

CHAPTER I
ECONOMIC SECTOR
(OTHER THAN STATE PUBLIC SECTOR UNDERTAKINGS)

1.1 Introduction

The findings based on audit of State Government units under the Economic Sector are featured in this chapter.

During 2015-16, against a total budget provision of ₹ 3,004.23 crore, a total expenditure of ₹ 2,364.25 crore was incurred by 18 departments under Economic Sector. The Department-wise details of budget provision and expenditure incurred there against are shown in the following table.

**Table No. 1.1.1 Budget Provision and Expenditure of
Departments in Economic Sector**

(₹ in crore)

Sl. No.	Department	Budget Provision	Expenditure
1	Command Area Development Authority	177.24	104.27
2	Agriculture		
3	Sericulture	28.24	27.72
4	Economic and Statistics	16.08	10.70
5	Commerce and Industries	87.29	71.01
6	Co-operation	21.49	16.75
7	Fisheries	29.69	26.57
8	Horticulture and Soil Conservation	85.20	58.75
9	Veterinary and Animal Husbandry	95.12	65.42
10	Science and Technology	4.75	2.71
11	Tourism	79.53	77.58
12	Forest Department (including Environment)	184.98	122.34
13	Irrigation and Flood Control	304.75	167.07
14	Minor Irrigation	88.47	75.24
15	Public Works	789.40	590.51
16	Power	708.98	692.40
17	Public Health Engineering	272.26	224.48
18	Information Technology	30.76	30.73
Total		3,004.23	2,364.25

Source: Appropriation Accounts

Besides, the Central Government has been transferring a sizeable amount of funds directly to the implementing agencies of the State Government for implementation of various programmes of the Central Government. During 2014-15, out of ₹ 124.75 crore directly released to different implementing agencies, ₹ 79.18 crore was under Economic Sector. The details are shown in *Appendix 1.1*.

1.1.1 Planning and conduct of Audit

Audit process starts with the assessment of risks faced by various departments of Government based on expenditure incurred, criticality/complexity of activities, level of delegated financial powers, assessment of overall internal controls, etc.

After completion of audit of each unit, Inspection Reports (IRs) containing audit findings are issued to the heads of the departments. The departments are requested to furnish replies to the audit findings within one month of receipt of the IRs. Whenever replies are received, audit findings are either settled or further action for compliance is advised. The important audit observations arising out of those IRs are processed for inclusion in the Audit Report of the Comptroller and Auditor General (C&AG) of India

Audits were conducted during 2015-16 involving expenditure of ₹ 4,049.36 crore including expenditure of ₹ 3,722.53 crore of previous years of the State Government under Economic Sector as shown in **Appendix 1.2**. This chapter contains two Performance Audits viz.; “Implementation of Accelerated Irrigation Benefits Programme” and “Implementation of Schemes for Flood Control and Flood Forecasting” and three compliance audit paragraphs as discussed in the succeeding paragraphs.

PERFORMANCE AUDIT

**IRRIGATION AND FLOOD CONTROL DEPARTMENT,
MINOR IRRIGATION DEPARTMENT AND
COMMAND AREA DEVELOPMENT AUTHORITY**

1.2 Performance Audit on Implementation of Accelerated Irrigation Benefits Programme

Accelerated Irrigation Benefits Programme (AIBP) was launched by Government of India (GoI) during 1996-97 for providing loan assistance to the States for accelerating the implementation of large irrigation and multipurpose projects which were beyond the resource capability of the States or were in advanced stage of completion. To create additional irrigation potential, this was later extended to surface water Minor Irrigation (MI) Projects in Special Category States (North Eastern States and Hilly States of Himachal Pradesh, Sikkim, Jammu and Kashmir, Uttaranchal and projects benefiting KBK¹ districts of Orissa) from 1999-2000 onwards. In addition to loan assistance, a grant component was introduced in the programme from April 2004. Government of Manipur was provided assistance of ₹ 1,696.15 crore under AIBP since its inception till March 2016 for implementation of major, medium, and minor irrigation projects including ₹ 724.20 crore provided during the Performance Audit period (2011-16).

Highlights

- *As of March 2016, against the targeted creation of irrigation potential of 43,783 ha in respect of the sampled projects, only 25,709 ha of irrigation potential was created.*

(Paragraph 1.2.8.5)

- *Initial project cost of Thoubal and Dolaithabi projects have shot up by about 36 and 27 times respectively. Similarly, there was time overrun to the extent of 29 and 19 years for Thoubal and Dolaithabi projects respectively.*

(Paragraph 1.2.9.1(A))

- *The State Government had to pay penal compensation of ₹ 6.83 crore for using 38.53 ha of non-forest land and 35 ha of forest land before obtaining forest clearance for Thoubal Multipurpose Project.*

(Paragraph 1.2.9.1(B))

- *In respect of Thoubal and Dolaithabi projects cost escalation of ₹ 54.62 crore was paid to the contractors without proper justification.*

(Paragraph 1.2.10.1)

¹ Koraput, Bolangin and Kalahandi.

- *Due to lack of proper planning and coordination, the Department incurred avoidable expenditure of ₹ 2.33 crore.*

(Paragraph 1.2.10.2)

- *Purchase of cement without tender resulted in extra expenditure of ₹ 4.01 crore.*

(Paragraph 1.2.10.5)

- *An expenditure of ₹ 1.29 crore was incurred without provision for canal/gates/shutter to deliver irrigation water to the command areas.*

(Paragraph 1.2.11.3)

- *The structures such as diversion box, check gates to ensure delivery and sharing of water were not constructed though provided in the DPR/estimate under Command Area Development.*

(Paragraph 1.2.11.5)

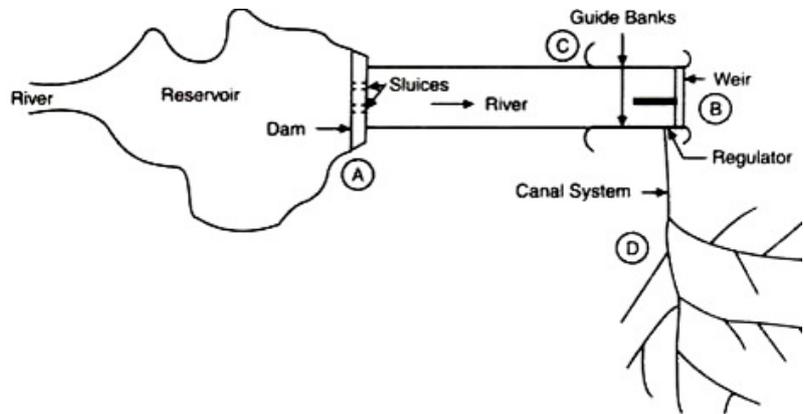
- *AIBP fund amounting to ₹ 47.36 crore was diverted for execution of unapproved works, payment of Muster Rolls wages, Work Charged establishment salaries, purchase of vehicle etc.*

(Paragraph 1.2.12.5)

1.2.1 Introduction

Irrigation is the system under which a controlled amount of water is supplied to agricultural field through a network of major and minor canals from rivers.

A typical sketch of the flow irrigation system is shown in the figure alongside which comprises of (A) Storage works, (B) Diversion works, (C) River training works and (D) Distribution system.



Storage work comprises a reservoir created by constructing a dam across the river. In the body of the dam a spillway is provided to pass down the flood flow safely. Sluices and outlets are provided to release the water for irrigation purposes. Generally, a diversion work, also called headwork, is provided across the river below the dam in the vicinity of irrigable area. A weir or barrage with its constituent parts raises the water level in the river. A regulator diverts a measured quantity of water into the canal system. In order to guide the river flow in proper direction and to protect the river course, some sort of river training work is constructed at the site of the head works.

Once the measured quantities are diverted in the canal, irrigation water is carried to the fields by a network of big and small irrigation canals. The network of canals is called canal system and is made up of main, branch, distributary canals and field channels.

Accelerated Irrigation Benefits Programme (AIBP) was launched in 1996-97 for providing loan assistance to the States for accelerating the implementation of large irrigation and multipurpose projects which were beyond the resources capability of the States or were in advanced stage of completion. The loan assistance was extended to minor surface irrigation schemes of States of North-East and Hilly States from the year 1999-2000 onwards. In addition to Central Loan Assistance (CLA), grant component was introduced in the programme with effect from April 2004.

In Manipur, as per plan the total irrigable areas proposed to be covered under AIBP projects was 114.3 thousand hectare (ha). Against this, Irrigation Potential created till March 2016 stood at 88.7 thousand ha of which 59.2 thousand ha is being utilised.

Prior to introduction of AIBP, the Command Area Development Programme launched (December 1974) by Government of India (GoI) was in operation with the aim to improve irrigation potential utilisation and optimise agricultural production from irrigated land through efficient water management. The major components of the programme are namely, construction of field channels, field drains, correction of system deficiencies, and enforcement of *warabandi*². The programme was renamed as Command Area Development and Water Management Programme (CAD&WMP) in 2004 and was to be implemented in a holistic manner *pari-passu* with irrigation projects under AIBP so that irrigation potential created (IPC) gets utilised soon after its creation. The main components of the CAD&WMP are On-Farm Development works, construction of Field channels and Intermediate and Link Drains. The cost of works under CAD&WMP is shared between the Centre and the State in the ratio of 50:50.

1.2.2 Organisation set-up

The organisational set-up of the three Departments responsible for implementation of irrigation projects and command area development and water management projects are as shown below.

- Irrigation and Flood Control Department (IFCD) implements Major and Medium Irrigation Projects in the State. The Additional Chief Secretary (IFCD) is overall in-charge of IFCD. The Chief Engineer is the Head of the Department and he is assisted by two Additional Chief Engineers, four Superintending Engineers and thirteen Executive Engineers.
- Minor Irrigation (MI) Department implements Minor Irrigation Projects in the State. The Commissioner (MI) is the overall in-charge

² Rotational method for release of irrigation water.

of the Minor Irrigation Department. The Chief Engineer is the head of the Department and he is assisted by one Superintending Engineer and four Executive Engineers.

- Department of Command Area Development Authority (CADA) is responsible for implementing CAD&WMP in the State. The Commissioner (CADA) is the overall in-charge of the Department. The Additional Chief Engineer is the head of the Department and he is assisted by one Superintending Engineer and three Executive Engineers.

1.2.3 Audit Objectives

The objectives of the Performance Audit were to assess whether:

- Planning process of the projects was systematic;
- Financial management was economical and effective;
- Projects were implemented timely to generate desired benefits and completed within the stipulated time; and
- Monitoring mechanism and evaluation system were in place and were effective.

1.2.4 Scope of Audit

During the period 2011-16, a total of 358 projects (Major, Medium and CAD&WMP) were taken up under AIBP funding. The Performance Audit was carried out during April to September 2016 covering one Major, one Medium, eleven Minor and ten Command Area Development and Water Management projects. The projects were selected using Simple Random Sampling without Replacement (SRSWOR) method. Details of the sampled projects are given in *Appendix 1.3*.

1.2.5 Audit Methodology

The Performance Audit commenced with an Entry Conference (April, 2016) with the senior officials of the three implementing Departments wherein the audit objectives, scope of audit, audit methodology and audit criteria were discussed. During the course of audit, scrutiny of the documents of the sampled offices was done and responses to audit observations were collected. Joint physical inspections of sampled projects were carried out wherever possible and photographic evidences were taken to substantiate the audit findings. The Draft Report was issued to the departments (October 2016). Audit findings were discussed with officers of the departments in an Exit Conference (November 2016) and their views, wherever available, have been incorporated in the Report.

1.2.6 Audit Criteria

Audit findings were benchmarked against the following:

- AIBP Guidelines;
- Guidelines issued by Central Water Commission (CWC) for preparation of Detailed Project Reports (DPRs);
- DPRs of sampled projects;
- Other circulars/instructions issued by the Ministry of Water Resources (MoWR), CWC and State Government; and
- General Financial Rules, 2005 and Central Public Works Department Works Manual.

1.2.7 Acknowledgement

Indian Audit and Accounts Department (IA&AD) acknowledges the cooperation extended by the State Government in providing necessary information and records to Audit.

Audit Findings

The findings of the performance audit on the implementation of the AIBP are discussed in the succeeding paragraphs.

1.2.8 An overview of Target and Achievement of schemes

As on March 2016, the total Irrigation Potential (IP) created in the State was 88.67 thousand ha out of which only 59.19 thousand ha was utilised. The IP created in the sampled projects was 25.70 thousand ha out of which 10.81 thousand ha of IP was utilised. As the name suggests, CAD does not involve creation of additional irrigation potential but is associated with development of command areas of irrigation projects in order to fully utilise the IP created through integrated and co-ordinated approach of efficient water management.

Audit findings on the examination of AIBP projects are discussed below.

1.2.8.1 Major Irrigation Project

Thoubal Multipurpose Project (TMP), was approved (May 1980) by the Planning Commission at a cost of ₹ 47.25 crore. The objectives of the project were namely, creating annual irrigation potential of 33,449 ha, providing raw water for water supply facilities of 10 MGD³ and generating 7.5 MW⁴ of power. The project was scheduled to be completed in 1987. As on date of audit (September 2016), the project cost and completion date had been revised five times. The fifth revised cost estimates of ₹ 1,694.27 crore was approved

³ Millions of Gallons per Day.

⁴ Mega-Watt.

and accorded investment clearance (February 2014) by the Planning Commission with the condition that the project shall be completed by March 2016. The scope⁵ of the project was also revised in the fifth revised estimate with inclusion of additional 1,161 ha of Irrigation Potential area.

The expenditure under the project stood at ₹ 1,390.09 crore at the end of March 2016.

1.2.8.2 Medium Irrigation Project

Dolaithabi Barrage Project (DBP) was approved by the Planning Commission (1992) at an estimated cost of ₹ 18.86 crore with the objective of creating annual irrigation potential of 7,545 hectares. With schedule target date of completion by 1997, project cost had been revised four times (₹ 508.48 crore in 2013). Though the Technical Advisory Committee (TAC) of the Central Water Commission had approved the fourth revised cost estimate, investment clearance from the Ministry of Water Resources (MoWR) was awaited (September 2016). The expenditure of the project as on March 2016 stood at ₹ 374.60 crore.

Both these projects were included in the list of priority projects by MoWR and targeted to be completed by March 2017.

1.2.8.3 Schemes under Minor Irrigation Department

The Minor Irrigation Department had taken up 267 minor irrigation schemes under AIBP during 2011-16 at a total estimated cost of ₹ 316.24 crore as shown in the following table.

Table No. 1.2.1 Details of Minor Irrigation schemes

Project Groups	Year of Approval	Estimated cost (₹ in crore)
165 MI Schemes	2009-10	145.87
102 MI Schemes	2013-14	170.37
267 MI Schemes		316.24

(Source: Departmental figures)

Out of the 267 Minor Irrigation Project, 11 were selected for test check.

1.2.8.4 Schemes under Command Area Development and Water Management Programme

Under the Command Area Development and Water Management Programme (CAD&WMP), the State Government was provided central assistance of ₹ 29.40 crore for implementation of various projects during 2011-16. Ten projects were selected for test check under Thoubal Project (Ph-II), Cluster 21, 28 and 37 MI Schemes.

⁵ Additional component for construction of 16.4 km long Water Transmission System for supply of 10 MGD of Drinking water to Water Treatment Plant of Public Health Engineering Department at Chingkheiching and additional irrigation in enroute command of 1161 ha with an estimated cost of ₹ 290.22 crore.

1.2.8.5 Status of Irrigation Potential targeted to be created, actually created and utilised

As of March 2016, against the targeted creation of irrigation potential of 43.78 thousand ha in respect of the sampled major irrigation project, medium irrigation project and minor irrigation projects, only 25.70 thousand ha of irrigation potential was created with an overall achievement of only 59 per cent. Out of 25.70 thousand ha of irrigation potential created, only 10.81 thousand ha (42 per cent) of irrigation potential was being utilised which is only 25 per cent of the total irrigation potential to be created. The details are as shown in the following table.

Table No. 1.2.2 Irrigation potential targeted and achieved (major, medium and minor irrigation projects)

Particulars	Unit	Targeted (Ha)	Achieved (Ha)	Achievement Per cent	Remark
Thoubal Multipurpose Project	Hectare	35,160	21,260	60%	Major Irrigation Project
Dolaithabi Barrage Project	Hectare	7,545	3,500	46%	Medium Irrigation Project
11 sampled MI schemes	Hectare	1078	949	88%	Minor Irrigation Projects
Total		43,783	25,709	59%	

The delays were attributed to lack of proper planning, issues relating to land acquisition, provision of insufficient fund in the State Plan, short release of GoI share due to non-provision of State matching share and law and order problems which are discussed in the succeeding paragraphs.

