MANEKSHAW PAPER No. 40, 2013

Measures for MES Works Maximisation based on a Statistical Review of Works in a Corps Zone

Col Sanjay Sethi

Centre for Land Warfare Studies
New Delhi

KNOWLEDGE WORLD
KW Publishers Pvt Ltd
New Delhi

Centre for Land Warfare Studies
RPSO Complex, Parade Road, Delhi Cantt, New Delhi 110010
Phone: +91.11.25691308 Fax: +91.11.25692347
email: landwarfare@gmail.com website: www.claws.in

The Centre for Land Warfare Studies (CLAWS), New Delhi, is an autonomous think tank dealing with national security and conceptual aspects of land warfare, including conventional and sub-conventional conflicts and terrorism. CLAWS conducts research that is futuristic in outlook and policy-oriented in approach.

Disclaimer: The contents of this paper are based on the analysis of materials accessed from open sources and are the personal views of the author. The contents, therefore, may not be quoted or cited as representing the views or policy of the Government of India, or Integrated Headquarters of MoD (Army), or the Centre for Land Warfare Studies.

www.kwpub.com

Published in India by

Kalpana Shukla
KW Publishers Pvt Ltd
4676/21, First Floor, Ansari Road, Daryaganj, New Delhi 110002
Phone: +91 11 23263498 / 43528107 email: knowledgeworld@vsnl.net • www.kwpub.com

Contents

Preface

The Military Secretary's Branch offers numerous assignments in A, G and Q appointments post completion of the Higher Defence Management Course (HDMC) or equivalent course. Interestingly, in deciding what assignment you get, the station where you can be posted also plays a role. I was posted to a station, which was one of my choices and, this to some extent, was responsible for me ending up as Colonel Quartermaster Works, post termination of the HDMC. The appointment offered me some unique opportunities to experiment in an area of work which till the date of joining the said appointment, was mostly alien to me.

The tenure as Colonel Quartermaster Works taught me that nothing can be more satisfying than an opportunity to build or create assets which enhance the capacity and capability of our force. A works assignment at the level of corps affords an opportunity to process/manage several hundred jobs of asset construction or repair, which are worth several hundred crores of rupees. The sheer number and magnitude of the jobs executed in a Corps Zone makes the task challenging and exciting. The massive resource availability also provides one with a gratifying experience of meeting the never ending demands of the environment.

The works assignment also involves a fascinating exercise in management of data, facts and figures. Resolving the maze made by varying allocations of ceiling and funds under different budget heads, the implications of timing of the accord of administrative approval on the fund-to-ceiling ratio, and simultaneously pursuing the Annual Major Works Programme (AMWP) can be a stimulating, thought provoking and, at times, even worrisome experience. However, above all, the experience is a statistician's delight, to say the least.

At the very beginning of the tenure, one realises the need for the application of Pareto's Principle. A few AMWP works account for most of the budget, while several hundred revenue budget works consume only a small share of the works budget. Notwithstanding the expenditure profile, works executed under the revenue budget heads are more gratifying as the output is visible in one's tenure, whereas the major works take at least three tenures, if not more, to fructify.

I had the privilege of serving under the able command of three Corps Commanders during my tenure and must acknowledge that each one of them distinctly shaped the way works were managed in the Corps Zone. Similarly, the Chiefs of Staff and the Brigadier Quartermaster also made a huge impression. I thoroughly enjoyed the good fortune of working in a synergised and perceptive environment and have had the liberty to try out some very remarkable ideas in managing works, under, and at times, even beyond, the overall ambit of the Defence Works Procedure 2007.

I must say the corps did see some astonishingly encouraging results in both capital and revenue head works. The consumption of funds for new works grew by a mind-boggling figure of 262 percent, a performance which can elicit the envy of the best of the corporate world in contemporary India. The quantum of major works sanctioned in 2012-13 was comparable to the sum of ceilings sanctioned in the preceding three years. I can quote many other accomplishments, but without going further, I think it would be only fit if the input/output of the period of experimentation is statistically analysed to identify a few best practices and recommend them for incorporation in the Defence Works Procedure 2007.

The focus of the study revolves largely around revenue head works to include special repairs, revenue works and minor works. From the capital head spectrum, only the Low Budget Works (LBW) have been included since their methodology till acceptance of necessity does yield some very good lessons. The paper that follows includes statistical analysis of data spread over a period of more than five years and deductions drawn on the basis of trends visible. The deductions with a positive impact have been converted into implementable recommendations for the issue of policy guidelines / appropriate inclusion in the Defence Works Procedure 2007.

I sincerely hope that the policy-makers at Integrated Headquarters of the Ministry of Defence will give the paper a patient reading and consider adoption of the proposals contained therein.

SANJAY SETHI

Chapter 1
Introduction

Meaningful utilisation of funds available under the Military Engineering Service (MES) budget heads can make a significant difference to the quality of life of all ranks in a military station. Despite the fact that there are adequate funds at our disposal today, the satisfaction levels don't seem to be reaching the desired threshold. Unfortunately, in a large number of stations, funds for MES works go unutilised year after year.

Anyone with a little experience in the field can list out the elements of a typical works predicament. To put it simply, the funds for 'new works' are available in plenty at all times, but those for 'carry over works' are never adequate, though both are sourced from the same budget heads. Consequently, while, on the one hand, the MES executives are unable to pay the contractors' dues for carry over works in time, on the other, funds for new works are surrendered/remain unutilised. Delayed payments result in delayed execution of the works and reduce the pace of capacity deliverance.

The apportioning of responsibility for the aforesaid situation is also typical. The Commanders and staff at all levels often hold the Garrison Engineers and Commander Works Engineer responsible for the situation. However, MES executives defend themselves and apportion the blame on the Competent Financial Authorities (CFAs) for delaying the issue of administrative approvals and releasing inappropriate amounts of funds. The above dynamics repeats itself, year after year, and the existing policy guidelines have not helped much to remedy the prevailing ills. The CFAs and their staff officers learn with experience, only to be replaced after their tenure by another set of officers who again learn on the job.

The management of the proportion of funds-to-ceiling ratio is also a sensitive issue, since an imbalance can lead to an enhanced carry over liability. There have been situations in the past wherein the quantum of carry over liability for a command or corps was so huge that it left little or no funds

for allocation to new works and, consequently, there was no ceiling at all to allocate.

The policy guidelines of the Engineer-in-Chief's (E-in-C's) Branch dictate that two-thirds of the revenue works are completed in the year of sanction. Similarly, it is mandated that one-third of special repair works are completed in the year in which administrative approval is accorded. The said guidelines form the basis of conversion of funds into an appropriate amount of ceiling at the Command Headquarters. However, for the system to work, the booking of funds has to follow the aforesaid guidelines very strictly. That is to say, for revenue works, funds amounting to 66 percent of the allocated ceiling should be booked in the year of sanction, and similarly, for special repair works, funds amounting to 33 percent of the allocated ceiling should be booked in the year of sanction. There are just two requirements for achieving the said pattern of fund booking. Firstly, the CFAs need to accord administrative approvals for the bulk of the works in time, that is, at the very beginning of the financial year. Secondly, the MES executives need to complete the tendering action for the bulk of the works within three to four months of accord of administrative approval. Simple as it may seem, the aforesaid can happen only if the works machinery, in the staff as well as departmental channels, is well oiled and geared up.

To elucidate the above, it would be appropriate to cite the status of works in the Area of Responsibility (AOR) of a corps in the past few years. In the financial year 2010-11, the corps surrendered funds amounting to approximately Rs 21.5 crore in the last quarter of the financial year. The matter attracted attention from the very highest level and a presentation explaining the aforesaid lapse was subsequently given to the Parliamentary Standing Committee on Defence. Consequently, in the second quarter of the following financial year (2011-12), a number of initiatives were undertaken by the staff at Corps Headquarters, headed by the Chief of Staff himself. The same did yield positive results. Also, in the said financial year (2011-12), sizeable funds for new works were reappropriated to carry over works in the third quarter to avoid a repeat of 2010-11.

The financial year 2012-13 witnessed application of a series of proactive measures, initiation of which commenced even prior to the beginning of the financial year. Further, an automated system of performance evaluation

involving use of 'Desktop-based Dashboards' was adopted to present a near real-time picture to all 22 CFAs in the Corps Zone. These measures were executed by staff which had been on the scene for some time, and enjoyed the support of the Formation Commander. The Dashboards were viewed by the Corps Commander, who made his satisfaction as well as dissatisfaction with respect to performance known to the concerned CFAs, as a matter of routine.

Another factor which contributed to an extent was the fact that the works were released centrally by the Corps Headquarters. The central release of works yields many benefits. To name a few, it enables application of a uniform fund-to-ceiling ratio, ease of reappropriation of funds, and flexibility in meeting unforeseen requirements. However, the same comes at an expense, and leads to an additional stage in the processing of works. There is a time penalty involved, which needs to be weighed alongside the advantages of central release of funds. This issue also needs to be factually analysed on the basis of accurate data over a period of time.

The paper which follows is an endeavour to present a graphical view of works related data and statistically validate practices which bring in efficiency and effectiveness in consumption of MES funds. The paper concludes with some definite recommendations with a view to bring in much needed reform, and maximisation of performance with regard to ground application of MES funds.

Aim

The aim of the study is to identify best practices which enhance ground application of MES funds.

Scope

The scope of the study is restricted to the following categories of works:

- Low Budgeted Works.
- Minor Works.
- Revenue Works.
- Special Repair Works (Building).
- Special Repair Works (Furniture).
- Special Repair Works (Roads).
- Special Repair Works (MES Installations).

The data used in the study has been largely taken from the undermentioned two sources[1]:

- Monthly Expenditure Reports (MER) rendered by the Office of the Zonal Chief Engineer for the period April 01, 2007, to March 31, 2013.
- Details with regard to administrative approvals and fund releases as recorded in 'Summary of Funds Released' in the Quartermaster Works Branch of the Corps Headquarters (HQ).

1. There is slight variation in the stations and corresponding MES executives considered, in the two sources listed, since there is a couple of stations which are served by Garrison Engineers under the technical control of Air Force Zonal Chief Engineers.

Chapter 2
Measures Initiated in the Years of Focus

The paper has used data commencing from financial year 2007-08 onwards, but looks at the last three financial years (2010-11, 2011-12 and 2012-13) critically. These three years have also been referred to as Year I, Year II and Year III respectively in the following parts of the report.

The objective of this chapter is to list out the measures initiated at the Corps Headquarters in the said 'Years of Focus'. The impact of measures initiated has been statistically evaluated in the chapters that follow.

Year I – Financial Year 2010-11

Year I witnessed routine allocation of ceilings to subordinate formations post receipt from the Command Headquarters. Further, emphasis on timely consumption of ceilings was also communicated in a routine manner. The progress of consumption of allocated ceilings was monitored through Excel spreadsheets maintained for the release of funds. Routine conferences were organised to review the progress of consumption of the works ceiling.

Year II – Financial Year 2011-12

Year II commenced on lines similar to Year I. Ceilings were allocated to subordinate formations post receipt from Command Headquarters. The first quarter of the year witnessed routine emphasis on early consumption of the works ceiling. However, since Year I had witnessed surrender of funds amounting to Rs 21.5 crore, an explanation for the same was presented to the Parliamentary Standing Committee on Defence during this period. Consequently, the following measures were initiated in the second quarter of the financial year:

- A target was laid down for 100 percent consumption of the works ceiling by October 30, 2011.
- A sense of competition was generated amongst the subordinate

formations and Station Headquarters by disseminating comparative details of the consumption profile of the works ceiling under various budget heads, on a monthly basis.

- Periodic conferences were organised to review the progress of early consumption of the works ceiling. The progress was monitored at the level of Chief of Staff and Brigadier Quartermaster.
- The progress of booking of released funds by the Commander Works Engineers and the Garrison Engineers was monitored at the end of the second and third quarters.
- At the end of the third quarter, post consultation with MES executives, funds surplus to the requirement were recommended for reappropriation to carry over works in the beginning of the fourth quarter.

To summarise, Year II witnessed application of a series of reactionary measures, initiated in the second quarter, aimed to avoid a repeat of the performance of Year I. The results were partially satisfactory as sizable quantum of funds could be reappropriated to meet the requirements of carry over liability.

