a decision and to submit final reply.</p>
3:5:3	<p>Non – acquisition of private forest under section 4 of the Ecologically Fragile Land Act.</p> <p>Audit noticed that 30 proposals involving 393.6377 Ha of private land to be notified as Ecologically Fragile Land under section 4 of the Act were pending with the Custodian since 2008. Audit further noticed that 2 cases included in the selected samples and another one instance noticed from the media, 399.64 Ha of land were pending notification.</p>	<p>Urgent action is being taken for reconstituting the Advisory Committee in File No: E2/113/2016/F&WLD, which is in the final stage. Section 4 notifications can be done only after reconstituting the Advisory Committee. Some of the proposals may not be fit to be notified as EFL under section 4 as the proposals pertain to estates lying within forests. As a matter of fact, the estates which were used principally for the cultivation of crops of long duration such as tea, coffee, rubber, pepper, cardamom, coconut, arecanut or cashew or any other sites of residential building and surroundings essential for the convenient use of such buildings are excluded from the definition of "forest" as per section 2(c) of the EFL Act. Even</p>

		<p>though the lands are encircled within forest , probability of the same is being notified as EFL under section 4 of the Act are also remote. Moreover, the Governmental stand is not to include estates under the purview of EFL. After reconstituting the Advisory Committee , steps will be taken to notify the eligible lands if any, under section 4 . Hence the audit para may please be dropped.</p>
3:5:4	<p>Non- Acquisition of private mangrove forests under Ecologically Fragile Land Act 2003</p> <p>Audit noticed that the Department had neither a comprehensive data about the extent of mangrove forests in the state nor an action plan to conserve the same</p>	<p>Action has been taken to identify all the Private mangrove forest in the State by implementing a project by KFD. Department had taken over 238.92 Ha of mangrove forest in Kannur*District under Kerala Forest Act , 1961 and also initiated steps to notify 54.69 Ha Mangrove Forests in Kasargode and Manjeswaram Taluk in Kasargode division under Kerala Forest Act, 1961. Hence the private Mangroves can be acquired under other statutes and schemes than the Kerala Forests (Vesting and Management of Ecologically Fragile Lands) Act , 2003. Hence the para may please be dropped.</p>
3:5:5	<p>Non-restoration of 17.48 Ha of EFL at Nenmara</p> <p>Audit noticed that the Custodian , complying partially with the legal opinion , had denotified the land but failed to re-notify the land for no specific reasons after the EFL Act had come into force.</p>	<p>An extent of 17.48 Ha of land under Nenmara Forest Division was notified as Ecologically Fragile Land in October 2000 based on the Ecologically Fragile Land Ordinance, 2000. Meanwhile , the occupant of the land had approached the Hon'ble High Court and obtained an order to revoke the notification within four weeks. As per the legal opinion (august 2004) , even if the property had been de-notified , the Government had higher option for notifying the property as per the provisions of the Ecologically Fragile Land Act, 2003.</p>


