



## INDIA

K R Sriram writes about SAI-India's use of IT in an All India performance audit of the National Rural Employment Guarantee Act



# IT-enabled Performance Audit of a Social Security Programme

## All India Performance Audits – SAI-India's approach

India is a federal State, with the Constitution dividing responsibilities for various subjects between the Central (or Federal) Government and the State (or Provincial) Governments into three categories – a Central list of subjects, a State list of subjects as well as a concurrent list, where both Governments have jurisdiction. In addition, there is a framework of local self-government bodies, both in rural areas (at the village, block and district levels) as well as in cities and towns.

The vast majority of funding for Governmental programmes in the Central and concurrent lists comes from the Central Government, and even for State subjects like health and education, the Central Government has devised massive programmes to supplement the efforts of the State Governments in these areas. Implementation of almost all Central Government-funded programmes is, however, done through the State Governments, either directly through State Government Departments and Agencies and/or through local self-government bodies and Non-Governmental Organisations (NGOs).

SAI-India has a network of audit offices throughout the country – Central Audit Offices conduct audit of Central Government Ministries with reporting responsibilities to the Central Parliament, and State Audit Offices (which are also part of SAI-India) conduct audit of State Government Departments with reporting responsibilities to the State Legislatures. However, the

performance audit of programmes funded by the Central Government and implemented by the State Governments poses a special challenge for SAI-India, in view of the need for co-ordinated audit and dual reporting responsibilities to both the Central Parliament and State Legislatures. For such programmes, the SAI has evolved a system of "All India Performance Audits", where the efforts of the offices auditing the Central Government Departments and those offices auditing the State Governments are co-ordinated. These audits, which are conducted in accordance with the SAI's Performance Auditing Guidelines, involve:

- Finalisation of detailed audit guidelines by the audit offices of the Central Government, after pilot studies, and their circulation to the field offices auditing the State Governments.
- Audit by the Central Audit Office of the policy, planning, financial management and monitoring of the programme by the Central Government, and audit by the State Audit Office of the utilisation of funds, programme implementation at the grassroots level and achievement of outputs and outcomes.
- Co-ordinated mid-term reviews to assess the progress of audit at the Central and State levels and take suitable corrective action, where necessary.
- Dual audit reporting to both the Central and State Legislature, with the Central Audit Report containing the overall audit findings for the country as a whole and the State Audit Reports covering State-specific details.



## IT Support in Performance Auditing

Traditionally, there was little use of Information Technology (IT) in the conduct of performance audits, including All India Performance Audits. Individual State Audit Offices used to send long-form draft reports containing details of significant audit findings in their respective States, consistent with the methodology outlined in the detailed audit guidelines. The Central Audit Office would manually collate the reports received from the State Audit Offices, and, after including its own audit findings, present a consolidated draft Audit Report for approval by the Comptroller and Auditor General of India. However, this approach had certain limitations:

- The Central Audit Office was restricted to those findings considered as significant by the State Audit Office and included in their long-form draft reports. Further, there was lack of uniformity and consistency between the long-form reports of different State Audit Offices. Often, findings of deficiencies on a particular issue reported by one State Audit Office could not be linked with findings on the same issue in other

States, which could either be due to the relevant control working satisfactorily or the State Audit Office not considering it to be a materially significant finding. On the other hand, getting responses from the State Audit Offices on all the issues indicated in the detailed audit guidelines and consolidating them manually was not a practically feasible option, given the sheer volume of responses from 26 or more States, and the tight time schedule for finalisation of the report.

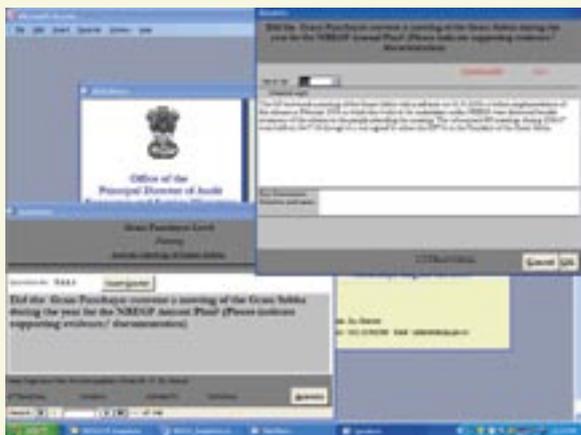
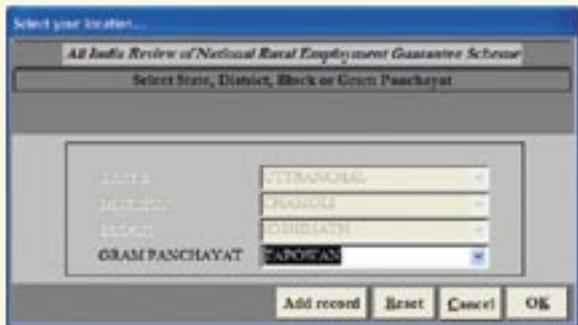
- There was lack of uniformity in the preparation of audit working papers by different State Audit Offices. Review by the Central Audit Office of even the subset of working papers supporting the significant audit findings in the draft reports, which were sent by the State Audit Offices, was an arduous and time-consuming task.
- While some of the working papers were available in electronic format, the Audit Offices did not have a document management system, which could be used to systematically organise documents and retrieve them using a flexible search feature.