Year III – Financial Year 2012-13

Year III witnessed application of a series of proactive measures which were aimed at achieving complete utilisation of funds without resorting to either reappropriation or surrender. The ceiling allocation by the Corps Headquarters in this year preceded the receipt of allocation from Command Headquarters. The measures initiated in Year III were as under:

- Tentative ceilings for Year III were allocated to subordinate formations in the fourth quarter of Year II. The tentative ceiling amount was restricted to 80 percent of the final ceiling allocation of Year II.
- Consumption of 80 percent of the allocated ceiling by May 31, 2012, was laid down as Target I.
- Consumption of 100 percent of the allocated ceiling by August 31, 2012, was laid down as Target II.
- Allotment of funds depending on the month of accord of sanction was as per guidelines contained in HQ Chief Engineer Zone letter No 95006/ AW/12-13/04/E5 dated May 04, 2012 (Appendix A).

- 'Desktop-based Dashboards' were developed to keep the Corps Commander and subordinate Formations Commanders updated on a fortnightly basis with regard to the progress of consumption of ceilings and utilisation of funds.
- Periodic video conferences were organised at the corps to review the progress of early consumption of the works ceiling. The progress was monitored at the level of Corps Commander.
- The progress of the accord of technical sanction, issue of the notice inviting tenders, issue of tenders, receipt of tenders, acceptance of a tender by MES executives was monitored on a periodic basis.
- The progress of booking of released funds by the Commander Works Engineers and the Garrison Engineers was monitored at the end of the third and fourth quarters.

The results of the aforesaid measures were encouraging and are detailed in the following chapters of the paper. Further, the impact of the measures implemented in Year II and Year III has been statistically and graphically analysed.

Chapter 3
Ceiling and Fund Allocation Profile in the Years of Focus

The Years of Focus

The ceilings for the sanction of works are allocated by the Command Headquarters. Invariably, the process is kick-started on the receipt of the Vote on Account (VOA) allocation of funds from Integrated Headquarters of the Ministry of Defence (MoD) (Army). The Command Headquarters generate ceilings and distribute both ceilings and funds together. The VOA allocation is followed by the Budgetary Estimate (BE) allocation which is sizeable and is almost equal to 60-80 percent of the final allocation. The Corps Headquarters, on receipt of the ceiling, allocates further to the Divisional Headquarters, who, in turn, distributes it to the stations in its Area of Responsibility (AOR). It can be safely assumed that the end users receive the ceiling two to three weeks after allocation is made by the Command Headquarters.

This chapter intends to briefly present the ceiling allocation profile of the last three years. Further, the pattern exhibited by the fund-to-ceiling ratio during the currency of these financial years has also been presented graphically. Data used in the chapter is restricted to special repair works only and comprehensive tables for Year I, II and III are attached as Appendix B.

Year I – Financial Year 2010-11

The following is apparent from the ceiling and fund allocation profile:

- The initial allocation amounting to 32 percent of the final ceiling was available to the end users almost 34-42 days after the commencement of the financial year.
- In the first half of the financial year, only two-thirds of the ceiling was available. In the same period, the availability of funds rose to as much as 249 percent of what was eventually booked at the end of the financial year.
- Forty-eight percent (48 percent) of the funds and 34 percent of the ceiling was allocated in the seventh month / third quarter of the financial year.

- Sixty percent (60 percent) of the allocated funds was surrendered in the last quarter of the financial year.

The fund-to-ceiling ratio, when plotted against the time of the year, yields a graph which is somewhat parabolic in shape. The year commenced with average fund-to-ceiling ratio of 23 percent, which subsequently increased to 63 percent during the year, and, finally, settled at 25 percent.

Fig 1: Allocation Profile 2010-11

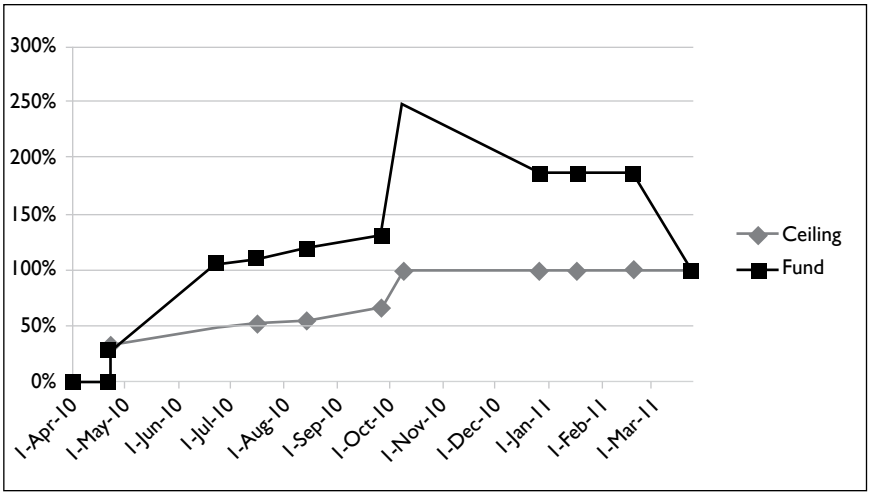
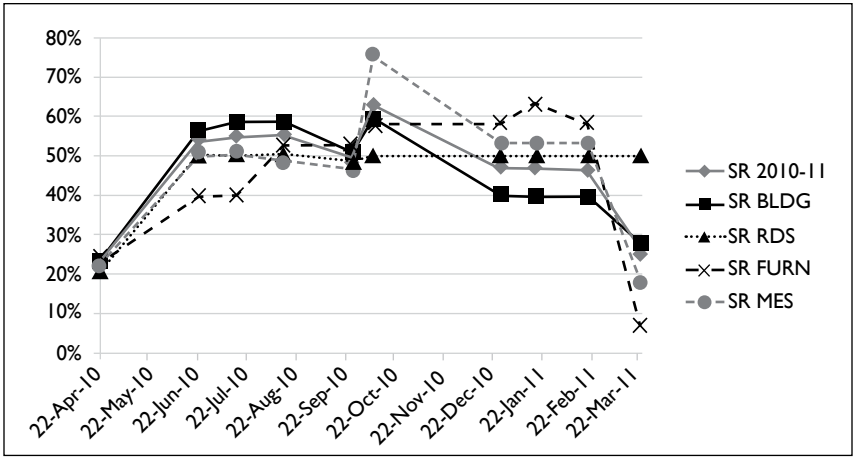


Fig 2: Fund-to-Ceiling Ratio Profile 2010-11



Year II – Financial Year 2011-12

The following is apparent from the ceiling and fund allocation profile:

- The initial allocation amounting to 85 percent of the final ceiling was available to the end users almost 48-55 days after the commencement of the financial year.
- In the seventh month of the financial year, 100 percent of the ceiling was allocated to the corps.
- Fifty-eight percent (58 percent) of the funds were withdrawn / reappropriated / surrendered in the last quarter of the financial year.

The fund-to-ceiling ratio, when plotted against the time of the year, displays a downward trend. The ratio in the beginning of the year is 44 percent, which tapers down to 32 percent towards the end of the third quarter and finally settles at 18 percent at the end of the financial year.

Fig 3: Allocation Profile 2011-12

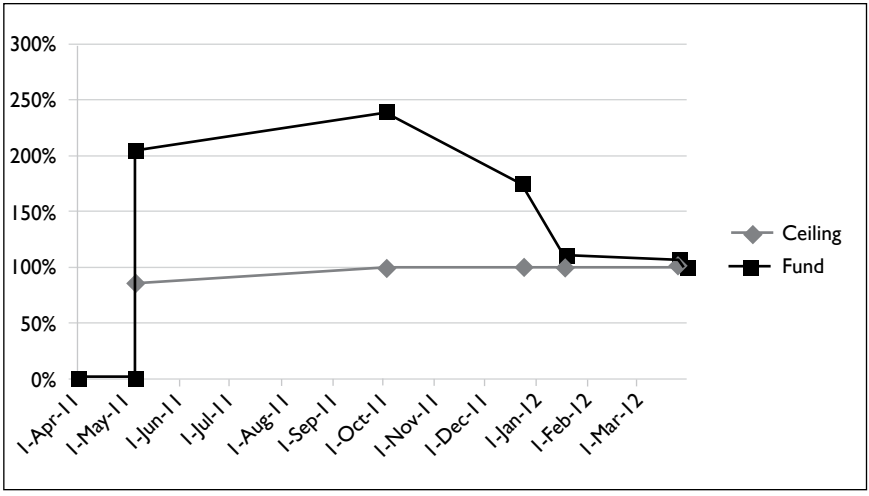
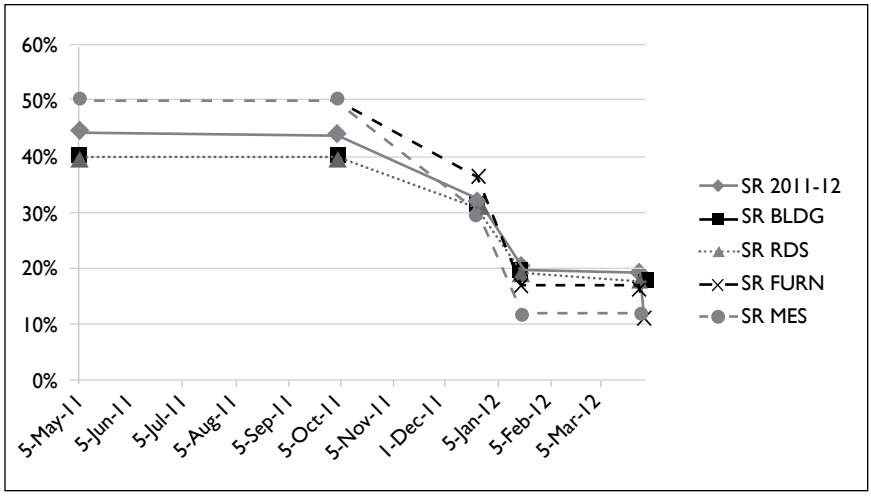


Fig 4: Fund-to-Ceiling Ratio Profile 2011-12



Year III – Financial Year 2012-13

The following is apparent from the ceiling and fund allocation profile:

- The initial allocation amounting to 13 percent of the final ceiling was available to the end users almost 36-42 days after the commencement of the financial year.
- For the first four months of the financial year, only 35 percent of the final allotment of the ceiling was made available to the Corps Headquarters.
- Ninety percent (90 percent) of the ceiling was allotted to the corps by the first week of the sixth month, whereas 99 percent of the funds was available by the last week of June 2012 (end of first quarter).

As a proactive measure, the Corps Headquarters, without awaiting the release from the Command Headquarters, allocated the ceilings for the financial year 2012-13 in the last quarter of the year 2011-12.

The fund-to-ceiling ratio, when plotted against the time of the year, displays a reasonably level trend during the financial year. The ratio in the beginning of the financial year was 45 percent and the financial year ends with 34 percent, which is equal to the threshold contained in the policy disseminated by the E-in-C's Branch.

Fig 5: Allocation Profile 2012-13

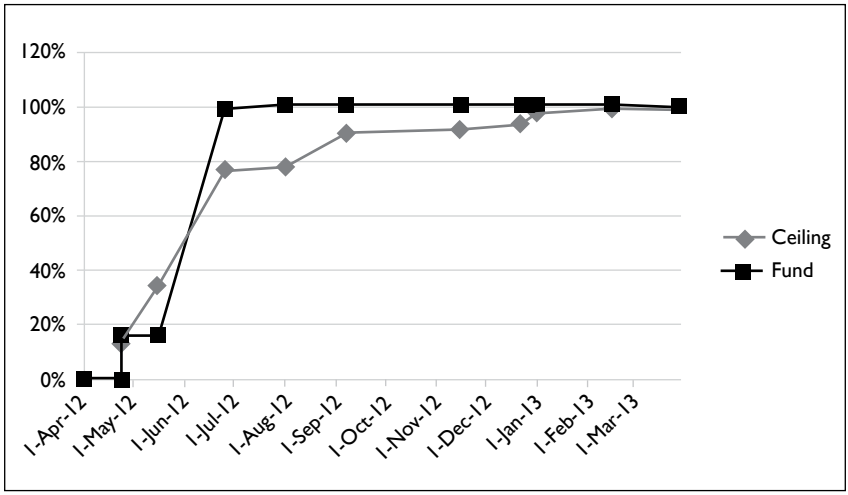
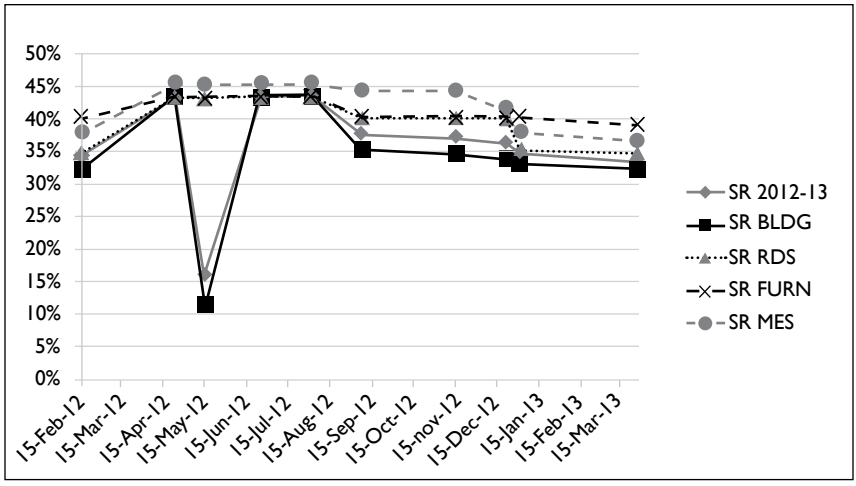


Fig 6: Fund-to-Ceiling Ratio Profile 2012-13



Deductions

The following deductions can be made with regard to allocation of ceilings and funds:

- Ceilings are invariably allocated along with funds, though there is no compulsion to do so.
- The initial allocation of ceilings is received by the end users 1-2 months after commencement of the financial year.