		<p>On promulgation of Kerala Forest Vesting and Management of Ecologically Fragile Lands, Ordinance , 2000 the 17.48 Ha in Survey no: 366, 296 & 365 of Vandazhi Village was notified as EFL vide notification No: C4-21437/2000 dated 20.10.2000 and published in the Kerala Gazette dated 02.01.2001. Smt. Indira & Others filed OP .No: 24844/2000 & 30094/2002 for exemption of land from the notification.The cases were disposed by the Hon'ble High Court with a direction to the Principal Chief Forest Conservator to dispose the representation filed by the petitioners. The Principal Chief Conservator of Forests heard the petitioners and rejected the claim of the petitioners. Against this Smt.Indira & Others filed the WP(C) 18214/2003 with prayer to cancel the Ecologically Fragile Land notification. The Writ petition was disposed by the hon'ble High Court on 09-01-2004 with a direction to the Principal Chief Conservator of Forests to revoke the notification within a period of four weeks from the date of receipt of the judgment. In obedience to the judgment the Principal Chief Conservator of Forests, Custodian of Ecologically Fragile Lands denotified the said land from the Ecologically Fragile Land as per notification no: C6-18178/2003 dated 01.04.2004. As per G.O(Rt). 111/2004/F&WLD dated 09.03.2004, the Government have ordered to file SLP before the Hon'ble Supreme Court of India against the orders of the Hon'ble High Court dated 09.01.2004 in WP(C) 18214/2003. Advocate Ramesh Babu, Standing Counsel in Supreme</p>
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		<p>Court opined that there is no scope for filing SLP before the Hon'ble Supreme Court vide letter dated 24.07.2004.</p> <p>The Statement filed by the Divisional Forest Officer, in OP 24844/2000 describes that the land in question is supported with predominantly natural vegetation and contiguous to the Vested Forest. It is also endorsed in the Statement of Facts filed in WP(C) 18214/2003 by the then Divisional Forest Officer.</p> <p>From the above fact it is suspected that lack of proper inspection and adequate care had not taken by the department officials in preparation of the Statement of Facts in the OP and WP(C). However the intentions of the then officers were not to exclude any suitable land from the EFL notification. From the concerned files it is revealed that it was happened in the course of action taken in a good faith. Moreover the Supreme Court Advocate Sri. Ramesh Babu had opined that there is no scope for filing appeal in the judgment of the Hon'ble High Court of Kerala. It is also suspected that the communication regarding the appeal may be delayed to reach the Department. The opinion of the Audit Officer is based only on the facts mentioned in the Statements filed by the Department; it is filed with an intention to protect the interest of the Government, unfortunately some defects occurred in preparing the Statement of Facts, it is transparent from the file and enquiry revealed that the land in question is not an Ecologically Fragile</p>
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		<p>Land. It is also reported that the legal injury occurred in the case is not intentional. The EFL land restored to its ex-owners is not an Ecologically Fragile Land and Government has no loss sustained in this regard. The concerned officials tried to protect the Government interest rather than the interest of the others. In the above circumstances it is requested that the audit note may please be dropped.</p>
3:5:6	<p>Issue of NOC for registration of sale deed of lands proposed for Ecologically Fragile Land notification at Mannarkkad.</p> <p>In Mannarkkad Division audit noticed an instance of issuance of NOC by the Divisional Forest Officer, for obtaining possession certificates for land which were proposed to be notified as Ecologically Fragile Land. Audit observed that no action was taken by the Custodian against the DFO who had granted NOCs for land proposed for Ecologically Fragile Land in an unauthorized manner.</p>	<p>The NOCs issued by the DFO was not in order. So in May 2015, the DFO in -charge of the Division had cancelled the NOCs issued by the then DFO during 2012 and the matter was reported to the revenue authorities. Report was given to APCCF (Administration) to initiate action against the DFO Sri. James Mathew and Range Forest Officer Sri. A.L.Sanush who had granted NOCs for land proposed for Ecologically Fragile Land in an unauthorized manner. Hence the audit para may please be dropped.</p>
3:5:7	<p>Delay in Survey of notified Ecologically Fragile Land area and non-inclusion of Ecologically Fragile Land in Management Plan.</p> <ul style="list-style-type: none"> Lack of Coordination between Forest and Revenue Department. <p>Audit observed that even after 15 years from the implementation of the Act, the Department had not included the management of Ecologically Fragile Land in the management plan and also not completed demarcation process except 306.74 Ha</p>	<p>It is submitted that Government had approved proposal to impart training to its field staff at Survey Training School in Survey Wing of Revenue Department as per GO(Ms) no: 82/2015/F&WLD dated 26/10/2015. Kerala Survey and Boundaries Rules, 1964 Rule 101 was also amended as per GO (P) 290/2016/RD dated 04-04-2016 and published in Kerala Gazette Extra Ordinary no: 773 Vol.5 dated 08-04-2016 . Now Beat Forest Officers /Section Forest Officers who have passed Chain Survey and Higher Survey test</p>

