

As per the Operational Guidelines, Information Technology (IT) is to be used in planning, execution and monitoring of all vital aspects of the Scheme. The Guidelines also elaborate that IT will be used in the areas of communication, access to information, grievance redressal and in monitoring and evaluation in order to increase efficiency and enhance transparency in operation. Accordingly, MoRD engaged the National Informatics Centre (NIC) to develop a system to fulfill these IT requirements. The software so developed is designated as NREGASoft.

The aforesaid NREGASoft, working through the Scheme's official portal¹ provides operational information, management facilities like data entry, authorization of works and expenditure, monitoring and common information access to all the stakeholders and functionaries of the Scheme.

At the state level IT Audit of the software was conducted to examine whether the software is being used by the stakeholders in the manner required for proper functioning of the Scheme as per the Act and whether the software has flexibility, scalability and security features necessary for its functioning in different scenarios and under various threats posed by a public domain internet environment.

Issues noticed during the audit of NREGASoft are discussed in the succeeding paragraphs.

Audit findings

8.1 Lack of adequate validation controls

Large online databases, like the NREGASoft, usually have a large number of validations and checks which work in the background. The purpose of such checks is to ensure that only complete and valid information is entered in database; throw up warnings whenever erroneous data is being entered; and generate periodic reports on the validity and authenticity of data on pre-determined parameters. However, analysis of the data collected by NREGASoft revealed the followings:

Items	Remarks
Work Panchayat master table	In MIS of MGNREGS, the code number '31' was prescribed for the State. Data analysis revealed that 15 different code numbers for the State were used in different records. During 2008-12, the prescribed code was used for 2,418 records out of 8,765 in MIS.
Village table	The census identification of the villages in village table was to be given in each record. However, the census identification, in most of the cases, was not indicated in the table.

¹ <http://www.nrega.nic.in>

Material purchase table	The figure given in the column of value of material purchased should be equal to the product of the rate and quantity of material purchased. Data analysis however, revealed that the value of material purchased was indicated incorrectly in 68,313 items out of 38,56,941 items of purchases (2008-12).
Incorrect closing balances	The closing balances should be equal to the opening balances plus all inflows and minus all outflows. Data analysis, however, revealed that the closing balances in the State, District, Block and <i>Panchayat</i> level accounting tables did not agree with various records during 2008-12.
Registration number table	<p>Registration number table of the State contained 1,51,61,746 numbers of records. Data analysis revealed as under:</p> <ul style="list-style-type: none"> • Registration number which should be in numeric value was not found in all the records and in 24,623 (0.16 <i>per cent</i>) records it did not match with the pattern specified for registration. • In 4,34,560 (2.87 <i>per cent</i>) records, registration numbers ended with alphabet 'A' to 'F' instated of numeric value as prescribed. • House number column in the table was blank in 1,48,96,143 (98.23 <i>per cent</i>) cases. • The column 'EPIC-Number' (in which election photo identity card number was to be filled up) in the table was blank in 1,49,98,267 (98.90 <i>per cent</i>) cases. In offline verification of records of test checked GPs in Allahabad districts, the EPIC number was not mentioned on any of the job card and in job card register maintained by GPs. • Job cards were required to be issued within 15 days from the date of registration. Data analysis however, revealed that 1.55 crore (4 <i>per cent</i>) job cards were issued after prescribed 15 days of registration during 2008-12. • Employment up to 100 days to a household was admissible under the Scheme. Data analysis however, revealed that the job card holders were provided employment for more than 100 days during 2008-12.

The Government stated (January 2013) that initially, the master data were down loaded from GoI website for offline feeding of MIS and then the same were uploaded online by GoI. There was no option to change the code fixed for the State. The house number and census code were not compulsory but presently, the compulsory eight digits census codes are being complied. The Government further stated (January 2013) that the directives have been issued

to the district level functionaries for correct data entry and the errors in registration number will be rectified with GoI.

The reply was not convincing as data analysis revealed variable State code, blank house number, census code number, registration number with missing/invalid names.

In addition to the above, the following validation issues were also noticed.