- Ceilings are released in a piecemeal fashion and 95-100 percent of the ceilings is available to the end users only after half the financial year has lapsed.
- The fund-to-ceiling ratio fluctuates during the year and is not in sync with the expected threshold viz 66 percent for revenue works and 33 percent for special repairs.
- Excess funds are placed at the disposal of the users in the beginning of the financial year which remain unutilised for the greater part of the year and are later sucked out of the system by withdrawal / reappropriation / surrender.
- Early allocation of tentative ceilings in Year III has had a very positive and unprecedented impact on utilisation of funds and led to cent percent consumption.

Chapter 4
Pace of Utilisation of Ceilings by CFAs

In addition to the proactive and early allocation of ceilings, as detailed in the preceding chapter, targets were formulated in Year III with regard to early utilisation of ceilings as per details appended below:

- Target I. Consumption of 80 percent of the allocated ceiling by May 31, 2012.
- Target II. Consumption of 100 percent of the allocated ceiling by August 31, 2012.

Laying down of targets without an effective monitoring mechanism seldom serves any purpose. Accordingly, *Desktop-based Dashboards* were developed, disseminated to all CFAs and updated on a fortnightly basis. The performance of formations with regard to utilisation of ceilings as well as funds was quantified and ranked. The ranking coupled with easy and widespread availability of information, generated competitiveness and ensured that all formations made concerted efforts to meet the targets. An extract of information available on *Dashboards* is attached as Appendix C.

This chapter graphically presents a comparative profile of the pace at which administrative approvals were accorded in Years I, II and III.

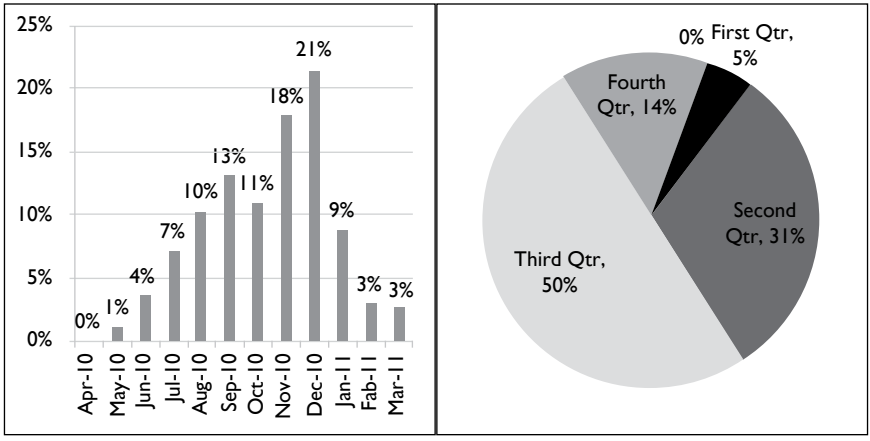
Year I – Financial Year 2010-11

In Year I, just 5 percent of the ceiling was consumed in the first quarter and 31 percent in the second quarter. Almost 50 percent of the ceiling was consumed in the third quarter and maximum ceiling was consumed in the month of December 2010 (21 percent).

The pace of consumption of the ceiling depicts an absence of any urgency in its utilisation or that of the funds allocated alongside. In all likelihood, the process of utilisation was triggered only after allocation of ceilings and, in all probability, lack of targets coupled with absence of a structured monitoring

mechanism led to a slow pace of utilisation. As has already been stated, surrender of a sizeable quantum of funds was witnessed in the last quarter of Year I.

Fig 7: Overall Pace of Utilisation of Ceiling in 2010-11



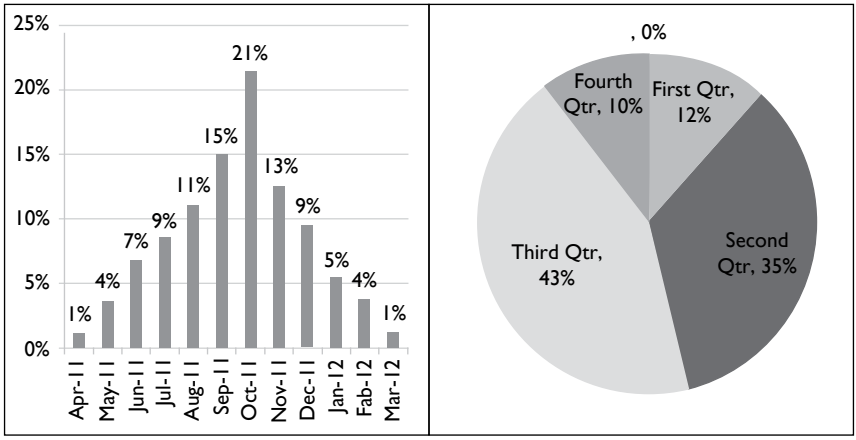
Year II – Financial Year 2011-12

In Year II, 12 percent of the ceiling was consumed in the first quarter and 35 percent in the second quarter. Almost 43 percent of the ceiling was consumed in the third quarter and maximum ceiling was consumed in the month of October 2011 (21 percent).

The pace of consumption of the ceiling is comparatively faster than in Year I, however, approximately 53 percent of the administrative approvals was accorded in the second half of the financial year. Evidently, the process of utilisation was triggered only after the allocation of ceilings. Targets for complete utilisation by October 31, 2011, were formulated late in the financial year; though their results are visible to a certain extent. However, reappropriation of funds for new works to carry over works was resorted to in the third / fourth quarter of the financial year.

The overall fund-to-ceiling ratio achieved in the year was 21.75 percent which is far below the expected threshold.

Fig 8: Overall Pace of Utilisation of Ceiling in 2011-12



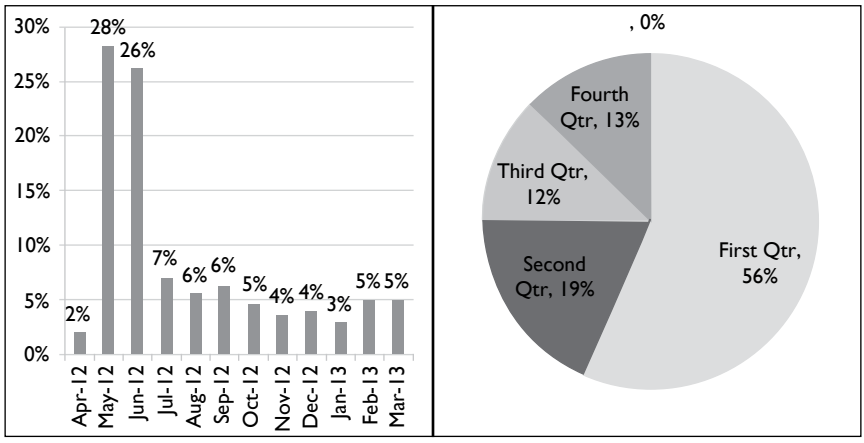
Year III – Financial Year 2012-13

In Year II, 56 percent of the ceiling was consumed in the first quarter and maximum ceiling was consumed in the month of May 2012 (28 percent). The consumption in the first quarter of Year III is greater than the sum of consumption in the first and second quarters in Year II as well as Year III. Approximately, 19 percent ceiling was consumed in the second quarter. Therefore three-fourths of the ceiling was consumed in the first half of the financial year. This gave MES executives adequate time to book funds.

The pace of consumption of the ceiling is much faster than in Years I and II. It is obvious that targets formulated for Year III and their monitoring through Dashboards made a considerable impact on the pace of utilisation of funds. Further, the year witnessed neither surrender nor reappropriation of funds.

The overall fund-to-ceiling ratio achieved in the year was 41.17 percent in comparison to 26.15 percent in Year I and 21.75 percent in Year II.

Fig 9: Overall Pace of Utilisation of Ceiling in 2012-13



Trends in Utilisation of LBW Ceilings

It is interesting to analyse the pace of utilisation of Low Budget Works (LBW) ceilings and the same is depicted below graphically for Years I, II and III. In the first half of the said three years, the ceiling amounting to 77 percent, 73 percent and 86 percent was consumed respectively. It is also remarkable that the pace of utilisation of LBW ceilings stands out both for consistency and above average performance when compared to all other MES budget heads.

The only reason which can be attributed to the aforesaid is the process for approval of these works which entails compiling a list of works for the approval of the Army Commander. Since the approval of the Army Commander is accorded at the beginning of the financial year, the same ensures early decision-making with regard to utilisation of funds and early sanctioning of works. Therefore, even in the absence of targets and a structured monitoring mechanism, 26 percent and 53 percent of the ceiling was utilised in the first quarter of Years I and II respectively.

Fig 10: Pace of Utilisation of LBW Ceiling in 2010-11

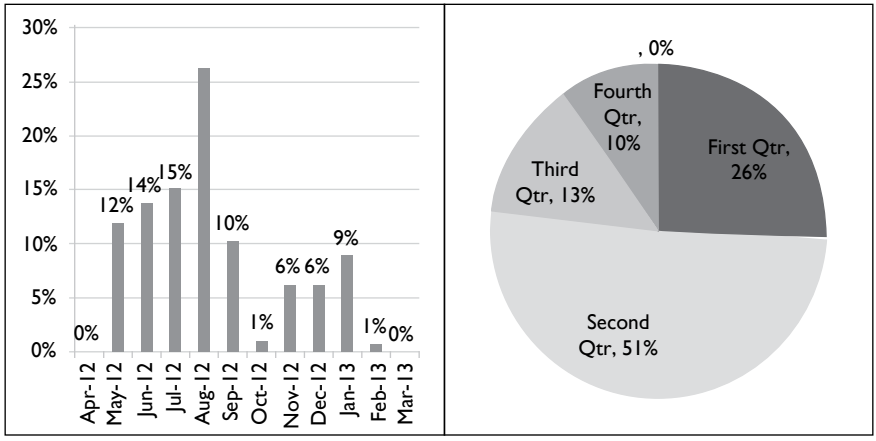


Fig 11: Pace of Utilisation of LBW Ceiling in 2011-12

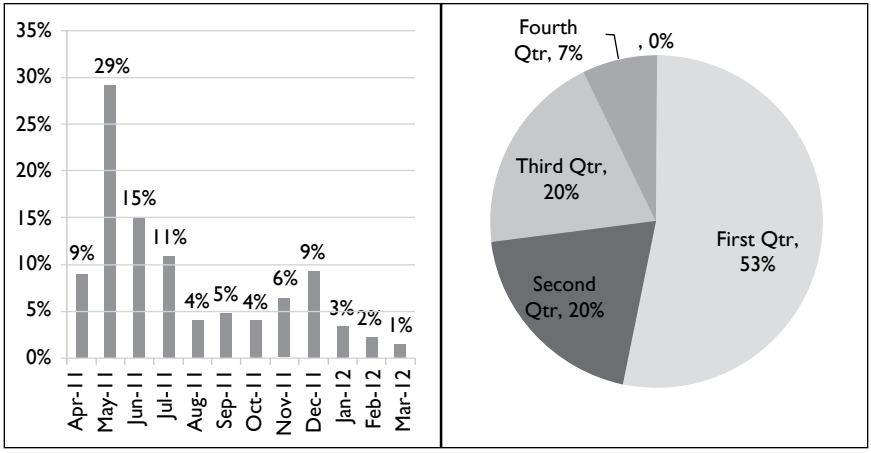
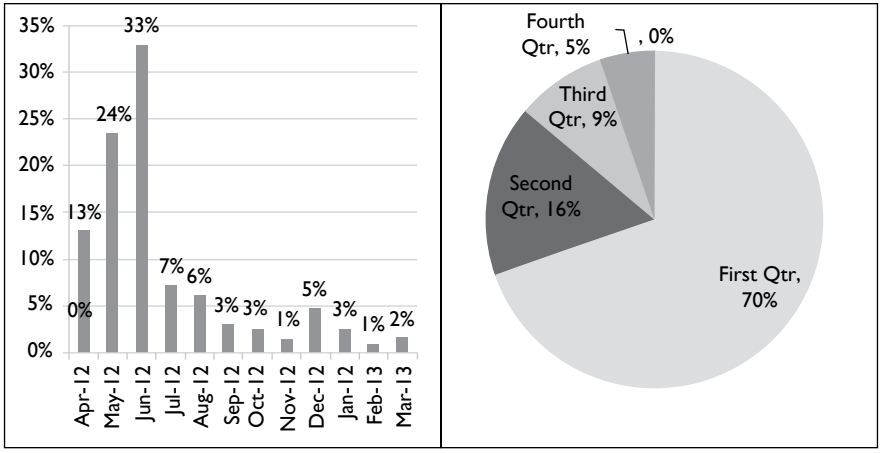


Fig 12: Pace of Utilisation of LBW Ceiling in 2012-13



A comparison of the performance in LBW with other budget heads is tabulated below. It is also evident from the table that the most discernible improvement as a consequence of measures initiated is in the heads pertaining to special repairs roads, furniture and MES installations in financial year 2012-13, which otherwise remain neglected.