	<p>out of 14910.4 Ha.</p>	<p>conducted by the Survey and Land Records Department is eligible to survey EFL area. Now 180 Beat Forest officers/ Section Forest Officers completed Survey training conducted by the Survey and Land Records Department. DFOs were utilizing this trained staff for survey of forest area.</p> <p>It is submitted that OAs, MFAs & SLP(C)s are pending in many of the notified Ecologically Fragile Lands. A scientific management of such Ecologically Fragile Lands under litigation is not feasible as there is chance for the Government loosing in some of the cases. On the other hand, general protection measures including the fire protection are being done in such land. As a matter of fact , the entire extent of EFL is figuring in the Administration Report of Kerala Forest Department every year, and also in the Working Plan & Management Plan.</p> <p>Most of the Ecologically Fragile Lands are in Eastern Circle, Palakkad and Northern Circle, Kannur. These lands were surveyed and the survey sketches prepared during the vesting process under the Kerala Private Forest (Vesting and Assignment) Act, 1971. These private forest lands are demarcated in field with the survey stones at the time of Vested Forests demarcations.</p> <p>It is submitted that, the continuation of the various cases is affecting the construction of permanent cairns around the EFL notified areas. Wherever the cases are not there earnest actions are taken to complete the construction of the permanent cairns. In</p>
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		instances of restoration of the lands to the owners, on account of 10A applications, 19 (3) (b) applications, OA and MFA Orders, the restorations are done only with proper survey demarcation and construction of permanent cairns.
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സബ് റെജിസ്ട്രാർ
തിരുവനന്തപുരം
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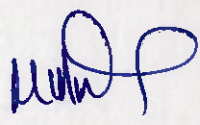
Annexure IV
Details showing delay in notifying as EFL in respect of proposals
received in Custodian's Office
(Reference: paragraph 5.2, Page 5)

Sl .No.	Division	Date Receipt of proposal	Area (in Hectares)	Delay as on 31-12-2015	Reason for delay.	Remarks
7.	Nilambur South	05-03-2014	1.9230	1.8	Sample plot details sought from sub-office	Notification sent to Govt press on 29-10-2018.
8.	Thrissur	25-03-2014	0.6072	1.8	Sample plot details sought from sub-office	Notification sent to Govt press on 24-10-2018.
9.	Nilambur North	04-06-2014	4.0480	1.5	Sample plot details sought from sub-office	Notified as Ecologically Fragile Land as per notification no.EFL10-311/13 dated 21-07-2018 and published in Gazette No.33 Vol.VII dated 14-08-2018.
11.	Mannarkkad	28-10-2014	21.2120	1	Sample plot details sought from sub-office	Notified as Ecologically Fragile Land as per notification no.EFL10-311/13 dated 16-08-2016 and published in Gazette No.37 Vol.V dated 20-09-2016.

12.	Mannarkkad	28-10-2014	4.8562	1	Sample plot details sought from sub-office	File closed
13.	Palakkad	12-11-2014	0.3346	1	Sample plot details sought from sub-office	Notification sent to Govt press on 29-10-2018.
15.	Marayur	27-11-2014	79.5000	1	Sample plot details sought from sub-office	DO letter given to CCF(HRC) & DFO Marayoor on 23-10-2018
16.	Palakkad	06-03-2015	6.0703	0.8	Sample plot details sought from sub-office	Notification sent to Govt Press on 26-10-2018.
17.	Nenmara	20-06-2015	2.8210	0.5	Sample plot details sought from sub-office	Notified as Ecologically Fragile Land as per notification no.EFL10-311020/2016 dated 10-08-2016 and published in Gazette No.35 Vol.V dated 30-08-2016.
18.	Nilambur North	09-12-2015	0.6550	-	Sample plot details sought from sub-office	File closed

Monitoring and Evaluation	
3.5.8	<p>According to EFL 2003, the lands to be vested as EFL under GOK's control were to be managed in an integrated and uniform manner within their ecological boundaries in accordance with the management plans based on sound scientific principles. The scrutiny of records revealed that the lands vested had not been included in the Annual Plan of Operations (APO) of the Divisions for maintenance in a scientific manner. On this being pointed out in Audit, the Custodian stated that EFL was automatically taken as part of the protection working circle of the approved Working Plan of the division and as and when Working Plan was revised, EFL area would be taken in area account of the divisions.</p> <p>For managing the lands to be vested as EFL in an integrated and uniform manner within their ecological boundaries, instructions were issued from the O/o EFL Custodian for including such lands in Annual Plan of Operation of each Division. Management Plans would be prepared for such lands until finally the land is included in Working Plan. Maintenance of EFL land in scientific manner will be ensured in Working Plans.</p>