1.2.9 Planning process

1.2.9.1 Deficiencies in planning of Major and Medium Irrigation Projects

A. Perspective Plan and Annual Plans not prepared

Preparation of perspective plan and annual plans are required for systematic implementation of any programme. However, Audit noticed that perspective plan and annual plans were not prepared for implementation of AIBP in the State. The physical and financial targets were fixed in an *ad hoc* manner while submitting the proposals for release of central assistance to the MoWR. The physical and financial status of the Thoubal Multipurpose Project and the Dolaithabi Barrage Project as on March 2016 are as shown in the following table.

Table No. 1.2.3 Details of original cost and revised cost

(₹ in crore)

Name of Project	Year of Start	Estimated cost		Scheduled date of completion		Time over run as on 2016 (in Years)	Total expenditure (March 2016)
		Original	Revised	Original	Revised		
Thoubal	1980	47.25	1,694.27	1987	2016-17	29	1,390.09
Dolaithabi	1992	18.86	508.48	1996-97	2016-17	19	374.60
Total		66.11	2,202.75				1,764.69

Source: Departmental figures

Initial project cost of Thoubal Multipurpose Project was ₹ 47.25 crore and for Dolaithabi Barrage Project was ₹ 18.86 crore which have been increased by about 36 and 27 times. As on the date of Audit (April 2016) the time overrun to the extent of 29 years for Thoubal Multipurpose Project and 19 years for Dolaithabi project. Non-completion of these projects even after many revisions of cost and target date for completion is an indication of lack of proper planning by the State Government.

The Department accepted the fact that perspective plan and annual plans for systematic implementation of AIBP projects were not formulated.

B. Delay in obtaining forest clearance

As per Forest (Conservation) Act, 1980, if forest land is to be diverted for non-forest purposes, the approval of the Central Government must be taken.

Planning Commission accorded investment clearance for Thoubal Multipurpose Project in May 1980, for which a total of 595 ha of forest land were to be diverted. The first stage forest clearance for the above forest land was accorded by the Ministry of Environment and Forest in January 2010, almost 30 years after the investment clearance for the project. The final forest clearance (December 2014) took another five years. On this being pointed out, the Divisional Officer of Thoubal Project Division-I stated that the project was approved (May 1980) by the Planning Commission before enactment of the said Act. Upon enactment of the said Act, the State Government applied to the Ministry of Environment and Forest and there were delays on the part of the Ministry in granting the forest clearance.

The reply is not tenable as the State Government took eight years after enactment of the Act/investment clearance for the project to apply for forest clearance (January 1988) without giving information on Environmental aspect and Environmental Action plan. The State Government took another nine years to submit (February 2007 and again October 2009) details of environment aspect and environmental action plan. Thus, the State Government was largely responsible for the delays in getting forest clearance. On account of the avoidable delay in obtaining forest clearance, the State had to pay a penalty of ₹ 6.83 crore for using 38.53 ha of non-forest land and 35 ha of forest land before obtaining forest clearance.

C. Delay in land acquisition

Under Thoubal Multipurpose Project, land has to be acquired from land owners of five villages for construction of Heirok Branch Canal (21.28 km in length) which is one of the two branch canals of the Left Main Canal of the Project. Government of Manipur sanctioned (February 2013) an amount of ₹ 2.81 crore to the Deputy Commissioner, Thoubal towards payment of compensation to the affected *pattadars* of these villages so as to expedite construction of the canal. The Deputy Commissioner, Thoubal had reportedly deposited (February 2015) the sum to the District and Session Judge, Thoubal District. However, Audit scrutiny revealed that the amount was still lying unutilised/ undisbursed to the affected land owners (May 2016) indicating that land acquisition has not been completed resulting in non-construction of the Heirok Branch canal. Also, land (9.98 ha) required for Lausi Pat Distributary, Heirok Distributary and Thoubal Right Main Canal from RD 25.935 km to RD 28 km had not been acquired.

The Divisional Officer of Thoubal Project Division-IV accepted the fact and stated that the amount of ₹ 2.81 crore had been lying unutilised for over three years as the landowners refused to accept the compensation amount on the ground that the rate of compensation offered was too low, and another section of farmers did not want to spare their land for canal construction doubting the success of the project. Further, the Divisional Officer stated (June 2016) that all-out efforts are being made to settle the problem of land acquisition required for construction of the Heirok Branch Canal.

As such, the target of providing irrigation to the irrigable command area of 5064 hectares of Heirok Branch Canal is very remote thereby delaying the intended benefits.

Similarly, out of the total estimated quantity of 293.60 acre of land required for canal system for Dolaithabi Barrage Project, 172.40 acre (59 *per cent*) only had been acquired till date (July 2016). As such, 121.20 acre of land was to be acquired.

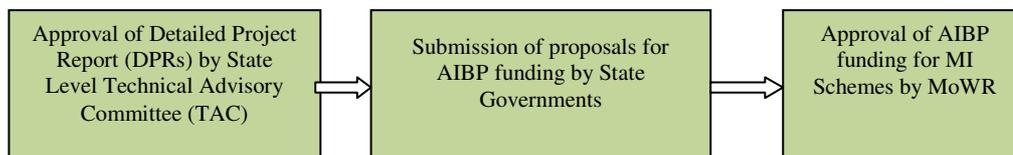
The Divisional Officer, Dolaithabi Barrage Division-II stated (August 2016) that detailed reply would be furnished in consultation with higher authorities. The reply is awaited (January 2017).

As the land acquisition was yet to be completed, the completion of Thoubal and Dolaithabi Projects by March 2017 as per revised target is very remote.

Thus, due to inadequate planning for systematic implementation of the projects, delay in obtaining forest clearance and delay in land acquisition in major and medium irrigation projects, the primary objective of AIBP for speedy development of irrigation potential and its eventual utilisation for the benefits of farmers was not achieved. As a result, against the total target for creation of irrigation potential of 43.78 thousand ha, only 25.70 thousand ha (59 *per cent*) of irrigation potential had been created out of which only 10.81 thousand ha (42 *per cent*) was being utilised as on March 2016.

1.2.9.2 Deficiencies in planning of Minor Irrigation Schemes

The processes for approval of MI Schemes under AIBP is as below.



The following shortcomings were noticed in planning of the MI Schemes:

- The schemes were designed without undertaking proper survey and investigations for selection of sites;
- Detailed Project Reports of the proposed schemes were not prepared for getting approval of the State Technical Advisory Committee (TAC) and the MoWR;
- The schemes were formulated on the basis of the proposals received from the elected members of the State Legislature and submitted to the MoWR in the form of concept papers⁶ for funding under AIBP without undertaking any feasibility study;
- The schemes were approved by a Work Advisory Board and not by TAC; and
- The Benefit Cost Ratios (BCRs) of the schemes were not calculated based on validated and verifiable data. State Agriculture Department was not consulted with regards to the proposed cropping patterns and the values of agricultural production under pre-project conditions and after completion of the projects/schemes.

The Department stated that with the inclusion of AIBP under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), District Irrigation Plans are now prepared after proper survey and investigations. The Department claimed that a Superintending Engineer from Meghna Circle from CWC attended the TAC Meetings which was not supported by any documents. Further, it was stated that the BCRs were calculated based on the old data taken from the Agriculture Department. The reply is not acceptable as the BCRs were to be calculated with relevant and up-to-date data from the Agriculture Department.

Thus, it was evident that the planning process of the minor irrigation schemes in the State was not comprehensive rendering the effectiveness of the implemented schemes doubtful.

1.2.9.3 Deficiencies in planning Command Area Development schemes

Audit observed that none of the implementing divisions had prepared a comprehensive/long term perspective plan for execution of projects under

⁶ A brief description of the scheme indicating Cultivable Command Area, Benefit Cost Ratio, components of the schemes etc.

Command Area Development (CAD). There was no evidence for undertaking any survey and investigation for preparation of the project reports. The year-wise targets for various CAD activities were fixed in an adhoc manner while submitting proposals for release of central assistance and were not in line with the targets projected in the Memorandum of Understanding (MoU).

In the absence of a comprehensive plan and survey, proper prioritisation for CAD activities was not ensured. Also, the preparation of detailed project reports without any survey and investigations rendered the project reports unrealistic.

1.2.10 Implementation of Major and Medium Irrigation projects

1.2.10.1 Irregular payment of cost escalation - ₹ 54.62 crore

As per Clause 10(CC) read with Clause 2 and Clause 5 of the agreement between the Department and the contractors, the contractor shall be compensated for increase in prices of materials and or wages of labour required for execution of the work subject to fulfilment of the following conditions:

- Compensation for escalation in prices shall be available only for the work done during the stipulated period of the contract including such period for which the contract is validly extended by the Engineer-in-charge.
- If the contractor desires an extension of time on grounds of his having being unavoidably hindered in its execution of work or any other ground, he shall apply in writing to the Engineer-in-charge within thirty days of the date of hindrance. The opinion of the Engineer-in-charge as to whether the ground(s) is reasonable and extension of time is necessary or proper shall be final and shall authorise accordingly.
- No compensation is contemplated to be imposed on the contractor for failure to commence or finish the work after the proper date or for failure to adhere to the time schedule submitted by the contractor and accepted by the Engineer-in-charge.

Audit scrutiny of cases of payment involving cost escalation brought out the following irregularities.

A. Thoubal Multipurpose Project (TMP)

Under TMP, work of “Construction of Spillway, Intakes and Water Conductor System” was awarded (October 1989) to M/S Ansal Properties and Industries Limited, New Delhi at a tendered amount of ₹ 24.67 crore stipulated for completion by October 1994. The sub-work of gates and hoisting arrangements was awarded separately (July 2006) at a cost of ₹ 9.90 crore stipulated for completion by December 2007.

The works were yet to be completed and the Divisional Officer had been granting provisional time extensions periodically. Meanwhile, cost escalation amounting to ₹ 12.31 crore was paid merely on the basis of the provisional extension of time. Similarly, with regard to the construction of the earth dam, cost escalation of ₹ 33.38 crore was paid to the firm during 2011-16 without valid time extension.

As pre agreement clauses *ibid*, if the delay was on the part of the contractor, liquidated damage should be levied from the contractor instead of giving cost escalation. In this case, inspite of the Engineer's repeated request for application, the contractor did not apply for time extension nor did the Department assess whether the delay was attributable to the contractor. Cost escalations were paid for works executed beyond the stipulated date of completion without any valid and justified time extension rendering undue benefit to the contractor. Moreover, site records/hindrance register etc., were not maintained for proper establishment of reasons for delay in completing the projects.

Thus, there was a payment of cost escalation to the contractors amounting to ₹ 45.69 crore without proper grant of extension of time.

B. Dolaithabi Barrage Project

As per Clause 21 of the agreement, the tender accepting authority can rescind the contract on account of subletting or assigning the contract to another party without prior permission of the authority who accepted the tender. Sub-letting may be permitted only in exceptional cases and for recorded reasons as to why contractor himself cannot directly run the contract when:

- The sublet contractor is of the same or higher capacity or class as the original contractor;
- The contractor is not subletting the work for earning a middle man's profit;
- The Government will not be put to any loss on this account and that no risk is involved etc.

Construction of main barrage of Dolaithabi Barrage Project was awarded (November 1996) to M/S R.P.N.N Ltd, Faridabad, Haryana at a tendered amount of ₹ 31.47 crore stipulated for completion by December 2000. On the contractor's application (November 2000), time extension was given up to March 2003 only. In January 2003, the contractor was served show cause notice for tardy execution of the work. Neither was there any record of the contractor's response to the notice nor evidence of follow-up by the Department. In February 2005 the Department and M/S R.P.N.N Ltd. agreed for completion of the construction of the main barrage by February 2007. However, the contractor applied for further extension of time for the period from March 2007 to March 2010. As on date of audit (September 2016), construction of the main barrage was not completed. Though the contractor had not applied for time extension, the contract was kept alive through provisional time extensions till November 2016.

It was noticed from the minutes of the meeting (April 2011) of the then Commissioner (IFCD) that the contractor M/S R.P.N.N Ltd. did not have its own resources and was executing the work through sub-contractors on commissions ranging from 8 per cent to 17 per cent and that there were inordinate delays by the sub-contractors in executing the works. In spite of knowing these facts, the Department did not initiate any action to terminate/rescind the contract as per contract clause. Rather, cost escalations amounting to ₹ 8.93 crore was paid during 2011-16 based on provisional extensions of time.

The Department has not furnished any reply (January 2017).

1.2.10.2 Avoidable expenditure in execution of works - ₹ 2.33 crore

Para 2.3 of Indian Standard (IS) 4701-1982-Code of Practice for Earthwork on Canal stipulates that prior to the commencement of canal work, all relevant data shall be collected and drawings prepared showing the location of the excavation and embankments reaches separately. Further, as per Para 8.1 and 9.1 of the IS code *ibid*, all excavated materials within economic lead, suitable for construction of canal embankment should be used for its construction and when canal excavation does not furnish sufficient suitable material for embankments, additional material required may be brought from borrow pits.

Audit scrutiny of records of Thoubal Multipurpose and Dolaitabi Barrage Projects brought out the following deficiencies.

The construction of Thoubal Right Main Canal from RD 11.720 km to RD 12.00 km awarded in November 2002 included excavation and disposal of 2,44,075.94 cum of hard dense soil whereas canal construction from RD 12 km to 14 km awarded in November 2006 included earthwork in banking of 1,69,394.625 cum of hard dense soil. The excavated earth from RD 11.720 km to RD 12.00 km was disposed at a distance of 2 km away from the work site. Had proper planning been done, the works could have been taken up simultaneously and the excavated earth could have been utilised for banking in RD 12 km to 14 km. However, due to lack of proper planning, the Division took up the works at different points of time and the excavated earth was not utilised for banking.

Had 1,69,394.625 cum of the hard dense soil excavated in between the stretch from RD 11.720 km to RD 12 km been utilised for earthwork in banking for the canal construction between RD 12 km to RD 14 km, the expenditure could have been restricted to ₹ 41.50 lakh (1,69,394.625 cum X ₹ 24.50⁷) for banking work only as against the actual expenditure of ₹ 2.18 crore (at the rate of ₹ 128.50 per cum including cost of transportation).

Thus, the non-utilisation of excavated earth available within the economic lead for canal embankment, due to lack of proper planning resulted in extra/avoidable expenditure of ₹ 1.76 crore.

⁷ The rate of banking work as worked out by the Department was ₹ 24.50 cum.

The Divisional Officer (TFD) stated that the excavated earth could not be utilised for banking as the works were carried out at different times. However, the reply is not acceptable on the ground that had proper planning been done, the works could have been taken up simultaneously and the excavated earth could have been utilised for banking.

Similarly, in respect of Dolaithabi Barrage Project, the construction of downstream guide wall (Earth work only) for the portions from RD 120 m to RD 160 m and from RD 160 m to RD 250 m had been completed at a total cost of ₹ 94.68 lakh. Both the works were awarded to a single contractor (August 2011) and payment was made in December 2011.

Examination of records revealed that for the portion from RD 120 m to RD 160 m, an expenditure of ₹ 47.66 lakh was incurred for excavation and disposal of 2,1046.31 cum of the earth (hard dense soil) at a distance of 2 km whereas, for the portion from RD 160 m to RD 250 m, 2,1899.93 cum of earth (hard dense soil) was brought for banking purpose incurring at a cost of ₹ 47.02 lakh from a burrow area located at a distance of 2 km. Had the excavated earth from the portion from RD 120 m to RD 160 m (21,046.31 cum) been utilised and the balance quantity of 853.62 cum (21,899.93 – 21,046.31) been brought from the burrow area, the two works could have been executed at the cost of ₹ 37.95 lakh as given in **Appendix 1.4**. This resulted in avoidable expenditure of ₹ 56.73 lakh (₹ 94.68 lakh - ₹ 37.95 lakh).

The Divisional Officer (DBD-I) stated that such extra expenditure would be avoided in future.

Thus, due to lack of proper planning and coordination the Department incurred avoidable expenditure of ₹ 2.33 crore (₹ 1.76 crore + ₹ 0.57 crore).