Table 1

Year	Quarter	LBW	Rev	SR (Bldg)	SR (Rds)	SR (Furn)	SR (MES)	Overall
	(Expressed as % in a Quarter)							
2010-11	I	26	3	5	1	2	0	5
	II	51	35	38	21	15	17	31
	III	13	52	51	66	40	59	50
	IV	10	10	6	12	43	24	14
2011-12	I	53	10	8	0	0	0	12
	II	20	42	46	15	13	28	36
	III	20	45	38	75	56	61	42
	IV	7	3	8	10	31	11	10
2012-13	I	70	71	61	42	4	52	56
	II	16	9	11	31	55	30	19
	III	9	10	13	7	31	6	12
	IV	5	10	15	20	10	12	13

Relation Between Fund Consumption and Month of Sanction

Month-wise details of funds booked in Years I, II and III are detailed in Appendix D. A perusal of figures contained therein validates the practicability of booking as per guidelines for allocation contained in HQ Chief Engineer Zone letter No 95006/AW/12-13/04/E5 dated May 04, 2012 (Appendix A).

Deductions

The following can be deduced:

- In the absence of targets, ceiling utilisation peaks in the third quarter of the financial year.
- Targets, along with performance monitoring / quantification, cause ceiling utilisation to peak in the first quarter of the financial year.
- If 75 percent of the ceiling is consumed in the first half of the financial year, the same results in fund utilisation as per norms laid down by the E-in-C's Branch.
- Approval process of the LBW ensures timely utilisation of ceilings and consequently leads to desired fund utilisation.
- Utilisation of funds for Special Repairs roads, furniture and MES installations has certain major challenges but they can be overcome by enforcing targets through the command channel.
- Guidelines for allocation of funds contained in HQ Chief Engineer Zone letter No 95006/AW/12-13/04/E5 dated May 04, 2012, stand validated.

Chapter 5
Analysis of Fund-to-Ceiling Ratio Profile (2007-08 to 2012-13)

The policy in vogue mandates that funds amounting to 33 percent of the ceiling sanctioned for special repair works and 66 percent for revenue works are consumed in the year of approval. The objective of this chapter is to establish if the said thresholds were achieved in the period 2007-08 to 2011-12 and compare it with results achieved in 2012-13 post initiation of measures detailed in Chapter 2.

The Monthly Expenditure Report (MER) is a monthly return which presents details of expenditure booked by various MES executives for *new works* as well as that which is booked for *carry over works* in respect of all revenue and capital budget heads. The data in respect of LBW and other revenue budget head works contained in the MER rendered by the office of the Zonal Chief Engineer from April 01, 2007, to March 31, 2013, forms the basis of analysis carried out in this chapter.

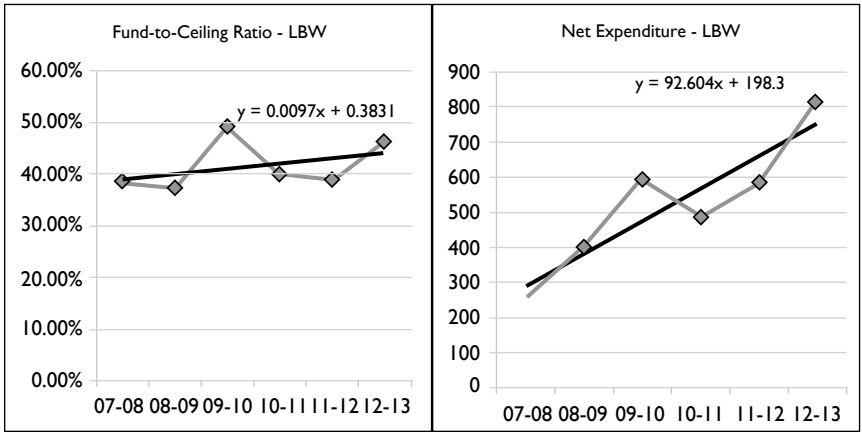
LBW

The details of expenditure booked for new works, amounts carried over to the next financial year and fund-to-ceiling ratio achieved in respect of LBW for a period of six years are tabulated below, and also depicted graphically.

Table 2

Year	Expenditure on New Wks (Lakh Rs)	Expenditure carried over to Next Year (Lakh Rs)	Net Expenditure (Lakh Rs)	Increase in expenditure over last year	Fund-to-Ceiling Ratio achieved
07-08	134	213	257		38.59 %
08-09	186	312	399	55 %	37.30 %
09-10	280	289	591	48 %	49.16 %
10-11	199	297	488	-18 %	40.08 %
11-12	286	447	583	20 %	39.01 %
12-13	**369**	**430**	**816**	**40 %**	**46.20 %**
Average Fund-to-Ceiling Ratio 2007-12					40.83 %
Std Deviation Fund-to-Ceiling Ratio 2007-12					4.26 %
Average annual increase in expenditure					129 %

Fig 13



The following is apparent from the above data with regard to LBW:

- The average fund-to-ceiling ratio for five years, commencing from 2007-08 to 2011-12, is 41 percent, which is fairly high, given that the Probable Date of Completion (PDC) for LBW invariably varies from 52 weeks to 78 weeks (or one to one-and-a-half years).
- Further, the performance is fairly consistent as the standard deviation is barely 4.26 percent.

- In Year III (2012-13), the fund-to-ceiling ratio has improved to 46 percent, which is an increase of 5 percent over the average of the last five years.
- The expenditure under the budget head has grown every year on an average by 29 percent in the last five years and the growth in Year III (2012-13) has been 40 percent.

Consistency is the hallmark of the LBW profile over six years. The reason for the consistently high fund-to-ceiling ratio can only be attributed to the methodology involved in approval of these works. The Annual LBW Programme (ALBWP) is approved by the Command Headquarters, and, therefore, compilation of such works, duly priced, is prepared much in advance. The approval of the General Officer Commanding-in-Chief of the Command Headquarters is sought prior to commencement of the financial year, which forces early decision-making with regard to choice of works and accordingly leads to accord of administrative approvals in an earlier time-frame.

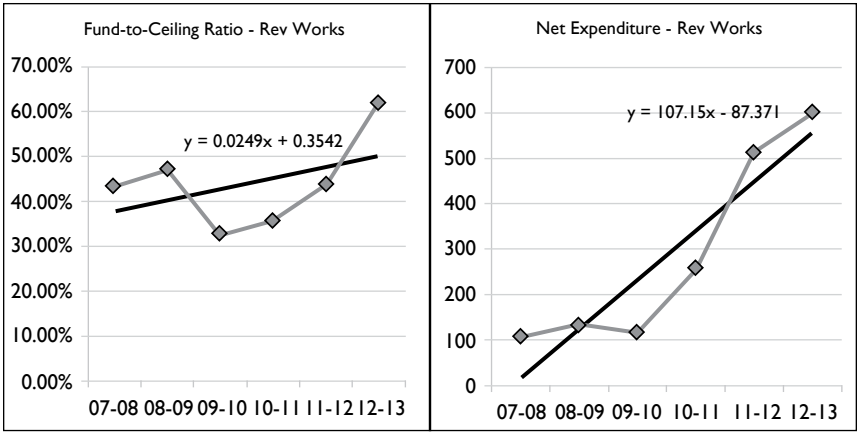
Revenue Works

The details in respect of revenue works for a period of six years are tabulated below, and also depicted graphically.

Table 3

Year	Expenditure on New Wks (Lakh Rs)	Expenditure carried over to Next Year (Lakh Rs)	Net Expenditure (Lakh Rs)	Increase in expenditure over last year	Fund-to-Ceiling Ratio achieved
07-08	52	68	107		43.32 %
08-09	64	72	132	24 %	47.07 %
09-10	45	92	117	-11 %	32.75 %
10-11	166	298	258	121 %	35.75 %
11-12	215	276	513	99 %	43.76 %
12-13	**323**	**197**	**599**	**17 %**	**62.13 %**
Average Fund-to-Ceiling Ratio 2007-12					40.53 %
Std Deviation Fund-to-Ceiling Ratio 2007-12					5.37 %
Average annual increase in expenditure					50 %

Fig 14



The following is apparent from the data pertaining to revenue works:

- The average fund-to-ceiling ratio for five years, commencing from 2007-08 to 2011-12, is 40.53 percent, which is high, given that the PDC for revenue works is invariably 52 weeks.
- Further, the performance is fairly consistent as the standard deviation is barely 5.37 percent.
- In Year III (2012-13), the fund-to-ceiling ratio has improved to 62.13 percent, which is an increase of 21.6 percent over the average of the last five years.
- The expenditure under the budget head has grown every year on an average by 50 percent in the last five years and the growth in Year III (2012-13) has been 17 percent.

The impact of measures initiated is most visible in revenue works for two reasons. Firstly, the average PDC of revenue works is much less than that of LBW or special repair works. Secondly, these are small jobs with little complexity, costing between Rs 1-2 lakh and can be completed in a short time post approval. Hence, if administrative approvals are accorded in time, the bookings can go as high as 62 percent of the ceiling within the financial year, which is, however, still short of the expected threshold of 66.6 percent.

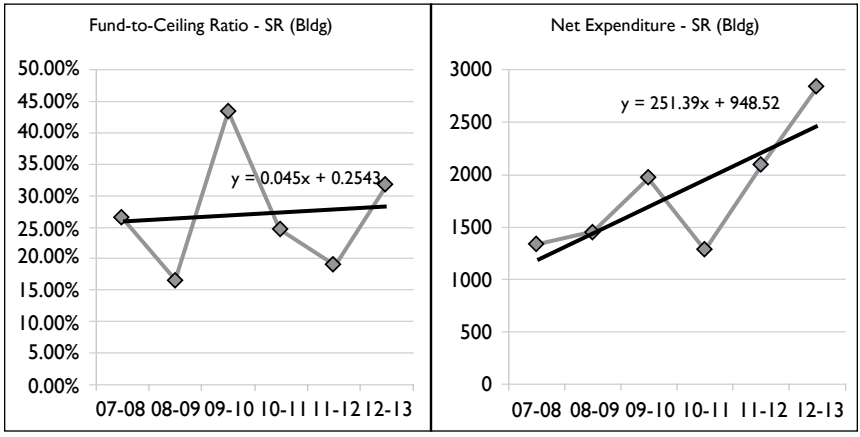
Special Repairs (Buildings)

The details in respect of special repairs buildings for a period of six years are tabulated below, and also depicted graphically.