We considered a popular audit management software – TeamMate produced by PriceWaterhouseCoopers, which had been used by the SAI for a few selected financial audits. However, we felt that the software lacked features for consolidation and data analysis of findings from multiple units, which was an essential requisite, and could not be easily customised to our requirements. Issues of cost, in view of the requirement of software licenses for multiple teams throughout the country, were also seriously considered.

As an alternative, we also examined the feasibility of using the offline version (Version 4) of Questionnaire Programme Language (QPL), a software developed by the Government Accountability Office (GAO), USA for building computer-aided telephone interview and data entry applications.

**However, after careful consideration of these software packages, we decided to develop a bespoke solution for this purpose.**

## Snapshots of data entry windows for the Electronic Database Application for collecting field audit findings



## National Rural Employment Guarantee Act (NREGA) – An Introduction

While the Government of India has been implementing schemes for providing employment in rural areas for more than two decades, the National Rural Employment Guarantee Act (NREGA) represents a paradigm shift towards providing a legal guaranteed right to work, and thus enhancing livelihood security. The Act guarantees 100 days of employment in a financial year to any rural household, whose adult members are willing to do unskilled manual work. This work guarantee also serves other objectives: generating productive assets, protecting the environment, empowering rural women, reducing rural-urban migration, and fostering social equity.

The Act was initially notified in 200 districts in the country from February 2006, and has subsequently been extended in phases to cover all the rural districts in the country with effect from April 2008. Each State Government is required to formulate a State Rural Employment Guarantee Scheme conforming to the minimum features specified in the Act. Rural households have a right to register themselves with the local Gram Panchayat<sup>1</sup>, and seek employment. Work is to be provided within 15 days of the date of demand, failing which the State Government would have to pay unemployment allowance at stipulated rates.

In August 2006, the Government of India requested the SAI to undertake a performance audit of the implementation of the Act to provide assurance that the processes under the Act were put in place, and were being adopted. After a risk assessment of the programme, the SAI accepted the request, and initiated a performance audit of the implementation of NREGA, covering the initially notified 200 districts.

## IT-enabled Performance Audit Approach

### Audit Co-ordination

The Office of the Principal Director of Audit, Economic and Service Ministries is responsible for the audit of 21 Ministries of the Government of India, covering such diverse sectors such as agriculture, rural development, food, power, transport and urban development. Since the Ministry of Rural Development, which is the nodal ministry for implementation of NREGA, was under the audit jurisdiction of this office, it was assigned the responsibility of co-ordinating this All India Performance Audit.

### Audit Sampling

A multi-stage statistical sampling approach was adopted for the performance audit. In each State, 25 per cent of the districts were selected using Simple Random Sampling Without Replacement (SRSWOR<sup>2</sup>). Below the district level, two blocks were chosen using SRSWOR in each sampled district, and in each sampled block, four villages were chosen using Probability Proportionate to Size (PPS<sup>3</sup>) sampling. The size measure for PPS was the number of NREGA-registered households, failing which the number of households below the defined poverty line was used. Overall, a sample of 68 districts, 141 blocks, and 558 villages in 26 States was selected. While the detailed allocation of resources for the audits was left to be decided by the State Audit Offices, approximately 150 audit personnel were deployed for about four months of field audit for this exercise.

### Audit Guidelines and Checklists

The current approach in SAI-India is to prepare detailed audit guidelines in the form of a detailed analysis of audit issues (termed as the 'Issue Analysis' or IA), which is then further developed into a Study Design Matrix (SDM).

