

CHAPTER-II

ECONOMIC SECTOR

Performance Audit of "Flood Control in Assam"

COMPLIANCE AUDIT

CHAPTER-II

ECONOMIC SECTOR

2.1 Introduction

The findings based on audit of the State Government departments/offices under Economic Sector feature in this chapter. During 2016-17, against a total budget provision of ₹ 25,429.60 crore, an expenditure of ₹ 16,071.21 crore was incurred by 19 departments. Department-wise details of budget provision and expenditure incurred thereagainst by these 19 departments are given in *Appendix-2.1*.

2.1.1 Planning and conduct of Audit

During 2016-17, out of 709 offices under Economic Sector (Non-PSUs), 137 units¹ were audited based on risk analysis during the year involving an expenditure of ₹ 5,978.17 crore (including expenditure of earlier years). This chapter contains one Performance Audit (PA) on 'Flood Control in Assam' and eight Compliance Audit paragraphs.

The major observations made in audit during the year 2016-17 are discussed in succeeding paragraphs.

PERFORMANCE AUDIT

Water Resources Department

2.2 Flood Control in Assam

The rivers, Brahmaputra and Barak along with their tributaries traverse the State of Assam. As identified by Rastriya Barh Ayog, 31.50 lakh hectares (ha) (40 per cent out of the total 78.44 lakh ha land area) of the State is flood prone area which is four times (approximately) of the national mark². Almost every year, the State is ravaged by devastating floods causing huge loss of life and property. The GoI implemented Flood Management Programme (FMP) and Flood forecasting scheme during XI (2007-12) and XII (2012-17) five year plans.

A Performance Audit (PA) on assessing the impact of the implementation of the selected projects under FMP, as well as other programmes of flood control undertaken by Water Resources Department (WRD), Government of Assam was conducted covering the period 2007-2017. The key findings of the PA were as under:

Highlights:

Non-adoption of the basin-wise Comprehensive Master Plan (as suggested under National Water Policy, 2002) and Model Bill of Flood Plain Zoning (FPZ), 1975

¹ High risk units: 62, medium risk units: 39 and low risk units: 36.

² 10.2 per cent flood prone area of the total area of the country.

for flood control measures pointed towards weak planning process of the Department. Further, hydrological and morphological studies were not adequate for making a long term plan for flood control and anti-erosion activities in the State. Audit also observed that an anti-erosion work executed at ₹ 5.88 crore failed to prevent erosion due to lack of adequate studies.

(Paragraphs 2.2.12, 2.2.14.1 and 2.2.14.2)

There were short releases of Central Assistance of ₹ 1,479.24 crore (50 per cent) and State's share of ₹ 164.84 crore (20 per cent) against the allocations made under the programme during 2007-17.

{Paragraph 2.2.13.2 (ii)}

Expenditure of ₹ 41.39 crore incurred against two selected projects under FMP proved wasteful due to stoppage of work by the National Green Tribunal for not obtaining prior clearance from the GoI under Forest Conservation (FC) Act., 1980 in one project. In other project, it was caused due to washing away of Reinforced Cement Concrete (RCC) porcupine screens due to ineffective launching.

(Paragraph 2.2.14.5)

Non-acquisition of land prior to execution of works in respect of three projects in violation of FMP guidelines had not only rendered the partial construction of embankment under the threat of inundation, but also rendered the entire expenditure of ₹ 39.59 crore incurred, unfruitful.

(Paragraph 2.2.14.6)

2.2.1 Introduction

Rastriya Barh Ayog (RBA) identified (1980) that 40 per cent (31.50 lakh ha out of 78.44 lakh ha) of the total land area of the State was prone to flood. In the State, there are mainly two river basins viz., Brahmaputra and Barak with about 50 major tributaries and many sub-tributaries. These rivers traverse the State of Assam and cause three to four floods every year, resulting in recurring flood havoc and loss of property and life. As per Annual Operational Plan (2015-16) of the WRD, the State could provide reasonable protection to about 16.50 lakh ha (52 per cent) of flood prone area only.

After the unprecedented floods in the country in 1954, Government of India (GoI) had announced a policy statement on floods and remedies comprising three types of measures viz., immediate, short term and long term. The flood control activities in Assam also started after the announcement of the said policy statement in 1954. The WRD, GoA planned and implemented various flood control projects like, construction of embankments, anti-erosion works, raising and strengthening of embankment and drainage works with funds received from the Centre and the State Governments under centrally sponsored and State schemes. The WRD, GoA had taken up works primarily

for development of the rural sector and for the protection of major townships. It covered both the Brahmaputra and Barak valley³. The Government had also taken up projects to relieve the problem of the drainage congestion in the cities and towns. The State had not taken any long term measures to arrest the flood and soil erosion problems on permanent basis.

2.2.2 Main causes of Flood and Erosion in Assam

The Water Resources Department (WRD), Government of Assam, identified the following reasons for flood and erosion in the State:

- **Physiographic condition of the valley:** Plains of Assam lie under narrow elongated U-shaped valley and open itself wider towards Bay of Bengal. The average width of the valley is 80-90 Kms. The natural course of the river flows from high elevation to a steep falling elevation⁴ when it enters the State.
- **Drainage congestion:** High stages of river Brahmaputra and Barak obstruct free discharge of tributaries causing back flow and congestion near outfalls. Inadequate countryside drainages through sluices⁵ in embankment system particularly during high floods cause prolonged inundation in the countryside. Encroachment of natural drainages further aggravates the situation.
- **Excessive rainfall:** Mean annual rainfall over the catchment area in India is around 2,300 mm, whereas mean annual rainfall varies between 2,480 mm to 6,350 mm in the North Eastern Hills.
- **Geology and Geomorphology:** Lesser Himalayas comprise of relatively younger rock formation and are in the process of building up. Hence, these rocks are easily erodible and prone to landslides.
- **Seismicity and Landslides:** Assam falls under Seismic Zone-V, which is the highest risk zone of earth-quake. As such, frequent tectonic activity causes geomorphology changes and landslides and excessive sediment charge causes rivers to change courses frequently. The rivers either spill or erode their banks due to constant shifting of channels.
- **Encroachment of Riverine Area:** Increase in population and development activities in riverine areas including encroachment of *chars*⁶ are another reasons for the erosion.

³ 30 districts fall under Brahmaputra Valley and three districts under Barak Valley.

⁴ Average slope about 2.82 m/Km gets reduced to about 0.1m/Km in Assam valley, which brings high sediments load and activate braiding.

⁵ a sliding gate or other device for controlling the flow of water, especially one in a lock gate.

⁶ Riverine islands.

- **Other Factors:** Deforestation and improper land use like *Jhum*⁷ cultivation and grazing in the hill districts, southward shifting of the river causing migration of bank line through erosion, *etc.*

2.2.3 Framework for management of floods

The subject of flood control does not figure in any of the three legislative lists included in the Constitution of India. Though there were multiple agencies involved in the management of flood, measures for drainage and embankments were specifically mentioned in the State List. The primary responsibility for flood control, as such, lies with the States. As per the Union List, Parliament declares, by law, the regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union, to be expedient in the public interest.

The Government of India (GoI) renders assistance to the States *viz.*, financial, technical, advisory, catalytic and promotional in nature. GoI had set up Central Water Commission (CWC) in 1945, formulated National Water Policy, 2002 under Ministry of Water Resources (MoWR), GoI and National Disaster Management Authority (NDMA) in 2005. The formulation was to enable the State Government to address flood problems in a comprehensive manner. Besides, Rashtriya Barh Ayog (RBA) and working group for XIIth Five Year Plan (FYP) of the Planning Commission of India made various recommendations and suggestions for flood control and management in March 1980 and October 2011 respectively.

The Brahmaputra Board (BB), a central autonomous body created in 1980 has jurisdiction of all NE States including Sikkim and North Bengal. The main functions of BB are the survey and investigation, preparation of master plans⁸ to control floods, construction and maintenance of dams *etc.* BB also recommends and monitors the projects under Flood Management Programme (FMP), a centrally sponsored scheme for the purpose of release of central assistance to the State.

2.2.4 Types of flood control infrastructure created by WRD

Against the three phases of immediate, short term and long term measures, the WRD, GoA concentrated on short term flood management schemes in river Brahmaputra, Barak and their tributaries. During the period 2007-17, for mitigation of floods, the WRD executed short term flood control measures as shown in **Table-2.1**:

⁷ *Jhum* cultivation, also known as the slash and burn agriculture, is the process of growing crops by first clearing the land of trees and vegetation and burning them thereafter. The burnt soil contains potash which increases the nutrient content of the soil.

⁸ The Master plans are the documents depicting overall integrated planning of water resources of a particular river basin.

Table-2.1

Item	Position as March 2007	Achievement during XI plan (2007-12)	Achievement during XII plan (2012-17)	Total achievement as of March 2017	Achievement during 2007-17 (in per cent)
Construction of Embankment (in Km)	4,465.85 (since 1954)	7.97	0.60	4,474.42	0.19
Anti-erosion Works (in Km)	746	138	74	958	28.41
Removal of drainage congestion under Drainage development scheme (in Km)	854.19	20.776	7.00	881.966	3.25
Major sluice (in number)	86	8	4	98	13.95
Minor sluice (in number)	539	6	-	545	1.11
Raising & strengthening (in Km)	4,465.85	527.758	280.136	5,273.74	18.09

Source: Information furnished by WRD, GoA.

The Department had not executed any long term measures such as construction of storage reservoir/catchment area treatment *etc.* After Audit pointed out the issue, the WRD stated (November 2017) that the main rivers Brahmaputra and Barak as well as their tributaries originate from hilly areas of the neighboring States/Countries. The Department therefore, could not implement long term measures due to non-establishment of Basin level organization involving all the stakeholders.

2.2.5 Loss of life and property due to flood

Information furnished by Revenue and Disaster Management Department (R& DMD), GoA, revealed that huge loss of life and property occurred during the floods (2007-17). The Government therefore, had to spend huge amount of money for rehabilitation of the flood victims and, on repairing works as shown in **Table-2.2** below:

Table-2.2

(₹ in crore)

Year	Loss of human life	Money value quantified on damage to properties/crops, etc.	Rehabilitation Grant (RG)	Gratuitous Relief (GR)	Flood damage Repair
2007-08	134	NA	17.41	91.12	260.48
2008-09	40	3.55	32.60	54.63	238.76
2009-10	NA	NA	18.75	24.16	357.87
2010-11	17	67.57	4.14	9.25	22.05
2011-12	144	3,591.89	1.42	4.98	47.53
2012-13	105	2,400.21	11.41	155.75	192.53
2013-14	90	1,915.50	1.08	22.33	232.01
2014-15	66	1,465.02	66.03	88.21	64.41
2015-16	64	10,161.56	5.26	54.34	38.67
2016-17	82	3,888.09	66.09	86.32	238.65
Total	742	23,493.39	224.19	591.09	1,692.96

Source: Information furnished by R & DMD, GoA.

NA- Details not available.

The above table shows loss of minimum of 742 human life and property valued at ₹ 23,493.39 crore during the span of last 10 years in floods. Besides, Government had

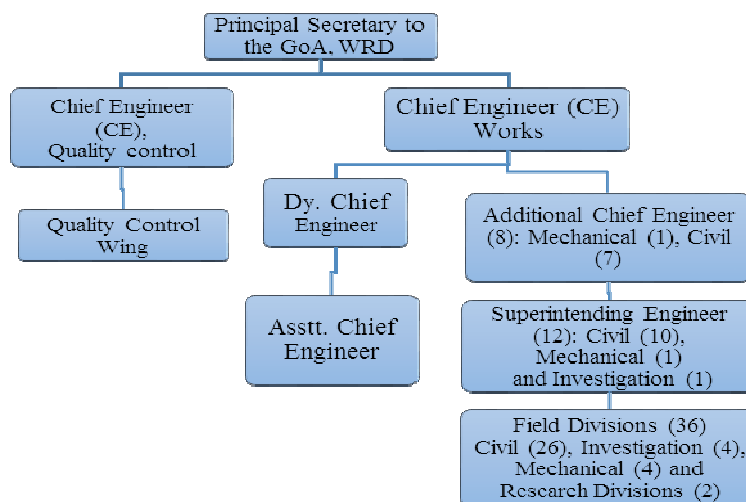
to spend ₹ 2,508.24 crore⁹ towards the repair and rehabilitation works. This indicated deficiencies in planning and implementation of effective flood management measures. Succeeding paragraphs depict such deficiencies noticed in audit.