Table 4

Year	Expenditure on New Wks (Lakh Rs)	Expenditure carried over to Next Year (Lakh Rs)	Net Expenditure (Lakh Rs)	Increase in expenditure over last year	Fund-to-Ceiling Ratio achieved
07-08	419	1,164	1,342		26.46 %
08-09	274	1,382	1,438	7 %	16.55 %
09-10	585	760	1,967	37 %	43.50 %
10-11	528	1,627	1,288	-35 %	24.49 %
11-12	464	1,956	2,090	62 %	19.17 %
12-13	890	1,906	2,846	36 %	31.83 %
Average Fund-to-Ceiling Ratio 2007-2012					26.03 %
Std Deviation Fund-to-Ceiling Ratio 2007-2012					9.43 %
Average annual increase in expenditure					22 %

Fig 15



The following is apparent from the above data:

- The average fund-to-ceiling ratio for five years, commencing from 2007-08 to 2011-12, is 26.03 percent, against the desired output of 33 percent.
- Further, the performance is fairly inconsistent as the standard deviation is 9.43 percent.

- In Year III (2012-13), the fund-to-ceiling ratio has improved to 31.83 percent, which is an increase of 5.80 percent over the average of the last five years and is very close to the expected output as per the policy of the E-in-C's Branch.
- The expenditure under the budget head has grown every year on an average by 22 percent in the last five years and the growth in Year III (2012-13) has been 36 percent.

In the special repairs building category, the fund-to-ceiling ratio has nearly reached the desired level. However, the high standard deviation highlights the complexities involved in execution of these jobs. The special repair building works are also *in situ* jobs and suffer from the challenges involved in execution of such jobs. Therefore, requirement of user involvement / monitoring assumes significance.

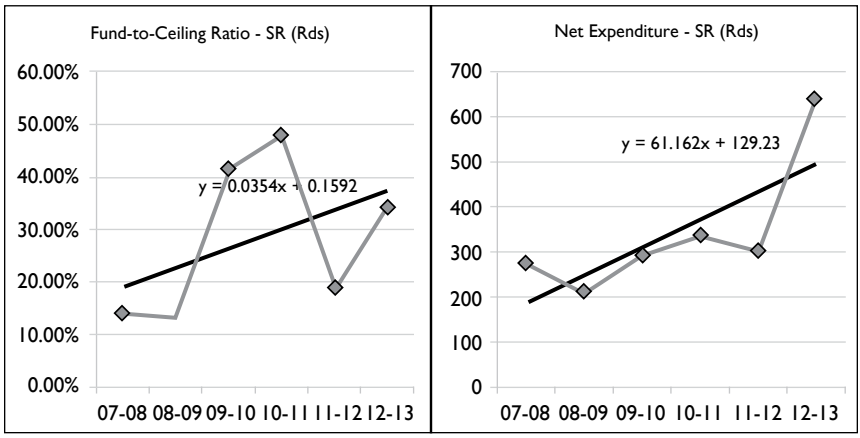
Special Repairs (Roads)

The details of expenditure booked for new works, amounts carried over to the next financial year and fund-to-ceiling ratio achieved in respect of special repairs (roads) for a period of six years are tabulated below, and also depicted graphically.

Table 5

Year	Expenditure on New Wks (Lakh Rs)	Expenditure carried over to Next Year (Lakh Rs)	Net Expenditure (Lakh Rs)	Increase in expenditure over last year	Fund-to-Ceiling Ratio achieved
07-08	30	184	274		14.04 %
08-09	28	185	213	-22 %	13.27 %
09-10	109	153	294	38 %	41.52 %
10-11	183	199	337	14 %	47.90 %
11-12	105	447	305	-9 %	19.04 %
12-13	**191**	**369**	**638**	109 %	**34.07 %**
Average Fund-to-Ceiling Ratio 2007-12					27.15 %
Std Deviation Fund-to-Ceiling Ratio 2007-12					14.61 %
Average annual increase in expenditure					26 %

Fig 16



The following is apparent from the above data:

- The average fund-to-ceiling ratio for five years, commencing from 2007-08 to 2011-12, is 27.15 percent, against the desired output of 33 percent.
- Further, the performance is very inconsistent as the standard deviation is as high as 14.61 percent.
- In Year III (2012-13), the fund-to-ceiling ratio has improved to 34.07 percent, which is an increase of 6.92 percent over the average of the last five years and is slightly more than the desired output.
- The expenditure under the budget head has grown every year on an average by 26 percent in the last five years and the growth in Year III (2012-13) has been 109 percent.

The fund-to-ceiling ratio for these works has reached the desired level. However, the high standard deviation highlights the complexities involved in execution of these jobs viz availability of the plant equipment and climatic conditions of rain and low temperatures. Therefore, it is important to plan for use of the working season, and ensuring utilisation through monitoring assumes importance.

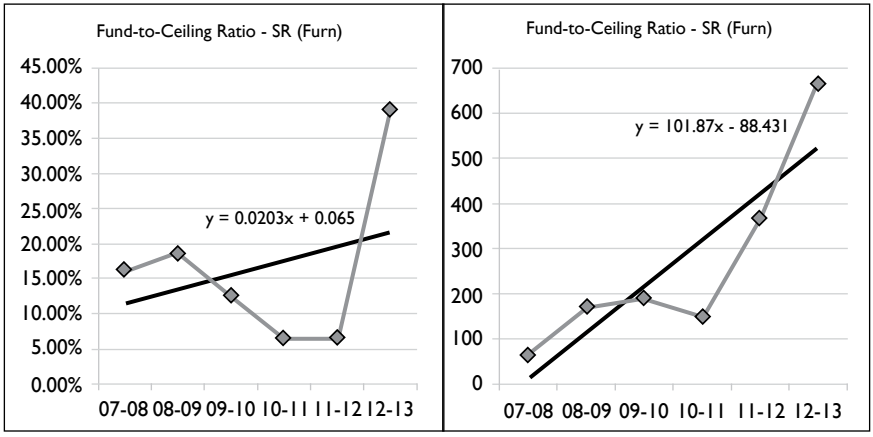
Special Repairs (Furniture)

The details in respect of special repairs (furniture) for a period of six years are tabulated below, and also depicted graphically.

Table 6

Year	Expenditure on New Wks	Expenditure carried over to Next Year	Net Expenditure in the FY	Increase in expenditure over last year	Fund-to-Ceiling Ratio achieved
07-08	25	132	64		16.21 %
08-09	39	171	171	169 %	18.73 %
09-10	18	126	189	11 %	12.59 %
10-11	24	334	149	-21 %	6.58 %
11-12	35	500	369	147 %	6.55 %
12-13	**167**	**261**	**666**	**80 %**	38.91 %
Average Fund-to-Ceiling Ratio 2007-2012					12.13 %
Std Deviation Fund-to-Ceiling Ratio 2007-2012					4.95 %
Average annual increase in expenditure					77 %

Fig 17



The following is apparent from the above data:

- The average fund-to-ceiling ratio for five years, commencing from 2007-08 to 2011-12, is 12.13 percent, against the desired output of 33 percent.
- Further, the below average performance is consistent as the standard deviation is barely 4.95 percent.
- In Year III (2012-13), the fund-to-ceiling ratio has improved to 38.91 percent, which is an improvement of 26.78 percent over the average of the last five years and is much above the desired output.
- The expenditure under the budget head has grown every year on an average by 77 percent in the last five years and the growth in Year III (2012-13) has been 147 percent.

The fund-to-ceiling ratio has gone well over the desired threshold, in spite of the fact that the performance in the last six years was consistently below average. Planning and execution of these works is contingent on availability of conditioned furniture in MES Yards and invariably the same is very difficult due to various constraints of space / user initiative to make furniture available for special repairs.

Special Repairs (MES Installations)

The details in respect of special repairs (MES installations) for a period of six years are tabulated below, and also depicted graphically.

Table 7

Year	Expenditure on New Wks	Expenditure carried over to Next Year	Net Expenditure	Increase in expenditure over last year	Fund-to-Ceiling Ratio achieved
07-08	64	357	406		15.27 %
08-09	42	327	399	-2 %	11.41 %
09-10	54	333	380	-5 %	13.87 %
10-11	125	701	457	20 %	15.12 %
11-12	90	672	790	73 %	11.79 %
12-13	**226**	**378**	**898**	**14 %**	**37.36 %**
Average Fund-to-Ceiling Ratio 2007-12					13.49 %
Std Deviation Fund-to-Ceiling Ratio 2007-12					1.62 %
Average annual increase in expenditure					20 %

The following is apparent from the above data:

- The average fund-to-ceiling ratio for five years, commencing from 2007-08 to 2011-12, is 13.49 percent, against the desired output of 33 percent.
- Further, the aforesaid below average performance is consistent as the standard deviation is barely 1.62 percent.
- In Year III (2012-13), the fund-to-ceiling ratio has improved to 37.36 percent, which is an increase of 23.87 percent over the average of the last five years and is much above the desired output.
- The expenditure under the budget head has grown every year on an average by 20 percent in the last five years and the growth in Year III (2012-13) has been 14 percent.

The consistently below average performance for six years highlights the challenges involved in the planning and execution of these jobs. The time taken to identify and prioritise these jobs based on vintage and state of MES installations is a challenge for the Local Military Authorities / Competent Financial Authorities (LMAs / CFAs) and, therefore, the need for the MES departmental chain to play a pivotal role in completion of these jobs. Notwithstanding, as a consequence of measures initiated, the fund-to-ceiling ratio has gone much over the required value of 33.3 percent.

Overall Picture

The details in respect of all categories of works for a period of six years are tabulated below, and also depicted graphically.

Table 8

Year	Expenditure on New Wks	Expenditure carried over to Next Year	Net Expenditure	Increase in expenditure over last year	Fund-to-Ceiling Ratio achieved
07-08	724	2,117	2,449		25.49 %
08-09	634	2,449	2,751	12 %	20.55 %
09-10	1,090	1,753	3,539	29 %	38.34 %
10-11	1,224	3,456	2,977	16 %	26.15 %
11-12	1,195	4,298	4,651	56 %	21.75 %
12-13	**2,514**	**3,593**	**6,812**	**46 %**	**41.17 %**
Average Fund-to-Ceiling Ratio 2007-12					26.46 %
Std Deviation Fund-to-Ceiling Ratio 2007-12					6.31 %
Average annual increase in expenditure					26 %

The following is apparent from the above data:

- The average fund-to-ceiling ratio for five years, commencing from 2007-08 to 2011-12, is 26.46 percent. That is to say that on an average 1/4 of the work got completed in the year of sanction, against the requirement of 1/3 in the case of special repairs and 2/3 in the case of revenue works.
- Further, the aforesaid below average performance is almost consistent.
- In Year III (2012-13), the fund-to-ceiling ratio has improved to 41.17 percent, which is an improvement of 14.71 percent over the average of the last five years.
- The expenditure under the budget head has grown every year on an average by 26 percent in the last five years and the growth in Year III (2012-13) has been 46 percent.

The impact of the measures initiated is very visible in the overall picture and the trends analysed herein will be carried forward to the chapter on recommendations.

Deductions

The following can be deduced:

- The fund booking profile of the LBW is fairly consistent and very satisfactory. The efficiency in utilisation of funds is attributable to its approval process.
- The measures initiated have made an impressionable impact on all budget heads as far as fund utilisation is concerned.
- Completion of 33 percent of the special repair works in the year of sanction is feasible and the E-in-C's Branch policy on the issue is realistic.
- Completion of 66 percent of the revenue works in the year of sanction is a challenge, since despite best efforts, the fund-to-ceiling ratio grew to only 62.13 percent (in comparison to five years average of 40.53 percent).
- Complexities involved in special repair works, particularly for roads, furniture and MES installations are evident in the form of low averages and high standard deviations.
- The MES Works Budget grows annually on an average growth rate of 26 percent. The overall MES expenditure has increased almost three-fold over the last five years. This has increased the workload of MES executives since the number of jobs has increased even as the monetary ceiling of the works has remained unchanged since 2007.

Chapter 6
Functional Efficiency of MES Executives

While the preceding chapters deal primarily with aspects related to the pre-administrative approval stage, this chapter aims to analyse the pace of activities which take place post accord of the administrative approval. The MES executives are entirely responsible for these activities and their performance is seldom evaluated by the local military authorities or the departmental channel (which is invariably occupied with major works).

Since the processes are dynamic in nature, two snapshots of MES works related data were captured with a view to examine the functional efficiency of the MES executives. The first snapshot is on the basis of data collected in May 2012 and relates to financial year 2011-12. The following aspects were examined:

- Time to issue tender.
- Time to receive tender back from the bidders.
- Time taken to accept tender post receipt.
- Time taken for physical completion of the work.

The results are depicted graphically, and the average and median time taken for the aforesaid activities has been annotated.