1.2.10.3 Execution of item of work in excess of the approved quantity and approved rate of DPR resulting in extra expenditure of ₹ 1.13 crore

As per fourth revised DPR of the Thoubal Multipurpose project, the approved quantity and rate for the item of work viz. “P/F 32 mm diameter Anchor Rod fully grouted 8m deep inside the rock and upto development length in concrete as per drawings and direction of the Engineer-in-charge complete” was 1,456 numbers at the rate of ₹ 7,176.20 each.

Examination of vouchers disclosed that the item of work had been executed in excess of the approved quantity and approved rate as shown in the following table.

Table No. 1.2.4 Details of excess quantity and rate over the approved DPR quantity and rate

(Amount ₹ in lakh)

Item	As per approved DPR			Actually executed and paid			Excess amount
	Quantity	Rate/unit (₹/No)	Amount	Quantity	Rate/unit (₹/No)	Amount	
P/F 32 mm diameter Anchor Rod	1,456 Nos.	7,176.20	104.48	2,474 Nos	8,778	217.17	112.69

The executed quantity (2,474 Nos.) of the item of work exceeded the approved quantity to the extent of 1,018 Nos. (2,474-1,456) and the awarded rate of the item per anchor was also in excess to the extent of ₹ 1,601.80 (₹ 8,778 - ₹ 7,176.20) over the approved rate of DPR which resulted in overall extra expenditure of ₹ 1.13 crore.

The Divisional Officer (TPD-II) stated that the increase in quantity of the item from 1,456 Nos. to 2,474 Nos. was due to non-inclusion of the quantity of item for transition zone of the stilling basin due to oversight. The reply is not tenable as the item could have been regularised at the time of the fifth revision of the project. Further the Department remained silent about the execution of the work at higher rates.

1.2.10.4 Improper cost estimate leading to extra committed liabilities of ₹ 20.35 crore for construction of tunnels

Under Thoubal Multipurpose Project (TMP), additional provision was made in the fifth revised estimate for irrigating additional command area of 1161 ha and supplying 10 MGD water to Water Treatment Plant at Chingkheiching through 16.4 km long common water transmission system. The Planning Commission accorded investment clearance (February 2014) to the revised estimate at a cost of ₹ 1,694.27 crore including ₹ 64.86 crore for construction of two tunnels as part of the proposed water transmission system. The approval was given with the condition that the State Government should restrict the expenditure to the approved cost and no additional expenditure beyond the approved cost would be permitted unless a revised estimate was approved following prescribed procedure.

Audit scrutiny of works relating to construction of above tunnels revealed that the works were awarded at a cost of ₹ 87.47 crore against the estimated cost of ₹ 64.86 crore as per DPR i.e. at a higher rate to the tune of ₹ 22.61 crore (35 per cent) as shown in the following table.

Table No. 1.2.5 Details of estimated cost and awarded cost for construction of tunnels

(₹ in crore)

Name of work	Estimated cost as per approved DPR	Work order value	Excess of work order value over approved cost of DPR
TMP, L-E/W (SH: C/o RCC Tunnel from RD 9380 m to 10,220 m for Water Transmission System from Thoubal Dam to Chingkheiching)	17.81	23.09	5.28
TMP, L-E/W (SH: C/o RCC Tunnel from RD 1100 m to 3380 m for Water Transmission System from Thoubal Dam to Chingkheiching)	47.05	64.38	17.33
Total	64.86	87.47	22.61

It was stated that the estimated cost as per approved DPR was framed based on schedule of rates of NF Railways for tunnelling works as no appropriate items of tunnelling work were available in the Manipur Schedule of Rates. Audit noticed that the higher rates adopted were not submitted for approval of CWC/MoWR as per procedure before awarding the work.

The Department stated that:

- The approved rates of railways tunnels included in the DPR could not be adopted in view of the smaller tunnel size;
- The awarded rates were based on the quantum of the Committee on Cost Control of River Valley Projects and Schedule of Rates of Karnataka State;
- The cost estimates for construction of the two tunnels were not properly framed with appropriate items and nomenclature meant for the works of tunnelling due to lack of technical expertise in tunnelling works in the Department.

Thus, due to inclusion of improper cost estimates for construction of tunnels coupled with failure to obtain approval of the CWC/MoWR for the excess cost, the State Government has to bear the extra committed liabilities of ₹ 20.35 crore (90 per cent Central share).

The Divisional Officer of TPD⁸-VI stated that the cost estimates for construction of the tunnels included in the DPR was not correct and further stated that the extra committed liabilities of ₹ 20.35 crore (Central share) would be regularised in the next revision of the project cost.

1.2.10.5 Purchase of Cement at high rate without tender

As per Rule 137 of the General Financial Rules-2005, every authority delegated with the financial powers of procuring goods in public interest shall be responsible and accountable to bring efficiency, economy, and transparency in matters relating to public procurement by following a fair, transparent and

⁸ Thoubal Project Division.

reasonable procedure. The procuring authority should satisfy itself that the price of the selected offer is reasonable and consistent and at each stage of procurement place on record, in precise terms, the considerations which weighed with it while taking the procurement decision. As per agreement, the Department was required to issue cement to the contractors of Thoubal Multipurpose Project and Dolaithabi Barrage Project.

Test check of cement purchase files and vouchers of Thoubal Multipurpose Project and Dolaithabi Barrage Project revealed that the Department purchased 29,670.35 MT of cement at the rate of ₹ 9,100 per MT as shown in the following table.

Table No. 1.2.6 Statement of excess expenditure

Sl. No.	Name of the Project	Quantity ordered (MT)	Procurement rate per MT (in ₹)	Justified rate per MT (in ₹)	Difference amount per MT (in ₹)	Excess expenditure (₹ in Crore)
1	TMP	10,500	9,100	7,750	1,350	1.42
2	DB Project	19,170.35	9,100	7,750	1,350	2.59
Total		29,670.35				4.01

The above purchases were made during October 2011 to October 2013 without any call of tender and without assessing the reasonability of the rate and incurred expenditure of ₹ 9.55 crore. However, after October 2013 cement was procured at the rate of ₹ 6,960 per MT after call of tender and justification of rates.

During the above period of procurement, the maximum Ex-Factory price of cement per MT including excise duty and taxes was around ₹ 4,150 per MT (DGS&D). If the highest bid of ₹ 3,600 per MT for transportation cost of cement obtained in August 2013 is added, the maximum justified rate of cement during October 2011 to October 2013 worked out to ₹ 7,750 per MT (₹ 4,150 + ₹ 3,600). Had open tender been called before the procurement process, 29,670.35 MT of cement could have been obtained for ₹ 22.99 crore (29,670.35 MT x ₹ 7,750 per MT).

Thus, due to lack of floating tender and proper assessment of the prevailing rates before the procurement process, the Department incurred extra/avoidable expenditure of ₹ 4.01 crore.

1.2.10.6 Non-adoption of justified rate resulting in excess payment to contractors - ₹ 1.40 crore

Audit scrutiny of works awarded under TMP (under IFCD) & CAD&WMP (under CADA) revealed the following:

The work of construction of Left Side High Level Road from Louphong to Chadong border from RD 4.265 km to 19.45 km was awarded to seven local contractors during January to March 2014. The work *inter alia* included the item “Earth work in rough excavation in hill cutting neatly dressed in ordinary rock” was awarded at the rate of ₹ 302 per cum which was higher than the

rates as per the Manipur Schedule Rate 2013 (MSR) by ₹ 110.4 per cum for the same item of work. The total volume of the item as per work orders was 41,273.50 cum. One contractor had already been paid for execution of 6,514.70 cum at the higher rate resulting in excess expenditure of ₹ 7.19 lakh. The overall excess expenditure on completion of this whole work (41,269.2 cum) would stand at ₹ 45.56 lakh.

Similarly, in the works for construction of Right Side High Level Road from RD 3.56 km to 13.56 km, award of works at rates higher than the MSR resulted in extension of undue benefits to the contractors amounting to ₹ 30.62 lakh.

Further, examination of records of works under CAD&WMP for construction of 656 Nos. of field channels in respect of Thoubal Multipurpose Project (Ph-II), MI dam at Tendongyang, Pick-up-Weir at Khongampat Khunou, Pick-up-Weir at Uchatampak, Pick-up-Weir at Wangthrok and RLI at Ithai Khunou revealed that the works were awarded at 12 to 39 *per cent* higher than the tendered rates thereby resulting in undue benefit to the contractors to the tune of ₹ 1.02 crore. Further, instances like tenders submitted in open envelopes, tempering of the tender documents such as overwriting of rates offered, opened bidding documents already signed by the contractors without mentioning name of the work, rates offered and signed envelopes, raises doubts on the genuineness of the tender process.

Thus, due to award of works at rates higher than the justified rate, the contractors were given undue benefit to the tune of ₹ 1.40 crore⁹ and also bears liability of ₹ 38.37 lakh¹⁰.

The Divisions stated that detailed reply would be furnished. However, the reply is still awaited (January 2017).

1.2.10.7 Undue benefit to contractor due to non-deduction of forest royalty - ₹ 15.53 crore

As per order of the Government of Manipur (August 1994) royalty on forest produce (stone, sand, earth etc.) at the prescribed rates are leviable for their utilization and are to be credited to the Government account as revenue. In case of contract works, the officer-in-charge should insist upon the documentary evidence indicating the payment of forest royalty for the materials utilised in the work from the contractor failing which the revenue realisable shall be deducted from the part/final bill of the contractor. As per Government notification (January 2011), the rate for forest royalty on earth/clay, stone aggregate and sand were ₹ 15, ₹ 25 and ₹ 20 per cum respectively.

Audit scrutiny of the records of the construction of Earth Dam and other 32 allied activities under TMP revealed that 94.72 lakh cum of earth, 2 lakh cum of stone aggregate and 4.13 lakh cum of sand were utilised during the

⁹ ₹ 7.19 lakh + ₹ 30.62 lakh for IFCD; ₹ 1.02 crore for CADA.

¹⁰ ₹ 45.56 lakh – ₹ 7.19 lakh.

period from 2011-12 to 2015-16. Thus, a total amount of ₹ 15.53 crore was payable by the contractor as forest royalty. However, no documentary evidence for payment of forest royalty by the contractors was produced to Audit. Also, the Divisional Officer (TPD-I) did not deduct the amount from the contractor's bills.

Thus, non-deduction of forest royalty resulted in loss to Government and extended undue benefits to the contractors to that extent.

1.2.10.8 Undue benefit to contractor due to non-recovery of interest on mobilisation advance - ₹ 2.05 crore

The work of "Construction of Earth Dam" for Thoubal Multipurpose Project was awarded (October 1989) to M/S Progressive Constructions Pvt. Ltd., New Delhi at a tendered amount of ₹ 43.98 crore. The cost of the work was revised from time to time. The second revision of rates of the balance work of the dam amounting to ₹ 294.17 crore was signed in 2006. As per additional terms and conditions of the agreement, mobilisation advance should carry a simple interest at the rate of 13 per cent per annum.

Test check disclosed that an advance of ₹ 3.00 crore was paid to the contractor in February 2015. The advance had been fully recovered during the period from July 2015 to March 2016. However, interest amounting to ₹ 21.70 lakh was not recovered which results in extension of undue benefit to the contractor.

Similarly, in respect of Dolaithabi Barrage Project, the work order for construction of Main Barrage was awarded (November 1996) to M/S R.P.N.N Ltd, Faridabad, Haryana at a tendered amount of ₹ 31.47 crore. The contractor was paid ₹ 1 crore as mobilisation advance during the period from February 1997 to September 2000 at the rate of 18 per cent interest per annum.

Test check of the details of recovery of mobilisation advance revealed that a total amount of ₹ 1.12 crore only (Mobilisation Advance - ₹ 1 Crore and Interest - ₹ 0.12 crore) had been recovered during the period from March 1998 to September 2014 as against the total recoverable amount of ₹ 3.17 crore towards mobilisation advance and interest.

The last recovery of mobilisation advance was made in September 2014 and thereafter no recovery has been made. Thus, there was short recovery of interest on mobilisation advance amounting to ₹ 2.05 crore as shown in *Appendix 1.5*.

The Department stated (January 2017) that recovery of interest amounting to ₹ 25.97 lakh had been made from 221st Running Account Bill on the mobilisation advance of ₹ 3.00 crore. On short recovery of ₹ 2.05 crore interest, the Divisional Officer (DBD-I)¹¹ stated (July 2016) that the interest would be recovered from the bills of the contractor. The status of recovery has not been intimated (January 2017).

¹¹ Dolaithabi Barrage Division-I.

Thus, interest on mobilisation advance amounting to ₹ 2.05 crore remained unrealised (January 2017).

1.2.10.9 Award of works without collecting Performance Guarantee Bond

As per Para 20.1 of CPWD Manual 2007, the successful tenderer shall deposit an amount equal to 5 per cent of the tendered and accepted value of the work as performance guarantee to ensure due performance of the contract. The letter for commencement of work shall be issued to the contractor only after he submits the performance guarantee in an acceptable form.

Scrutiny of records of TMP, Dolaithabi Barrage Project and 11 sampled schemes of Minor Irrigation revealed that during the period 2011-16, a total of 1,337 works were taken up at total tendered amount of ₹ 219.29 crore. However, in none of the works performance guarantee amounting to ₹ 10.96 crore (5 per cent of ₹ 219.29 crore) was collected from the successful contractors. The details are as shown in the following table.

Table No. 1.2.7 Statement of works taken up during 2011-16 without collecting Performance Guarantee

Sl. No.	Department	Number of works taken up	Total tendered amount (₹ in crore)	Performance Guarantee @ 5% of tendered amount (₹ in crore)
1	IFCD (TMP)	1254	178.59	8.93
2	IFCD (DB Project)	28	29.55	1.48
3	Minor Irrigation	55	11.15	0.56
Total		1337	219.29	10.96

The award of the works without collecting performance bond amounting to ₹ 10.96 crore resulted in extension of undue favour to the contractors and also compromises the interest of the Government.

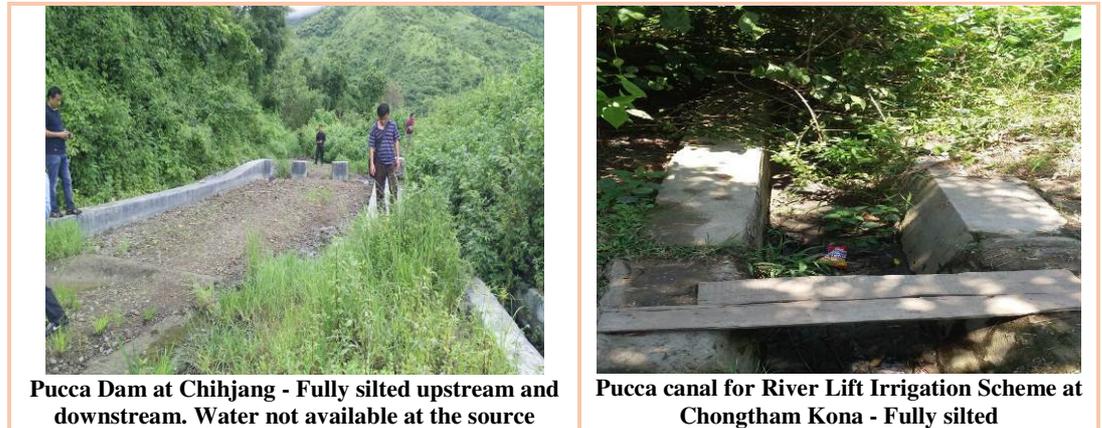
The Department stated that performance bond had not been obtained due to ignorance and the same would be obtained in future while awarding works.

1.2.11 Implementation of Minor Irrigation (MI) projects

The irrigation potential to be created, actually created and utilised in respect of sampled irrigation projects are given in *paragraphs 1.2.8.1 to 1.2.8.5* which shows that only 59 per cent of the irrigation potential targeted to be created was created and of which only 42 per cent is actually being utilised i.e. only 25 per cent of the irrigation potential to be created. Construction and maintenance of field channel and field drains are very important for effective utilisation of water and irrigation potential created. Audit found gaps relating to construction and maintenance of MI and CAD&WMP works including quality controls which are very crucial as discussed in the following paragraphs.

1.2.11.1 Assets not maintained

The created assets are required to be maintained to derive full benefits of the schemes. During joint physical field visits of the sampled MI schemes it was observed that many schemes had lost their capacity due to silting, structural erosion and weed growth etc. Some of the photographs of sampled schemes are shown below.