2.2.6 Organisational structure

Principal Secretary to GoA is the administrative head of the WRD. The two Chief Engineers (CEs), viz., CE (Works) and CE (Quality Control) assist the Principal Secretary. While CE (Works) is responsible for the overall implementation of all projects, funded under various programme, CE (Quality Control) is responsible for the quality control including monitoring and evaluation of projects.

Chart-2.1 shows the organizational structure:

Chart-2.1



Source: Departmental records.

2.2.7 Audit Objectives

The main objectives of the Performance Audit were to examine whether:

- the WRD prepared Holistic plans, based on basin-wise flood management;
- the WRD took adequate and effective measures for flood control;
- funds were adequate and financial management was in adherence to the financial rules and budgetary provisions;
- the WRD implemented the projects economically, efficiently and effectively; and,
- there was effective monitoring system at all level.

⁹ RG-₹ 224.19 crore, GR-₹ 591.09 crore and FDR-₹ 1,692.96 crore.

2.2.8 Audit Criteria

The following sources of criteria served as benchmark for the audit findings:

- National Water Policy, 2002;
- Flood Management Programme (FMP) guidelines (December 2007, August 2009 and October 2013);
- guidelines of Rural Infrastructure Development Fund (RIDF);
- report of Working Group of Planning Commission on Flood Management and Region Specific issues for XII Five Year Plan (FYP);
- Assam Public Works Department (APWD) Manuals and Assam Treasury Rules; and,
- Assam Financial Rules (AFR)/Government orders/ Departmental policies and regulations.

2.2.9 Scope and Methodology of Audit

The Performance Audit covering the period 2007-17 commenced with an Entry Conference held on 26 April 2017 with the Secretary to GoA, WRD and CE, WRD. Audit discussed the objectives, scope and criteria with the Department, and received their inputs. The audit team scrutinized (April-July 2017)¹⁰ records of WRD, GoA, CE, WRD, CE (Quality Control), concerned Divisions of WRD and BB¹¹ to see the implementation of the selected projects under FMP, as well as other programmes of flood control undertaken through other Schemes *viz.*, RIDF, Additional Central Assistance (ACA) and State Plan *etc.* Audit conducted joint physical verifications of the selected projects and obtained photographic evidences wherever required. Audit discussed the findings in the exit conference with the Principal Secretary, WRD and CE, WRD held on 30 October 2017 and incorporated departmental replies to the observations in the Report appropriately, wherever applicable.

2.2.10 Audit sampling

In addition to scrutiny of the records of the Secretary to GoA, WRD and CE, WRD and BB, Audit selected 30 projects relating to FMP (out of 141) and 15 projects (out of 282 projects) other than from FMP {eight under RIDF-NABARD¹²}, two under State plan, four under CM's Package and one under Additional Central Assistance (ACA) *ie.*, a total of 45 projects had been selected for coverage in the PA by using systematic random sampling after ranking the completed projects on quantum of money released and incomplete projects on the basis of delay in completion. The

¹⁰ In connection with the All India Performance Audit on 'Schemes for Flood Control and Flood Forecasting', audit gathered relevant information. Audit also conducted site verification during April–August 2016 in respect of the selected projects of FMP.

¹¹ For covering the aspects relating to planning and monitoring of FMP schemes.

¹² Rural Infrastructure Development Fund (RIDF) under National Bank for Agriculture and Rural Development (NABARD).

detailed list of projects covered in audit have been given in *Appendices-2.2 (A)* and *2.2 (B)* respectively. The details of total projects and coverage are shown in **Table 2.3**:

Table-2.3

(₹ in crore)

Source of the project	Number of total project	Expenditure of total project	Number of project selected for audit	Expenditure of the selected projects
FMP	141	1,258.89	30	280.62
Other than FMP	282	848.25	15	63.72
Total	423	₹ 2,107.14 crore	45	₹ 344.34 crore

Source: Departmental records and sample selection.

2.2.11 Acknowledgement

Audit acknowledges and appreciates the co-operation extended by the Secretariat of GoA, WRD, CE, WRD and WR Divisions during the course of the Performance Audit.

Audit findings

2.2.12 Planning

Planning is an integral part of implementation of a programme. For effective planning, the implementing agencies were to set for periodical targets after prioritising the necessities. At the State level, planning mechanism towards flood control activities involve WRD, State Technical Advisory Committee and Flood Control Board. State Governments are to ensure project-specific planning and their effective implementation.

- National Water Policy (NWP), 2002 suggested various structural and non-structural measures for the flood control and management for each flood prone basin such as preparation of 'Master Plan', construction of reservoirs *etc.* NWP emphasized on non-structural measures like flood forecasting and warning, flood plain zoning, *etc.*, for the minimisation of losses and to reduce the recurring expenditure on flood relief.
- The Brahmaputra Board (BB) suggested various measures for 'long term' solution of flood control such as catchment area treatment, afforestation, flood plain zoning, construction of reservoir, *etc.*, in their Master Plan. The Master Plans also envisaged 'short term' measures (construction of embankment, anti-erosion works, construction of raised platform *etc.*) and immediate measures (repairing and maintenance of embankment, regulating sluice gates and other emergency measures *etc.*). BB formulated (1986-2010) 57 Master Plans. Of these, the GoI approved 49 master plans for the rivers and tributaries and forwarded the same to the State for implementation. Master plan depicted the overall integrated planning of water resources of a particular basin. The WRD was to carry out detailed investigation and study before the implementation of the scheme as indicated in the Master Plan. Further, WRD needed to modify the master plan and update the same from time to

time in view of ever changing nature of rivers under Brahmaputra and Barak basins. The State Government was responsible for implementation of the recommendations in the Master Plans.

It was, however, observed that WRD had not carried out any such study for the preparation of basin-wise comprehensive plan before executing any scheme. In this regard, WRD stated that the Department had taken up flood control measures as per vulnerability to flood and erosion and availability of funds only. In absence of such plan, WRD did not set specific targets for execution of flood control measures to implement the recommendations made in the master plan which pointed towards the weak planning process of WRD as discussed in the succeeding paragraphs.

2.2.12.1 Plan for demarcation of zones

The CWC circulated the model bill of Flood Plain Zoning (FPZ), 1975 to the States for demarcating zones or areas with high risk of floods as a non-structural measure. The State was to specify the type of permissible development in the zones to minimize damages in case of flood.

The State had not adopted the model bill of FPZ till July 2017 for demarcating zones to minimize the flood damage. During the Exit meeting, the Principal Secretary, WRD stated that the Department could not implement FPZ Bill as it would involve eviction of the people already settled in the low lying areas.

2.2.13 Physical and Financial management

2.2.13.1 Physical Performance

RBA identified total flood prone area of 31.50 lakh hectares in the State in 1980. Of this, WRD covered only 16.50 lakh hectares (52 per cent) under reasonable protection. As such, the balance 48 per cent of flood prone area remained vulnerable to floods as of March 2017. As per the information furnished, WRD, GoA, sanctioned all together 423 projects during 2007-17 for flood control activities under different centrally sponsored and state schemes. Against these, WRD could complete 312 projects only as of July 2017. **Table-2.4** shows the position of scheme wise sanctioned projects *vis-à-vis* achievement made:

Table-2.4

(₹in crore)

Sl. No.	Name of the scheme	No. of project sanctioned	Achievement made with expenditure			
			No. of project completed	Expenditure (completed projects)	No. of incomplete project	Expenditure incurred (incomplete projects)
1	FMP XI-Plan	100	96	874.86	4	13.50
2	FMP XII-Plan	41	6	21.62	35	348.89
3	RIDF	142	98	394.85	44	41.63
4	NEC	4	3	16.06	1	1.73
5	NLCPR	2	2	12.71	0	0.00
6	ACA	55	55	188.43	0	0.00
7	SPA	3	3	22.24	0	0.00
8	State Plan	54	32	94.26	22	13.67
9	CM Spl Package	22	17	44.99	5	17.70
Total		423	312	1,670.02	111	437.12

Source: Departmental records.

The table above shows that WRD, GoA could complete nearly 74 *per cent* (312 out of 423) of the sanctioned projects with an expenditure of ₹ 1,670.02 crore. The remaining 111 projects remained incomplete with expenditure of ₹ 437.12 crore.

The position of achievement made in respect of the 45 projects covered under audit is shown in **Table-2.5**.

Table-2.5

(₹ in crore)

Sl. No.	Name of the scheme	No. of project sanctioned	Achievement made with expenditure			
			No. of project completed	Expenditure	No. of incomplete project	Expenditure incurred (incomplete projects)
1	FMP XI & XII Plan	30	22	221.75	8	58.87
2	RIDF (NABARD)	8	7	28.43	1	6.97
3	State Plan	2	1	7.29	1	0.46
4	CM's Spl. Package	4	2	5.42	2	8.55
5	ACA	1	1	6.60	0	-
Total		45	33	269.49	12	74.85

Source: Departmental records.

The percentage of completion in respect of these projects was 73 *per cent*. The issues relating to land acquisition, litigation in the National Green Tribunal (NGT), defective planning and short release of funds resulted in non-completion of the projects as discussed in the succeeding paragraphs.

2.2.13.2 Financial Performance

(i) Funding pattern

The WRD, GoA received funds from three sources *viz.*, State Plan, loan from National Bank for Agriculture and Rural Development (NABARD) and GoI under FMP. Funding pattern under FMP was in the ratio of 90:10 between Centre (central assistance) and the State respectively upto July 2013. Thereafter, GoI changed the ratio to 70:30 which remained constant up to 27 January 2016. The GoI again raised the Central assistance (CA) and fixed the ratio at 80:20 from 28 January 2016. The projects under RIDF, NABARD provided 95 *per cent* of the cost of the projects as loan assistance and remaining five *per cent* provided by the GoA. The GoI provided 100 *per cent* CA in respect of projects implemented under Additional Central Assistance (ACA). The GoA provided 100 *per cent* fund in respect of state plan schemes.

(ii) Receipt of funds and expenditure

During the period from 2007-08 to 2016-17, the Department received funds for implementation of 423 flood control projects from different sources. **Table-2.6** depicts details of programme/source-wise funds received and expenditure incurred there against.

Table-2.6

(₹ in crore)

Sl. No.	Name of programme/ Source of fund	Total No. of projects	Provision of allocation			Fund released to the implementing Divisions and expenditure		Short release	
			Sanctioned Cost	Central share (CS)/ Loan component(LC)	State share	CSLC	State share	CS/ LC	State share
1	FMP XI- Plan	100	1,139.56	1,025.60	113.96	775.77	112.60	249.83	1.36
2	FMP XII- Plan	41	1,386.96	975.65	411.31	27.23	343.29	948.42	68.02
3	RIDF (NABARD)	142	734.41	697.68	36.73	423.32	13.16	274.36	23.57
4	NEC	4	24.39	21.95	2.44	15.87	1.91	6.08	0.53
5	NLCPR	2	12.71	11.44	1.27	11.44	1.27	-	-
6	ACA	55	188.89	188.89	0.00	188.43	0.00	0.46	-
7	SPA	3	22.33	22.33	0.00	22.24	0.00	0.09	-
8	State Plan	54	153.22	0.00	153.22	0.00	107.93	-	45.29
9	CM Spl Package	22	88.75	0.00	88.75	0.00	62.68	-	26.07
Total		423	3,751.22	2,943.54	807.68	1,464.30	642.84	1479.24	164.84

Source: Information furnished by WRD, GoA.

It was evident from the table above, that-

- GoI and NABARD (RIDF) made a short release (50 per cent) consisting of ₹ 1,204.88 crore as CA and ₹ 274.36 crore as LC respectively against their allocation. The State also released ₹ 164.84 crore less (20 per cent) against its matching share indicating financial imprudence on the part of the both GoI and the State Government.
- Short releases of CA under FMP XI and XII (Plan) was 24 per cent and 97 per cent respectively during 2007-17 though the GoA released almost its matching share. The available records did not indicate the reasons for the short release of funds.

2.2.13.2.1 Pending Utilization Certificates (UCs)

According to FMP guidelines, State Government should forward UCs of CA to BB for onward transmission to MoWR, GoI along with its monitoring report and recommendations. It was necessary to furnish UCs so that MoWR could ascertain the quantum of progress achieved in each project and regulate the release of funds effectively, commensurate to achievement against the target.

GoA released CA of ₹ 200.56 crore to the implementing Divisions during the period from July 2008 to March 2015 against 23 (out of 30) projects covered under audit. Against this, BB forwarded UCs for ₹ 164.99 crore only to MoWR, GoI. The State Government did not submit UCs for balance amount of ₹ 35.57 crore. Audit, therefore, could not vouchsafe utilization of ₹ 35.57 crore under the programme.