Fig 18

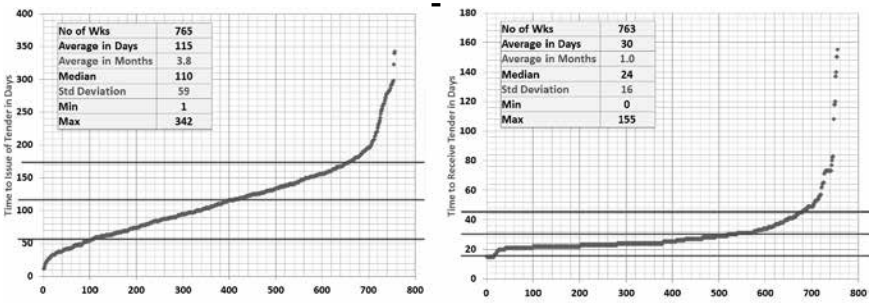
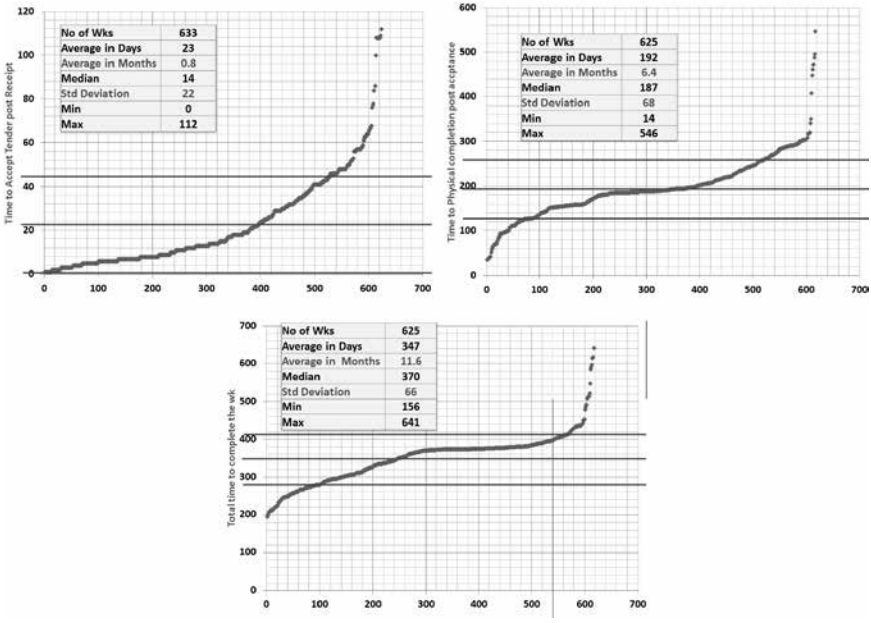
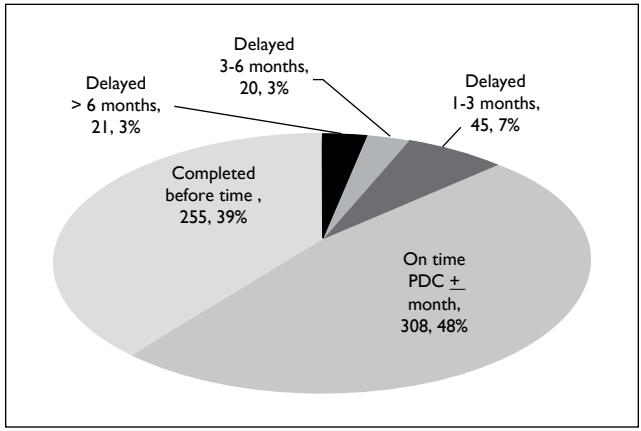


Fig 19



The pie chart on the following page depicts the performance with regard to completion within the PDC. While it is encouraging to note that 87 percent of the works finish on time, it is important to highlight that the data below only relates to works which were *tendered* at the time of snapshot / data capture.

Fig 20

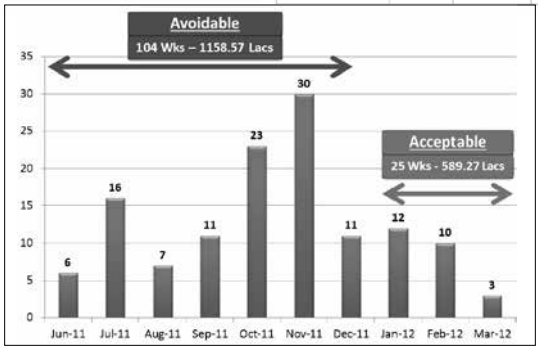


Data with regard to works that remain *untendered* as on date of snapshot viz May 31, 2012, is appended below. It is also evident from the category-wise breakdown that challenges are more prominent in the categories of special repairs, furniture, buildings and MES installations.

Fig 21

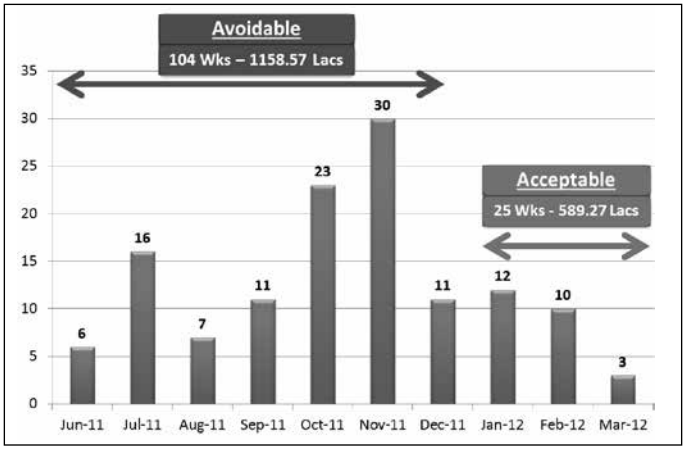
	CWE A		CWE B		Total	
Total Wks	347		431		778	
Tendered till 31 May 12	281	81%	368	85%	649	83%
Untendered as on 31 May 12	66	19%	63	15%	129	17%
Untendered as on 31 Jul 12	29	8%	9	2%	31	4%

Head	Total Wks	Tendered	No of untendered wks	% Untendered wks
LBW	92	79	13	14%
Rev Wks	321	298	23	7%
SR (Bldg)	268	199	69	26%
SR(Rd)	33	27	6	18%
SR (Furn)	25	16	9	36%
SR (MES Instln)	39	30	9	23%
Total	778	649	129	17%



Given that the average time to tender is 3.8 months, works remaining untendered beyond a period of 4-5 months is avoidable and leads to non-utilisation / lapse of funds.

Fig 22



A second snapshot was taken in March 2013 and the results of the same were compared with those of the first snapshot:

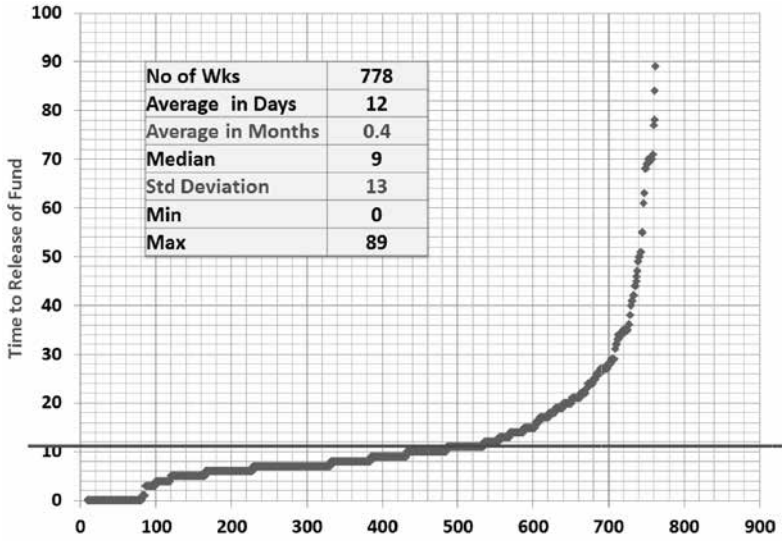
Table 9

Activity	Average		Average months		Median		Standard Deviation		Max	
	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13
Days taken for issue of Tender	115	109	3.8	3.6	110	100	59	55	342	308
Days taken to receive Tender	30	32	1.0	1.1	24	26	16	20	155	168
Time to accept Tender	23	25	0.8	0.8	14	17	22	26	112	205

Time to Release Funds

As has been brought out earlier, the funds were released centrally by the Corps Headquarters. This is at a slight variance with the Defence Procurement Procedure (DPP) 2007 which states that there will be no separate stage of release. The separate release creates a time penalty which was measured for 778 different works and on an average amounts to 12 days.

Fig 23



This penalty far outweighs the benefits which accrue from central release and are as follows:

- Control as well as flexibility in deployment of funds.
- Application of a uniform fund allocation policy.
- Ease of reappropriation.
- Reduces reports and returns as the true status and utilisation is known at all times.
- Facilitates checking of the works documents at Corps HQ.

Deductions

The following can be deduced:

- Average time for completion of LBW, revenue and special repair works is 11.6 months which compares well with the average PDC assigned to such category of works.
- The administrative lead time to commence work post accord of administrative approval is approximately 5.5 months which reflects on the technical efficacy of the MES.
- It takes approximately 6.4 months to physically complete the works of the aforesaid categories.

- Eighty-seven (87) percent of the works (which are tendered in time) is completed on time (within the PDC).
- Seventeen (17) percent of the works remain untendered even after two months of expiry of the financial year.
- Tendering delays are more visible in special repairs, furniture, buildings and MES installations, hence, the need to address the challenges therein.
- The time penalty involved in central release of works is only 12 days and needs to be viewed along with the advantages such release provides.

Chapter 7
Deductions and Recommendations

Though each chapter of the paper gives out the deductions, a comprehensive summary of the same is appended below:

Ceiling and Fund Allocation Profile in the Years of Focus (Chapter 3)

- Ceilings are invariably allocated along with funds, though there is no compulsion to do so.
- The initial allocation of ceilings is received by the end users 1-2 months after commencement of the financial year.
- Ceilings are released in a piecemeal fashion and 95-100 percent of the ceilings are available to the end users only after half the financial year has lapsed.
- The fund-to-ceiling ratio fluctuates during the year and is not in sync with the expected threshold viz 66 percent for revenue works and 33 percent for special repairs.
- Excess funds are placed at the disposal of the users in the beginning of the financial year which remain unutilised for the greater part of the year and are later sucked out of the system by withdrawal / reappropriation / surrender.
- Early allocation of tentative ceilings in Year III had a very positive and unprecedented impact on utilisation of funds and led to cent percent consumption.

Pace of Utilisation of Ceilings by CFAs (Chapter 4)

- In the absence of targets, ceiling utilisation peaks in the third quarter of the financial year.
- Targets along with performance monitoring / quantification causes ceiling utilisation to peak in the first quarter of the financial year.
- If 75 percent of the ceiling is consumed in the first half of the financial year, the same results in fund utilisation as per norms laid down by the E-in-C's Branch.

- The approval process of the LBW ensures timely utilisation of ceilings and consequently leads to desired fund utilisation.
- Utilisation of funds for special repairs roads, furniture and MES installations has certain major challenges but they can be overcome by enforcing targets through the command channel.
- Guidelines for allocation of funds contained in HQ Chief Engineer Zone letter No 95006/AW/12-13/04/E5 dated May 04, 2012 stand validated.

Analysis of Fund-to-Ceiling Ratio Profile (Chapter 5)

- The fund booking profile of the LBW is fairly consistent and very satisfactory. The efficiency in utilisation of funds is attributable to its approval process.
- The measures initiated have made an impressionable impact on all budget heads as far as fund utilisation is concerned.
- Completion of 33 percent of the special repairs works in the year of sanction is feasible and the E-in-C's Branch policy on the issue is realistic.
- Completion of 66 percent of the revenue works in the year of sanction is a challenge, since despite best efforts, the fund-to-ceiling ratio grew to only 62.13 percent (in comparison to five years average of 40.53 percent).
- Complexities involved in special repair works, particularly for roads, furniture and MES installations are evident in the form of low averages and high standard deviations.
- The MES Works Budget grows annually on an average growth rate of 26 percent. The overall MES expenditure has increased almost three-fold over the last five years. This has increased the workload of MES executives since the number of jobs has increased even as the monetary ceiling of the works has remained unchanged since 2007.

Functional Efficiency of MES Executives (Chapter 6)

- Average time for completion of LBW, revenue and special repair works is 11.6 months which compares well with the average PDC assigned to such category of works.
- The administrative lead time to commence work post accord of administrative approval is approximately 5.5 months which reflects on

the technical efficacy of the MES.