3.6	<p>Conclusion</p> <p>Despite a lapse of 15 years from the commencement of the EFL Act, the Department did not have a database of lands which could be notified as EFL, thereby hampering the protection of these areas and their consequent conservation and development. The survey and demarcation of boundaries which were to be completed within the stipulated time was delayed due to lack of co-ordination between Forest Department and Revenue Departments. The Department was not able to prevent the private plantations which were encircled by Reserved Forest and delay in acquiring such land caused threat to the ecology. Mangroves which were fragile and highly productive ecosystem found along the coasts were exposed to the risk of degradation due to absence of comprehensive data and an action plan to conserve them.</p>	<p>Lack of coordination between Forest and Revenue Department</p> <p>Detailed survey is inevitable in identifying EFL lands and preparation of data base. Now personnel trained in survey is available with the Kerala Forest Department. Database of lands which would qualify as EFL will be prepared under each circle in a time bound manner.</p> <p>In areas, where forest land share boundary with revenue land co-ordination with Revenue Department will be ensured. Action has been initiated for the acquisition of mangroves under Sec.(4) of Ecologically Fragile Lands Act 2003.</p>
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GOVERNMENT OF KERALA
STATEMENT OF ACTION TAKEN ON THE REPORT ON ECONOMIC SECTOR OF THE C & AG FOR
THE YEAR ENDED ON 31ST MARCH 2017
COASTAL SHIPPING & INLAND NAVIGATION (A) DEPARTMENT

Sl.No	Para No.	Audit Observation	Action Taken
1	4.5	<p><u>Procurement of sub-standard dredgers resulted in their under-utilisation.</u></p> <p>Failure of the departmental technical committee in ensuring that the dredgers supplied by the contractor matched the required specification and configuration resulted in supply of sub-standard dredgers unfit for the intended purpose, making ` 7.58 crore spent on their purchase unfruitful.</p>	<p>The Irrigation Department has planned to procure cutter suction dredgers in the 12th Finance Commission for the scheme Development of state waterways. Tenders were invited to procure the same but could not complete the process due to single tender received and other reasons. By that time, the 12th Finance Commission Scheme had reached its fag end and there was no time for another tendering process. Therefore Government was forced to think for an alternate solution.</p> <p>Meanwhile Kerala Shipping & Inland Navigation Corporation (KSINC), a Government of Kerala undertaking, has submitted a proposal to Government to build and supply the same to Irrigation department. The Government evaluated the proposal and decided to procure the same through KSINC. The concern raised by audit that KSINC has no proven capability to execute the work is not correct, because KSINC has built and supplied large number of vessels for various agencies. Besides KSINC is the only Government undertaking</p>

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company who has expertise in the field of manufacture of marine and Inland vessels with IRS classification and registered under Inland Vessel Rules and Merchant Shipping Act. Even though the dredgers are not self propelled, they are registered under Kerala Inland Vessel Rules and the drawings were verified by experts designated by KIV authorities. Accordingly the design of dredgers was vetted by former head of Ship technology, Cochin University of Science & Technology. The Technical Committee was constituted for evaluation of the bids offered and allied matters and reconstituted for evaluation of the subsequent proposal submitted by KSINC. The change of pump and engine of the dredger from the original specification was for better models suitable to the intended purpose. More over both the engine and pump was from world renowned manufacturers, *Caterpillar and Metso* respectively. There was no failure on the part of technical committee in assessing the feasibility of the selection of pump and engine. So the observation that the dredgers are substandard and not serving the intended purpose can not be agreed to.

Trial runs of both dredgers were carried out in the presence of officials of Irrigation Department. But it was nearly impossible to conduct perfect trial runs due to difficulty in finding a mutually agreeable site meeting all the test parameters like availability of sand, nature of soil, boulders in soil, turbulence in water etc. The main

bottlenecks in conducting performance tests were the selection of site and meeting the expenditure for carrying out the dredging. For conducting a performance test dredgers have to be operated at least 8 to 10 hours. Anticipating a 100m³/hr output, the quantity of sand anticipated comes up to approximately 1600m³ (approximately 300 lorry loads) sand. Such a huge deposit can be made possible only in Government lands for which a suitable water front land has to be located, dredgers has to be tugged to the site, site has to be prepared for accommodating this much sand, arrangements for making levels to assess quantity, providing fuel for the operation, cost for pipe line works etc. has to be arranged by the department. Due to this it was decided to carry out performance test during actual working. Besides due to implementation of Kerala Protection of River Banks and Regulation of removal of sand Rules 2002 the scope for private dredging was paralysed. The dredgers could not be deployed for reclamation works. Therefore it was decided to conduct performance test during actual working.