In reply (November 2017), the Department stated that they had submitted all the UCs to BB and they would reconcile the discrepancy, if any, with BB.

2.2.13.2.2 Delay in release of funds to the selected projects

According to FMP guidelines, funds released by GoI should reach the implementing Divisions within 15 days from the date of release by GoI. The State Finance Department should issue a certificate to this effect to the MoWR, GoI.

Scrutiny (June 2017) of records of implementation of selected FMP projects showed that GoA received CA of ₹ 206.82 crore in respect of 23 (out of 30) projects covered under audit, between July 2008 to March 2015. Of these, GoA released ₹ 200.56 crore to the implementing Divisions during March 2009 to February 2016. GoA delayed the release of funds to the implementing Divisions ranging from 63 to 790 days from the date of release by GoI in violation of FMP guidelines.

2.2.13.2.3 Rush of expenditure at the fag-end of financial year

Rule 90 of Assam Financial Rules stipulates to avoid rush of expenditure in the closing month of the financial year.

In respect of 45 projects covered under audit, the WRD spent ₹ 162.87 crore, out of ₹ 342.85 crore in the month of March alone. The expenditure in the last month ranged between three and 96 per cent as indicated in **Table-2.7**:

Table- 2.7

(₹ in crore)

Year	Total expenditure against selected projects	Expenditure incurred in March of the FY	Percentage of utilisation
2007-08	4.08	0.13	3.19
2008-09	17.28	12.74	73.72
2009-10	21.27	7.61	35.78
2010-11	48.27	19.17	39.71
2011-12	63.92	22.32	34.92
2012-13	82.72	29.57	35.75
2013-14	16.67	12.91	77.44
2014-15	54.43	52.00	95.54
2015-16	18.72	0.62	3.31
2016-17	15.49	5.80	37.44
Total	342.85	162.87	47.50

Source: Information furnished by the concerned Divisions.

The Department therefore, failed to maintain uniform pace of expenditure and observe codal formalities to ensure effective financial management and proper utilisation of funds.

The WRD (November 2017) stated that rush of expenditure was due to coincidence with the working season starting after recession of flood waters in November. The reply was not tenable as quantum of expenditure incurred at the fag-end as mentioned above, was contrary to the codal provisions.

A control mechanism needs to be in place for the effective financial performance in compliance with the codal provisions.

2.2.13.2.4 Irregular withdrawal of fund in cash

GoA, Finance Department instructed (March 2006) all working Departments not to draw funds allotted through Fixation of Ceiling¹³ (FoC) from the Government through self cheque in excess of ₹ 5,000 and desist from keeping the same as bankers cheque/bank draft.

Audit observed that Executive Engineers (EEs) of Karimganj and Silchar WR Divisions withdrew ₹ 3.69 crore (in six instances) and ₹ 0.85 crore (in one instance) aggregating to ₹ 4.54 crore through self cheque during January 2010 to March 2015 in respect of two projects (AS-40 FMP & CM's Special Package). Subsequently, the EEs disbursed the amount to contractors through bankers cheques. This indicated ineffective financial management of the Department, fraught with the risk of misuse and misappropriation of funds.

In reply (November 2017), the Department stated that the EEs had drawn self cheques at the fag-end of the financial year to avoid lapse of ceiling as the works involved large number of contractors. The reply was not tenable as the action of EEs to withdraw funds through self cheques was in violation of the instruction of the Finance Department, GoA.

2.2.13.2.5 Inclusion of past liability in the project cost

FMP Guidelines provide that GoI would not entertain Central Assistance (CA) towards the expenditure incurred by the State Government on a scheme in the previous financial year before its approval by the Inter Ministerial Committee (IMC)-FMP. However, it would reimburse the expenditure, if State Government incur or create liability within the currency of the financial year of approval of any project.

Scrutiny of records showed that Inter Ministerial Committee on FMP (IMC-FMP) of the MoWR, GoI approved two projects (Package Nos. AS-49 and AS-143)¹⁴ under FMP in July 2008 and March 2014 at a total cost of ₹ 17.11 crore on the recommendation of State Technical Advisory Committee (TAC). Audit observed that the Department commenced execution of these works during 2004 and 2012 respectively. The Department executed works valued at ₹ 4.70 crore creating liability and included the work in the FMP after a lapse of two years.

The Department, consequently, incorporated inadmissible past liabilities of the State in the FMP projects sanctioned later.

¹³ The GoA introduced (May 1998) the system of release of fund through ceiling with a view to regulate the outflow of cash on account of expenditure on the items listed at Annexure-5 in the Budget Grant, on monthly basis and to enforce control over appropriation. The validity of ceiling issued in a particular month is not extendable under any circumstances beyond the specified date.

¹⁴ (i) AS-49: Protection of Bokajan Town from the erosion of river Dhansiri in Karbi Anglong District at the approved cost ₹ 2.57 crore (July 2008); and (ii) AS-143: Channelisation of river Brahmaputra from upstream of Neamatighat to Lalty at the approved cost of ₹ 14.54 crore (March 2014).

The Department (November 2017) stated that they took up the works on emergent ground and subsequently included them in FMP. The reply was, however, not tenable as the Department did not take approval for the liabilities created during the currency of the financial year.

2.2.13.2.6 Loss of revenue/Undue financial aid to contractors

A. Notification (September 2009) of Finance (Taxation) Department, GoA, stipulated recovery of Forest Royalty (FR) @ ₹ 15 *per cum* from the contractor in case of collection of earth from government land. In case of burrowing of earth from the private land, the contractor should produce documents in support of payment of land compensation made to the land owner.

Scrutiny (June 2017) of records of five projects out of the 45 projects covered under audit showed that the rate of earth work was inclusive of FR @ ₹ 15 per cum. The Divisions did not recover FR, though the contractors had not submitted any document regarding payment of compensation made to the private land owners. This had resulted in excess payment to the contractors with a consequent loss of revenue to the State exchequer to the extent of ₹ 2.20 crore (including VAT & IT on FR) on execution 10,34,683 cum of earth (*Appendix-2.3*).

The Department stated (November 2017) that they would recover outstanding FR from the contractors concerned. However, confirmation to the effect of recovery on this count was awaited (December 2017).

B. The Department was to deduct Value Added Tax (VAT) at the prescribed rate at source against the material supplied as per the provisions of VAT Act., 2003 and the contract agreement.

On scrutiny of records in respect of three projects under Nagaon, Dhakuakhana and Silchar WR Divisions showed that six suppliers supplied 50,917 galvanized wire netting sheets against three projects. The concerned EEs, while making payment, had recovered VAT @ five *per cent* instead of the prescribed rate of 13.5/14.5 *per cent*, resulting in short recovery of ₹ 21.02 lakh (*Appendix-2.4*) towards VAT.

The Department stated (November 2017) that they would recover short deducted VAT amount from the concerned contractors; however, details thereof were awaited (March 2018).

C. In terms of the CPWD works manual, the Department can sanction Mobilisation Advance (MA) limited to 10 *per cent* of tender amount at 10 *per cent* simple interest per annum to a contractor on specific request as per the terms of the agreement.

The WR Division, Dibrugarh allotted the work under FMP Package No. AS-85¹⁵ to the contractor at a tendered cost of ₹ 21.86 crore after the execution of an agreement (January 2011). The Division paid (March 2011) MA of ₹ 6.55 crore (30 per cent of the contract price) to the Contractor, instead of maximum permissible amount of ₹ 2.19 crore (10 per cent). This had resulted in extending undue financial aid of ₹ 4.36 crore¹⁶ to the contractor. Audit also noticed that the Department did not include provision of interest in the agreement, causing a loss of ₹ 0.78 crore due to non-levy of interest as detailed in **Table-2.8**

Table-2.8*(₹ in crore)*

Mobilisation Advance granted	Vr. No. & Date of adjustment (Adjusted Amount)	Amount retained	Period of retention of mobilisation advance		Retention of advance (in months) ¹⁷	Interest due @ 10 per cent
			From	To		
6.55 (29.03.2011)	99/01.11.2011 (₹ 3.55 crore)	6.55	29.03.2011	01.11.2011	7	0.38
	73/21.03.2013 (₹ 3.00 crore)	3.00	02.11.2011	21.03.2013	16	0.40
Total						0.78

Source: Department records.

On this being pointed out, the Department assured that they would discontinue such practice in future. The department may consider initiating action against the erring official (s) responsible for extension of undue benefit to the contractor which also led to loss of ₹ 0.78 crore to the exchequer on account of not levying the interest on MA.

2.2.13.2.7 Non-adoption of available rates of SoR led to avoidable excess expenditure

Assam Financial Rules provides that the Department should prepare Schedule of Rates (SoR) of each kind of work commonly executed, on the basis of rates prevailing in each locality. The Department should record necessary analysis of the accepted rates of each description of works, and of the varying conditions thereof, as far as practicable, as the schedule is required for the purpose of preparing the estimates and also for settling the rates of contract agreements.

Three Divisions did not adopt the extant Departmental SoR for 2011-12 for fixing the rates of the following items of works executed during 2012-13¹⁸. The Divisions adopted analysed rates much higher than the scheduled rates. This resulted in avoidable expenditure of ₹ 34.19 lakh as indicated in **Table-2.9**

¹⁵ Emergent measure of anti-erosion work at Rohmorria for 9.00 km.

¹⁶ ₹ 6.55 minus ₹ 2.19 crore.

¹⁷ Calculated on completed months.

¹⁸ The divisions had no SoR for the year 2012-13.

Table-2.9

(Amount in ₹)

Item of work	Name of Division & work executed year	Quantity executed (in cum)	Rate adopted per cum	Rate as per SoR 2011-12 per cum	Difference in rate	Percentage of excess rate	Excess expenditure
Local carriage of boulders	PGP Mirza 2012-13	22,615.15	132.80	90.24	42.56	47.16	9,62,500.00
Local carriage of boulders	Sivasagar 2012-13	7,314.30	140.00	90.24	49.76	55.14	3,63,959.00
Local carriage of boulder	Jorhat 2012-13	11,455.00	145.42	90.24	55.18	61.15	6,32,086.90
Collection and supply of hand chiseled/ hard blasted man-size boulder		13,812.50	689.05	583.34	105.71	18.12	14,60,119.38
Total							34,18,665.28

Source: Department records.

On this being pointed out, the Department, in reply (November 2017), stated that they had analysed the rates on the basis of prevailing market rate of men and material. The reply was not tenable as the rates of SoR 2011-12 came in to effect from December 2011 while the Chief Engineer accorded Technical Sanction in these cases in February 2012. Increase of 18.12 to 61.15 per cent in the analysed rate in comparison to the SoR 2011-12 within a span of two months after publication of SoR, was not justified, and led to excess expenditure.

The Government may consider fixing responsibility for incurring excess expenditure.

2.2.13.2.8 Excess expenditure due to non-deduction of void on Boulder measurement

Provisions under Indian Standard (IS)-1982 (method of measurement of building and civil engineering works), stipulated 15 per cent deduction for void on the measureable stack of boulders.

In nine projects out of 45 FMP projects covered under audit, the executing Divisions made payments without deduction of 15 per cent void against utilization of 1,19,767.37 m³ man-size boulders. This resulted in excess expenditure of ₹ 2.47 crore (Appendix-2.5).

In reply (November 2017), the Department stated that they could not deduct void as the estimate did not provide for the same. The Department assured to effect deduction for void in future. The reply of the Department established the fact of excess expenditure of ₹ 2.47 crore due to failure of mandatory deduction while making payment by the concerned Divisions.

The Government may consider fixing responsibility for incurring excess expenditure.

2.2.13.2.9 Excess payment

The CE (Quality Control) had directed the EEs concerned to verify all relevant documents/test certificates etc., as per the requirement before making payment to the contractor.

Cachar Investigation Division executed 'Protection work of Siddheswar temple area from the erosion of river Barak including Reinforced Cement Concrete (RCC) steps under CM's Special Package'. The contractor used Shyam brand of TMT bar for protection work instead of estimated Tata make TMT bar. The Division, however, paid to the contractor for the bars at 'Tata make' rate. The rate of 'Tata make' being higher than the Shyam brand of TMT used in the execution of work resulted in excess payment of ₹ 3.37 lakh to the contractor as detailed in **Table-2.10**:

Table-2.10*(Amount in ₹)*

Name of the Items	Quantity utilized in MT	Rate of TATA make TMT bar	Rate of other make TMT bar	Rate allowed as per paid voucher	Difference per MT	Total excess payment
1	2	3	4	5	6 (5-4)	7 (2 x 6)
Supplying fitting and placing un-coated TMT bar reinforcement in foundation	93.92 MT	67,337	64,714	67,330	2,616	2,45,695
Supplying fitting and placing un-coated TMT bar reinforcement in substructure	34.858 MT	67,418	64,795	67,415	2,620	91,328
Total						3,37,023

Source: Department records.