- It takes approximately 6.4 months to physically complete the works of aforesaid categories.
- Eighty-seven (87) percent of the works (which are tendered in time) are completed on time (within the PDC).
- Seventeen (17) percent of the works remain untendered even after two months of expiry of the financial year.
- Tendering delays are more visible in special repairs furniture, buildings and MES installations, hence, the need to address the challenges therein.
- The time penalty involved in central release of works is only 12 days and needs to be viewed along with the advantages such release provides.

Recommendations

Recommendations on the basis of deductions arrived at in the paper are appended in the succeeding paragraphs.

Delink Allocation of Ceiling and Funds: The fund allocation is contingent on the budgetary calendar and has to follow the Vote on Account (VOA), Budget Estimates (BE), Revenue Estimates (RE) and Modification Appropriation (MA) allocation pattern. The allocation of ceilings need not follow the aforesaid pattern and can be delinked from fund allocation.

Proactive Allocation of Tentative Ceiling: Ceilings equal to 80 percent of the allocation of the last financial year should be allocated prior to the commencement of the financial year as per the schedule suggested below:

- Command Headquarters – February 01.
- Corps Headquarters – February 10.
- Divisional Headquarters – February 20.
- Station Headquarters – March 01.

Fund Allotment

- No headquarters should at any point of time allocate funds in such a fashion that the stipulated fund-to-ceiling ratio is exceeded. Fund allotment for special repairs budget heads should never exceed 33 percent of the allotted ceiling.
- Fund allocation for revenue works should never exceed 60 percent of the ceiling allotted, as it is not feasible to complete two-thirds of the

revenue works in the year of sanction. The fund-to-ceiling ratio for these works is recommended to be reduced to 60 percent from the existing 66 percent.

- Formalise the quantum of funds to be released by the CFA based on the time of accord of administrative approval. Guidelines contained in HQ Chief Engineer Zone letter No 95006/AW/12-13/04/E5 dated May 04, 2012, (Appendix A) are recommended for adoption universally and can be included in the Defence Works Procedure (DWP).
- In view of the distinct advantages of central release of funds at the level of corps, the same should be allowed at the discretion of the Corps Commander.

Replicate Approval Process for LBW: The process for approval of the Annual LBW Plan has distinct advantages and there is a strong case to formalise the approval process for the following budget heads:

- The Annual Special Repair Plan at the level of the Corps Commander by April 01 of each year. Responsibility for plan formulation should rest on the local military authority for buildings, furniture and roads. Responsibility for plan formulation for MES installations should rest on the respective Zonal Chief Engineer(s).
- The Annual Revenue Works Plan at the level of the Divisional Commander by April 01 of each year. Responsibility for plan formulation should rest on the Local Military Authority (LMA).

Targets for Ceiling Utilisation: The undermentioned targets to be laid down for ceiling utilisation and the progress monitored by Commanders and staff at all levels

- Consumption of 80 percent of the tentative allocated ceiling by May 31.
- Consumption of 100 percent of the tentative allocated ceiling by August 31.

Revised Administrative Approval: In cases where the tender for works (LBW, special repairs and revenue) is not accepted within nine months from the date of issue of the administrative approval, there should be a requirement of seeking revised approval of the CFA, after detailing reasons for the inordinate delay.

Monetary Ceiling of Works: The monetary ceiling of LBW, revenue and minor works should be revised every five years in the light of enhancement in the Standard Scheduled Rates (SSR) and amendments to the Defence Works Procedure (DWP) promulgated accordingly.

Appendix A

SANCTION OF WKS AND RELEASE OF FUND FOR FY : 2012-13

1. Further to this HQ letter No 95006/AW/11-12/196/E5 dated 26 Dec 2011.

2. The proposed monthwise schedule for sanction of Wks and accordingly allotment of funds for FY 2012-13 is fwd herewith for your further action please. The Appx attached for the wks sanctioned for FY 2011-12 clearly shown the %age of wks sanctioned in IIIrd Qtr is much higher compare to Ist and IInd Qtr. Hence, you are requested to regulate the sanction of wks in new wks viz LBW, Spl Rep, Rev Wks and corresponding Ltd release of funds, so that surrender of valuable funds in new works can be avoided as experienced in earlier FY. This will lead to avoid unnecessary criticism from higher HQ and proper utilization of funds for betterment of troops. The following is proposed :-

Ser No	Month in which A/A to be issued	No of A/A	Prop %age Allotment of funds for execution	Remarks
1	2	3	4	5
(a)	Apr	A/A to be issued of 80% of ceiling amt of respective CFA →	Min 80% - Max 90%	
(b)	May		Min 75% - Max 90%	
(c)	Jun		Min 70% - Max 80%	
(d)	Jul		Min 60% - Max 70%	
(e)	Aug		Max 50%	
(f)	Sep	A/A to be issued of 10%-20% of ceiling amt of respective CFA	Max 40%	
(g)	Oct		Max 30%	
(h)	Nov		Max 20%	
(j)	Dec		Token allotment of Rs. 1000.00	
(k)	Jan	A/A to be issued of 0%-5% of ceiling amt of respective CFA	-do-	
(l)	Feb		-do-	
(m)	Mar		-do-	

3. The maximum sanction of wks and release of funds to the tune of approx 80% is expected in 1st half of the year because executives get time to plan the wks during this lean period of rain and wks can take off after Aug-Sept.

4. Your attention in the matter is requested please.

ER ER

(Umesh Kanadikar)
Lt Col
SO-I (Budget)
for Chief Engineer

Appendix B

Table 1: Allocations Made Under Special Repairs Head in 2010-11

Date	SR(Bldg)		SR(Rds)		SR(Furn)		SR(MES)		Total SR		Cumulative SR	
	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund
22-Apr-10	1,039.5	241.5	262.5	55.9	68.5	16.4	193.2	43.3	1,563.7	357.0	1,563.7	357.0
22-Jun-10	471.5	612.5	34.5	93.1	81.8	43.6	241.8	174.7	829.6	924.0	2,393.3	1,281.0
16-Jul-10	80.0	80.0							80.0	80.0	2,473.3	1,361.0
14-Aug-10					108.0	76.0	40.0	16.0	148.0	92.0	2,621.3	1,453.0
26-Sep-10	375.0	70.0	50.0	20.0			110.0	40.0	535.0	130.0	3,156.3	1,583.0
9-Oct-10	445.0	430.0	150.0	80.0	275.0	175.0	790.0	760.0	1,660.0	1,445.0	4,816.3	3,028.0
27-Dec-10		-462.0						-305.0	0.0	-767.0	4,816.3	2,261.0
19-Feb-11	43.5								43.5	0.0	4,859.8	2,261.0
18-Jan-11					-43.5				-43.5	0.0	4,816.3	2,261.0
24-Mar-11		-285.0				-276.8		-484.8	0.0	-1,046.6	4,816.3	1,214.5
	2,454.5	687.0	497.0	249.0	489.8	34.2	1375.0	244.3	4,816.3	1,214.5		

Table 2: Allocations Made Under Special Repairs Head in 2011-12 (Year II)

Date	SR(Bldg)		SR(Rds)		SR(Furn)		SR(MES)		Cumulative SR		Cumulative SR	
	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund
5-May-11	2,697.0	1,078.8	558.8	279.5	732.8	366.5	700.5	350.3	4,689.1	2,075.0	4,689.1	2,075.0
3-Oct-11	625.0	250.0	140.0	70.0			50.0	25.0	815.0	345.0	5,504.1	2,420.0
24-Dec-11		-300.0		-100.0		-100.0		-150.0	0.0	-650.0	5,504.1	1,770.0
18-Jan-12		-388.0				-140.0		-135.0	0.0	-663.0	5,504.1	1,107.0
27-Mar-12		-50.0							0.0	-50.0	5,504.1	1,057.0
30-Mar-12						-45.4			0.0	-45.4	5,504.1	1,011.7
	3,322.0	590.8	698.8	249.5	732.8	81.2	750.5	90.3	5,504.1	1,011.7		

Table 3: Allocations Made Under Special Repairs Head in 2012-13 (Year III)

Date	SR(Bldg)		SR(Rds)		SR(Furn)		SR(MES)		Cumulative SR		Cumulative SR	
	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund	Ceiling	Fund
23-Apr-12	359.0	156.0	74.0	32.0	65.0	28.0	86.0	39.0	584.0	255.0	584.0	255.0
15-May-12	1,000.0								1,000.0	0.0	1,584.0	255.0
25-Jun-12	799.0	782.0	376.0	163.0	331.0	144.0	430.0	195.0	1,936.0	1,284.0	3,520.0	1,539.0
1-Aug-12	50.0	22.0							50.0	22.0	3,570.0	1,561.0
7-Sep-12	500.0		36.0		32.0		12.0		580.0	0.0	4,150.0	1,561.0
15-Nov-12	50.0								50.0	0.0	4,200.0	1,561.0
22-Dec-12	70.0						40.0		110.0	0.0	4,310.0	1,561.0
31-Dec-12	60.0		75.0				50.0		185.0	0.0	4,495.0	1,561.0
15-Feb-13	80.0								80.0	0.0	4,575.0	1,561.0
28-Mar-13	15.0					-5.0		-8.0	15.0	-13.0	4,590.0	1,548.0
	2,983	960	561	195	428	167	618	226	4,590	1,548		

Appendix C

Fig 1: Screenshots of the Desktop-Based Dashboard Designed for Monitoring Progress of Works in a Corps Zone

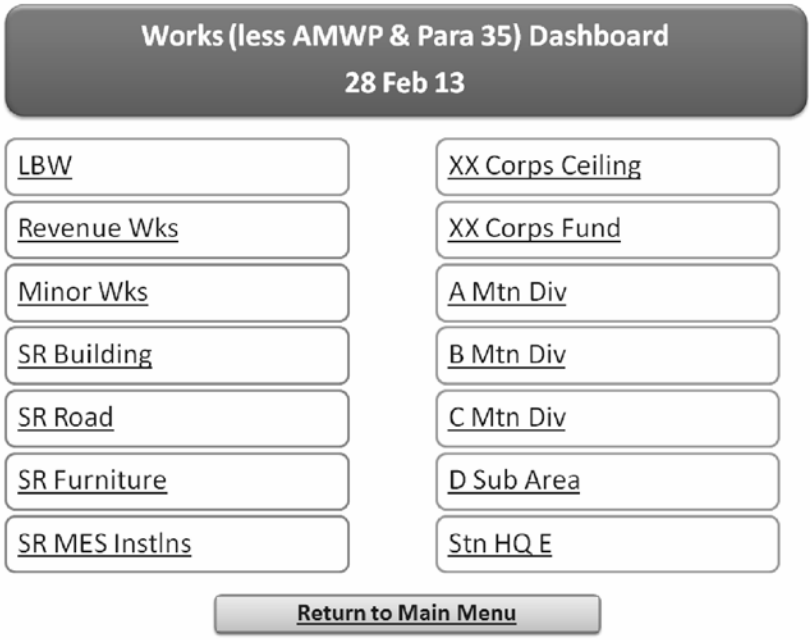


Fig 2: FMN Dashboards for LBW February 28, 2013

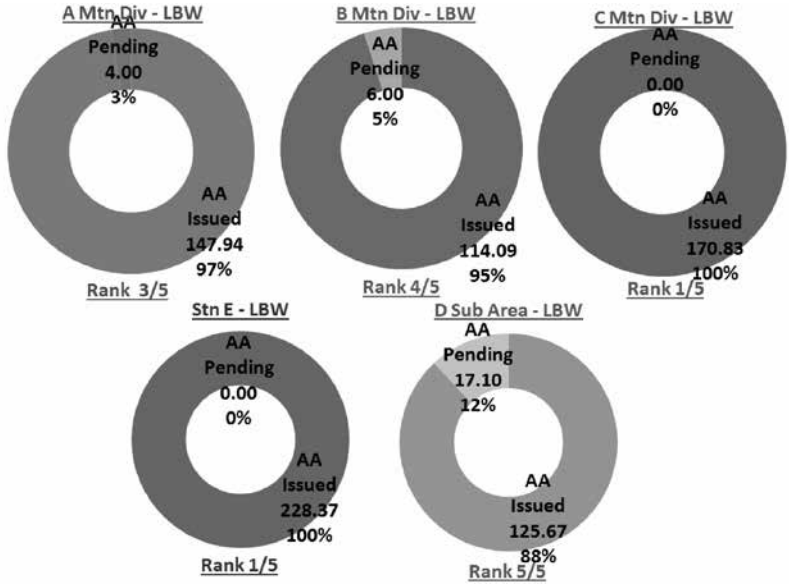


Fig 3: FMN Dashboards for Revenue WKS February 28, 2013

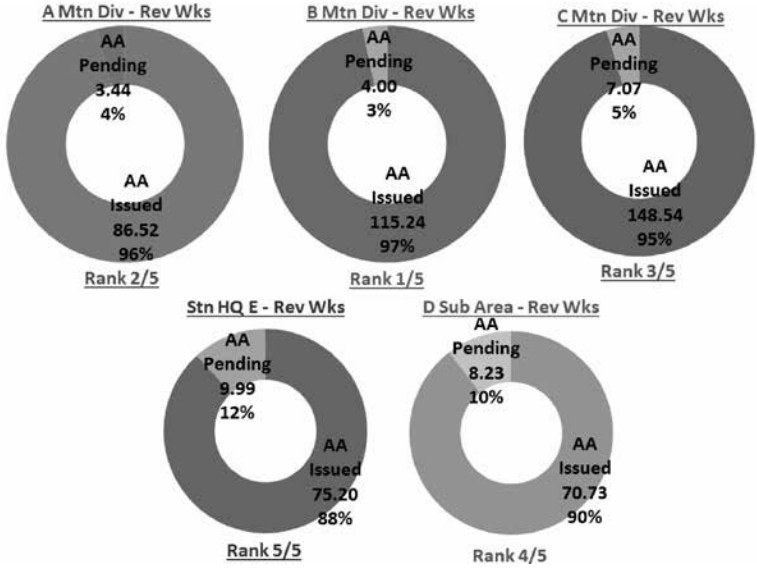


Fig 4: STN HQ E Dashboards February 28, 2013 (Less SR Furniture)