Blank or ambiguous users entering/authorising data

With a view to ascertaining accountability and fixing responsibility in data entry/authorisation tasks, a system of authentication of data to identify a person preparing and scrutinising the data with date of preparation and scrutiny is specified in the Operational Guidelines. To fulfill this requirement "Entry By" Column (in all the major tables) and "Authorised By" Column (in registrations and applicants tables) were created at the stage of designing the database. However, Audit noticed that 7,72,891 (76 per cent) out of 10,18,311 records entered, were entered either by no user or an ambiguous guest user. In 7,44,326 records (73 per cent), *khata* number or plot number was not entered.

Distance field without adequate validations

Distance covered under rural connectivity works was stratified in audit. It was noticed that in 973 cases of rural connectivity works, distance covered was less than zero kilometers, which is a practical impossibility. Similarly, in 11,956 works, distance covered was depicted as more than 50 kilometers. Further, in 708 rural connectivity works, distance covered was shown as over 1500 kilometers.

The Government stated (January 2013) that initially the data entry in the districts was done by different organizations and as such the data was reflecting different user names. The Government also stated that the error has been brought into the notice of GoI. Rectification in data is awaited in audit.

Thus, the validations for various data fields in the software, which can prevent spurious/incorrect data entry, were not inbuilt into the software. The software not only accepted invalid and incomplete information but also failed to generate alerts on occurrence of such events.

8.2 Lack of proficient IT personnel

The ground level IT personnel (data entry operators) should have knowledge of the software and be sensitive to its criticality. They should also know the relevance and the scope of their work and be aware of the possible errors and the implication of such errors on the whole system.

An analysis of the data revealed that the units measuring the work progress in respect of rural connectivity, water conservation, flood control and drought proofing etc. were often misunderstood by data entry operators. Consequently,

the entries recorded by them were inconsistent. The length of the road was measured in some cases in kilometer and in other cases in meter. Similarly, figures in the financial management module were in lakh at times and on other in thousand rupees. Besides being a validation issue, it also reflects on the quality of IT personnel engaged.

Thus, the whole system functioned inconsistently and the software was not used by the stakeholders in the manner required for proper functioning of the Scheme in terms of the Act.

8.3 Discrepancies in data on the MIS and the physical records

Data mismatch between MIS and MPRs

The data uploaded on the web based Monitoring Information System (MIS) and that reported through Monthly Progress Reports (MPRs) should ordinarily match.

Audit observed that the data (wages of unskilled, semi skilled labour and material cost) depicted in the two data sources (MPRs and MIS) in all the 18 test checked districts did not match in any of the years" under review (2009-12)². The year wise differences in two sets of figures are given below:

Table 8.1: Differences in MPR and MIS data

(₹ in crore)

Year	Expenditure as per MPR				Expenditure as per MIS			
	Labour	Skilled + semi-skilled	Material	Total	Labour	Skilled + semi-skilled	Material	Total
2009-10	1,014.29	64.89	565.60	1,644.78	681.27	2.97	382.78	1,067.02
2010-11	988.24	32.30	448.45	1,468.99	762.82	8.07	514.20	1,285.09
2011-12	905.02	20.63	441.62	1,367.27	857.07	15.76	422.72	1,295.55 ³
Total	2,907.55	117.82	1,455.67	4,481.04	2,301.16	26.80	1,319.70	3,647.66

Reporting of different figures in MPR and MIS during the same period besides being indicative of poor internal control and monitoring mechanism, is an error signal pointing to possible misutilisation of funds.

The State Government stated (January 2013) that some vouchers and muster roles were omitted from being fed into the MIS database due to their late receipt and closure of data uploading after one month of its becoming due. Besides, differences in the two records could not be reconciled/removed due to shortage of staff.

Data mismatch between MIS and Annual Accounts

The data of wages of unskilled, semi skilled workers and material on the MIS and that booked in Annual Accounts of the concerned year during 2009-12 did

² Update figures for 18 sampled districts.