While accepting the audit observation (November 2017), the Department, assured that the excess payment would be realised from the security deposit of the contractor concerned. The details of such recovery were awaited (March 2018).

2.2.14 Programme implementation

2.2.14.1 Inadequate hydrological and morphological studies

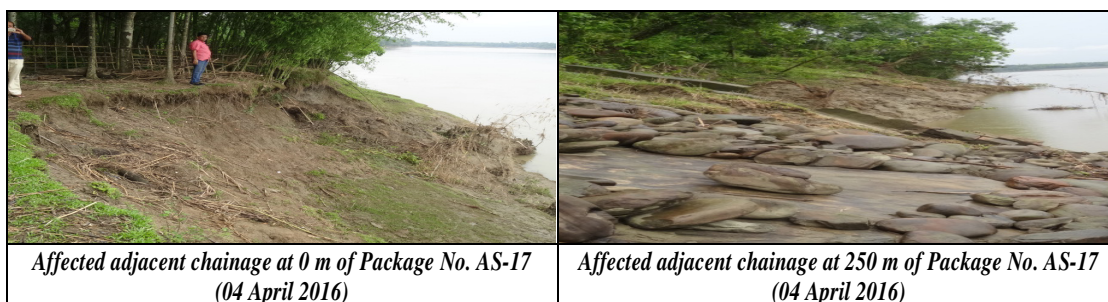
Change in natural course of river affects the banks and adjoining areas. As such, the Department requires holistic hydrological and morphological studies before execution of anti-erosion works and to assess favourable or adverse effects of the construction of the structure.

Examination of records revealed that the WRD, GoA had neither prepared frequency based flood inundation maps nor carried out any morphological studies. The Department also did not prepare any Digital Elevation Models (DEM)¹⁹ for flood affected area. In reply, the Department stated (November 2017) that the Government did not have adequate resources to prepare DEM of the State. The durability and effectiveness of the created infrastructure thus, remain uncertain in absence of hydrological and morphological studies.

W R Division, Silchar started an FMP scheme 'Anti erosion measures at Choudhurighat area of Silchar town on left bank of river Barak', (Package No. AS-17) in December 2008. The Division completed the scheme in April 2011 with an expenditure of ₹ 5.88 crore. Audit noticed that WRD executed anti-erosion works,

¹⁹ These models aim to supply automatic procedures for the delineation of areas exposed to flood inundation through a direct comparison of river stage and the elevation of the surrounding terrain.

without hydrological survey, morphological studies *etc.*, and did not provide any reasonable assurance with regard to the actual protection of the site. Joint physical verification of the site revealed severe erosion on both sides of the revetment as well as on the opposite bank of the river.



On this being pointed out, the Department stated that occurrence of such phenomena was very common along the river Barak. However, due to non-availability of adequate resources, the Department had taken up only the critically affected reach²⁰. The reply was not tenable as the Department executed the project without any prior morphological studies. Had such studies been done, erosion on the river bank could have been checked to a certain extent.

A control mechanism needs to be put in place for effective programme implementation ensuring due and adequate hydrological and morphological studies to ensure durability and effectiveness of the created infrastructure.






2.2.14.2 Non-implementation of Flood Plain Zoning Bill

The Central Water Commission (CWC) had continuously impressed upon the States about the need to take follow-up action to implement the flood plain zoning approach for demarcating zones or areas with high risk of floods. The CWC also pressed hard to specify the type of permissible development in the zones to minimize damages in the event of flood. In spite of vulnerability to floods, the GoA did not adopt (March 2017) the FPZ Bill, 1975. The Department failed to protect flood control assets from encroachments and restrict settlement in the river side even after a lapse of 42 years from the year of circulation of the bill due to non-adoption of the bill.

Joint physical verification (July 2016) of four schemes (including three selected schemes) under FMP (AS-81, AS-104, AS-119 and AS-39) revealed encroachment on the river side. **Table-2.11** shows the impact of non-adoption of FPZ Bill, 1975.

²⁰ An extended portion or stretch of land or water.

Table-2.11

Package No	Observation/impact and reply of the Divisional officer	Photograph showing encroachment of flood control assets
AS-81	<p>After construction of Land Spur No.1 (Doloigaon) in Morigaon District in March 2013, some people had settled on the top of the spur, near the nose, and all around the tie bund. This had resulted in encroachment of the embankment and assets created under WRD.</p> <p>After audit pointed out the issue, the EE stated (12 July 2016) that the Department could not evict the encroachers from their settlement in flood prone area due to non-adoption of Flood Plain Zone Bill in the State.</p>	 <p>(11 July 2016)</p>
AS-104 & AS-119	<p>The eroded river bank appeared to be about 500m away from Brahmaputra dyke²¹ on left bank from Gumi to Kalatoli at Goroimari-Majortop and large number of villagers had settled by the river banks. Some villagers even settled very near to the starting point of the revetment works under FMP package No. AS-104. Further, villagers had encroached in some stretches of raising and strengthening works executed on Brahmaputra dyke on Left Bank from Gumi to Kalatoli at Goroimari-Majortop under FMP package No. AS-119²² (completed during March 2015). Villagers had constructed some houses at ch26 km. on top of the embankment.</p> <p>The EE, Guwahati West Division stated (April 2016) that putting restriction on such settlement was not possible due to non-adoption of FPZ Bill. However, the EE assured to take necessary action to evacuate the settlers from the embankment.</p>	 <p>(30 April 2016)</p>  <p>(30 April 2016)</p>
AS-39	<p>Goalpara WR Division completed the work for raising and strengthening of Bhramaputra dyke at 24.725 km at a cost of ₹ 7.43 crore (March 2011) with earth work to keep free board of 1.20 m above HFL²³ from existing 0.30m to 0.50m. Joint physical verification revealed that heavy vehicles were plying through the embankment and local people had settled in a large area by the river side. Flood water had also inundated the settled area of river side. Utilisation of embankment as common road by the heavy vehicles deteriorated and reduced the height of freeboard²⁴. The objective of execution of R/S with earth work to keep the free board with HFL remained frustrated.</p> <p>The EE accepted (July 2016) that plying of heavy vehicles had damaged the crest of the embankment.</p>	 <p>(30 July 2016)</p>  <p>(30 July 2016)</p>

Source: Department records, site visit.

The Department assured to take up the matter relating to encroachment with the District Administration for taking remedial measures.

The above position indicated that the damages would continue to occur till adoption of FPZ Bill, 1975 and legislation on the flood prone zones.

²¹ a wall built to prevent the sea or a river from covering an area, or a channel dug to take water away from an area.

²² Though Package No AS-119 was not a selected scheme in the Performance Audit but audit found encroachment on the embankment which came to notice as both the FMP schemes (Package No AS-119 and AS -104) were in the same locality.

²³ High Flood level.

²⁴ the height above the recorded high flood level of a structure (such as a dam, embankment) associated with the water.

2.2.14.3 Contract Management

The WRD executed the flood control works by engaging contractors through open competitive bidding system. Rules of APWD, clauses of standard bidding documents, CVC Guidelines and different circulars of the Government were applicable for the selection process of contractor (s) for executing the works. Government constituted Tender Committees at the Departmental level and prescribed competency to accept tender at every level.

Scrutiny of related records in respect of projects covered under audit, disclosed violation of prescribed rules and clauses in award of contract as discussed in the succeeding paragraphs.

2.2.14.3.1 Award of contract in violation of codal provisions/ instructions

The Assam Financial Rules, 1939 provides the sequence for allotment of contract work as: (i) Publishing of Notice Inviting Tender (NIT); (ii) Receipt of bid documents under sealed cover from interested contractor (s); (iii) Opening of bid documents; (iv) Selection of contractors through comparative statement of the bidders; (v) Signing tender agreement; and, (vi) Issue of work order *etc.*

Scrutiny revealed that the Goalpara WR Division issued work orders (February-December 2009) to 219 contractors without following the prescribed selection procedures in one FMP project (AS-39). The work orders contained instructions to sign the tender agreement within three to 15 days. The Division however, had not executed agreements in 67 cases even after allotment of works to the contractors.

The Department cited (November 2017) urgency for the early completion of works as a reason for not executing tender agreement prior to issue of work orders. The reply was not tenable as the action was in violation of codal provisions.

2.2.14.3.2 Award of contract to large number of contractors

MoWR, in August 2010, suggested-

- not to split the works unnecessarily by engaging a large number of contractors.
- to engage only reliable contractors to achieve better outcome in terms of quality and co-ordination among the contractors.
- to avoid the practice of engaging a large number of contractors through small tenders.

Audit observed that in all the 30 selected FMP projects covered under audit, the Department engaged 27 to 517 contractors. Audit also noticed instances of delay in completion of works (*Appendix-2.6*). Engagement of large numbers of contractors in

execution of single project was in violation of the orders of the Ministry. Further, the Divisions compromised reliability and co-ordination among the contractors which contributed to delay in completion of projects.

On this being pointed out, the Department replied (November 2017) that it had noted the point for future compliance.

2.2.14.3.3 Subletting of contract in violation of contract agreement

Clause-22 of the tender agreement restricted subletting of the work without written approval of the EE. The Department could rescind the work or forfeit the security deposit in case of any subletting by the contractor. The Department should not pay to the contractor for any work, performed under the sublet contract.

Scrutiny of records revealed that the Department allotted (March 2014) earthwork in embankment by truck carriage for a scheme²⁵ to M/s Jyoti Constro Commercials at ₹ 2.10 crore. The original contractor, in turn, sublet the work to another contractor unauthorisedly through a Power of Attorney in April 2014. The EE, accordingly, without any written approval, paid (January 2016) ₹ 1.41 crore to the other contractor (to whom the work was sublet). Besides, the Department could not produce the Measurement Book (MB) indicating the abstract of work done, for release of payment. It was therefore, revealed that the Department allowed subletting of the contract without any prior approval and the EE and released payment of ₹ 1.41 crore, which was unauthorised. Further, non-production of MB also raised doubt about the veracity of actual execution of works done.

On this being pointed out, the Department, in reply (November 2017), stated that CE, WRD issued *ex-post-facto* approval in November 2017 and assured to avoid recurrence of such incidence in future. However, the veracity of expenditure for want of production of MB, remained unascertained.

2.2.14.3.4 Inordinate delay in selection of contractor and consequent cost overrun

Test check (June 2017) of records of the selected project 'Re-grading and Re-sectioning (Group-1) of Purkai Nala' under CM's Special Package in Silchar Division showed that the EE invited NIT for the construction of a sluice gate over Badri river on 18 September 2013 stipulating the date of opening of bids and selection of bidder as 30 September 2013. The Departmental Tender Committee, however, finalised the award of the work at ₹ 2.26 crore in October 2014 *i.e.*, after a lapse of more than one year. Owing to this inordinate delay in finalisation of price of NIT, the bidders expressed their unwillingness to execute the work at one year old quoted

²⁵ "Strengthening & Widening of embankment from Anipur to Mukamcherra covering both bank of river Singhla under Ratabari L.A.C, under CM's Special Package for Barak Valley" for Group No. XLVIII (Ch. 2,300 m to 5,000 m, R/B).

rates. As a result, the work was re-tendered (December 2014) and awarded (February 2015) the same at a revised cost of ₹ 2.49 crore.

WRD thus, failed to finalise the tender timely which resulted in a cost overrun of ₹ 0.23 crore. The cost overrun could have been avoided, had the NIT of the bidders been finalised on time.

2.2.14.4 Commencement of works prior to sanction

Rule 239 and 243 of APWD manual envisage execution of work with the prior sanction of the competent authority and accordance of technical sanction.

The Department took up two RIDF projects without prior Administrative Approval (AA) and Technical Sanction (TS). **Table-2.12** depicts the details of such execution of works as under:

Table-2.12

(₹in lakh)

Name of the project	Date of issue of work order/ commencement of work	Date of administrative approval	Date of Technical Sanction	Up-to-date expenditure
Protection of Borbeel, Kacharigaon and Muamari area from the erosion of river Brahmaputra on Left Bank under RIDF XI (Nagaon WR Division)	October to November 2006	January 2007	June 2007	586.38
Raising. and strengthening of marginal embankment along left bank of river Kohra from Bhogamukh of Moukhowa area including anti-erosion measures under RIDF XII(Dhakuakhana WR Division)	March to April 2007	July 2007	September 2009	442.03
Total				₹1,028.41 lakh

Source: Department records.