The Department stated that proposal for funds for providing maintenance and repairs in the revised budget would be submitted to the Government for maintenance of the schemes.

1.2.11.2 Lack of quality control in construction under MI schemes

The useful life spans of the schemes considered at the time of proposals were 50 to 100 years. However, during joint physical verification of sampled MI schemes completed in 2012-13 and many on-going schemes were found damaged as shown below.



The Department stated that the damaged structures would be repaired at the earliest. During the exit conference held in November 2016, the Department stated that the damaged glacies of Pick-up weir at S Mongbung had been repaired at the contractors cost and steps were also being taken up for early repair of other works.

1.2.11.3 Unproductive expenditure due to non-construction of canals under MI schemes

Pick-up-Weir is a barrier across a river that causes water to pool behind the structure and allows water to flow over the top unlike the dam. Unless canal is constructed the pool/pick-up water cannot reach the irrigation field and hence it has a very important significance in the irrigation system.

For the creation and utilisation of irrigation potential, water is required to reach the farmers' fields through the canal system from the pick-up-weirs. Projects approved for the construction of pick-up-weirs alone without the canal systems would not be productive.

Test check of records showed that the schemes/works listed in the following table were executed without any provision for canal/gates/shutter to deliver irrigation water to the command areas.

Table No. 1.2.8 Details of schemes where no canal was planned and constructed

(₹ in lakh)

Sl. No.	Name of scheme	Tendered Amount	Expenditure incurred
1	C/o Pick-up-weir at Salam Khul Thingel	10	8.98
2	C/o Pick-up-weir at UJB School Malom Tuliyaimea	20	19.70
3	C/o Pick-up-weir at Leima Mapa Mera Khong Maril	20	17.44
4	C/o Pick-up-Weir across TNK Senapati and Khebung river at Shekho P/F.	13.16	12.87
5	C/o P/W across Yairao river at Yairali P/F at Purul Atongba village	13.16	13.13
6	C/o P/W across Leparo river to Vudo Thaile P/F, Koide Mathak	13.17	12.13
7	C/o P/W across Iril River at Khamsom Mathak	13.15	9.63
8	C/o P/W across Eyoezo river at Tadubi	17.58	17.54
9	C/o P/W across Barak River at Willong	17.59	17.54
	Total	137.81	128.96

In the absence of water course/canals for conveying irrigation water and discharging to the fields, the very purpose of the scheme was defeated and resulted in unproductive expenditure of ₹ 1.29 crore.

The Department stated that canals could not be constructed due to financial constraints and would be taken up in the next programme or the farmers would construct the same at their own cost. Regarding absence of gates/shutters etc., the Department stated that some of the wood shutters had been damaged by the farmers and some had been repaired. Further, the Department mentioned that unless the farmers inculcate in them the sense of responsibility/ownership and participate in the maintenance of assets, whatever the Government had done will go in vain. For this, training of farmers and training of Water Users Association (WUA) was important, comments on this is given in *paragraph 1.2.11.8 and 1.2.11.9.*



Pick-up-weir at Salam Khul Thingel completed in 2012 with no canal and no gate/shutter (expenditure - ₹8.98 lakh)



Pick-up-weir at UJB School, Malom Tulyaima with no canal and no gate/shutter (expenditure - ₹19.70 lakh)



Pick-up-weir at Leima Mapa Merakhong Maril with no canal and no gate/shutter (expenditure - ₹17.44 lakh)

1.2.11.4 Non-availability of beneficiaries list and poor collection of water tax under Minor Irrigation schemes

As per the decision of the State Cabinet in its meeting held on 24 August 2013 the water rates for irrigation purposes were revised as shown in the following table.

Table No. 1.2.9 Details of water rates for irrigation purposes

Season	Crops	Water rates per hectare (₹)	
		Previous Rates	Revised Rates
Rabi	Paddy-I	150	602
	Wheat	75	305
	Moong, Peas, Mustard	45	184
Kharif	Paddy-II	75	305
	Others	45	184

The water rates were to be increased for subsequent years (applicable from 1st April every year) by 8.5 per cent. The above table indicates that the details of area irrigated under various crops by the schemes are necessary for

collection of water charges. However, no such details were available in the implementing divisions. Moreover, the division did not maintain the details of beneficiaries/farmers benefitted by the schemes.

In all the sampled schemes, good returns were projected and satisfactory benefit cost ratios were also worked out. However, the divisions implementing the sampled schemes did not maintain list of beneficiaries. During the period from 2011-12 to 2015-16, the implementing divisions collected water tax amounting to ₹ 69,000 only. Moreover, in respect of the sampled schemes, water committees and Water Users' Associations (WUA) were not formed till date of audit (September 2016). The Department was not clear as to whether the water tax was to be collected by the Panchayats or by the implementing Department itself as there was no clear cut policy of the State Government regarding the responsibility for collecting water tax.

Thus, due to absence of any clear cut policy on collection of water tax, the collection was negligible and realistic assessment of irrigation potential utilisation based on water tax collected could not be worked out.

1.2.11.5 Deficiencies in construction of Field Channels and Field Drains under CAD

Construction of Field Channels is an important activity under the CAD programme for efficient utilisation of irrigation water. Properly planned, aligned and designed field channels should be constructed from the canal outlet in a manner that each and every field of the outlet command is connected by field channel.

Test check of the physical and financial progress reports of the sampled projects revealed that field channels for 25,206 ha were reported to be constructed against the target of 25,170 ha. However, joint physical verification of the field channels revealed that most of the channels were not constructed in the fields but by the side of the fields. The structures such as diversion box, check gates to ensure delivery and sharing of water were not constructed though provided in the DPR/estimate. Thus, inter-connection of fields of the outlet command was not achieved. Moreover, the farmers of the command areas were not involved in planning and designing of the field channels.

Though there was more than 100 *per cent* achievement in construction of the field channels, a huge gap existed between irrigation potential created and actual utilisation/ actual area irrigated. In respect of the four CAD projects out of ten sampled projects, an area of 24,008 ha was irrigated out of 42,364 ha for which field channels were reportedly created leaving a balance of 18,356 ha of un-irrigated area.

Instances of Field Channels constructed by the side of the fields are shown below.



1.2.11.6 Suspected fraudulent expenditure

Test check of Measurement Books (MBs) and other records for construction of field channels in the sampled 603 schemes (Field Channels) of CAD&WMP during 2011-12 and 2012-13 showed that expenditure of ₹ 1.15 crore was incurred for construction of diversion boxes, turn outs and check gates. However, during joint physical verifications it was noticed that these components were not constructed and the intended field to field connections were not achieved as the field channels were constructed in straight runs. This indicates that the entries in the MBs for construction of these components may have been fraudulent. During the Exit Conference, the Department stated that diversion boxes could not be constructed as the farmers did not want to give their lands.

The Government needs to investigate the payment of ₹ 1.15 crore for works not done and take a remedial action to ensure that such instances do not happen again.

1.2.11.7 Survey and Investigation of Command Areas of the projects not conducted

As per CAD&WMP Guidelines, topographic survey was to be undertaken for proper planning and designing of On Farm Development (OFD) works so as to ensure their quality. Also, soil survey was to be carried out for land capability classification so as to understand their capability for crop planning and undertake proper treatment measures to realize their full potential. Proper topographic and soil survey maps of the project should be maintained in CADA records.

Audit observed that survey and investigation was reported to be carried out for a total area of 25,180 ha at a cost of ₹ 1.83 crore in respect of the sampled projects under Thoubal Project (Ph-II), clusters of 21, 28 and 37 MI schemes. However, no documentary evidence for any survey and investigation was produced to Audit. Thus, Audit could not draw any assurance which showed that survey and investigation was actually done.

The planning and designing of OFD works without proper topographic survey would have had an impact on the quality of the OFD works.

1.2.11.8 Demonstrations and Trainings not conducted

Under CAD&WMP, crop demonstrations were to be carried out practically at a farmer's field to show how to adopt suitable cropping patterns and use of balanced dose of inputs with proper management of available water for effective utilisation of potential created. For this component, 75 per cent of expenditure incurred was to be provided by GoI.

Against a financial target of ₹ 6.85 crore under demonstration in respect of the four sampled projects, the Department spent only ₹ 3.82 crore. As GoI share was to be released as reimbursement against expenditure actually incurred, the State forfeited GoI fund to the tune of ₹ 2.27 crore (being 75 per cent of the difference between ₹ 6.85 crore and ₹ 3.82 crore) and training of farmers was adversely affected to that extent.

1.2.11.9 One-time functional grant to Water Users Associations

As per CAD&WMP guidelines, farmers themselves need to maintain field channels and drains constructed by CADA in subsequent years. It is therefore essential to involve Water Users' Associations (WUAs) in the planning and execution of On-Farm Development (OFD) works, equitable distribution of irrigation water among all the land holders of an outlet command and repair/maintenance of the distribution network after the same is handed over to them for management. To facilitate the working of WUAs, a one-time functional grant of ₹ 1,000 per ha is provided. The amount is to be kept in fixed deposit and interest earned on the deposit is to be utilised for these activities. The central share under this component was 45 per cent.

The financial target to be achieved under one-time functional grant (farmers' participation) in respect of the four sampled projects was ₹ 2.52 crore. However, due to non-formation of WUAs, no expenditure was incurred for this purpose. As such, central assistance amounting to ₹ 1.13 crore (45 per cent of ₹ 2.52 crore) was not availed. Also, non-involvement of farmers in planning and designing of OFD works was fraught with the risk of non-maintenance of the created assets and the very objective of CAD&WMP to optimise agricultural production from irrigated land through integrated and coordinated approach for efficient water management could not be achieved.

1.2.11.10 Unjustified splitting up of sanctions

As per amendment notification (November 1999) of the Delegation of Financial Powers Rules, 1995, the Additional Chief Engineer (CADA) is authorised to accord Administrative Approval and Expenditure Sanction (AA&ES) to the extent of ₹ 5 lakh in each case. The Commissioner/Secretary of the Administrative Department can sanction upto ₹ 10 lakh while for amounts more than ₹ 10 lakh, concurrence of Finance Department is mandatory. Rule 3(2) of the Rules *ibid* stipulates that the expenditure proposals should not be bifurcated merely for the purpose of bringing them under the delegated power so as to avoid sanction of the higher authority.

Test check of the copies of AA&ES for implementation of CAD activities in the implementing divisions revealed that the then Additional Chief Engineer accorded AA for ₹ 2.80 crore and ES for ₹ 2.54 crore during May 2011 and October 2011 through 64 number of sanctions by restricting the amount to ₹ 5 lakh which is within his financial powers as shown in *Appendix 1.6*, purportedly to avoid the approval of the Government.

Thus, the splitting up of sanctions to avoid the sanction of the higher authority is irregular and is against the provision of the Delegation of Financial Powers Rules.

The Executive Engineer, CADA-Division-I stated that the Administrative Approval and Expenditure Sanction was being taken from the Finance Department.

1.2.12 Financial Management

1.2.12.1 Non-release of grant by Central and State Government

The AIBP was mainly funded by the Central Government. For special category States the central assistance is 90 per cent and State share is 10 per cent. As per AIBP Guidelines, the central assistance along with the State share must be released to the project authorities by State Government within 15 days of its release by Government of India.

The details of funds released and expenditure incurred in respect of Thoubal Multipurpose Project and Dolaithabi Barrage Project during 2011-16 is as shown in the following table.

Table No. 1.2.10 Fund release and expenditure during 2011-16 under Major and Medium Irrigation Projects

(₹ in crore)

Year	Funds released during the year by		Funds released by State from its own resource	Total available fund	Total Expenditure **
	GoI	State Govt. out of the GoI fund			
Thoubal Multipurpose Project					
2011-12	Nil	44.34*	15.00	59.34	62.08
2012-13	250.00	250.00	26.08	276.08	279.62
2013-14	Nil	Nil	15.00	15.00	19.84
2014-15	67.50	67.50	20.47	87.97	91.81
2015-16	103.03	42.82	20.97	63.79	66.08
Total	420.53	404.66	97.52	502.18	519.43
Dolaithabi Barrage Project					
2011-12	Nil	16.95*	9.5	26.45	25.91
2012-13	94.40	94.40	9.82	104.22	104.92
2013-14	Nil	Nil	3.80	3.80	4.55
2014-15	15.18	15.18	3.53	18.71	19.10
2015-16	39.35	10.00	5.93	15.93	16.10
Total	148.93	136.53	32.58	169.11	170.58
Grand Total	569.46	541.19	130.1	671.29	690.01

Source: Departmental figures

* Balance of previous year; **inclusive of income tax and sales tax adjusted through book adjustment.

The State Government released ₹ 541.19 crore to the implementing agencies out of fund released by GoI (including previous year's balance of ₹ 61.29 crore) resulting in withholding of ₹ 28.27 crore (5 per cent). Further, GoI did not release funds during 2011-12 and 2013-14 due to non-submission of utilisation certificates (UCs) of preceding years.

Similarly, in respect of Minor Irrigation schemes, no central assistance was received during 2012-13 and 2014-15 as evident from the following table.

Table No. 1.2.11 Details of funds released and expenditure incurred during 2011-16 under Minor Irrigation schemes

(₹ in Crore)

Year	Funds released by GoI	Funds released by the State Government			Expenditure		
		Central Share	State Share	Total	Central Share	State Share	Total
2011-12	44.55	44.55	5.00	49.55	44.55	4.76	49.31
2012-13	Nil	Nil	2.16	2.16	Nil	2.21	2.21
2013-14	39.59	39.59	Nil	39.59	39.19	Nil	39.19
2014-15	Nil	Nil	11.65	11.65	Nil	10.90	10.90
2015-16	40.00	40.00	5.56	45.56	38.50	5.35	43.86
Total	124.14	124.14	24.37	148.51	122.24	23.22	145.46

Source: Departmental figures (The discrepancy between funds received and expenditure incurred was due to non-charging of the agency charges to the works and book adjustment of income tax recovered from the contractors).

Non-release of fund during 2012-13 and 2014-15 was due to non-submission of utilisation certificates of preceding years.

In the case of CAD schemes, it was noticed that the State Government had not submitted UCs for ₹ 1.43 crore released during 2012-13 (₹ 34.72 lakh for Thoubal Project (Ph-II), ₹ 1.04 crore for Cluster of 21 MI schemes and ₹ 5.20 lakh for cluster of 37 MI schemes). Also, audited statements of expenditures for ₹ 6.88 crore released during 2011-14 (₹ 2.37 crore for Thoubal, ₹ 4.12 crore for cluster of 21 MI schemes, ₹ 17.16 lakh for cluster of 37 MI schemes and ₹ 22.80 lakh for 28 MI schemes) had not been submitted (January 2017).

The Department stated that the delay in submission of UCs were due to delay in release of funds by the State Government. The reply is not acceptable as the UCs should be submitted within the stipulated period from the date of receipt of fund.

1.2.12.2 Delay in release of central assistance by State Government to the implementing agencies

Audit scrutiny of the release of central assistance by the State Government to the implementing agencies during 2011-12 to 2015-16 revealed that the funds were released to the implementing agencies with a delay ranging from 10 to 260 days in respect of Thoubal Multipurpose Project and 11 to 323 days in respect of Dolaithabi Barrage Project as shown in **Appendix 1.7**. Similarly, there was delay in release of funds ranging from nine to 78 days in respect of Minor Irrigation schemes as shown in **Appendix 1.8**. Under the Command

Area Development Programme the delay ranged from 39 days to 305 days as given in *Appendix 1.9*.

The Department stated that the Finance Department did not release funds on time. The reasons for delay in release of central assistance by State Government were not furnished to Audit (January 2017).

1.2.12.3 Unutilised fund kept in Public Account and other Civil Deposits

A. Unutilised fund under Major and Medium Irrigation Projects

As per order of the Finance Department, Government of Manipur dated 7 March 2012, receipts under Centrally Sponsored Scheme (CSS) which cannot be spent by the Department within the year can be included in the budget estimates of the next year or can be authorized for expenditure during the next year. It is therefore not necessary to withdraw the amount and deposit in the Public Account (MH – 8449 – Other Deposits and MH – 8443 – Civil Deposits).

Audit examination revealed that during 2011-16, central assistance amounting to ₹ 86.43 crore and ₹ 63.45 crore for Thoubal Multipurpose Project and Dolaithabi Barrage Project respectively were kept under 8449-Other Deposits and utilized in subsequent years. Details are given below.