The dredgers were manufactured based on the approved design, hence conducting performance test is not at all mandatory. The performance test conducted during the actual working of dredger at Thottappally has resulted an output of 50m³/hr. This site was very near to the sea, the sand available was very fine and compact, also there was

a lot of boulders in sand. The efficiency of the operator is a very important factor. The operating mechanism of the new dredger was purely hydraulic which the operators of the department are less familiar with. The above said parameters might have adversely affected the performance of the dredger. Therefore the output 50m³/hr obtained from that test alone cannot be treated as its actual output. This may vary according to other site conditions. In view of the above facts it is requested to drop the para 4.5 of the C &AG report for the year ended 31-03-2017.



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APPENDICES FROM AG'S REPORT

APPENDIX III (C)

**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	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 ₹)
			Rebate quoted with respect to EPAC				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Improvements to Muttar-Neelamperoor 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.

Appendix A ^{III (2)}
Encroachments on West Coast Canal, as on October 2015
 (Reference: Paragraph 2.5.2(ii); Page:16)

Sl. No.	Place	Chainage			Extent of encroachment, if known	No. of families residing therein	No. of families evicted	Reasons for non-eviction of encroachers, and other remarks
		From	To	Length				
		(km)	(km)	(km)		(Nos.)	(Nos.)	
1	Thiruvananthapuram & Kollam District (jurisdiction of IN Division, Kollam)							
	Pallithura bridge to Kadinamkulam kayal (falling under jurisdiction of IN Section, Kazhakootam)	Ch. 21.05 km (Pallithura bridge)	Ch. 22.55 km (Arattuvazhi Bridge)	1.50	Not assessable, as demarcation not yet completed by Survey Department	56	nil	Demarcation not yet completed. Hence, assessment of encroachments, and resultant evictions required, was not possible.
		Ch. 22.55 km (Arattuvazhi Bridge)	Ch. 26.00 km (Anakkapillai Bridge)	3.45		192	nil	
		Ch. 26.00 km (Anakkapillai Bridge)	Ch. 26.90 km (Channamkara Bridge)	0.90		53	nil	
		Ch. 26.90 km (Channamkara Bridge)	Ch. 27.45 km (Kadinamkulam kayal begins)	0.55		3	nil	
	Kadinamkulam kayal to Anjengo kayal (falling under jurisdiction of IN Section, Chirayinkeezhu)	Ch. 33.63 km (Kadinamkulam Kayal ends)	Ch. 35.23 km (Kadakam Road)	1.60		20	nil	Demarcation not yet completed. Hence, assessment of encroachments, and resultant evictions required, was not possible.
		Ch. 35.23 km (Kadakam Road)	Ch. 36.56 km (Vadakke Arayathuruthu Road)	1.33		32	nil	
		Ch. 36.56 km (Vadakke Arayathuruthu Road)	Ch. 37.29 km	0.73		17	nil	
	Anjengo kayal to Nadayara kayal (falling under jurisdiction of IN Section, Varkala)	Ch. 42.46 km (Anjengo kayal)	Ch. 43.78 km (Thazhevettoor)	1.32		5	nil	Demarcation not yet completed. Hence, assessment of encroachments, and resultant evictions required, was not possible.
		Ch. 50.90 km (Sivagiri)	Ch. 52.20 km (Nadayara)	1.3		40	nil	
		Ch. 52.20 km (Nadayara)	Ch. 55.17 km (Nadayara)	2.97		10	nil	

Sl. No.	Place	Chainage			Extent of encroachment, if known	No. of families residing therein	No. of families evicted	Reasons for non-eviction of encroachers, and other remarks
		From	To	Length				
		(km)	(km)	(km)		(Nos.)	(Nos.)	
			kayal)					
	Kovalam to Pallithura <i>(falling under jurisdiction of IN Section, Thiruvananthapuram)</i>	0.00 km (Kovalam)	21.05 km (Pallithura bridge)	21.05		700	nil	Demarcation not yet completed. Hence, assessment of encroachments, and resultant evictions required, was not possible.
				36.70	TOTAL	1128	nil	
2	Thrissur District (jurisdiction of Addl. Irrigation Division, Thrissur) **							
	Kodungallur	-	-		4.92 Ha	214	nil	Demarcation not yet completed. Hence, assessment of encroachments, and resultant evictions required, was not possible.
	Mukundapuram	-	-		3.44 Ha	78	nil	
	Thrissur	-	-		3.02 Ha	97	nil	
	Chavakkad	-	-		6.6 Ha	443	nil	
	** Data provided by the Division as available in Report for year 2011 of Distt. Collector, Thrissur				TOTAL	832		
3	Malappuram District (jurisdiction of Irrigation Division, Malappuram)					nil	-	No family is to be rehabilitated, but 18 shops are to be removed from the banks of PC Canal in Ponnani Taluk.
					GRAND TOTAL	1960	nil	