In terms of the APWD manual's provision, commencement of the works without AA and TS was irregular. This indicated deficiencies in internal control mechanism and poor monitoring system and therefore, needed strengthening by the Department.

The Department stated that such type of irregular practices were no longer in practice.

2.2.14.5 Wasteful expenditure against packages of FMP

Scrutiny of records and site verification in respect of the selected projects revealed wasteful expenditure of ₹ 41.39 crore against two FMP packages (AS-102 & AS-85) due to defective planning of Engineering Division/Department. **Table-2.13** depicts the details of the same:

Table-2.13

Sl. No.	Package No.	Approved cost	Expenditure	Executing Agency	Remarks
1	AS-102	14.82 crore	₹ 7.41 crore	Chirang WR Division	The Department took up (September 2012) the project 'Training ²⁶ of river Beki on Left Bank (L/B) and activation of river Manas and Hakua at Mathanguri' in the core area of Manas Wildlife Sanctuary. As such prior approval from the GoI under Section 2 of the Forest Conservation (FC) Act., 1980 was mandatory. The Department commenced the work (September 2012) without obtaining clearance from the GoI or the Manas Wildlife Sanctuary under the FC Act., 1980. Subsequently, on the basis of a complaint lodged by a social activist, the Department stopped the execution of work in April 2014 with physical progress of 50.55 per cent. The National Green Tribunal (NGT), Kolkata also passed (January 2015) an order directing not to proceed with the work. However, the GoA did not apply for such approval of GoI. Expenditure of ₹ 7.41 crore (including liability of ₹ 2.49 crore) on the partial execution of the work was therefore, wasteful.
2	AS-85	59.86 crore	₹ 33.98 crore	Dibrugarh WR Division	Dibrugarh WR Division completed the work 'Emergent measure of anti-erosion work at Rohmorja for 9.00 km', at an approved cost of ₹ 59.86 crore in March 2012. The work included '2,600m geo-bag ²⁷ revetment ²⁸ , and launching of '16 RCC porcupine ²⁹ screens' for protection of the remaining 6,400m of eroded river bank with expenditure of ₹ 33.98 crore. The Performance Evaluation team of Jorhat Engineering ³⁰ College, during their visit in October 2012, found that the porcupine screens of 6,400 m stretch were not effective due to launching of porcupine screens at interval of 300-1,000 m (instead of launching at requisite interval of 50m to 60m). Hydrodynamic force of the river water subsequently washed away the porcupine screens. The evaluation team suggested that the Department could control erosion by providing revetment with stone or geo-bag pitching as a long term measure. This resulted in wasteful expenditure of ₹ 33.98 crore. However, to overcome the problem, the Department took another work at an estimated cost ₹ 78.48 crore in the same chainage (6,400m) and GoI approved (October 2014) the same to prevent erosion problem.
Total			₹ 41.39 crore		

Source: Departmental records.

2.2.14.6 Unfruitful expenditure in execution of works

FMP Guidelines provide that while forwarding any project for inclusion under FMP, the State Government should ensure acquisition of land along with a certificate to this effect failing which it would not release any fund.

²⁶ 'River training' refers to the structural measures which are taken to improve a river and its banks.

²⁷ The geo bag is a geo-synthetic product that is made out of polyester, polypropylene or polyethylene and is used for the protection of hydraulic structures and riverbanks from severe erosion, utilised in-lieu of boulder.

²⁸ Revetment is a wooden, stone, or concrete fence-like structures to protect an earthen embankment or a bank of river.

²⁹ RCC porcupine is a prismatic type permeable structure, comprises of six members of made of RCC, which are joined with the help of iron nuts and bolts. It is a cost effective alternative to the impermeable bank protection works for the rivers carrying considerable amount of silt.

³⁰ As per FMP guidelines, Performance evaluation of the project is required to be conducted by an independent agency preferably by the Indian Institute of Technology.

MoWR, GoI approved three³¹ selected FMP projects for construction of three embankments for a total length of 30.235 Km between August 2011 and December 2013 at a total estimated cost of ₹ 135.40 crore. The works came to halt (March 2016) due to non-availability of required land. At the time of stopping the works, the Department achieved physical progress of 40 to 70 per cent after incurring an expenditure of ₹ 39.59 crore as of March 2017.

Acquisition of land was a pre-requisite criterion for any construction. The Department did not ensure observance of the same which rendered partial construction of embankment with number of gaps in the chainage exposing the area to inundation, resulting in an unfruitful expenditure of ₹ 39.59 crore. **Appendix-2.7** highlights the details of the work done.

The Department stated (November 2017) that the matter of land acquisition was under progress. As a result, commencement of works, without ensuring availability of land, led to unfruitful expenditure of ₹ 39.59 crore incurred by the Department.

2.2.14.7 Diversion of funds and inadmissible expenditure

The FMP is meant for the critical flood control and river management works. However, the WRD had diverted the projects funds for other purposes as mentioned below:

Dibrugarh WR Division constructed (March 2012) a two-storied office building at ₹ 1.55 crore under the FMP Package No. AS-85 (sanctioned cost of ₹ 59.86 crore).

Similarly, Morigaon WR Division incurred (March 2013) expenditure of ₹ 67.25 lakh towards construction of 'SE's residence building at Nagaon (₹ 20.53 lakh), extension and repairing of office building at Morigaon (₹ 25.44 lakh) and construction of auditorium-cum-conference hall at CE's office, Guwahati (₹ 21.28 lakh). The expenditure was incurred out of the FMP Package No. AS-81 against the sanctioned amount of ₹ 27.87 crore.

It was seen that the expenditure for construction of office buildings *etc.*, was made by making provision under a sub head 'K-building'³² in the sanctioned project cost. Hence, incurring expenditure for the purpose of construction office buildings, *etc.*, by earmarking fund under the sub head was irregular which inflated the actual project cost under FMP.

The Department stated (November 2017) that buildings were constructed due to dilapidated condition of the office buildings and paucity of funds.

³¹ AS-88, AS-90 & AS-130.

³² 'K-building' is a sub head under the project cost meant for construction of temporary shed at work sites.

2.2.14.8 Repeated sanction and recurring expenditure on the same segment

Flood Management being a subject falling within the purview of States, the role of the Union Government on the subject is advisory in nature.

FMP guidelines, 2009 stipulate that GOI would provide CA to the States for taking up flood management works in an integrated manner covering entire river/tributary or a major segment.

The Department failed to adequately plan and adopt integrated basin management which resulted in repeated sanctions. Audit noticed that the Department incurred recurring expenditure against repeated sanctions in case of the following three packages in one segment.

A. Package No. AS-39 under FMP

FMP Guidelines stipulates that GoI should consider a scheme costing less than ₹ 7.50 crore only in exceptional cases, where the State Government submits a certificate that there was no other proposal for works required on the same river at that point in time under consideration by the State Government.

MoWR, GoI sanctioned the project under FMP package No. AS-39 (March 2008) for ₹ 7.44 crore without forwarding the requisite certificate by the GoA. Further, on the same segment during 2009-14, at dyke from Kharmuja to Beldubi (Chainage 0 Km to 17 Km and Chainage 26.39 Km to 35 Km), there were ten consecutive sanctions of ₹ 71.57 crore from different sources of fund (including three FMP packages).

As of March 2016, the WRD, GoA incurred a total expenditure of ₹ 26.73 crore against the sanctions, as detailed in *Appendix-2.8*.

The concerned EE stated (August 2016) that due to flash flow in oblique channel, frequent erosion had occurred. As a result, the Division took up same works repeatedly to protect the dyke in this reach. The reply only reinforces the Audit contention that the Department could not avoid issue of repeated sanctions and recurring expenditure to overcome the flood related issues due to non-adoption of the basin management approach.

B. Package No. AS-70 under FMP

The Department commenced the work 'Anti-Erosion measures to protect right bank of river Jiabharali from Bihiagaon to Tengakhuti from the erosion of Jiabharali' in January 2009. The Department completed the work in December 2010 at an expenditure of ₹ 7.26 crore. The main provisions of execution of the work were the construction of two land spurs at a gap of 970 metres on the 1.610 km long embankment and launching of 52 RCC porcupine screens. The objective of the

construction of two spurs was to divert the flow of the river towards central channel and to protect the embankment.

The Department executed another revetment work 'Anti-Erosion measure to protect Jiabharali right bank from Kuttamara to Khaloibeel Ph-I' between January 2012 and June 2013 at an expenditure of ₹ 4.55 crore with the assistance of NABARD. The Department executed the revetment work in between the two spurs, which were constructed during December 2010, as the river water was hitting the embankment between these two spurs. Therefore, execution of the revetment work in the same location proved that the previous construction of two spurs at ₹ 7.26 crore was not successful. Since the Department constructed the said two spurs without basin-wise integrated planning and morphological study of the river, it could not deflect the water flow giving rise to execution of repeated work at the same location.

C. Package No. AS-41 under FMP

The Department completed anti-erosion measures to Dehing bund right bank from Bhogamur to Sessamukh (protection work at 4th Km near Panimirigaon) under FMP package No. AS-41 in June 2010 at an expenditure of ₹ 2.47 crore. The Department had undertaken the works for the protection of 3,500 ha of homestead and agricultural land of villages under Barbarauh Development block of Dibrugarh.

Again, the Department completed, another scheme of 'Extension of A/E measures Dehing bund R/B Bhogamur to Sessamukh at 4th Km Panimirigaon'-under State Plan on the same location in March 2013 at an expenditure of ₹ 7.30 crore. This State plan scheme also claimed to protect 3,500 ha of vast homestead and agricultural land as was covered under FMP package No. AS-41. The Department therefore, repeatedly sanctioned schemes on the same segment which indicated lack of a holistic approach and integrated planning for arriving at one time solution for a particular segment of the river.

On the three observations being pointed out, the Department, in reply, stated (November 2017) that an integrated basin/segment-wise project was always desirable. But, considering the urgency and availability of funds, the Department took up the projects. The reply substantiated the fact that, due to absence of integrated plan, the Department took up schemes in the same segment repeatedly in the emergent situation. Absence of an integrated plan therefore, resulted in recurring expenditure and left the inhabitants vulnerable to the exposure of flood.

2.2.14.9 Execution of work at unapproved location

(A) In FMP Package No. AS-81, GoI sanctioned construction of land spur and tie bund at three locations viz., Bhojaikhati, Doloigaon, and Ulubari area in Morigaon district. During execution, the Department constructed land spur at Solmari. The location of land spur was five Km away from the original location at Bhojaikhati. The

Department changed the location of execution without seeking prior approval of the competent authorities in violation of FMP Guidelines.

In reply, the Department stated (November 2017) that Solmari spur was actually within the jurisdiction of Ulubari revenue village, and therefore, there was no shifting of location. The reply was however, not tenable as during the joint physical verification (11 July 2016), the EE, Morigaon WR Division confirmed that the construction site at Solmari was five Km away from the sanctioned location. Therefore, construction of land spur was unauthorised in the absence of approval of deviation by the competent authority.

(B) GoA sanctioned (February 2014) the work ‘Strengthening and Widening of embankment from Anipur to Mukamcherra covering both bank of river Singhla’ under ‘CMs special Package’ with the provision of strengthening & widening of embankment from 0 m to 6000 m (both banks).

The EE, Karimganj, WR Division issued six work orders for earth work from chainage 8,000 m to 10,500 m (left bank) *i.e.*, beyond the sanctioned chainages and paid ₹ 27 lakh (in six bills) against those unapproved chainages. Further, the Division did not record the detailed measurement of works in the Measurement Books and therefore, possibility of payment against fictitious bills could not be ruled out in audit.

In reply, the Department stated (November 2017) that they had executed the work as per site condition beyond the sanctioned chainages due to acute emergency and necessary steps to recast the estimate for seeking necessary approval would be taken. The same would be awaited in audit.

2.2.15 Quality assurance

The responsibility of the Chief Engineer (CE), Quality Control is to ensure quality of flood management works. To achieve the objectives, the State Government under Notification of 1973 entrusted the Chief Engineer, Quality Control for examining the following aspects:

- Checking at initial level before works are taken up.
- Checking quality and specification of works to ensure proper specification.
- Monitoring and evaluation of works executed by the Department.
- Checking at final level before payments are made.

Audit noticed that the Department did not evolve any mechanism of carrying out tests of materials like geo-textile bags and mattresses, leading to use of untested materials in the construction works. However, the CE, Quality Control had directed from time to time to the concerned EEs to verify all relevant documents and ensure test certificates before making payment to the contractors. During scrutiny of records of the projects covered under audit, the following deficiencies were noticed:

(i) In seven projects³³ (out of 45) covered in audit, Department released payments to the contractors without the quality tests of materials and due check of measurements of the executed works.