- ₹ 72.70 crore for Thoubal Project was deposited in March 2013 and withdrawn in piecemeal between June 2013 and March 2014. Another amount of ₹ 13.73 crore was deposited in March 2015 and withdrawn in piecemeal between June 2015 and August 2015;
- ₹ 63.45 crore for Dolaithabi Project was deposited in March 2013 and withdrawn in piecemeal between August 2013 and March 2014.

The Department stated that the funds were kept under 8449-Other Deposits on the instruction of the Finance Department. The reply is not acceptable as the instruction itself is in contradiction to the extant rules.

The impact of such keeping of funds (thereby delaying utilisation of funds) was clear from the fact that no central assistance was received during 2011-12 and 2013-14 for both Thoubal and Dolaithabi Projects.

B. Unutilised funds under Minor Irrigation Schemes

During the period 2011-16, the Department kept central assistance fund of ₹ 59.96 crore under Major Head 8443-Civil Deposits (₹ 37.64 crore in March 2012 and ₹ 22.32 crore in March 2014). The amount of ₹ 37.64 crore was withdrawn and utilised in February 2013 and the amount of ₹ 22.32 crore was withdrawn and utilised in November 2014. Reasons for drawal of funds and subsequently keeping the funds into 8443-Civil Deposits were not furnished to Audit, though called for.

1.2.12.4 Rush of Expenditure

As per Rule 56(3) of the General Financial Rules, 2005, rush of expenditure, particularly in the closing months of the financial year, shall be regarded as a

breach of financial propriety and shall be avoided. However, Audit noticed that the Department incurred 17 to 67 *per cent* (Thoubal Project) and 45 to 72 *per cent* (Dolaithabi Project) of the total expenditure in the month of March alone during the period 2011-16. Rush of expenditure at the end of the financial year indicated that expenditure control mechanism had not been adequately exercised as envisaged in the General Financial Rules.

1.2.12.5 Diversion of funds

Audit scrutiny of selected Major and Medium Irrigation Projects revealed that an amount of ₹ 47.36 crore was diverted during 2011-16 to works/activities not related to AIBP projects as detailed below.

- During April 2011 to March 2016, ₹ 29.19 crore was utilised for execution of works not included in the Detailed Project Reports such as maintenance of canals and other repairs and improvement works;
- During April 2011 to March 2016, ₹ 14.58 crore was utilised for payments of Muster Roll Wages and Work Charged establishment salaries;
- During April 2011 to March 2016, ₹ 2.66 crore was utilised for refund of security deposits to the contractors;
- ₹ 49.19 lakh was utilised for repairing of Bulldozers during December 2013 to January 2015;
- ₹ 43.88 lakh was utilised for purchase of vehicles during March 2015 (₹ 36.89 lakh) and March 2013 (₹ 6.99 lakh).

The Divisional Officers accepted the irregularities and stated that the refunds of security deposits to contractors were made out of AIBP funds as no funds were released from the appropriate head. Further, they claimed that the works not included in the DPR were unavoidable and thus taken up for smooth implementation of the projects as no fund for repairs and maintenance works were released.

1.2.13 Monitoring and Evaluation

1.2.13.1 Non-formation of Project Level and State Level Monitoring Committees

As per AIBP Guidelines, Project Level and State Level Monitoring Committees for environment safeguard implementation should be formed. However, neither State Level nor Project Level Monitoring Committees were formed.

1.2.13.2 Ineffective Concurrent Evaluation of the projects

As per Para 4.13 of AIBP Guidelines effective from October 2013, concurrent evaluation of the projects by State Government is mandatory at the end of each financial year during the period of funding. A template for the concurrent evaluation recommended by the Chairman, Central Water Commission and approved by the Secretary (Water Resource) was circulated (May 2014) to the

States so as to facilitate the evaluation. As per the said template, the evaluation shall broadly cover the aspects of planning and execution, organization set-up, contractual mechanism, land acquisition and Rehabilitation and Resettlement issues, quality aspects, bottlenecks and overall assessment.

As against the requirement of three concurrent evaluations each for Thoubal Multipurpose and Dolaithabi Barrage Projects, till the date of audit (April 2016), only one concurrent evaluation for the year 2013-14 was carried out in September 2014 by Manipur Institute of Technology (MIT) for which ₹ 42.82 lakh was paid (January 2015).

The reports submitted by MIT in both cases did not conform with the guidelines of CWC for concurrent evaluation. The reports were without any significant evaluation of the project like major issues on utilisation of created irrigation potential, reasons for gap between potential created and utilised, impact of the projects on the farmers' livelihood, examination of the quality of work and shortcomings in the programme implementation. As such, the concurrent evaluation reports did not contain information as per CWC guidelines and was deficient to that extent.

The Department stated (January 2017) that guidelines of CWC/MoWR would be followed for concurrent evaluation to be carried out and payments in future.

1.2.13.3 Delay/Non-submission of Audited Statements of Expenditure

As per AIBP Guidelines, the State Government was required to submit audited statements of expenditure incurred on the AIBP component of the project within nine months of the completion of the financial year. However, the State Government submitted audited statements of expenditure for the years 2008-09 to 2012-13 with a delay ranging from 9 months to 53 months. The audited statements of expenditure for the years 2013-14 and 2014-15 have not been submitted till date of audit (April 2016).

1.2.13.4 Monitoring by Central Water Commission

As per AIBP Guidelines effective from December 2006, the Central Water Commission (CWC) was to carry out monitoring visits and submit status reports in respect of Major/Medium projects at least twice a year for the period ending March and September of the year. However, as per modified guidelines effective from October 2013 the monitoring visit was to be carried out once in a year for all Major/Medium projects where funds have been released in the previous year.

During 2011-13, as against the requirement of four field visits for both Thoubal Multipurpose Project and Dolaithabi Barrage Project, only one field visit for the period ending September 2012 was made in December 2012 for each of the projects. Another field visit was made by CWC in November 2015.

1.2.13.5 Monitoring of Minor Irrigation Schemes

As per AIBP Guidelines, monitoring of minor irrigation projects based on Geographic Information System (GIS) shall be done by the State Government

through agencies independent of construction agencies. These schemes were also to be monitored periodically on sample basis by CWC and assessed against predetermined targets set by the MoWR.

The Department stated that monitoring of schemes was done during 2015 by CWC and the report was awaited. However, monitoring of schemes based on GIS by an independent agency has not been carried out till date of audit.

1.2.13.6 Evaluation of Minor Irrigation Schemes

The evaluation of the impact of the scheme is essential to judge the success or failure of the scheme and for taking remedial measures to eliminate shortcomings in implementation of the schemes. AIBP Guidelines provides for evaluation of completed Minor Irrigation schemes by the State Government through independent agency.

It was reported that the evaluations of completed schemes had not been carried out till date (January 2017). As such, no attempt has been made to assess the impact of the scheme or the actual benefits of the schemes. In such a scenario, the report on creation of irrigation potentials and utilisations of the various schemes was not reliable.

1.2.13.7 Monitoring and Evaluation CAD&WMP

As per CAD&WMP Guidelines (June 2010), the State Government is primarily responsible for monitoring of the projects. The guidelines also envisaged constitution of a multidisciplinary committee including representative of Panchayati Raj Institutions (PRIs) to perform the following duties:

- To decide about the future programmes of CADAs and ensure their implementation in an integrated and holistic manner and advise suitably;
- To review the progress of CAD&WM programme and make suggestions for improving its performance at all levels;
- To decide upon the evaluation studies to be taken up; and
- To review and recommend project proposals to be sent to the Ministry of Water Resources for inclusion of projects under the scheme.

During test check of records, it was observed that a State Level Monitoring Committee (SLMC) was formed in August 2007. The committee is responsible for ensuring quality of execution of the works and a report on the progress of works during preceding financial year is to be submitted to MoWR in the month of July-August of every financial year. However, there were no records of activities carried out by the SLMC.

Concurrent evaluation of the projects by the State Government through an independent agency as required by CAD&WMP Guidelines was not carried out during 2011-12 to 2015-16.

Thus, the SLMC had not fulfilled any of its responsibilities during the period from 2011-16. Due to non-monitoring of the projects coupled with non-conduct of concurrent evaluation, defective implementation of the projects cannot be ruled out.

1.2.14 Conclusion

Perspective Plan and Annual Plans were not formulated for systematic implementation of AIBP Projects. Deficiencies in planning, financial management and execution of irrigation projects was noticed. Against the targeted irrigation potential of 43.78 thousand hectares, irrigation potential of only 25.70 thousand ha (59 *per cent*) was created in respect of the sampled irrigation projects as on March 2016, of which 42 *per cent* was utilised. There was time overrun to the extent of 29 years for Thoubal Multipurpose and 19 years for Dolaithabi Barrage Projects, consequently the project cost of Thoubal Multipurpose and Dolaithabi Barrage Projects was increased by about 36 and 27 times respectively. Land Acquisitions for the Thoubal and Dolaithabi Projects are yet to be completed. The State government incurred extra and avoidable expenditure due to weak contractual management. There were delays on the part of the State Government in releasing central assistance to the implementing agencies. Due to keeping of central fund under Deposit head no central assistance for Thoubal and Dolaithabi Projects was released during 2011-12 and 2013-14. There were deficiencies in monitoring and evaluations of the projects also.

1.2.15 Recommendations

The Government may ensure that:

- The Department adopts adequate planning mechanism for completion of the projects without further delay so that targeted irrigation potential could be created and actually utilised for the benefit of the farmers;
- The Department completes acquisition of land required for construction of canals;
- Timely release of funds to the implementing agencies is done and diversion of funds does not take place; and
- The implementing Departments strengthen contract management and undertakes monitoring and evaluation of the projects as per guidelines provided.

IRRIGATION AND FLOOD CONTROL DEPARTMENT

1.3 Performance Audit on Implementation of Schemes for Flood Control and Flood Forecasting

Highlights

Flood Control Schemes implemented by the Ministry of Water Resources (MoWR) during the XI and XII Five Year Plans (2007-16) in the country fall into three categories:

- Flood Management Programme (FMP);
- River Management Activities and Works Related to Border Areas; and
- Flood Forecasting.

In Manipur, only FMP is being implemented. Twenty-two FMP Schemes were implemented in the State during 2007-16. The performance audit brought out the following significant audit findings:

- *Planning for management of floods was done without scientific assessment of flood prone areas, morphological studies of rivers and did not comply with action plan of National Disaster Management Guidelines.*

(Paragraphs 1.3.8.1, 1.3.8.2 & 1.3.8.6)

- *During 2007-16, the Department had incurred expenditure of ₹ 53.84 crore on execution of 11 sampled schemes/project on nine rivers without preparation of Comprehensive Master Plan.*

(Paragraph 1.3.8.4)

- *The actual implementation of schemes/projects suffered from time overrun and works were abandoned midway under one sampled project.*

(Paragraph 1.3.9.1)

- *The State Government released fund to the implementing department with delays ranging from 54 to 334 days, which effected fund flow.*

(Paragraph 1.3.9.3)

- *Compensation of ₹ 1.55 crore for delay in completion of works was yet to be recovered from the defaulting contractors.*

(Paragraph 1.3.9.8)

- *The quantum of flood damage in terms of area, population and value of flood damage showed ascending trend during 2007-16 inspite of execution of 22 FMP projects incurring expenditure of ₹ 100.30 crore and utilization of flood fighting materials.*

(Paragraphs 1.3.12.3 & 1.3.12.4)

1.3.1 Introduction

In Manipur, devastation by floods is a recurrent annual phenomenon. There are 33¹² rivers under four river basins of the State. During 2007 to 2015, floods caused enormous damage to life, public property and infrastructure, the affected area ranging from 68,200 to 1,50,600 hectares and population ranging from 91,250 to 1,15,000 each year. The total value of flood damages during the period 2007 to 2015 amounted to ₹ 268.20 crore. In view of damage to life and public property caused by flood, the Irrigation and Flood Control Department (IFCD) has taken up several flood management projects.

Flood protection/mitigation can be done by structural measures *i.e.*, flood embankments, drainage and channel improvement, dams and reservoirs, flood wall, diversion of flood water, *etc.*, and Non-structural measures *i.e.*, flood forecasting, flood plain zoning, disaster preparedness and response, *etc.*

During the period 2007-08 to 2015-16, schemes/projects under Flood Management Programme (FMP) in the State were implemented on cost sharing basis between State and Central Government at the ratio of 10:90. Against total State share of ₹ 10.91 crore released, the release of Central share was ₹ 98.18 crore during the period. Expenditure incurred on FMP during the period was ₹ 100.30 crore. Considering the importance of flood control in the State and the expenditure incurred, Performance Audit on implementation of Schemes for Flood Control and Flood Forecasting covering the FMP was taken up.

1.3.2 Organisation Set-up

Flood Management Programme is implemented by Irrigation and Flood Control Department (IFCD) headed by the Chief Engineer. The Chief Engineer, IFCD is assisted by an Additional Chief Engineer, a Superintending Engineer (SE), Flood Management Circle SE(FMC) and four Executive Engineers of four Flood Control and Drainage (FCD) Divisions for flood control measures in the State. One Sectoral Flood Control Room also functioned under the supervision of the SE(FMC). The responsibility for preparation of Detailed Project Reports (DPR) and submission thereof to the Government for obtaining further approval lies with the Department. Implementation of the schemes/projects is done at the levels of the Sub-division, Division and Flood Management Circle.

1.3.3 Audit objectives

The Performance Audit was carried out to assess whether:

- Planning for management of flood control was comprehensive and effective; and

¹² (i) Manipur river basin and Loktak sub-basin: 23; (ii) Barak river basin: 6; (iii) Lanye river basin: 2; (iv) Yu/Chindwin river basin: 2.

- Process of approval, implementation and evaluation and monitoring of the projects under Flood Management Programme was economic, efficient and effective.

1.3.4 Scope of Audit

The performance audit covered the FMP implemented by IFCD in the State during the period from 2007-08 to 2015-16. Eleven projects (50 *per cent*) out of 22 projects implemented were selected by systematic sampling. The list of the selected projects is given in **Appendix 1.10**. Out of the sampled projects, two projects (10 *per cent* of 22 FMP schemes) were selected for joint physical verification of the work sites.

Records of the Chief Engineer, IFCD; the Additional Chief Engineer, IFCD; Superintending Engineer, Flood Management Circle and the Executive Engineers, Flood Control and Drainage Divisions (FCD) I, II, III and IV were test checked in audit.

1.3.5 Audit methodology

The audit commenced with holding of an Entry Conference (February 2016) with the Departmental Officers wherein audit objectives scope and methodology of audit was discussed. Records pertaining to planning for management of floods, process of approval, status of implementation, evaluation and monitoring of the projects were examined. Joint physical verification by audit team and the officers of the implementing Department/Division was also conducted. The draft report was issued to the Government in October 2016 and the audit findings were discussed with the Government and Departmental Officers in an Exit Conference (October 2016). Reply of the Department, wherever relevant have been incorporated in the report.

1.3.6 Audit Criteria

The audit findings were benchmarked against the following:

- National Water Policy 2012;
- 21st Report of Standing Committee on Water Resource;
- Flood Management Programme Guidelines;
- Memorandum for Expenditure Finance Committee;
- Report of Planning Commission on Flood Management and Region Specific Issues for XII Five Year Plan;
- CPWD Works Manual;
- General Financial Rules, 2005, *etc.*

1.3.7 Acknowledgement

Indian Audit and Accounts Department (IA&AD) acknowledges the cooperation extended by the State Government in providing necessary information and records to Audit.

Audit findings

1.3.8 Planning

Flood Management Programme is a very important aspect of flood control in the State where flood has affected significant areas and large population as shown in the following table.

Table No. 1.3.1 Quantum of flood damage during 2007 to 2015

Year	Area affected (ha)	Population affected (Nos.)	Value of flood damage (₹ in crore)
2007	75,500	99,000	25.60
2008	68,200	98,500	22.10
2009	69,150	99,800	25.00
2010	1,50,600	1,15,000	42.50
2011	80,500	1,00,000	28.50
2012	1,25,000	98,950	30.40
2013	82,250	95,500	29.40
2014	77,800	91,250	26.50
2015	95,800	1,10,000	38.20
Total	8,24,800	9,08,000	268.20

Source: Irrigation and Flood Control Department, Manipur

Scientific assessment of the areas affected by flood, morphological studies of rivers, preparation of frequency based inundation and Digital Elevation Maps, Comprehensive Master Plan and demarcation of Flood Plain Zones are essential for an effective planning for management of flood. The important audit findings in the planning process are discussed in the succeeding paragraphs.