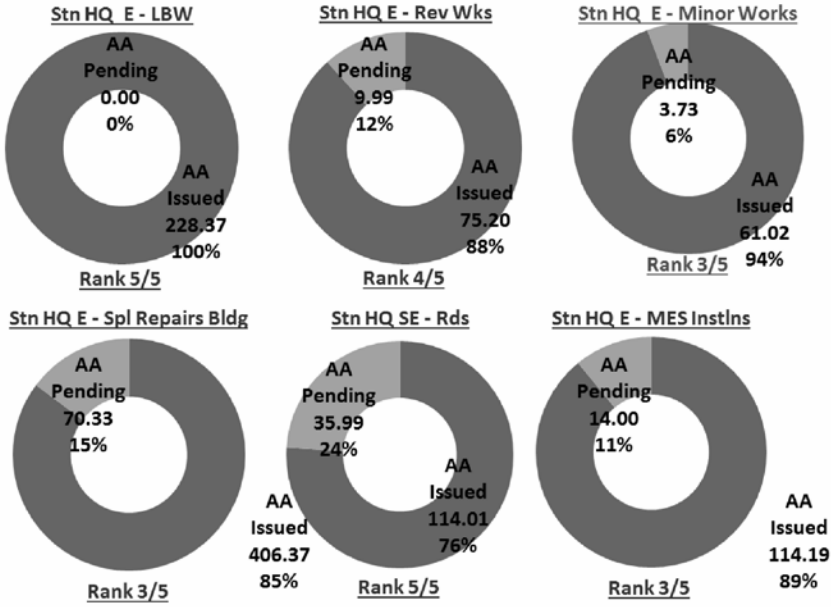
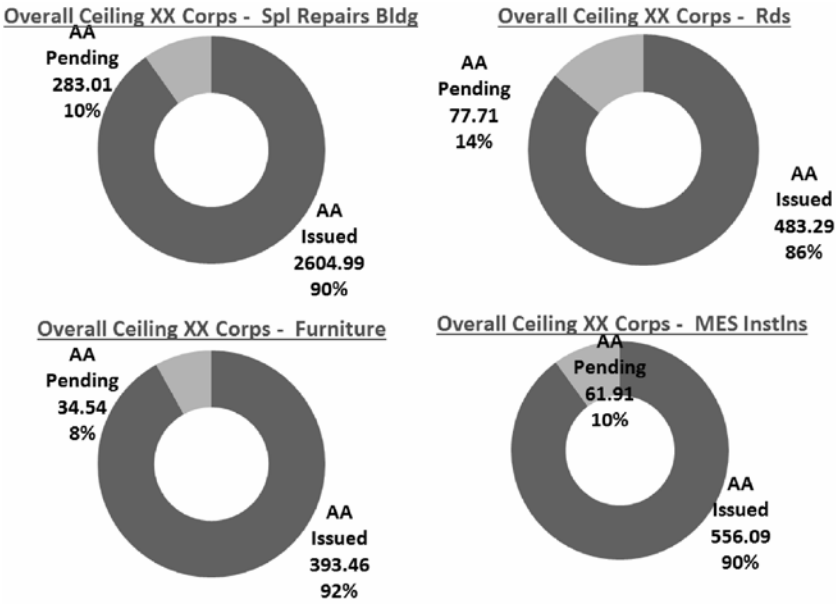


Fig 5: XX Corps Ceiling February 28, 2013



Appendix D

Table 1: Relation Between Fund Consumption and Month of Sanction

Revenue Wks

Month AA	2010-11			2011-12			2012-13			Recommendations
accorded	Max	Avg	Med-ian	Max	Avg	Med-ian	Max	Avg	Med-ian	of the Zone
Apr	0 %	0 %	0 %	0 %	0 %	0 %	85 %	84 %	85 %	90-80 %
May	0 %	0 %	0 %	0 %	0 %	0 %	105 %	78 %	80 %	90-75 %
June	100 %	87 %	100 %	100 %	62 %	77 %	103 %	73 %	80 %	80-70 %
July	100 %	82 %	89 %	100 %	61 %	71 %	62 %	48 %	50 %	70-60 %
August	102 %	64 %	76 %	102 %	44 %	26 %	103 %	58 %	50 %	50 %
September	100 %	64 %	79 %	95 %	51 %	61 %	80 %	50 %	40 %	40 %
October	100 %	53 %	62 %	100 %	61 %	80 %	78 %	13 %	3 %	30 %
November	100 %	41 %	40 %	100 %	41 %	36 %	75 %	39 %	50 %	20 %
December	100 %	31 %	1 %	95 %	43 %	75 %	100 %	39 %	15 %	Token Amount
January	95 %	17 %	1 %	3 %	1 %	1 %	80 %	27 %	1 %	Token Amount
February	40 %	25 %	33 %	1 %	1 %	1 %	1 %	0 %	0 %	Token Amount
March	13 %	6 %	7 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount

Table 2

LBW										
Month AA accorded	2010-11			2011-12			2012-13			Recommendations of the Zone
	Max	Avg	Med-ian	Max	Avg	Med-ian	Max	Avg	Med-ian	
April	0 p%	0 %	0 %	96 %	50 %	60 %	60 %	47 %	46 %	90-80 %
May	100 %	71 %	94 %	105 %	80 %	93 %	106 %	57 %	60 %	90-75 %
June	100 %	43 %	38 %	86 %	43 %	52 %	97 %	54 %	54 %	80-70 %
July	90 %	42 %	39 %	105 %	45 %	43 %	93 %	56 %	50 %	70-60 %
August	85 %	36 %	38 %	95 %	35 %	33 %	64 %	47 %	45 %	50 %
September	100 %	47 %	56 %	54 %	22 %	19 %	40 %	30 %	30 %	40 %
October	100 %	65 %	65 %	9 %	6 %	6 %	30 %	15 %	15 %	30 %
November	62 %	28 %	26 %	38 %	14 %	1 %	2 %	2 %	2 %	20 %
December	77 %	24 %	8 %	5 %	2 %	2 %	0 %	0 %	0 %	Token Amount
January	32 %	15 %	14 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount
February	3 %	3 %	3 %	0 %	0 %	0 %	1 %	0 %	0 %	Token Amount
March	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount

SR(BLDG)

Month AA accorded	2010-11			2011-12			2012-13			Recommendations of the Zone
	Max	Avg	Median	Max	Avg	Median	Max	Avg	Median	
April	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	90-80 %
May	0 %	0 %	0 %	40 %	0 %	37 %	103 %	49 %	50 %	90-75 %
June	94 %	56 %	66 %	100 %	37 %	40 %	101 %	42 %	45 %	80-70 %
July	100 %	50 %	45 %	75 %	21 %	12 %	50 %	45 %	50 %	70-60 %
August	98 %	52 %	56 %	100 %	35 %	34 %	81 %	52 %	50 %	50 %
September	91 %	34 %	25 %	99 %	21 %	4 %	40 %	13 %	4 %	40 %
October	112 %	32 %	25 %	69 %	11 %	3 %	35 %	6 %	0 %	30 %
November	100 %	19 %	1 %	46 %	6 %	1 %	76 %	20 %	7 %	20 %
December	83 %	13 %	1 %	3 %	1 %	0 %	1 %	0 %	0 %	Token Amount
January	3 %	1 %	1 %	33 %	6 %	1 %	0 %	0 %	0 %	Token Amount
February	1 %	1 %	1 %	1 %	1 %	1 %	1 %	0 %	0 %	Token Amount
March	15 %	3 %	0 %	0 %	0 %	0 %	1 %	0 %	0 %	Token Amount

SR(RDS)

Month AA accorded	2010-11			2011-12			2012-13			Recommendations of the Zone
	Max	Avg	Med-ian	Max	Avg	Med-ian	Max	Avg	Med-ian	
April	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	90-80 %
May	0 %	0 %	0 %	0 %	0 %	0 %	70 %	70 %	70 %	90-75 %
June	100 %	100 %	100 %	0 %	0 %	0 %	98 %	52 %	60 %	80-70 %
July	67 %	63 %	63 %	95 %	95 %	95 %	85 %	43 %	43 %	70-60 %
August	81 %	79 %	79 %	95 %	95 %	95 %	97 %	35 %	0 %	50 %
September	89 %	53 %	48 %	85 %	23 %	2 %	1 %	1 %	1 %	40 %
October	90 %	67 %	62 %	66 %	36 %	40 %	0 %	0 %	0 %	30 %
November	81 %	51 %	61 %	40 %	40 %	40 %	0 %	0 %	0 %	20 %
December	57 %	38 %	37 %	32 %	21 %	32 %	0 %	0 %	0 %	Token Amount
January	53 %	41 %	41 %	0 %	0 %	0 %	70 %	50 %	57 %	Token Amount
February	21 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount
March	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount

SR(FURN)

Month AA accorded	2010-11			2011-12			2012-13			Recommendations of the Zone
	Max	Avg	Median	Max	Avg	Median	Max	Avg	Median	
April	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	90-80 %
May	0 %	0 %	0 %	0 %	0 %	0 %	70 %	70 %	70 %	90-75 %
June	38 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	80-70 %
July	100 %	36 %	26 %	0 %	0 %	0 %	90 %	71 %	70 %	70-60 %
August	93 %	47 %	47 %	58 %	42 %	47 %	89 %	69 %	69 %	50 %
September	64 %	22 %	12 %	27 %	27 %	27 %	17 %	9 %	9 %	40 %
October	0 %	0 %	0 %	40 %	17 %	16 %	30 %	30 %	30 %	30 %
November	14 %	8 %	8 %	45 %	16 %	9 %	94 %	57 %	57 %	20 %
December	41 %	6 %	0 %	45 %	19 %	19 %	0 %	0 %	0 %	Token Amount
January	2 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount
February	31 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount
March	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount

SR(MES)

Month AA accorded	2010-11			2011-12			2012-13			Recommendations of the Zone
	Max	Avg	Med-ian	Max	Avg	Med-ian	Max	Avg	Med-ian	
April	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	90-80 %
May	0 %	0 %	0 %	0 %	0 %	0 %	65 %	65 %	65 %	90-75 %
June	0 %	0 %	0 %	0 %	0 %	0 %	99 %	54 %	65 %	80-70 %
July	92 %	35 %	0 %	25 %	25 %	25 %	91 %	70 %	70 %	70-60 %
August	31 %	16 %	16 %	92 %	54 %	64 %	50 %	25 %	25 %	50 %
September	93 %	40 %	27 %	81 %	29 %	25 %	3 %	2 %	2 %	40 %
October	29 %	7 %	3 %	50 %	7 %	0 %	75 %	75 %	75 %	30 %
November	78 %	34 %	23 %	7 %	2 %	0 %	0 %	0 %	0 %	20 %
December	75 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount
January	81 %	21 %	1 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount
February	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount
March	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	Token Amount