(ii) Cachar Investigation Division, Badarpur had received and utilised 26,401 geo-bags for the works 'Protection of Siddeswar Temple area from erosion of river Barak including construction of RCC steps' under CM special package. The Division however, could not produce 'Test Report' against the supplied materials and paid ₹ 47.52 lakh (@ ₹ 180.00 per bag) without obtaining any test report.

On this being pointed out, the EE stated (June 2017) that the Division had no equipment to conduct test of geo-bags *etc.* This indicated that the Department had not evolved any mechanism for quality test of material for utilization in the works and was releasing the payments without ensuring and following the due procedure.

In reply, the Department stated (November 2017) that the WRD, GoA was setting up a laboratory for testing parameters of required materials shortly, which would be watched in audit.

2.2.16 Monitoring and Evaluation

2.2.16.1 Deficiencies in Evaluation of FMP Projects

The FMP guidelines provides that a reputed organization having expertise in flood control measures (preferably Indian Institute of Technology) was to evaluate the performance of the completed works in consultation with the BB/CWC, as the case may be.

Scrutiny of records of the FMP projects covered in audit revealed the following deficiencies:

- Polytechnic College did not mention the dates of site visit/assessment in the Performance Evaluation Reports in respect of three selected projects of FMP (AS-3, AS-57 and AS-34).
- The Department completed the four selected projects of FMP (AS-17, AS-40, AS-108 and AS-135) during the period April 2011 to June 2015, but did not conduct performance evaluation of the projects.

The Department stated (November 2017) that it would take steps for carrying out performance evolution of the schemes regularly in future.

2.2.16.2 Lapses in Monitoring of FMP projects

The FMP Guidelines stipulate that the GoI would release the central assistance to the States on the recommendations of the monitoring agencies. For works costing more

³³ 04 FMP projects (AS-88, AS-90, AS-102 and AS-105) and 03 projects under RIDF, CM's Special & State Plan.

than ₹ 15.00 crore, the monitoring agencies should inspect the works, at least once in every financial year, to monitor the overall quality of works, technical specifications and progress at site, before recommending further releases.

The BB conducted monitoring after completion of the schemes in respect of three projects of FMP (AS-85, AS-87 and AS-104) packages costing above ₹ 15.00 crore. Against package AS-108, the BB did not conduct monitoring even after completion of the project work in June 2015. The FMP project AS-130 (estimated cost ₹ 105.95 crore), after commencement in December 2014, achieved physical progress of 71 per cent and financial progress of ₹ 31.72 crore till May 2017. However, the BB did not conduct any monitoring of the schemes as required under the FMP Guidelines.

On this being pointed out, the Department, in reply (November 2017), stated that they had submitted the requisite documents indicating work quality against each scheme since inception of the project to its completion. The reply was not tenable as the BB attributed (June 2016) the reason for not conducting the monitoring during execution of work on the ground of non-receipt of the requisite documents relating to status report of the projects concerned from the Department.

Therefore, necessary monitoring of FMP projects, required as per Guidelines, was lacking.

2.2.16.3 Monitoring and recommendation of projects for Central assistance

In terms of the provisions of FMP Guidelines and the Circular dated 2 November 2011 of CWC, the responsibility of appraisal/examination (technicality) of the proposal, including Detailed Project Report (DPR) of FMP schemes in Assam and their recommendations for clearance including release of central assistance lies with the BB. Audit had requisitioned for records regarding project formulation, with date of approval by the BB and date of submission to the Planning Commission for recommendation including quality control parameters pertaining to FMP Packages covered in audit. Against the requisition, the BB replied (June 2016) that such records were not available with them. However, as per the FMP guidelines and the Circular of the CWC *ibid*, the BB should have the above information.

Audit therefore, could not verify different stages of finalisation of FMP projects,

2.2.16.4 Monitoring and evaluation of the projects other than FMP

The BB as a statutory agency, had no role in monitoring and evaluation of the projects, funded from the sources other than the FMP. Further, in respect of the projects other than FMP, the Department admitted (August 2017) that it did not evolve any specific mechanism for monitoring and carrying out performance evaluation by any independent agency. In the absence of effective monitoring and

evaluation successful implementation of the projects did not appear to be feasible as discussed in the preceding paragraphs.

An effective mechanism thus, needed to be put in place to ensure necessary monitoring in line with FMP guidelines.

2.2.17 Conclusion

The WRD, GoA did not accord importance to long term plans ignoring the enactment of Flood Plain Zoning Bill, 1975 in the State. It relied mainly on short term and immediate measures to address issues relating to flood problems in the State. There were instances, where implementation of FMP projects suffered from deficiencies like delay in land acquisition, improper planning in taking up the works of erosion control without morphological and hydrological studies of river. During the period covered in audit, both Centre and State short released their shares to the extent of 52 *per cent* and 20 *per cent* respectively. This led to delay in execution and completion of works for the state as a whole. Further, it was observed that, in 30 FMP projects covered under audit, the GoA did not furnish UCs to the extent of 18 *per cent* (₹ 35.57 crore out of ₹ 200.56 crore) of funds received from the GoI, affecting the prospects of further release of central share under the Scheme. A considerable amount of funds released for critical flood control and river management works proved wasteful and unfruitful/un-productive due to lack of proper planning and injudicious execution of works. Audit observed irregularities and systemic lapses, such as non-adoption of integrated basin management, execution of works without conformity with the approved Detailed Project Report (DPR) and irregular utilization of funds.

The impact of flood and its severity could have been minimized by long term planning. However, in absence of long term planning (such as construction of reservoirs, dams, catchment area treatment *etc.*) coupled with financial mismanagement and reliance on short term measures in an unplanned manner, the perennial flood problem continued to exist in the State.

2.2.18 Recommendations

The State Government may consider:

- *Long term flood control measures for providing a lasting solution to the problem of recurring floods;*
- *Adopting the Flood Plain Zoning Bill (1975) of GoI for demarcation of zones to minimise damages, loss of life and property;*
- *Ensuring timely release and proper utilization of funds, with reference to the planned activities;*

- Ensuring execution of projects after proper survey and hydrological/morphological studies; and strengthening the monitoring mechanism of the projects and their performance evaluation with reference to the achievement against projected outcomes.

Compliance Audit

Agriculture Department

2.3.1 Excess expenditure

Executive Engineer (Agriculture) of five Divisions incurred excess expenditure of ₹ 4.17 crore on procurement and distribution of Diesel Pump Sets and execution of civil works of Shallow Tube Well under the World Bank aided Project.

The Government of Assam had implemented the World Bank aided Assam Agricultural Competitiveness Project (AACP) from February 2005 to March 2015³⁴ to stimulate growth in agricultural economy of the State. With a focus on expanding dry season cultivation, Agriculture Directorate formulated (May 2012) promotion of small irrigation systems using ground water resources and testing new irrigation technologies. For this, mainly diesel operated centrifugal pump sets for Shallow Tube Wells (STWs) were to be distributed. However, depending on demand and availability of electrical connectivity, electric operated pump sets were also to be provided.

Guidelines stipulate that financing should be on cost sharing basis where the project grant was 50 *per cent* of the cost of the scheme. The beneficiaries were to contribute the balance amount of the total cost from their own sources. In case of STW, the maximum cost for Civil Works was limited to ₹ 9,200 for 30 meter depth. Actual cost of Civil Works as per approved estimated cost was admissible for below 30 meter depth. For electrically operated STW, the State Project Director (SPD), Assam Rural Infrastructure Agriculture Services (ARIAS) Society modified (1 October 2012) the cost of civil works at ₹ 12,976 for 30 meter depth based on the proposal (July 2012) of the Chief Engineer, Agriculture. The World Bank authority accepted the modification in December 2012.

The SPD, ARIAS accorded (February 2014 and January 2015) financial sanctions amounting to ₹ 31.50 crore and ₹ 20.79 crore towards 50 *per cent* subsidy portion for 15,000 STWs for the year 2013-14 and 10,000 STWs for the year 2014-15 respectively in respect of 13 Executive Engineers (EE) (Agriculture)³⁵. The sanction orders (January 2015) *inter-alia* stipulated the cost per STW as ₹ 41,576 (₹ 28,600 for pump set *plus* ₹ 12,976 for civil works) for 2014-15. The sanctions for the year

³⁴ Extension given, if any, was not on records.

³⁵ Executive Engineers (Agriculture) Kamrup, Morigaon, Nagaon, Jorhat, Sonitpur, Udalguri, Darrang, Nalbari, Baska, Barpeta, Bongaigaon, Goalpara, Dhubri.

2013-14, however, were silent about the cost of the STWs. This indicated that the cost of civil works remained at ₹ 9,200 for 2013-14.

Scrutiny (March 2017) of records of the State Project Director, ARIAS Society, Guwahati and five offices of EE (Agriculture)³⁶ disclosed that:

- EEs (Agriculture) of five test checked offices procured and distributed 7,795 Diesel Pump Sets³⁷ during 2013-14. The cost of civil works against each Diesel Pump Set was ₹ 12,976 against approved rate of ₹ 9,200. This resulted in an extra expenditure of ₹ 1.47 crore³⁸ incurred from the Government share.
- Against the sanction of January 2015, the five tests checked offices procured and distributed 9,572 Diesel Pump Sets³⁹ during 2014-15. Audit observed on scrutiny of vouchers selected randomly in those five Divisions that the respective Executive Engineers procured 3,057 Diesel Pump Sets at a total cost of ₹ 10.19 crore at different rates (ranging from ₹ 29,993 to ₹ 37,013) higher than the approved rate of ₹ 28,600. This resulted in excess expenditure of ₹ 1.45 crore (**Appendix-2.9**).
- The guidelines and sanction of January 2015 stipulate that, while making payment to suppliers for the procurement of the Diesel Pump Sets, beneficiaries' share @ ₹ 14,300 (50 per cent of ₹ 28,600) per pump set was required to be deducted. But the Executive Engineers, as against required deduction of ₹ 4.37 crore (50 per cent of total cost of ₹ 8.74 crore for 3,057 sets @ ₹ 28,600), deducted ₹ 3.12 crore. This resulted in an excess expenditure of ₹ 1.25 crore (₹ 4.37 crore - ₹ 3.12 crore) towards beneficiaries share.

Therefore, the Engineering Authority failed to adhere to the scheme guidelines and the criteria stipulated in the sanctions with regard to procurement of Diesel Pump Sets, execution of civil works and deduction towards the beneficiary share, which resulted in excess expenditure.

The matter was reported to Government in August 2017; reply was awaited (March 2018).

³⁶ Executive Engineers (Agriculture) of Nagaon, Kamrup, Darrang, Nalbari and Sonitpur districts.

Year	EE (Agri), Nagaon	EE (Agri), Kamrup	EE (Agri), Darrang	EE (Agri), Sonitpur	EE (Agri), Nalbari	Total
2013-14	3,785	943	877	--	2,190	7,795

³⁸ Civil works @ ₹ 12,976 for 7,795 pump sets = ₹ 10,11,47,920
 Civil works @ ₹ 9,200 for 7,795 pump sets = ₹ 7,17,14,000
 Difference = ₹ 2,94,33,920
 50 per cent of difference as Government share = ₹ 1,47,16,960

Year	EE (Agri), Nagaon	EE (Agri), Kamrup	EE (Agri), Darrang	EE (Agri), Sonitpur	EE (Agri), Nalbari	Total
2014-15	3,540	1,210	778	900	3,144	9,572

The Government may also consider fixing responsibility for incurring excess expenditure.

Irrigation Department

2.3.2 Excess payment

Executive Engineer, Karbi Anglong Irrigation Division, Diphu made excess payment of ₹ 4.03 crore to contractors due to non-deduction of VAT at applicable rates.

Provisions⁴⁰ of Value Added Tax (VAT) Act, 2003 stipulated that a contractor engaged in works contract was liable to pay VAT @ 13.5⁴¹ *per cent*. However, if the contractor had opted for Composition Scheme⁴² of works contract, VAT @ 5 *per cent*⁴³ would be deducted/ levied, effective from 01 April 2012.

The Executive Engineer (EE), Karbi Anglong Irrigation Division, Diphu undertook 23 irrigation schemes under various development blocks in Karbi Anglong district during 2012-14. The contractors completed the works during July 2012 to April 2014. The Division paid (between March 2014 and March 2016) ₹ 53.75 crore (including taxes) to contractors against the up-to-date bill value of ₹ 59.73 crore.