1.3.8.1 Scientific assessment of the areas affected by flood not conducted

As per the report of the Standing Parliamentary Committee of Water Resources of 2013-14, the Ministry of Water Resources had constituted an expert committee for scientific assessment of flood prone areas by using new technology like satellite imagery data, frequency of floods and depth of inundation. It was also decided to set up State/Regional committees for compilation and assessment of State-wise flood prone areas.

The Department did not use such scientific assessment; rather, the flood prone area was assessed based on assumptions and past experiences. No database for flood prone areas was maintained. Moreover, the Department did not constitute State/Regional committee for compilation and assessment of flood prone areas in the State.

1.3.8.2 Morphological studies of rivers not conducted; frequency based inundation maps not prepared

As envisaged in Para 10.3 and 10.6 of National Water Policy 2012, in order to prevent loss of land eroded by the river which causes permanent loss, revetments, spurs, embankments, *etc.* should be planned, executed, monitored and maintained on the basis of morphological studies. This would affect mitigating strategies through construction of structural measures at the right places. This will become increasingly more important since climate change is likely to increase the rainfall intensity, and hence, soil erosion.

Audit noticed that the Department had not conducted morphological studies of rivers and hence could not evolve effective planning for prevention of loss of land eroded by the rivers. Frequency based flood inundation maps were also not prepared. Therefore, the Department could not evolve coping strategies against flood. The Department stated (December 2016) that creation of the National Morphological Studies Centre at Imphal is under process.

1.3.8.3 Digital Elevation Maps not prepared

As per recommendation No. 26 and 28 of the Standing Committee on Water Resources for 2013-14, Digital Elevation Maps (DEMs) were to be prepared to demarcate the flood affected area in the State and for modernization of flood forecasting.

Audit noticed that DEMs for flood affected areas were not prepared. As such, works pertaining to the demarcation of the flood affected areas and modernization of flood forecasting remained unattended. The Department stated (December 2016) that preparation of DEM is being considered.

1.3.8.4 Status of Comprehensive Master Plan and Action Plan

Comprehensive Master Plan is required to be prepared by taking into account various aspects like the morphology and behavior of the river and its tributaries, changes in response to variation in flow regime and sediment transport pattern, influence of human intervention, overall development plan of the region of the river system, modern practices of flood mitigation, *etc.* The schemes for flood control should be implemented as per Action Plan based on Comprehensive Master Plan.

Test check of records showed that though three out of four river basins¹³ of the State were under FMP, Comprehensive Master Plan for flood management was not prepared for these river basins. It was also observed that the consultant¹⁴ engaged by the Department to undertake a study on pilot basis for preparation of a Comprehensive Master Plan submitted its report in November 2004. Scrutiny of the report showed that the study was not adequate to provide inputs for a holistic basin-wise Comprehensive Master Plan for flood

¹³ Out of four river basins, *i.e.*, Manipur, Barak, Yu and Lanye river basins; only three river basins *viz.*, Manipur, Barak and Yu river basins were under the Flood Management Programme.

¹⁴ Water and Power Consultancy Services (India) Ltd. (WAPCOS), New Delhi.

management as selected stretches of only four¹⁵ rivers of one river basin (Manipur river basin) was covered.

During 2007-16, total expenditure of ₹ 53.84 crore was incurred on execution of 11 sampled schemes on nine rivers¹⁶ without preparing Comprehensive Master Plan. In absence of comprehensive plan, action and initiatives under FMP would have been haphazard thereby affecting the overall effectiveness.

The Department admitted (December 2016) the audit observation.

1.3.8.5 Status of implementation of the Flood Plain Zoning Bill

Flood Plain Zoning (FPZ) aim at demarcating zones or areas likely to be affected by floods of different magnitudes or frequencies of probability levels and specify the types of permissible development in these zones so that whenever the floods actually occur, the damage can be minimized.

The State had enacted the Flood Plain Zoning Legislation in 1978 to control flood in encroached flood zone. The Department was required to demarcate boundaries and limits of flood plain zone in collaboration with the Directorate of Settlement and Land Records. However, the Act had not been operationalised even after 38 years of its enactment due to non-demarcation of flood zones. The Department stated (August 2016) that demarcation of Flood Plain Zones is to be done by the Directorate of Settlement and Land Records. The Department could not make available to Audit any correspondence made with the said Directorate for demarcation of the Flood Plain Zones. Therefore, the intended benefits out of enactment of the legislation remained frustrated.

1.3.8.6 Action Plan of the National Disaster Management (NDM) Guidelines for management of floods not complied with

Para 6.10 of the NDM Guidelines prescribes an Action Plan (to be implemented during 2008 to 2012) for various activities to be taken up for management of floods. Test check of records showed that the Department did not comply with the said action plan. The status in this regard is given in the following table.

Table No. 1.3.2 Compliance with Action Plan of National Disaster Management Guidelines

Sl. No.	Activity	Stipulated time for Commencement	Remarks/ Present position
1	Flood Plain Zoning (FPZ) regulation	Immediate	FPZ Act was enacted in 1978. However, the Act remained non-operational due to non-demarcation of the flood plain zones.
2	Bye-laws for buildings in flood plains	Immediate	Not yet done.
3	Legal framework to make infrastructure flood resilient	Immediate	Not yet done.
4	Flood plain survey (close colour maps – DEM)	Not stated	Not yet done.

¹⁵ Imphal, Iril, Thoubal and Nambul rivers.

¹⁶ Abulok, Chakpi, Imphal, Iril, Jiri, Khujairok, Langathel, Potsangbam and Thoubal rivers.

Sl. No.	Activity	Stipulated time for Commencement	Remarks/ Present position
5	Wetlands conservation and restoration	Not stated	Not yet done.
6	Watershed management/ CAT/afforestation	Immediate	Not yet done.
7	Mechanism for co-ordination and enforcement of regulation	Immediate	Not yet done.

Source: Irrigation and Flood Control Department, Manipur

Deficiencies in planning for management of floods in the State is evident from absence of basic data owing to non-conduct of scientific assessment of the flood prone areas and morphological studies of rivers, non-preparation of frequency based inundation maps, Comprehensive Master Plan for flood management and non-compliance with the action plan of the National Disaster Management Guidelines for management of floods.

Thus, planning for management of floods in the State was not comprehensive and effective and the whole approach was *ad-hoc*.

1.3.9 Award and implementation of the FMP projects

Physical and Financial Targets and Achievements of schemes

1.3.9.1 Physical target and achievement

During 2007-16, only 41,765 hectares out of 91,480 hectares of average¹⁷ flood affected area in the State were covered under 22 FMP projects. The physical target set for construction of structural measures like embankments, retaining walls, bored piles etc., during 2007-16 and achievement there-against under FMP is shown in *Appendix 1.11*.

The Department claimed achievement of 69.400 km of structural measures as against the target 68.915 km under 22 FMP schemes during 2007-16. Scrutiny of records like agreements and measurement books, etc. pertaining to 11 sampled schemes revealed the following deficiencies:

- There was time overrun ranging from two to 21 months in completion of six out of eleven sampled schemes as discussed in the report.
- In respect of one sampled scheme (Anti-erosion scheme of Imphal River L/B/B at Kyamgei and D/S of Lilong Bridge - Chandakhong - MAN-7), three works executed under the scheme was abandoned since April 2013 after completion of boring of piles without construction of bracing structures; reason(s) for which was not found on record. The Department stated (December 2016) that the contractor concerned was advised to complete the works.

¹⁷ Average over 10 years from 2006 to 2015 (as per information furnished by IFCD, Manipur).

- While there was excess achievement of 565 m in construction of structural measures on the part of FCD-I and FCD-II (Target: 41.162 km and Achievement: 41.727 km), there was shortfall in achievement to the extent of 80 m in respect of FCD-III (Target: 17.912 km and Achievement: 17.832 km). The reasons for excess execution of structural measures and shortfall in achieving the target as cited above were not recorded.

In view of above it is derived that the actual implementation of schemes suffered from time overrun and works abandoned midway.

1.3.9.2 Financial target and achievement

The funding pattern for central assistance for Flood Management Programme in respect of the Special Category States including Manipur is 90 per cent (Central Share): 10 per cent (State Share). As per Guidelines, the first instalment of central assistance was to be released on approval of the scheme by the Empowered Committee of the Central Government. The remaining amount was to be released after submission of Utilisation Certificate (UC) of the earlier instalment, the monitoring report and the annual budget provision being made by the State.

Audit noticed that while UCs of the first instalment and annual budget provision were submitted to the Ministry, the position on submission of the other requisite record viz., monitoring report of the Brahmaputra Board could not be ascertained in audit as the same was not furnished by the Department.

The position of approved cost of 22 FMP schemes, quantum of Central Share and State Share released and utilization thereof is shown in the following table.

Table No. 1.3.3 Financial target and achievement of FMP Schemes during 2007-16

(₹ in lakh)

No. of the Flood Management Programme/Schemes and Code No. (Year of approval)	Approved Cost of the Schemes	Amount required as per approved cost of the scheme		Cost as per actual execution of the schemes			Amount released		Amount utilised		Funds short released	State share released in excess	Funds claimed by the State
		Central (90% of Approved Cost)	State (10% of Approved Cost)	Central Share	State Share	Total	Central	State	Central	State			
1	2	3	4	5	6	7	8	9	10	11	12 (5-8)	13(6-9)	14 (12-13)
12 (MAN-1 to MAN-12) (2008-09)	3939	3545	394	3506.02	389.56	3895.58	3461.62	393.93	3461.62	393.93	44.40	4.37	40.03
10(MAN-13 to MAN-22) (2010-11)	6970	6273	697	6174.64	686.07	6860.71	5477.54	697.00	5477.54	697.00	697.10	10.93	686.17
Total	10909.00	9818.00	1091.00	9680.66	1075.63	10756.29	8939.16	1090.93	8939.16	1090.93	741.50	15.30	726.20

Source: Irrigation and Flood Control Department, Manipur

From the above table it emerged that, during 2007-16, out of the Central Share of ₹ 96.81 crore (based on cost of actual execution of work), Government of India (GoI) released ₹ 89.39 crore thereby leaving a balance of ₹ 7.42 crore (8 per cent). Further, as against the balance amount of the Central Share of ₹ 7.42 crore the State Government claimed only ₹ 7.26 crore from GoI which was yet to be received as on date of audit inspite of timely submission of UCs

to the Ministry. The reason(s) for short release of Central Share was not furnished (January 2017).

1.3.9.3 Delay in release of funds by the State Government

As per FMP Guidelines, the grant-in-aid along with State share would be released by the State Government to the concerned project authorities executing the works within 15 days of receipt of central assistance. If the State Government fails to release the requisite fund to the project authority in the stipulated time, the full Central grant-in-aid released for the work would be converted into loan and it would be recovered as per usual terms of recovery of Central loan.

During 2007-16, ₹ 89.39 crore was released by the Central Government for FMP in the State. As per available records, there were delays ranging from 54 to 334 days in release of the funds by the State Government to the implementing Department in violation of the guidelines. In spite of such delays, GoI did not convert the Central grant-in-aid into loan.

The Department stated (December 2016) that although the liability claims were submitted by the Department in time, there were delays in release of funds by State Finance Department.

1.3.9.4 Approval of projects

Proposals of the Flood Management Programme (FMP) were required to be cleared by specified authorities including the State Technical Advisory Committee (STAC), the State Finance Department and the Brahmaputra Board/Central Water Commission *etc.*, for central assistance under this scheme. For FMP projects costing less than ₹ 7.5 crore, the Brahmaputra Board should certify that the organisation participated in the STAC meeting or certify that the cost estimate has been technically examined by them.

The Department did not furnish records related to approval of DPR by the Brahmaputra Board/ Central Water Commission in respect of the 11 sampled schemes. Hence, the status of obtaining required mandatory clearance could not be ascertained.

1.3.9.5 Deficiencies in preparation of DPR

As per the Guidelines of the Central Water Commission for preparation of DPR, all flood management projects should be planned, investigated and formulated keeping in view the hydrological aspects such as flood frequency analysis. While preparing/formulating flood management schemes, their *inter-se* priorities among the flood management projects from amongst those included in the master plan should be fixed in the light of the factors like extent and frequency of flood damage as also loss of life, benefit-cost ratio, effects on environmental ecology and the density of population in the flood affected areas as well as per capita expenditure on flood management in the project area. Audit noticed that there were instances of deficiencies in preparation of DPRs of 11 sampled schemes as discussed below.

i) Preparation of schemes without Comprehensive Master Plan

The schemes of flood management are required to be prepared based on Comprehensive Master Plan for flood management. The Department did not prepare such a master plan. In the absence of Comprehensive Master Plan, the flood management projects were implemented without a holistic plan on selective basis. Further, information on area specific flood damage was not maintained by the Department. Hence, the badly affected areas covered under the FMP projects could not be ascertained in audit.

ii) Calculation of Benefit Cost ratio

Benefit Cost (BC) ratio of the scheme is the ratio between the saving in annual damage and the annual cost of flood management component. As per the Guidelines for preparation of DPRs of Irrigation and Multipurpose Projects (2010), saving in annual damage would be worked out by taking into account the pre-project average annual damage for last ten years and average annual damage anticipated after the execution of the project.

Audit noticed that BC ratio in respect of DPRs of 11 sampled schemes was prepared by the Department without accounting for pre-project average annual damage for the last ten years. As such, the calculation of BC ratio was not in order. In the absence of reliable data on BC ratio, Audit could not vouch that the selection of projects was proper.

iii) Absence of aspects of environmental impact assessment in the DPR

As per the guidelines for formulation of DPR cited *ibid*, environmental impact assessment for evaluating the beneficial and adverse effects of the project should also be included in the planning stage itself. However, Audit noticed that such aspects had not been taken into account.

iv) Files/records for surveys, investigations, etc. not maintained

The Department/Divisions could not furnish to Audit the files/records for surveys, investigations, etc., for preparation of DPRs. As such, Audit could not ascertain whether adequate surveys were carried out at the work sites. The Department stated (December 2016) that proper maintenance of files/records would be considered in future implementation.

1.3.9.6 Award of contract

A. Award of works through restricted tender

CPWD Manual which is also applicable in Manipur envisaged, among others, the following criteria for award of contracts through restricted tenders.

- Work required to be executed with very great speed, for which not all contractors may qualify;
- Work of special nature requiring specialized equipment, which is not likely to be available with all contractors;

- List of pre-qualified contractors is required to be shortened to a suitable limited number etc.

On scrutiny of records of five sampled FMP schemes/projects, it was noticed that 122 works had been awarded through restricted tender ostensibly on urgency of the works, special nature of the work, past performance and resourcefulness of the contractor, etc. The grounds for resorting to restricted tendering were, however, inadequate as discussed below.

- Awarding of works through restricted tender due to urgency in completion of work and requirement for execution at great speed was defeated as there were delays in completion of 89 works ranging from three months to more than four years as discussed in the report.
- Some works like Anti-Erosion Flood Control Scheme of Khujairok River, Phase-I were specified as specialized nature of work for resorting to restricted tender. However, the items of works *viz.*, earthwork in excavation, cement concrete in foundation and filling up the excavated earth, *etc.*, were not classified as special work under relevant manual (Annex-I to Chapter 16 of the CPWD Works Manual 2010). As such, restricted tender was in violation of the extent rules.
- Relevant information for assessing the past performance and resourcefulness of the contractors such as list of the works executed, stipulated dates of commencement/completion, report on evaluation of the works, *etc.*, were not recorded or referred to in the concerned tender files. As such, assessment of the past performance and resourcefulness had not been actually carried out by the Department/division.

B. Lack of transparency in tendering

As per the CPWD Manual, in case works are awarded through restricted tender, the Chief Engineer is to prepare the list of contractors invited to participate in the restricted tender and the list should be as large as possible so that competitive tenders are received.

Test check of records of three¹⁸ divisions revealed that different sets of contractors were invited to participate in restricted tender of different works/schemes. It was noticed that the lists were prepared by the Executive Engineers of divisions concerned and got approved by the Chief Engineer/Additional Chief Engineer. The lists for different works/schemes were found to differ widely both in terms of number of contractors and names of contractors who were invited. In respect of 122 works (of five schemes) for which tender records were test checked, different numbers of contractors ranging from 6 to 70 were invited to participate in the restricted tendering process. However, in spite of inviting 6 to 70 contractors to participate in the tendering process of 122 works, exactly three bids were submitted in respect of each work. Thus, there was no transparency in the tendering process.