However, in this case, in view of the spread of functions across different levels at the Centre, State and lower levels, the IA/SDM approach was altered slightly and we decided to prepare separate detailed audit checklists at the Central, State, district, block and village levels. We felt that a checklist format would be appropriate for electronic compilation and analysis of audit findings for drawing generalised conclusions across the sampled population throughout the country.

The number of questions ranged from 149 for the State level checklist to 348 for the village level checklist. All the checklists were so designed that the vast majority of questions involved yes/no answers (this would facilitate easy data analysis using IT); this was made easy by the fact that the audit was intended to provide assurance about the effectiveness of the controls and processes for implementing the Act. In order to supplement the "Yes/No" responses, separate fields for detailed remarks, as also for references of the supporting documentation (in order to provide assurance as to the reliability, completeness and competence of the audit evidence), were added in the electronic database.

For audit areas not involving compliance issues, a supplementary analytical checklist involving detailed audit analysis and free-form responses on a limited set of issues was also devised.

- 1 Village self-governing body.
- 2 SRSWOR is a statistical sampling method, under which each item is chosen randomly and by chance, such that each item has the same probability of being chosen at any stage during the sampling process. During this process, the possibility of selecting any item more than once is deliberately avoided.
- 3 PPS method is a statistical sampling method where the probability of selection of an item is proportional to its size measure.

## Design and Development of IT Application

We developed an electronic database application in-house for capturing audit findings for each checklist level from the State down to the district level. As Microsoft Office 2003 was the standard office automation package for the SAI, the database application was developed in Microsoft Access 2003. The application was circulated, using CDs as the media, to all the State Audit Offices, who were requested to send their databases, duly filled in with their responses, back to us.

Keeping in view the limited availability of computer notebooks for electronic capture of audit findings at the field level, we envisaged that the field audit teams (typically two to three teams per State Audit Office) would write down their findings on hard copies of the checklists. These responses would then be entered into the database application at the Headquarters location of the State Audit Office, where adequate IT infrastructure and staff for data entry were available. In view of the limited bandwidth for Internet connectivity and the size of the Access databases, it was decided that the responses would be transmitted on CDs.

Since the analytical checklist involved free-form responses, this was not included in the electronic database, and the responses to this checklist were processed manually.

The responses from the 26 State Audit Offices were consolidated into a single Microsoft Access database, containing more than 200,000 records of data. In the consolidated database, multiple queries were written for viewing the audit findings, classified by audit area (planning, financial management, registration of households, provision of employment, payment of wages, monitoring etc). The queries provided audit findings summarised for the country as a whole, and also provided drill-down features for viewing the detailed findings for specific States, Districts, Blocks and Villages.

This consolidated electronic database formed the basis for our Performance Audit Report, which was finalised and presented to Parliament recently, after due consideration of the views of the Government at the draft stage.

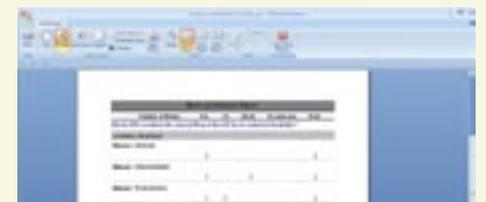
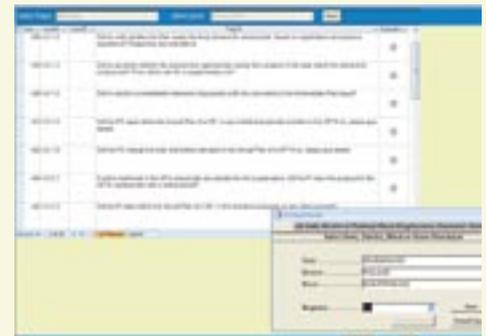
## Lessons Learnt from the IT-enabled Approach

The IT-enabled approach to performance audit of NREGA was highly successful, as for the first time we had a wealth of detailed audit findings, which could be viewed and analysed at a highly granular level. We were pleasantly surprised with the way in which the State Audit Offices readily adapted to the delivery of audit findings in an electronic manner. Further, the process of consolidation of findings at our office was considerably simplified, and also better structured.

Based on the successful use of IT in this performance audit, the SAI has started using this approach for other All India Performance Audits. We are also finding the IT-enabled approach extremely useful for consolidating findings across multiple units or projects even for performance audits conducted exclusively by our office.

One important lesson that we learnt was that the documentation of audit responses to the checklists involves significant resources for data capture and data entry. In our future endeavours, we are, therefore, curtailing the number of questions in each checklist so as to optimise the audit effort, given our resource constraints. ○

## Snapshots of the Consolidated Database of Audit Findings from 26 State Audit Offices



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