Appendix II (3)
Details of Feeder canals improved without adequate width and having bridges of low vertical clearance
(Reference: Paragraph 2.5.3(i);Page:18)

Sl.No.	Division	Name of Feeder canal	Width (m)	No. of bridges with low vertical clearance	Amount (₹ in lakh)
1.	Alappuzha	Kumbalathankarythodu	10.85	-	63.06
2.		Kattachirathodu	1.80	-	76.10
3.		Chandiroorthodu	2	1	37.73
4.		Chethipozhy	8	-	6.50
5.	Kottayam	Lappalam	-	1	195.77
6.		Muttom- Changanacherry canal	-	5	53.85
7.		Chethipuzha	-	1	58.05
8.		Muttar- Neelamperoor canal	-	3	74.61
9.		Kodur river	-	11	110.14
10.		Neendoor canals	-	1	146.99
11.		Kallara canal	-	3	82.62
12.		Chullithodu	-	1	28.91
13.		Appanchira canal	-	2	57.78
14.		Perinjillathodu	-	3	110.66
15.		Valiyathodu	-	4	142.81
16.		Kariyar link canal	-	1	157.88
17.	Thrissur	Shanmugham canal	6 to 8	-	114.50
Total					1517.96

Appendix III (A)
Details of feeder canal where joint inspection was conducted by Audit
 (Reference: Paragraph 2.5.3(ii);Page:18)

Sl. No.	District	Name of FC	Nature of work	Date of completion	Amount (₹ in lakh)	Present Condition (November 2014)
1.	Alappuzha	Madayanthodu	Desilting, removal of water hyacinth	24 October 2008	82.21	Completely covered with water hyacinth. Width and depth of the canal in most places were less than the standard required.
2.	Do	Kumbalathankary	Side protection, deepening	30 July 2009	63.05	Getting thick with water hyacinth. Width is only 10.85 m and depth 0.80 m
3.	Do	Ambalapuzhathodu	Desilting, side protection, and removal of water hyacinth	27 September 2008	65.80	Thickly covered with water hyacinth, low bridges, no navigability
4.	Thrissur	Shanmughamthodu	Desilting, side protection	30 January 2010	114.50	No connectivity throughout the year. A salt water barrier is there between WCC and the Feeder Canal (FC). Narrow canal.
5.	Kottayam	Valiyathodu	Protection of left bank, desilting.	19 July 2014	142.81	Two low railway bridges, work done on one side alone while other side of Kaduthuruthy bridge is shallow, full of dirt. Water weeds are fastly growing in the recently improved area.
6.	Do	Perinchillathodu	Side protection and desilting	19 January 2013	110.66	Thickly covered with water hyacinth and waste thrown in to the FC.
7.	Do	Mannanam-Chuzhalykkuzhy	Deepening	31 August 2011	115.94	Three km towards Mannanam was full of water weeds, rock preventing navigability.
TOTAL					694.97	

Appendix . III(5)
Details showing delay in repair of barges and their disposal
(Reference: Paragraph 2.6.1; Page:22)

Sl. No.	Barge and year of construction	Withdrawal from service	Details of action taken after withdrawal of the vessel from service	Ultimate impact
1	Bhavana, 1992	June 2009	Estimates for dry dock repair were prepared in June 2009 (₹18.06 lakh), and re-estimated in December 2011 (₹58.09 lakh) and in June 2012 (₹129 lakh) but repair was not carried out.	After withdrawal from service, the vessel remained idle for 3.5 years and later found in severely corroded condition. Finally, it became unviable for repair and was disposed of in December 2012, for ₹15.09 lakh
2	Aiswarya	June 2009	Estimate for dry dock repair was prepared in June 2009 (₹17.51 lakh). But repair was not carried out.	After one year, the vessel was found in severely corroded condition. Disposed of in September 2011 for ₹30 lakh.
3	Bhagya, 1991	January 2011	Estimates for dry dock repair were prepared and approved by Board of Directors frequently since December 2010 (₹22.67 lakh). Finally repaired at a cost of ₹78 lakh and released in August 2012.	On account of idling of barge for long time without repair, the quantum of steel replacement increased by 29 MT which led to additional expenditure of ₹55.33 lakh.