Audit observed (January-February 2017) that the Division prepared the detailed estimates for execution of the above works on the basis of Schedule of Rates (SoR) of Karbi Anglong Division (Irrigation), Diphu for the year 2012-13. The rates of all the items in the SoR were inclusive of VAT @ 12.5 *per cent* only instead of 13.5 *per cent*. As per the information furnished by the Division, none of the contractors opted for Composition Scheme of works contract. As such, they were liable to pay VAT @ 12.5 *per cent* in line with the VAT included in the SoR. But, the Division while making payment deducted/recovered VAT @ 5 *per cent* amounting to ₹ 2.69 crore from the contractors at source against the due amount of ₹ 6.72 crore⁴⁴. This led to an excess payment of ₹ 4.03 crore to the contractors due to recovery of tax at lower rate than the applicable rates.

On this being pointed out, the Executive Engineer, while accepting the audit observation stated (February 2017) that, less deduction of VAT occurred due to oversight and audit observation would be noted for future guidance. The fact however remained that the SoR did not consider the prescribed rate of VAT applicable during the period and the excess payment of ₹ 4.03 crore made to the contractors remained unrecovered with consequent loss of revenue to the State exchequer.

⁴⁰ Section-10 (1) (a)-5th Schedule.

⁴¹ Amended from 12.5 per cent to 13.5 per cent vide Notification No.FTX.55/2005/Pt-III/118 dated 31.10.2009.

⁴² Composition scheme for works contract permits a registered dealer of the state who executes works contract, to pay at his option, an amount at the rate of 5 paise in every rupee of the total aggregate value of the works contracts.

⁴³ Order no.CTS-21/2005/340 dated 16.10.2012.

⁴⁴ 12.50 *per cent* of ₹ 53.75 crore.

The matter was reported to Government in August 2017; reply was awaited (March 2018).

Public Works (Roads) Department

2.3.3 Avoidable extra expenditure

Executive Engineer, PWD, Guwahati Road Division incurred an avoidable extra expenditure of ₹ 82.67 lakh on Road cum BUG Bridge due to injudicious analysis of providing and launching Steel Truss of Structural Steel BUG Super structure.

In terms of Rule 248 of Assam Financial Rules, to facilitate the preparation of estimates, a schedule of rates (SoR) for each kind of work commonly executed should be kept in each Division and the estimated rates should generally agree with the SoR.

Government of Assam, Public Works (Roads) Department accorded (September 2012) administrative approval for the execution of the work “Construction of Road cum Built Up Girder (BUG) Bridge No. 1/1 over River Digaru at Old AT Road, Sonapur including approaches under CM’s Special Package” at ₹ 9.01 crore. The Executive Engineer (EE), PWD, Guwahati Road Division prepared (May 2012) the estimates using SOR-2009-10. The Division awarded (December 2012) the work to M/s Hi Tech Construction at a tendered cost of ₹ 9.01 crore with stipulation to complete the work by 16 June 2014. The contractor completed the work on 10 December 2014 and the Division paid ₹ 9.00 crore to the firm.

Audit observed (September 2016) that the bills of the firm included payment for providing of 168.466 MT Structural Steel against the item “Providing and launching Steel Truss of Structural Steel” at an analysed rate of ₹ 1,31,590.12 per MT. The rate of the item in the SoR (2009-10) was ₹ 64,235 per MT. Therefore, the rate allowed was on higher side. It needs to be mentioned that the rate of the item in the SoR for 2011-12 (valid from May 2011 to May 2013) was ₹ 82,517 per MT only. Further, audit observed that while analyzing the rate of structural steel, base rate of steel was adopted at ₹ 57,000 per MT, whereas as per SoR (2009-10), this rate was ₹ 38,000 per MT. Further, for the preparation of SoR (2011-12), while calculating rate of structural steel, base rate of steel adopted was ₹ 35,150 per MT only. Therefore, the rate of structural steel analysed was even higher than the rate published for this item in the SoR for 2011-12.

On this being pointed out, the EE stated (May 2017) that the original estimates were prepared on the basis of the SOR 2009-10 and the same was sanctioned in 2012. The Department analysed the rate of the item as per the instructions (May 2012) of the Chief Engineer on the ground of substantial increase of price of steel, cement *etc.*, after a gap of two years. The reply was not acceptable as the rate of the item in SoR 2011-12 was valid from May 2011 till publication of next SoR (2013-14) in June 2013.

Therefore, the Division failed to adopt available rate of SoR (2011-12) and analysed the rate of the item injudiciously which resulted in an extra expenditure of ₹ 82.67 lakh⁴⁵.

The matter was reported to Government in June 2017; reply was awaited (March 2018).

2.3.4 Cost overrun

The Project Director (ASRP) delayed handing over of the site for the construction of road under Assam State Roads Project which resulted in cost overrun of ₹ 15.13 crore. Besides, the Department did not recover the additional cost of ₹ 3.95 crore from the defaulting contractor as was required under the contract agreement.

Government of Assam, Public Works Department (PWD) accorded (February 2013) administrative approval to the work of Improvement and Up-gradation of SH-32: Borhola-Goronga Road (12.53 Km) under World Bank aided Assam State Roads Project (ASRP) at ₹ 42.57 crore. The Chief Engineer (CE), PWD (ARIASP & RIDF)⁴⁶-cum-Project Director (ASRP), Guwahati sanctioned (March 2013) the work technically at the same cost for execution through the Project Director, ASRP. The CE awarded (March 2013) the work to a contractor⁴⁷ at a tendered cost of ₹ 29.41 crore with the stipulation to complete the work within 30 months (*i.e.*, by September 2015).

On test check (October 2016) of records of the CE, Audit observed that the work commenced with the handing over of site on 17 May 2013. The contractor however, failed to mobilize the site with equipment even after passage of four months (September 2013). The Construction Supervision Consultancy Services Team⁴⁸ reminded the contractor several times with regard to the non-mobilization of man and machinery on site. The team, consequent to their site visit, brought (May 2014) the deficiencies including non-mobilization of key personnel, plants & machinery, non-submission of work programme *etc.*, to the notice of the contractor. The team served (January 2015) notice asking explanation on slow progress of the work and pointed out the breach of contract agreement. The Department however, granted (August 2015) extension of time for completion of the contract within 29 February 2016 owing to Department's delay in providing hindrance free land (3.29 Km out of 12.53 Km). The contractor, however, did not execute any work during the extended period.

⁴⁵

Name of work	Tendered rate (₹)	Rate as per SoR 2011-12 (₹)	Difference (₹)	Executed quantity (MT)	Amount involved (₹)
Construction of Road cum BUG Bridge No. 1/1 over River Digaru at Old AT Road	1,31,590	82,517	49,073	168.466	82,67,132

⁴⁶ ARIASP-Assam Rural Infrastructure and Agricultural Services Project, RIDF-Rural Infrastructure Development Fund.

⁴⁷ M/s Supreme Infrastructure India Ltd, Kolkata.

⁴⁸ URS Scott Wilson India Pvt. Ltd. engaged by the CE for supervision work.

As such, the CE rescinded (May 2016) the work on the ground of fundamental breach of contract. Before rescinding the work, the Project Director, ASRP made (up to March 2016) net payment of ₹ 2.13 crore⁴⁹ to the contractor.

Audit observed that the Department prepared (July 2016) an estimate for the execution of the balance work at ₹ 34.65 crore (as per Bill of Quantities) against the value of balance work at ₹ 27.09 crore after rescinding the work. The CE floated Notice inviting National Competitive Bidding (NCB) for the balance work in August 2016. The CE awarded (June 2017) the balance work to two contractors⁵⁰ at a total tendered cost of ₹ 42.22 crore.

Therefore, delay in handing over the site, delay in withdrawal of the work from the defaulting contractor and delay in settlement of the balance work by the Department, rendered cost overrun of ₹ 15.13 crore⁵¹.

Further, in terms of Clause 60 of General Condition of Contract, 20 per cent of the value of the work not completed, was to be recovered from the defaulting contractor as employer's additional cost.

The Department however, (May 2016) recovered ₹ 1.47 crore only from the contractor forfeiting the performance security⁵² against the total recoverable additional cost of ₹ 5.42 crore (20 per cent of ₹ 27.09 crore). Had the Department enforced the clause of the agreement strictly to recover the additional cost fully, the Department could have reduced the additional burden of cost to complete the work by ₹ 3.95 crore.

On this being pointed out, while accepting the audit contention, the Government stated (November 2017) that against the recoverable additional cost, only performance securities had been recovered from the contractor and the balance amount became a debt to the Employer⁵³. The fact, however, remained that there was little scope for the Department to recover the debt amount as there was no existing commitment of works by the contractor in the State.

⁴⁹ Value of work:	₹ 205.21 lakh
Price adjustment:	₹ 22.70 lakh
Less withheld money:	₹ 0.93 lakh
Less Retention money:	₹ 13.67 lakh
Net payment	₹ 213.31 lakh.

⁵⁰ M/s B.L. Agarwala: ₹ 16.94 crore; M/s M.P. Agarwalla: ₹ 25.28 crore.

⁵¹ ₹ 42.22 crore minus ₹ 27.09 crore.

⁵² In the form of Bank Guarantee.

⁵³ Chief Engineer, PWD (ARIASP & RIDF).

2.3.5 Excess expenditure

Injudicious inclusion of inadmissible 10 per cent premium for remote areas in the estimates and subsequent awarding of the work at rates inclusive of premium had resulted in excess expenditure of ₹ 2.21 crore.

Schedule of Rates (SoR) 2013-14 for Road, Bridge and Culvert Works for all Divisions under Assam PWD provided for inclusion of premium on rates in the estimates for five⁵⁴ specified remote areas/districts of Assam. This premium was applicable for preparation of estimates only and was not meant for tendering and billing purpose.

Government of Assam, Public Works (Roads) Department, administratively approved (July 2014) the execution of the work “Construction of RCC Bridge No. 3/1 on HM Road to South Salmara Patakata Road via Sukhchar Ghat over river Zinziram including approaches and protection works, under CM’s Special Packages for conversion of wooden bridges to RCC Bridges”. The Chief Engineer, PWD (Roads), Assam accorded (July 2014) technical sanction to the work at ₹ 47.30 crore⁵⁵ based on the estimates prepared by Executive Engineer, Dhubri Rural Road Division. The tender for execution of the work at the estimated cost (₹ 47.30 crore) was invited on 17 February 2014. The Division awarded the work (August 2014) to M/s Hi Tech Construction at its tendered cost of ₹ 47.30 crore with the stipulation to complete the works by August 2016. Against the physical progress of 61 per cent and measured value of bridge proper in June 2016, the Division paid ₹ 22.16 crore in March 2017. The reason for non-completion of the work within the scheduled time was non-payment of dues to the contractor owing to non-availability of funds.

Audit, on scrutiny (October 2016) of records of the Executive Engineer, Dhubri Rural Road Division observed that the Division had framed (January 2014) the estimates on the basis of SoR (2013-14) with due weightage on the haulage of materials from the approved quarries and batching plants to work site for ₹ 43.00 crore and thereafter, allowed 10 per cent (₹ 4.30 crore) premium/escalation meant for specified remote areas and worked out the total estimated cost of ₹ 47.30 crore for the work.

The inclusion of 10 per cent premium/escalation on the cost of the works executed in Dhubri District, which is not specified as remote area in the SoR and inclusion of the same for tendering purpose was against the provision of the SoR (2013-14) mentioned above.

⁵⁴ Dhemaji, Karbi Anglong, Dima Hasao, Majuli and Sadia.

⁵⁵

(₹ in lakh)

Sl. No.	Item of work	Estimated value	Tendered value
1	Cost of RCC Br. Proper	3,134.14	3,662.14 (Lump sum)
2	Cost of Approach Road	684.90	612.41
3	Cost of Protection work	422.87	387.60
4	Cost of Subway	58.40	68.00
Total cost of the work		4,300.31	4,730.15
Enhanced cost for escalation in remote area @ 10 per cent		430.03	
Grand Total		4,730.35	

On this being pointed out, the EE while forwarding the copy of Revision of Pay (RoP) 2017, stated (May 2017) that Dhubri district is in remote areas as per the RoP. Reply of the EE was not tenable as the district was not included in the list of remote areas in SoR (2013-2014) as mentioned above, based on which the estimate of the works was prepared in 2014. The EE had not, however, furnished any reason for inclusion of the premium in the tender invited for the execution of the work.

Further, the Government in August 2017 stated that the provision of 10 *per cent* extra cost was provided in the estimate as cost escalation for estimating purpose only as the works would continue for three years. Further, the bid value was reduced to ₹ 43 crore by issuing a corrigendum on 19 February 2014 and as such, the bidders were not given any advantage. The addition of 10 *per cent* in the estimate was purely for internal purpose. The reply was not tenable, as 10 *per cent* premium in the estimates was included for escalation in remote area, which was not in order as Dhubri was not a remote area as per provision of SoR 2013-14. Further, records for evaluation of tender indicated that the reference was drawn to original NIT dated 17 February 2014, and response of bidders was also commensurate with the original estimates.