¹⁸ FCD – I, II and III.

1.3.9.7 Time overrun in completion of projects

Test check of records of implementation of 11 sampled FMP projects revealed that six projects could not be completed within the stipulated time reasons for which were not on record. The position in this regard is depicted in the following table.

Table No. 1.3.4 Time overrun in completion of sampled projects

(₹ in lakh)

Sl. No.	Name of Scheme	Sanctioned Cost	Expenditure incurred	Stipulated Date of Completion	Date of Completion (Physical) as per FMP/ Completion report	Time overrun in completion (months)
1	Anti-erosion scheme of Imphal River L/B/B at U/S of Imphal Barrage (Lairabakhong) (MAN-1)	196.00	188.16	March 2008	31-12-2009	21
2	Abulok Flood Control Scheme (MAN-2)	169.00	162.24	May 2008	31-12-2009	19
3	Anti-erosion scheme of Imphal River L/B/B at Kyamgei and D/S of Lilong Bridge (Chandakhong) (MAN-7)	259.00	253.92	Nov. 2008	31-12-2009	13
4	Anti-erosion scheme of Imphal River from Koirengai to Lilong, Phase-I, (MAN-8)	391.00	383.48	March 2008	31-12-2009	21
5	Anti-Erosion Flood Control Scheme of Khujairok River, Phase-I (MAN-15)	740.00	635.35	March 2012	31-05-2012	2
6	Langathel river flood control project phase-I (MAN-18)	745.00	663.86	March 2012	30-04-2013	13

Source: Irrigation and Flood Control Department, Manipur

From the above table, it transpires that there was time overrun ranging from two to 21 months in completion of the projects. Thus, the intended benefits out of construction of the projects was delayed.

1.3.9.8 Short recovery of amount of compensation for delay in completion of work

As per Clause 2 of the agreement, the contractor who fails to complete the work within the stipulated date shall be liable to pay an amount of compensation equal to one *per cent* or such smaller amount as the Superintending Engineer may decide on the said estimated cost of the whole work for every day that the quantity of work remains incomplete. The entire amount of compensation to be paid shall not however exceed 10 *per cent* of the estimated cost of the work.

On scrutiny of the relevant records of 11 sampled schemes under FMP, it was ascertained that in respect of 89 works under eight schemes, the contractors failed to complete the works within the stipulated period. The summarised position in this regard is shown in the following table.

Table No. 1.3.5 Delay in completion of works

Name of Division	Up to 3 months	Above 3 months to 1 year	Above 1 year to 2 year	Above 2 years to 3 years	Above 4 years (incomplete as on March 2013)	Total No. of works	Amount of compensation due for recovery (₹ in lakh)
FCD-I	3	15	5	1	2	26	46.74
FCD-II	7	11	17	5	0	40	50.83
FCD-III	0	14	0	9	0	23	57.20
Total	10	40	22	15	2	89	154.77

Source: Irrigation and Flood Control Department, Manipur

As seen from the above table, due to delay in completion of the works, the defaulting agencies were liable to pay compensation of ₹ 1.88 crore of which only ₹ 32.96 lakh had been collected leaving a balance of ₹ 1.55 crore. The Department stated (December 2016) that initiatives would be taken to collect the compensation from the defaulting contractors.

1.3.9.9 Execution of work without design

The main purpose of construction of retaining walls is to protect the river bunds against sliding. For an effective protection of the river bunds, design of the retaining wall containing features like check against sliding of the river bunds, check against overturning of the retaining wall, *etc.*, is required to be incorporated in the DPR.

Test check of records maintained by FCD-I revealed that cement concrete retaining walls for a length of 15.419 km along right and left river bunds under the schemes of anti-erosion flood control were constructed (December 2007 to March 2010) at the Iril River and the Imphal River at a tendered cost of ₹ 5.00 crore (Estimated cost: ₹ 4.55 crore). Out of the total ₹ 4.91 crore value of work done, the agencies concerned were paid ₹ 4.88 crore.

Scrutiny of records maintained by FCD-I revealed that the DPRs and technical sanctions of the schemes/works were silent about the design of the retaining walls to be constructed. Thus Audit could not vouch for the effectiveness of the retaining walls whose design parameters had not been specified.

1.3.9.10 Undue benefit extended to the contractors

Test check of records like copies of agreements and MB showed that under the Anti-Erosion Flood Control Scheme of Potshangbam River (MAN-19), earth works in excavation and embankment of bunds were executed (April 2011 – March 2012). “Earth work in surface excavation.....in hard/dense soil” was one of the five items of work. Against this item 90,931.01 cum of earth work was executed in the stretch from RD 0 m to RD 7200 m at a cost of ₹ 69.07 lakh at

the rate of ₹ 80.10 per cum from RD 0m to 5050 m and @ ₹ 50.00 per cum from RD 5050 m to 7200 m.

Scrutiny of the design and scope of the works, however, revealed that the works consists of removing of silting materials and embankment of bunds. And hence, the appropriate and correct nomenclature of the work should be of the similar item of work in loose and soft soil, for which the rate is ₹ 36.88 per cum as per the Manipur Schedule of Rates, 2008.

Had the Department executed the work in true spirit of the design and scope of the work, expenditure would be only ₹ 33.54 lakh on clearance of silting materials. This led to extension of undue benefit of ₹ 35.53 lakh (₹ 69.07 lakh- ₹ 33.54 lakh) to the agencies concerned. The Department stated (December 2016) that recovery from the bills of the contractors is being considered. However, no information about the recovery has been received (January 2017).

1.3.9.11 Execution of works at unidentified areas

Test check of records of FCD-I and FCD-III divisions revealed that under two sampled FMP projects, the divisions executed (December 2008 – March 2012) flood protection works at a cost of ₹ 2.90 crore on various sites/villages which were not among the villages identified as flood prone areas by the Department as shown in the following table.

Table No. 1.3.6 Execution of Anti-erosion/Flood protection works at unidentified areas

Division	Name of scheme	Villages where Anti-erosion works taken-up	Length of Retaining wall (Rm)	Expenditure (₹ in lakh)
FCD - I	Special Protection and Erosion Control Work on Left Bank Bund of Jiri River at Gulathol, Kamaranga, Khutchoithup, Chandrapur and Jirighat (MAN-13)	Jirighat, Khutchoithup	133.50	153.57
FCD - III	Anti-erosion Scheme of Thoubal River, Phase-V (MAN-10)	Nongbrang	261.00	136.34
Total			394.50	289.91

Source: Irrigation and Flood Control Department, Manipur

Execution of flood protection works at unidentified sites was tantamount to giving less initiative in targeted area and results in wasting of resources in non-priority areas. While admitting the audit observation, the Department stated (December 2016) that it would consider to stick to the identified areas in future.

1.3.9.12 Proper quality control not exercised in execution of work

As per the CPWD Works Manual, it is incumbent upon the various officers concerned with the work, namely, the Superintending Engineers/Executive Engineers/Assistant Engineers/Junior Engineers, etc., to inspect the works

frequently to ensure that the works are in general being executed according to the design, drawings and specifications laid down in the contract.

Test check of records revealed that the Department/Divisions did not maintain records for inspection of works. During joint physical verification of two sampled schemes, one each on the Iril and the Langathel rivers, instances of damage of bracing structure, poor state of retaining wall, *etc.*, were noticed which indicated lack of proper quality control in execution of works.

Further, the Performance Evaluation Studies of Schemes under Flood Management Programmes in respect of 11 sampled projects were conducted by the Project Evaluation Committee, Manipur Institute of Technology (MIT), Imphal. The performance evaluation report in respect of the sampled project of Jiri River indicated poor performances in execution of the schemes as shown in the following table.

Table No. 1.3.7 Deficiencies in execution of works

Name of the project (Code No.)	Cost of the project	Deficiencies as reported by the Project Evaluation Committee
Special Protection and Erosion Control Work on Left Bank Bund of Jiri River at Gulathol, Kamaranga, Khutchoithup, Chandrapur and Jirighat, (MAN-13)	₹ 7.45 crore	<ul style="list-style-type: none"> • The performance of the scheme/project at Jirighat was not satisfactory; heavy damages had been caused to the retaining structures; • The performance of the scheme/project at Khutchoithup was also not satisfactory. At this location, the river had completely submerged some portions of the retaining structure.

Source: Performance Evaluation Report of Manipur Institute of Technology (MIT)

The deficiencies highlighted above are evidences of lack of/non-exercise of proper quality control in execution of works. While admitting the audit observation, the Department stated (December 2016) that quality control in execution of works would be observed and rectification, if necessary, would be carried out for the completed structures.

1.3.10 Other audit findings

1.3.10.1 Catchment Area Treatment

Catchment Area Treatment (CAT) would reduce soil erosion in the catchment areas and siltation of river beds which would help in mitigation of flood havoc. The Department, however, had not initiated any coordinated effort with other Departments of the State for CAT, afforestation and watershed management. During XIth and XIIth Five Year Plan, the Department did not take up any project for CAT, afforestation and watershed management. As a result, soil erosion in catchment area and siltation of river beds could not be redressed. The Department stated (December 2016) that in future CAT would be taken up.

1.3.10.2 Records of assets created not maintained

Test check of the records of four divisions of the Department revealed that the divisions did not maintain the basic records to watch the assets created for the 22 FMP schemes executed during 2007-16 although the Department incurred an expenditure of ₹ 100.30 crore (as of March 2016) on implementation of the schemes. Since the records of assets were not maintained, the Department could not monitor the present state of the assets created and could not ascertain the details of the assets whose maintenance were required. Moreover, there was no budget provision for maintenance of the FMP projects for the years from 2007-08 to 2015-16. The Department had not taken up maintenance work for any of the completed 22 FMP projects.

Thus, the intended benefit out of the implementation of the projects may not be fully derived in the event of non-maintenance of the assets created. The Department admitted the audit observation and stated (December 2016) that the divisions implementing the projects were responsible for maintenance of the assets created. The Department further stated that the Assets Register would be maintained and budget proposal would be made for maintenance of the assets created.

1.3.10.3 Award of works without collecting performance guarantee bond

As per CPWD Manual, the letter for commencement of work shall be issued to a successful tenderer only after the contractor deposits five *per cent* of the tendered amount as performance guarantee bond to hold the contractor accountable for timely execution and completion of the works.

Test check of records of four Flood Control and Drainage divisions¹⁹ revealed that 334 works pertaining to 11 sampled Anti-erosion Flood Control Schemes were awarded (2006-07 to 2011-12) to various contractors at a total tendered value of ₹ 56.62 crore without collecting performance guarantee bond of ₹ 2.83 crore thereby violating the provisions of the Manual.

Further, out of the 334 works which had been awarded without collecting performance guarantee bond, three works of one scheme were abandoned and 89 works of eight schemes were completed beyond the stipulated date. As performance guarantee bond was not collected, it was difficult to hold the contractor accountable for timely execution and completion of projects.

While admitting the audit observation, the Department stated (December 2016) that collection of performance guarantee bond would be considered in future.

1.3.10.4 Inadmissible deduction of Contingency charges by the Finance Department

As per CPWD Works Manual, provision for contingency shall be kept in the estimated cost of the project. The contingencies can be utilized in connection

¹⁹ Flood Control and Drainage Divisions I, II, III and IV.

with the execution of the project on activities such as engagement of watch and ward staff and jobworks like surveying, material testing, estimating, structural design, drawings, models and other field requirements, etc.

Test check of records maintained by the Department showed that during 2008-09, Government of India (GoI) had released ₹ 11.78 crore for 11 FMP schemes. Against this amount, the State Finance Department released the fund after deducting ₹ 35.33 lakh as contingency charges.

As per norms, contingency is to be utilised by the implementing agency in connection with the execution of the work concerned. As such, deduction of contingency charges by the Finance Department was in violation of the norms.

1.3.10.5 Joint Physical Verification of projects

The following irregularities were noticed during joint physical verification of two sampled schemes/projects by Departmental officers and audit team.

A. Langathel River Flood Control Project Phase-I (MAN-18) (implemented during the period from April 2011 to February 2014)

- **Work not executed as per DPR:** As per DPR, re-sectioning work (cutting/excavation and embankment) was to be executed from RD 17 to 27.10 km chainage of the river. However, as per MB, works were awarded and executed over the chainage 13.468 to 26.290 km thus resulting in execution of 3.532 km (RD 13.468 to 17 km) beyond the scope of DPR, whereas another 810 m (RD 26.290 to 27.10 km) was left out during actual execution.

The Department replied (December 2016) that the work executed for a stretch of 3.532 km between chainage 13.468 km and 17 km was taken up because of the weaker and risky segments of the river bank located at the said chainage and protection from floods of the people residing around the weaker segments in question. Technical sanctions for the said works were accorded by the Superintending Engineer, Flood Management Circle. Thus, the reply confirmed the deficiency in the DPR which excluded the weaker section/segment of the river. This indicated inadequate surveys prior to preparation of DPRs.

- **Inadequate height of embankment:** As per the DPR of the scheme, the height of the embankment to be constructed was calculated by taking into account the High Flood Level (HFL) of the river with 50 years return period. The embankment was designed to be 1.00 m above the HFL. However, during site inspection of the work, the embankments were completely submerged (as seen in the photograph) in flood waters for a stretch of about 500 m (24.250 to 24.750 km) along the river. As a result, the scheme could not fully achieve the objective of controlling floods in areas surrounding this overflowing portion

The Department stated (December 2016) that the site where there was inadequate height of embankment was a sinking prone area and it sometimes did sink even after completion of the work. The reply of the Department is not acceptable since the item specification for the banking of earth had provided for adequate compaction²⁰ and as such, the embankment was not expected to suffer significant depression.



For a stretch of about 500 m (RD 24.250 to 24.750 km) embankments were submerged in flood waters.

Langathel River Flood Control Project Phase-I

B. Anti-erosion Scheme of Iril River from RD 0.00 km to 30.00 km (MAN-11) (implemented during the period from January 2009 to March 2010)

- **Damaged bracing structure of Reinforced Cement Concrete (RCC) piles:** Construction of RCC bored pile along Iril river Right Bank Bund (R/B/B) at upstream (u/s) of Sawombung bridge were executed in portions I, II and III. In portion II, the bracing structure was broken. As a consequence, the (bracing) structure was distorted and tilted towards the river. The Department replied (December 2016) that the structures were satisfactory and the damage occurred due to the site being heavy slide prone area. The reply is not acceptable as the Department should have designed the construction of the bored pile and bracing structure taking into account the sliding prone area.
- **Poor state of retaining wall:** Construction of cement concrete retaining wall for the chainage 14.400 to 14.470 km at R/B/B of the river was executed by two different agencies.

On physical verification, it was found the retaining wall executed over 14.440 to 14.470 km was in poor state.



Damage in bracing structure of RCC piles

14-6-2016

Poor quality of Retaining Wall

Anti-erosion scheme of Iril River from RD 0.00 to RD 30.00 km

²⁰ with (a) ½ tonne roller or rammer and (b) power roller (minimum 8 tonne) in every successive layer of 20 cm and 60 cm respectively.

Since the works were part of the same scheme implemented over the period from January 2009 to March 2010, such contrast in the present state of the retaining walls constructed at the same site indicates that quality was not maintained in the execution of works.

1.3.11 Monitoring and Evaluation

The position on monitoring and evaluation of schemes are discussed in the succeeding paragraphs.

1.3.11.1 Observance of prescribed monitoring procedure of FMP

As per the FMP Guidelines, implementation of schemes in the State was to be monitored by the Brahmaputra Board. No records were produced to Audit to indicate any monitoring by the Brahmaputra Board on the FMP works.

1.3.11.2 Performance evaluation of the FMP during XI and XII Plan

As per the FMP Guidelines, the performance of the schemes (costing below ₹ 7.5 crore) was to be evaluated after completion through reputed organization (not under the administrative control of Ministry of Water Resources, Government of India or under the Irrigation/ Water Resources Department of the State Government) in consultation with Central Water Commission/ Brahmaputra Board.

The task of performance evaluation of the completed FMP projects was assigned to Manipur Institute of Technology (MIT), Imphal. However, records pertaining to any consultation with Brahmaputra Board as mandated by FMP Guidelines could not be produced to Audit.