Appendix III (6)

The details of extent of EFL area notified by Forest Department
(Reference: Paragraph 3.1; Page:27, 29)

Extent of EFL area

Sl. No.	District	Division	Total Notified	
			No. of bits	Extent (Ha)
1	Kollam & Thiruvananthapuram	Thiruvananthapuram	55	929.33490
2	Kollam	Achencovil	1	133.05090
3	Kollam	Punalur	1	15.71000
4	Kollam	Shendurney (Wild life)	4	35.43900
5	Kollam	Thenmala	3	45.45320
6	Idukki	Munnar	14	898.01250
7	Idukki	Marayur	75	248.74000
8	Idukki	Kottayam	89	265.06737
9	Thrissur	Chalakydy	3	4.56200
10	Thrissur	Thrissur	19	75.48019
11	Palakkad	Mannarkkad	54	713.04420
12	Palakkad	Nenmara	140	1,417.69070
13	Palakkad	Palakkad	289	3,060.80693
14	Palakkad & Malappuram	SVNP (Wild life)	8	114.45000
15	Malappuram	Nilambur North	25	948.05070
16	Malappuram	Nilambur South	13	298.93700
17	Kozhikode	Kozhikode	104	1,544.99140
18	Kannur & Kasargod	Kannur	75	1,154.17850
19	Wayanad	Wayanad North	74	903.54010
20	Wayanad	Wayanad South	65	2,098.62577
21	Wayanad	Wayanad (Wild Life)	1	5.23058
		Total	1,112	14,910.39594*

* Out of the total 14910.39 Ha of the notified EFL area, 14,905.17 Ha was notified w/s 3 of EFL Act and an extent of 5.23 Ha (Serial No.21) was notified w/s 4 till July 2015.

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Appendix III (A)
Details showing delay in notifying as EFL in respect of proposals received in
Custodian's Office
(Reference: Paragraph 3.5.2;Page:30)

Sl. No.	Division	Date of receipt of proposal	Area (in Ha)	Delay as on 31 December 2015 (in years)	Reason for delay
1	Nenmara	27.11.2008	0.9120	7	Sample plot details sought from sub office
2	Palakkad	20.05.2010	12.9800	5.5	Report sought from CCF (Eastern Circle)
3	Thrissur	08.10.2010	2.1034	5	Sample plot details sought from sub office
4	Palakkad	23.12.2011	7.6100	4	Sample plot details sought from sub office
5	Palakkad	20.11.2012	2.1450	3	Court Stay
6	South Wayanad	31.12.2013	6.0000	2	Sample plot details sought from sub office
7	Nilambur South	05.03.2014	1.9230	1.8	Sample plot details sought from sub office
8	Thrissur	25.03.2014	0.6072	1.8	Sample plot details sought from sub office
9	Nilambur North	04.06.2014	4.0480	1.5	Sample plot details sought from sub office
10	Kozhikode	30.06.2014	6.8790	1.5	Under enquiry by Custodian
11	Mannarkkad	28.10.2014	21.2120	1	Sample plot details sought from sub office
12	Mannarkkad	28.10.2014	4.8562	1	Sample plot details sought from sub office
13	Palakkad	12.11.2014	0.3346	1	Sample plot details sought from sub office
14	Thrissur	22.11.2014	2.5334	1	Sample plot details sought from sub office
15	Marayoor	27.11.2014	79.5000	1	Sample plot details sought from sub office
16	Palakkad	06.03.2015	6.0703	0.8	Sample plot details sought from sub office
17	Nenmara	20.06.2015	2.8210	0.5	Sample plot details sought from sub office
18	Nilambur North	09.12.2015	0.6550	-	Sample plot details sought from sub office
Total			163.1901		