³ Excluding figures of MIS data of Gonda (₹ 92.76), Sultanpur (₹ 56.89 lakh), Sitapur (₹ 152.87 lakh), and Bulandshahar (₹ 23.08 lakh) districts for the year 2011-12 due to non-preparation of Annual Accounts of these districts till the time of audit.

not tally in any of the 18 districts test checked. The cumulative difference of the three years was ₹ 706.24 crore as detailed in the table below:

Table 8.2: Difference in Annual Account and MIS data

(₹ in crore)			
Year	Expenditure (Total) as per Annual Accounts	Expenditure (Total) as per MIS	Difference
2009-10	1,649.46	1,092.03	(-) 557.43
2010-11	1,489.53	1,331.34	(-) 158.19
2011-12	1,032.86	1,042.24	(+) 9.38
Total	4,171.85	3,465.61	(-) 706.24

Difference in the financial data reported during the same period is unacceptable. It is evident that this data was never reconciled and resultantly the possibility of mis-utilisation of funds cannot be ruled out.

The State Government stated (January 2013) that the expenditure in Annual Accounts was reported by BDOs in the light of monthly targets of labour budget and later on online MIS feeding was done by Programme Officers, because of which differences occurred.

The reply is irrelevant as the accounts need to be squared and reconciliation done in order to ensure financial data integrity.

8.4 Excess administrative expenses

As per instructions issued (March 2007 and 2009) by MoRD, the permissible limit of administrative expenses was four *per cent* of the total wage and material cost from April 2007 to March 2009 and six *per cent* from April 2009. Excess expenditure beyond the limit was not permissible.

Expenditure uploaded on MIS revealed that nine districts incurred administrative expenditure beyond permissible limit totalling ₹ 23.56 crore during 2007-12 as detailed below:

Table 8.3: Administrative expenses beyond prescribed limit

(₹ in crore)						
Name of district	Year	Actual expenditure incurred	Admissible Administrative Expenses	Expenditure incurred as per MIS Data	Excess expenditure	Total
1.Gonda	2007-08	59.34	2.37	5.16	2.79	10.20
	2008-09	57.24	2.29	5.59	3.30	
	2010-11	70.40	4.22	6.56	2.34	
	2011-12	85.84	5.15	6.92	1.77	
2.Sultanpur	2010-11	50.61	3.04	3.15	0.11	0.52
	2011-12	53.27	3.20	3.61	0.41	
3.Balrampur	2011-12	71.20	4.27	5.46	1.19	1.19
4.Kushinagar	2010-11	63.29	3.80	6.24	2.44	2.44
5.Rampur	2010-11	33.61	2.01	2.68	0.67	0.67
6.Bareilly	2010-11	73.86	4.43	4.84	0.41	0.69

	2011-12	68.59	4.12	4.40	0.28	
7.Chitrakoot	2010-11	48.66	2.92	4.15	1.23	1.23
8.Allahabad	2009-10	71.14	4.27	5.39	1.12	5.26
	2010-11	71.47	4.29	8.43	4.14	
9.Azamgarh	2010-11	102.87	6.17	7.40	1.23	1.36
	2011-12	107.99	6.48	6.61	0.13	
Total		1,089.38	63.03	86.59	23.56	23.56

The expenditure was incurred in violation of limit prescribed for administrative expenses and was thus inadmissible.

In reply, the State Government while accepting the audit findings in respect of the districts (Sultanpur, Balrampur, Rampur and Allahabad) stated (January 2013) that due to lack of cent-percent accurate MIS feeding, excess expenditure incurred had been shown. It was also replied that instructions to avoid repetition of such lapses in future had been issued.

8.5 Conclusion

Thus due to software related issues, NREGASoft did not function as a comprehensive operational information, monitoring and accurate information tool for all the stakeholders and functionaries of the Scheme. There were blank or ambiguous users entering/authorising data. The software not only accepted invalid and incomplete information but also failed to generate alerts on occurrence of the errors in order to facilitate rectification. Besides, the data entry operators were also not proficient and as such unaware of the relevance and the impact of their work. Further, the validity of data on the MIS is suspect as there were various data sets for the same activity as detailed in the preceding paragraphs.

8.6 Recommendations

- The Government should ensure that NREGASoft is accessed by identifiable and authorised users only so as to maintain the reliability of data uploaded on it.
- The Government should ensure that the errors in data entry are checked through inbuilt validation controls in the software itself.
- Data entered on the MIS should be periodically reconciled with the physical records.
- Errors detected should be rectified by the data entry operators within reasonable time.