Therefore, CE's action had not only inflated the estimates giving enough scope to the contractor to quote rates on the enhanced estimated cost but also resulted in excess expenditure of ₹ 2.21 crore against the payment of ₹ 22.16 crore made to the contractor (August 2017) due to cost escalation.

The Government may consider fixing responsibility for incurring the excess expenditure.

2.3.6 Excess and irregular expenditure

Executive Engineer (EE), PWD, Guwahati Road Division made an excess payment of ₹ 2.21 crore to the contractors on execution of construction work of RCC Bridge No. 6/2 on Chamaria Sontoli Road under RIDF-XV due to providing of higher rate for the item Structural Steel Truss in the estimate.

In terms of Rule 248 of Assam Financial Rules, to facilitate the preparation of estimates, a schedule of rates for each kind of work commonly executed should be kept in each Division and the estimated rates should generally agree with the schedule of rates.

Audit observed (September 2016) that the Executive Engineer, PWD, Guwahati Road Division prepared (2009-10) the estimate of the work "Construction of RCC Bridge No. 6/2 on Chamaria Sontoli Road under Rural Infrastructure Development Fund (RIDF)-XV" for ₹ 8.54 crore using SoR of 2007-08. The Division awarded (6 June 2011) the work to M/s Modern Construction Company with the stipulation to complete the work by December 2012. As of March 2017, the Division paid ₹ 7.58 crore to the contractor against the measured value of ₹ 7.76 crore with physical progress of 92 *per cent* (January 2017).

Audit observed that the rate adopted for the preparation of estimates of the above work was based on SoR of 2007-08 for all items, except for Structural Steel Truss. The analysed rate for Structural Steel Truss of ₹ 1,09,000 per MT against SoR rate of ₹ 58,395 per MT was adopted which was much on higher side. Audit further observed that the item used as recorded in the Measurement Book was Structural Steel Truss only, for which rate was available in the SoR but not adopted. Further, the technical sanction to the work was found issued by the competent authority after the award of work to the contractor.

Therefore, adoption of higher rates than the scheduled rate as per SoR 2007-08 in respect of analysed rate for Structural Steel Truss resulted in excess expenditure of ₹ 2.21 crore⁵⁶ to the contractor besides irregular award of the work without prior accordance of technical sanction.

On this being pointed out, the Executive Engineer, stated that the non-scheduled item for the Built up Girder (BUG)⁵⁷ was analysed on the basis of prevailing market rate and SoR as BUG was made of high tensile strength material with rolled steel, but rate available in the SoR was for general structural steel materials. The reply was not tenable as the estimates and the tender included the item structural steel and not high tensile strength material with rolled steel. As per records and MB, the contractor used structural steel truss only and not the high tensile rolled steel. As such, payment at the higher rate which resulted in excess expenditure of ₹ 2.21 crore, was irregular and avoidable.

The matter was reported to Government in May 2017; reply was awaited (March 2018).

2.3.7 Extra expenditure

Executive Engineer (EE), PWD (Roads), Mangaldoi State Road Division incurred an extra expenditure of ₹ 75.62 lakh towards carriage of road metals from the quarry against the items of Granular Sub Base and Water Bound Macadam by providing extra carriage in the estimates.

Public Works Department, Government of Assam, accorded (January 2011) administrative approval (AA) of the work “Improvement/Upgradation of Mangaldoi Bhutiachang (MB) Road for a length of 19.30 Km (from Ch. 0.00 Km to 1.20 Km, from Ch. 18.00 Km to 29.10 Km and from Ch. 33.00 Km to Ch. 40.00 Km) under “Assam Bikash Yojana (ABY)” at the estimated cost of ₹ 28.77 crore. The Chief

⁵⁶

Name of work	Analysed rate (₹)	SoR rate (₹)	Difference (₹)	Quantity executed (MT)	Amount involved (₹)
Construction of RCC Bridge No. 6/2 on Chamaria Sontoli Road under RIDF-XV	1,09,000.00	58,395.00	50,605.00	436.98	2,21,13,373.00

⁵⁷ A Girder is a support beam used in construction. Built up Girder means a beam made of structural metal units (such as plates and angles), which are riveted, bolted or welded together.

Engineer (CE), PWD (Roads), Assam accorded (February 2011) technical sanction (TS) to the work. The work was awarded (February 2011) under the package (ABY-DAR-08) for a length of 18.10 Km (from Ch. 18.00 Km to Ch. 29.10 Km and from Ch. 33.00 Km to Ch. 40.00 Km) to a contractor at ₹ 26.82 crore with the stipulation to complete the work by February 2013. The portion from Ch. 0.00 Km to Ch. 1.20 Km was not allotted to the contractor for execution as the surface of road of the portion was found in better shape. The contractor completed the work in February 2013 and the EE paid (March 2013) ₹ 27 crore against the final bill.

Audit on scrutiny (December 2016) of records of the EE, Mangaldoi State Road Division observed that the metals for Granular Sub Base (GSB), Water Bound Macadam (WBM-II & III) to the chainages were to be carried from Bhutiachang Quarry⁵⁸ located at 55th Km of MB Road from the chainage 0.00 Km. The lead chart was prepared and calculation done with the payable lead of 50 Km (40 Km on surfaced road and 10 Km on graveled road), excluding initial 5 Km lead (Katcha road) from quarry.

The work on Ch. 18.00 Km to Ch. 29.10 Km and from Ch. 33.00 Km to Ch. 40.00 Km only was allotted under the package to the contractor and work for the Ch.0.00 Km to Ch. 1.20 Km was not considered for improvement/upgradation as mentioned above. Therefore, inclusion of the chainage from 0.00 Km to 18.00 Km in the lead chart/estimates for the carriage of metal was not in order. The maximum payable carriage for the allotted portion of the work should have been 32 Km. This inflated the rates of the items of GSB and WBM considering extra carriage for 18 Km of road metal involving an extra expenditure of ₹ 75.62 lakh⁵⁹ against the executed quantities of GSB and WBM.

On this being reported, the Government stated (September 2017) that the analysis of rates of the estimates for involving quarry materials (GSB, WBM-II and WBM-III) were made kilometer wise with respective quarry leads to derive rates of the items in each Km separately. The lead for the section from Ch.0.00 Km to Ch.1.20 Km was not applied to rest of the road sections from Ch.18.00 Km to Ch.29.10 Km and from Ch.33.00 Km to Ch.40.00 Km. The reply was not tenable considering the fact that, although the different rates were worked out for different chainages, but only one single rate was adopted in the approved estimates and contract for the entire length of the road. The Division awarded the work taking into account the total payable lead of 50 Km despite deleting the provision of improvement/upgradation of works in

⁵⁸ a designated quarry for stone metal.

Item	Extra lead (Km) with rate per cum/Km		Total rate for 18 Km (extra payment)	Measured Quantity	Loose factor	Quantity of metals	Amount involved (₹)
	Surface road 8 Km @ ₹6.37	Gravel road 10 Km @ ₹7.64					
1	2	3	4	5	6	7 (5x6)	8 (4x7)
GSB	50.96	76.40	127.36	23,417.82	1.28	29,974.81	38,17,591.80
WBM-II	50.96	76.40	127.36	9,293.57	1.57	14,590.90	18,58,297.02
WBM-III	50.96	76.40	127.36	9,430.65	1.57	14,806.13	18,85,708.72
Total							75,61,597.54

Ch.0.00 Km to Ch.1.20 Km. The payments were, however, made based on the estimated and tendered rates which were derived considering the whole chainages (inclusive of Ch.0.00 Km to Ch.1.20 Km also), leading to render the extra expenditure.

Water Resources Department

2.3.8 Avoidable expenditure

Executive Engineer, Tezpur Water Resources Division incurred an avoidable expenditure of ₹ 3.88 crore due to non-adoption of lowest rate by the Departmental Tender Committee for the supply of Geo bags besides making extra payment of ₹ 23.21 lakh towards local carriage of Gabion boxes.

Water Resources Department, Government of Assam accorded (October-December 2014) administrative approval for the execution of three schemes, namely, (i) Protection of T/dyke from Chillanipam to Orangbasti from the erosion of river Jia Bharali on its Left Bank (AS-137); (ii) Protection of Biswanath Panpur including areas of upstream Silamari and for downstream Bhumuraguri to Borgaon against erosion of river Brahmaputra (AS-139); and (iii) Protection of Tezpur University and its adjoining areas from the erosion of river Jia Bharali (AS-140). The technical sanction to the works for ₹ 203.92 crore⁶⁰ was accorded (January 2015) by the Chief Engineer of the Department. Tender for the works in separate packages were invited and the Departmental Tender Committee (DTC) settled (January 2015) allocations of all the three schemes. The work orders were issued (February 2015) to 417 contractors at a total tendered cost of ₹ 193.65 crore. As of March 2017, all the three schemes remained incomplete with total financial progress of ₹ 45.08 crore⁶¹. Non completion of the schemes was attributed to non-release of funds by the Government.

Audit on scrutiny (November-December 2016) of records of the Executive Engineer (EE), Tezpur Water Resources Division and collection (May 2017) of additional related information, observed that the scope of execution of the schemes included supply of Geo bags⁶² and Gabion boxes⁶³. Tenders for the works were invited on 28 October 2014, 28 November 2014 and 05 December 2014 respectively. DTC, while finalising the tenders, fixed (January 2015) different rates (exclusive of carriage charges) for the supply of Geo bags of the same size and specification⁶⁴ for all the

⁶⁰ For work at (i) ₹ 13.65 crore, (ii) ₹ 167.09 crore; and (iii) ₹ 23.18 crore.

⁶¹

Scheme	Physical progress (in per cent)	Payment made (₹ in crore)
AS-137	60	3.76
AS-139	73	34.37
AS-140	91	6.95
Total		45.08

⁶² A geo synthetic bag made out of polyester, polythene etc., and is used for protection of structures & river banks from erosion.

⁶³ A cage filled with rocks, concrete, sand & soil etc. for use in erosion control works.

⁶⁴ Geo bags of size 1.03m X 0.70m; Gabion boxes of size 2m X 1m X 0.45m made of 8G wire.

three works *i.e.*, @ ₹ 163.80 (for scheme AS-137), ₹ 177 (for scheme AS-139) and ₹ 170 (for scheme AS-140) respectively instead of adopting the lowest rates offered/fixed for these items under the scheme AS-137 as the bags in all the three works were to be supplied at FOR⁶⁵ destination Tezpur (Divisional Store). For Gabion boxes, the rates were fixed including cost of carriage and placing the boxes at work site.

Considering the quantum of supply of Geo bags against the schemes AS-139 and AS-140 and non-adoption of the lowest rates, the Division had incurred an extra expenditure of ₹ 3.88 crore⁶⁶ as of March 2017.

Further, in case of supply of Gabion boxes, though the rates were inclusive of carriage and placing at the work site, it was noticed that in respect two works *viz.*, AS-137 and AS-139, ₹ 23.21 lakh⁶⁷ was paid against local carriage of 35,714 Gabion boxes at an average rate of ₹ 65.00 per box, while the rates fixed were inclusive of carriage cost also.

On this being pointed out, EE, Tezpur Water Resources Division stated (March 2017) that different rates were awarded for execution as per site condition. The reply was not tenable as the rates of Geo bags were fixed, were for the same size and specification and inclusive of their supply at FOR destination, Tezpur and therefore, did not have any relation with the site condition. As the rates were settled on the same day in the same DTC meeting for all the works and supply orders were issued in the same month, the Division could have avoided the extra expenditure, had the lowest rate of the items been considered for the supplies.

The matter was reported to Government in June 2017; reply was awaited (March 2018).

⁶⁵ Freight on Road.

⁶⁶

(in ₹)

Items supplied	Lowest rate (AS-137)	Scheme / Rate allowed		Excess rate allowed	Quantity (Nos.)	Amount
1	2	3		4 (3-2)	5	6 (4*5)
Geo bags	163.80	AS-139	177.00	13.20	27,18,594.00	3,58,85,441.00
		AS-140	170.00	6.20	4,63,766.00	28,75,349.00
Total						3,87,60,790.00

⁶⁷

Name of scheme	Quantity supplied (in nos.)	Average rate (in ₹)	Amount (in ₹)
AS-137	7,442	65.00	4,83,730.00
AS-139	28,272	65.00	18,37,680.00
Total	35,714	-	23,21,410.00