Test check of Performance Evaluation Reports prepared by MIT of 11 completed sampled projects revealed that the performance of 10²¹ out of 11 sampled schemes was graded 'satisfactory'. The grading was based on the reports of the quality tests conducted by the Quality Control and Monitoring Division (QCMD) of the Department and site inspections by the Project Evaluation team of the MIT.

However, no laboratory was opened at the work sites to conduct the requisite tests. The QCMD used to conduct the tests of the samples that were brought by the Divisions concerned at the laboratory of their office. While four mandatory tests (i. Compressive strength test for concrete cubes and tensile strength test for steel, ii. Material test, iii. Compaction test and iv. Sand test) were required to be conducted, Audit noticed that in respect of two²² sampled schemes, only compressive strength for concrete cubes was tested.

²¹ One scheme "Anti erosion works on left bank bund of Jiri river at Gulathol, Kamaranga, Khutchoithup, Chandrapur and Jirighat" was graded 'not satisfactory' by the MIT team.

²² Anti-erosion scheme of Imphal River from Koirengei to Lilong, Phase-I (MAN-8), and Anti-erosion Scheme of Flood Control Scheme on Iril River from RD 0.00 km to 30.00 km (MAN-11).

1.3.11.3 Records for Departmental inspection of works not maintained

As per the CPWD Works Manual, the Executive Engineer should draw up a quarterly programme of inspection of all works in his Division. Similarly, the Superintending Engineer shall draw up a programme for inspection of various works in his Circle. All the officers shall ensure issue of inspection notes/instructions after their inspection.

It was seen in audit that the Department/Circle/Divisions neither prepared quarterly programmes for inspection of works nor maintained records for inspection of works such as Inspection Registers, Inspection Notes/Reports, etc. In the absence of relevant records, Audit could not ascertain as to whether the inspections as laid down by the CPWD Manual were actually conducted. While admitting the audit observation, the Department stated (December 2016) that programme for inspection of work sites and inspection reports would be maintained in future.

1.3.12 Flood forecasting/warning and flood fighting activities

1.3.12.1 Flood forecasting/warning

The activity of flood forecasting has been entrusted with the Central Water Commission (CWC) for which the flood forecasts are provided at different stations located in various States. The CWC has been making continuous endeavour for modernization of its flood forecasting network like installation of automatic system of data collection, transmission, flood forecasting with use of satellite based technology etc. However, there was no flood forecasting station in Manipur.

The existing system of flood forecasting /flood warning in the State depends on weather report collection from India Meteorological Department, Silchar branch, rainfall data collected from local rainfall stations and different stations of rivers.

The Department stated (June 2016) that warning level, high flood level, etc., are marked for major rivers in the State. Forecasts/warning is issued accordingly from the data so collected. As soon as water level in the major rivers crosses warning levels, the Superintending Engineer (SE), Flood Management Circle normally issued warning for floods to the public and the district administration.

Thus, the State is still dependent on conventional system of flood forecasting/warning instead of application of modern technology.

1.3.12.2 Flood fighting

To perform emergency flood duties, the Department constituted three teams each under the supervision of one Executive Engineer/Surveyor of Works and they were attached to the Superintending Engineer, Flood Management Circle on daily basis, generally from May to October of the year. Four teams were also constituted in each of the four Flood Control and Drainage Divisions to

discharge flood fighting duties. No equipment was provided to the flood fighting teams other than empty cement bags, bamboos, *chattai* (ordinary and bamboo split). The duty of the flood fighting teams included receipt of complaints relating to flood and discharge of flood fighting works at the affected sites.

1.3.12.3 Inadequacy of flood fighting activities

The different methods for flood protection/mitigation are:

- Structural measures *i.e.* flood embankments, drainage and channel improvement, dams and reservoirs, flood wall, diversion of flood water, *etc.*
- Non-structural measures *i.e.*, flood forecasting, flood plain zoning, disaster preparedness and response, *etc.*

The Department incurred expenditure of ₹ 100.30 crore towards execution of 22 projects under FMP during 2007-16. The structural measures executed for flood protection/mitigation included construction of flood embankments, re-sectioning of river channels, retaining walls, *etc.* The Department also put into use flood fighting materials valued at ₹ 2.13 crore during 2008-16. However, effective flood management including disaster preparedness and response planning including flood forecasting and warning were absent.

As a result, the State suffered from the grim situation of flood annually, the quantum of flood damage in terms of area, population and value of flood damage being in the ascending trend during the period from 2007-16 as discussed in the report. Thus, the overall flood fighting and control activities remained inadequate.

1.3.12.4 Complaints and redressal thereof

The Flood Control Room used to receive flood related complaints from time to time and the complaints were addressed in coordination with the concerned Flood Control and Drainage (FCD) Divisions. As per records maintained (Complaint Register) by the Flood Control Room, the concerned FCD Divisions had acted upon 14 complaints received during the period from 2008-09 to 2015-16.

There was no record of complaints received for the years 2009, 2010, 2012 and 2013. However, non-receipt of complaint during the said years was not in consonance with the actual position of flood situation in the State during 2007 to 2015 when flood affected significant areas and large population as shown in **Table No. 1.3.1.**

1.3.13 Conclusion

Planning for management of flood was not effective and comprehensive as Comprehensive Master Plan for the State was not prepared. The State was dependent on conventional system of flood forecasting/warning instead of modern technology. The Department had neither scientifically assessed the database of flood prone areas nor prepared frequency based inundation maps and depended on conventional system of flood forecasting/warning. The Flood Plain Zoning Act, 1978 was not operationalized and the Action Plan of the National Disaster Guidelines was not complied with till date of audit. There was inordinate delay in release of funds by the State Government and in completion of the schemes/projects. Inefficiency in execution of the schemes was apparent from cases of execution of work without design and implementation of projects at sites not identified as flood prone areas. There were instances of extension of undue benefit to the contractors. Site inspection of schemes/projects by Departmental officers was not documented properly. Joint physical verification of some of the projects disclosed cases of poor quality of works executed. In spite of execution of 22 Flood Management Projects and procurement of flood fighting materials during the period 2007-16, the quantum of flood damage in terms of area, population and value of flood damage is in the ascending trend.

1.3.14 Recommendations

The Department may ensure the following steps:

- Construct structures as per action plan prepared on the strength of Comprehensive Master Plan of flood management and compliance with the action plan of the National Disaster Guidelines for management of floods;
- Prepare digital elevation maps and frequency inundation maps based on scientific assessment of the flood prone areas and morphological study of rivers;
- Demarcate flood plain zones in the State as mandated under Flood Plain Zoning Act, 1978;
- Adopt modern technology for flood forecasting and warning; and
- Inspection of the work sites as per the provisions of the works manual.

COMPLIANCE AUDIT

CO-OPERATION DEPARTMENT

1.4 Loss to the Government

Failure of the State Government to honour its commitment of One Time Settlement proposal resulted in loss of ₹ 11.08 crore to the Government

Rule 62 of General Financial Rules, 2005 provides that money which is indisputably payable by Government shall not ordinarily be left unpaid and suitable provision for the anticipated liabilities should invariably be made in Demands for Grants placed before Legislature.

Audit of records (October 2014) of the Co-Operation Department showed that Manipur State Apex Co-operative Housing Society Ltd. (MSACHS), a society under the Department had taken loan of ₹ 5.76 crore from Housing and Urban Development Company (HUDCO) as shown in the following table. The Government of Manipur (GoM) was the guarantor of the loan.

Table No. 1.4.1 Loan from Housing and Urban Development Company

Scheme No	Year of Sanction	Amount (₹ lakh)
9821	1993-94	161.20
11379	1995-96	176.90
12754	1996-97	146.49
11992	1997-98	91.23
Total		575.82

MSACHS had availed the loan for advancing housing loans to its member societies²³ for implementing Composite Cash Loan Housing Scheme in Manipur. The beneficiaries of the loan disbursed by MSACHS defaulted in repayment and no action was taken to recover the amounts due through deduction at source from their respective salaries as proposed from time to time.

As the loan remained unpaid for a long time, HUDCO initiated legal action (September 2004) against MSACHS and the Government of Manipur (GoM), the guarantor of the loan through the Debt Recovery Tribunal, Guwahati. After negotiation with the HUDCO, the State Government proposed (August 2009) for One Time Settlement (OTS). The proposal was approved (December 2009) by HUDCO at ₹ 14.13 crore along with interest at the rate of 11.14 per cent per annum with effect from January 2010. It was agreed that 25 per cent of the OTS was to be paid upfront within 60 days and the remaining balance in eight installments, payable by December 2011. The details of the recovery schedule of the OTS, Interest and Legal expenses are as shown in the following table.

²³ MSACHS has 156 primary Housing Co-operative Societies as its member societies.

Table No. 1.4.2 Recovery schedule of One Time Settlement

Particular	Amount (₹ in lakh)	Remarks
OTS		
Upfront payment @ 25% of the OTS amount	353.19	₹ 300 lakh of the upfront amount was paid (August 2009) as advance
Balance amount of OTS payable in 8 installments within 2 years	1059.56	To be paid in equal installment of ₹ 132.44 lakh during March 2010 and December 2011
Interest and Legal expenses		
Interest on the Balance amount	132.51	Compound Interest @ 11.14 per cent on the Balance amount
Legal	2.00	-
Total	1547.26	

Out of upfront payment of ₹ 3.53 crore, the Government paid (August 2009) only ₹ 3 crore. HUDCO asked GoM to pay the balance of upfront payment of ₹ 55.19 lakh (including Legal expenses of ₹ 2 lakh) by April 2010 and advised GoM to make Budget provision to meet its OTS commitments. However, the Government failed to make the payment and the OTS was revoked and HUDCO moved the Debt Recovery Tribunal against the State Government and claimed that their dues as on 31 March 2014 was ₹ 23.34 crore on which interest at 10 per cent was applicable plus legal charge of ₹ 0.03 crore. In August 2014, Government of Manipur proposed a settlement against onetime payment of ₹ 23.55 crore and transferred the amount to HUDCO's bank account in September 2014.

Thus, the State Government had to pay an excess of ₹ 11.08 crore²⁴.

Thus, failure on the part of the State Government to make commitment of its OTS proposal with adequate Budget provision and fund allocation had resulted in loss of ₹ 11.08 crore to the Government.

The matter was referred to the Government (June 2016); reply had not been received (January 2017).

IRRIGATION AND FLOOD CONTROL DEPARTMENT

1.5 Undue benefit to the contractor

Undue benefit of ₹ 1.75 crore was extended to the contractor due to recovery of cement at a rate lesser than the applicable issue rate

Para 7.2.19 of the Central Publics Works Account Code stipulates that issue rates of cement, steel or any other item in the contracts should not be less than the market rates of these commodities irrespective of the issue rates of the Central Stores.

Audit of records (December 2015) of the Executive Engineer, Thoubal Project Division-II, Irrigation and Flood Control Department showed that during

²⁴ ₹ 23.55 crore - (₹ 15.47 crore - ₹ 3 crore).

February 2014 to June 2015, the Division had issued 1,36,540 bags of cement²⁵ to M/S Ansal Properties and Infrastructure Ltd (APIL) for the work 'Construction of Spillway, Intake and Water Conductor System' under Thoubal Multipurpose Project, recoverable from the running account bill.

During 2014-2015, the market rate (rate at which the Department purchased) of 43 grade OP cement was ₹ 348 per bag. The Department stated (August 2016) that based on this market rate, the analyzed issue rate for cement was fixed at ₹ 368.88 per bag which is inclusive of six *per cent* storage charge.

The Division recovered the cost of 1,30,453 bags of cement at the rate of ₹ 235 per bag from the 135th to 141st Running Account (RA) bills of APIL instead of the issue price of ₹ 368.88 per bag as required under the provisions *ibid*. Thus, the rate of recovery was less than the issue rate by ₹ 133.88 per bag (₹368.88 – ₹ 235) resulting in undue benefit to the contractor to the tune of ₹ 1.75 crore²⁶ and loss to the Government to that extent (*Appendix 1.12*).

The Department stated (September 2016) that recovery at the rate of ₹ 235 per bag was made as per the contract agreement signed in October 1989. The reply of the department is not acceptable as recovery rate was less than the prevailing market rate of cement which was in violation of the Central Public Works Account Code mentioned *ibid*.

PUBLIC WORKS DEPARTMENT

1.6 Undue benefit to contractors

Incorrect adoption of rates led to undue benefits of ₹ 34.22 lakh to the contractors of two bridge works

Rule 21 of General Financial Rules 2005 as adopted by the State Government states that every officer incurring or authorizing expenditure from public fund should enforce financial order and strict economy and see that the expenditure should not be *prima facie* more than the occasion demands.

The Bridge Division, Public Works Department awarded two bridges works in October 2012 and March 2014 at a tendered cost of ₹ 32.29 crore as shown in the following table.

²⁵ 43 Grade/ordinary portland cement.

²⁶ Loss to government = ₹ 133.88 per bag x 1,30,453 bags = ₹ 1,74,65,047.64.

Table No. 1.6.1 Details of works awarded

Name of work	Name of contractor	Tendered amount (₹ in crore)	Date of award	Upto date payment
C/o Sanjenthong Bridge over Imphal River	M/s Simplex Project Ltd, Kolkata	28.15 (4.8 % above estimate)	March 2014	₹ 7.92 crore upto 2 nd RA in December 2014
C/o Ithoi Bridge over Ithoi River at Metakhong, Molkon (SH: Main bridge & Coffor Dam)	Shri M. Chaoba Singh	4.14 (0.73 % above estimate)	October 2012	₹ 4.77 crore upto 7 th RA in March 2015
Total		32.29		

In execution of the two works, the contractors were give undue benefit as discussed below.

(i) Construction of Sanjenthong Bridge over Imphal River

The contractor was awarded boring, providing and installation of M-35 Grade bore pile of 1200 mm diameter (dia) at the rate of ₹ 21,050 per Rm for which Dimapur sand was preferred to the locally available sand. The Department could not produce the relevant rate analysis for the item. However, Audit analysed the applicable rate for this item as ₹ 19,512.71 (inclusive of 4.8 per cent above estimate as per tender) as shown in *Appendix 1.13*. Thus the work was awarded to the contractor at higher rate by ₹ 1,537.29 per Rm.

Till date of audit (February 2016), 1,760 Rm of the bore pile work was executed. As such, there was an undue benefit to the contractor to the extent of ₹ 27.06 lakh (₹ 1,537.29 x 1760).

(ii) Construction of Ithoi Bridge over Ithoi River at Metakhong, Molkon

A) As per Manipur Schedule of Rates (MSR) 2011, the base rate per Rm for boring, providing and installation of M-20 Grade bore piles of 550 mm dia and 600 mm dia are ₹ 3,437.90 and ₹ 4,091.40 respectively.

For this work, the contractor was awarded the work of boring, providing and installation of M-20 Grade bore pile of 550 mm dia at the rate of ₹ 4,950.15 per Rm. This item of work could have been awarded for ₹ 3,937.24 per Rm (after factoring 0.73 per cent above estimate for award of work) as shown in *Appendix 1.14*. Thus, the work was awarded to the contractor at higher rate by ₹ 1,012.91 per Rm.

Till date of audit (February 2016), 660 Rm of the bore pile work was executed. As such, there was an undue benefit to the contractor to the extent of ₹ 6.69 lakh (₹ 1,012.91 x 660).

B) Cement concrete of proportion 1:3:6 with stone aggregate 20 mm nominal size was required to be executed for the “SH: Main Bridge” and “SH: Retaining wall, Curtain wall and Floor Protection”. Though

the work to be executed remained the same, the contractor was awarded at ₹ 6,250 per cum for the main bridge and ₹ 6,294 per cum for the retaining wall etc., for which there was no justification on record. Thus, the cement concrete (1:3:6) for the retaining wall *etc.*, was awarded to the contractor at higher rate by ₹ 44 per cum. Till date of audit (February 2016), the contractor had executed 1,060.77 cum at the higher rate resulting in undue benefit to the tune of ₹ 0.47 lakh (₹ 44 x 1,060.77).

Thus, the Department incurred expenditure of ₹ 34.22 lakh²⁷ in excess of actual requirement thereby giving the contractor undue benefit to that extent. Had the Department been vigilant and circumspect at the time of preparation of estimate and finalisation of contract, such excess expenditure could have been avoided.

The matter was referred (September 2016) to the Government; reply has not been received (January 2017).

²⁷ ₹ 27.06 lakh + ₹ 6.69 lakh + ₹ 0.47 lakh = ₹ 34.22 lakh.