

Food and Civil Supplies Department

2.2 Information System Audit of “End-to-End Computerisation of Targeted Public Distribution System Operations”

Executive Summary

End-to-end Computerization of Targeted Public Distribution System (TPDS) Operations scheme was envisaged by Department of Food and Public Distribution (DoF& PD), Government of India (GoI) with a view to address various challenges of the existing system such as leakages and diversion of foodgrains, fake and bogus ration cards, inclusion and exclusion errors and lack of transparency in the system. The key activities of the scheme included digitization of ration cards/ beneficiary databases; computerisation of supply-chain; setting up of transparency portal and grievance redressal mechanism. The administrative approval for the scheme was accorded by GoI in December 2012 for its implementation under the 12th Five Year Plan (2012-17) on cost sharing basis (50:50). GoI approved ` 108.53 crore under various heads of the scheme for its implementation in the State. A total expenditure of ` 54 crore has been incurred on the scheme by GoUP as of March 2016. However, against the target date of completion (October 2013), none of the key activities as envisaged were completed even after the extended period of June 2015.

Information system audit of the scheme revealed the following:

Project Planning, Implementation and operationalization

Project planning suffered from delays and deficiencies due to delayed signing of the MoU with GoI, late constitution of the State Project Management Unit (SPMU) and key activities not being executed by SPMU.

(Paragraphs 2.2.8.1 & 2.2.8.2)

Timeline set for computerisation of TPDS operations was not achieved due to inconsistent strategy adopted by the Department.

(Paragraph 2.2.8.4)

Application software developed by State NIC failed to address the entire spectrum of the TPDS operations as manual intervention still existed in the system. Neither application software documentation was ensured nor was Service Level Agreement executed with State National Informatics Centre (NIC) unit.

(Paragraph 2.2.8.6)

Computerisation of TPDS operations

There were deficiencies in digitization of stakeholders database and beneficiary database due to incorrect mapping of master codes and presence of duplicate records of beneficiaries in the database.

(Paragraph 2.2.9.1)

The objective of eliminating fake/bogus cards from the system for better targeting of subsidy through cross verification with other databases and

capturing of beneficiary bank account number and Aadhaar number to eliminate all bogus beneficiaries and those claiming benefit more than once could not be achieved because of not verifying and updating the database.

(Paragraph 2.2.9.2)

Computerisation of supply chain management was not fully functional as system generated allocation orders based on the beneficiary database count was not achieved.

(Paragraph 2.2.9.3)

Details of actual offtake of food-grain commodities, master stock register of State godowns and sales register were not available on the transparency portal. Mobile SMS alerts to inform all pre-registered beneficiaries about availability of foodgrains at the FPS were not issued in the test-checked districts.

(Paragraph 2.2.9.4)

Training

No effective training plans were formulated for imparting training to the personnel engaged for carrying out day to day operations.

(Paragraph 2.2.10)

Monitoring

The system was at risk in absence of system certification and security audit of TPDS application modules. Fortnightly monitoring reports required to be submitted to GoI, were not prepared.

(Paragraph 2.2.11)

2.2.1 Introduction

Targeted Public Distribution System (TPDS) was aimed at ensuring food security of the people, especially the poor and vulnerable sections. Distribution of essential commodities such as wheat, rice, levy sugar and kerosene oil was made to the ration card holders through the Fair Price Shops. Computerization of TPDS operations was taken up across the country with a view to address various challenges of the existing system such as leakages and diversion of food-grains in the TPDS supply-chain, fake and bogus ration cards, inclusion and exclusion errors, lack of transparency, weak grievance redressal *etc.*

To provide technical, financial and infrastructural support to States, the Department of Food and Public Distribution (DoF&PD) under Ministry of Consumer Affairs, Food and Public Distribution, Government of India (GoI) prepared a Plan Scheme on '*End-to-End Computerization of Targeted Public Distribution System (TPDS) Operations*' for its implementation in all States under the 12th Five Year Plan (2012-17) on cost-sharing basis. The cost sharing was on 50:50 between GoI and the State Government.

The End-to-End computerization scheme of the existing 4.41 crore digitized cards¹ comprised implementation of two components. *Component-I* consisted of digitization of beneficiary and other databases, computerisation of supply-chain, setting up of transparency portal, and grievance redressal mechanism. Under *Component-II*, Fair Price Shop (FPS) automation was to be undertaken which included installation of Point of Sale (PoS) device at FPS for authentication of beneficiary, recording of sales and uploading of transaction data in the central server.

The Administrative approval for implementation of Component-I of the plan scheme was accorded by GoI in December 2012. The timelines laid down for digitisation of beneficiary database and computerisation of supply-chain as per the scheme guidelines were March 2013 and October 2013 respectively.

A Memorandum of Understanding (MoU) was signed (May 2013) between GoI and Government of Uttar Pradesh (GoUP) for implementation of the scheme in the State. As per terms of the MoU, GoUP agreed to implement activities specified under Component-I of the scheme.

Consequent upon the implementation of the National Food Security Act (NFSA), 2013 by GoI, computerisation of the TPDS operations was a prerequisite for implementation of NFSA by the States.

2.2.2 Coverage of TPDS in Uttar Pradesh

As per Census-2011, the population of Uttar Pradesh was 19.98 crore of which 15.53 crore (77.73 per cent) was Rural population and 4.45 crore (22.27 per cent) was Urban population.

Under TPDS, three categories of Ration Cards (RC) were issued to the identified beneficiaries viz., Above Poverty Line (APL), Below Poverty Line (BPL) and Antyodaya Anna Yojna (AAY) cards. Target of coverage of BPL (65.85 lakh) and AAY category cards (40.95 lakh) was fixed by GoI whereas no target was fixed for APL cards.

The NFSA was implemented in 28 districts in the State from January 2016 and in remaining districts from March 2016. Under sub-section (1) of Section 10 of NFSA, beneficiaries were to be identified based on the inclusion and exclusion criteria under two categories namely; Priority Household² (PHH) and *Antyodaya Anna Yojna* (AAY) to provide subsidised food grains.

As per order of GoI (March 2015), 64.43³ per cent of the Urban population (2.87 crore) and 79.56 per cent of the Rural population (12.34 crore) was to be covered under NFSA. Section 3 of the Act stipulated that every person in a PHH was entitled for five kilograms of food grains per month while under AAY a household was entitled for 35 kilograms of food grains per month.

¹ In the State, number of total ration cards as of February 2005 were 4.51 crore and as of 2012 the number of digitised cards was 4.41 crore.

² As per GoUP guidelines (October 2014) for identification of eligible families under NFSA, all families already identified under APL and BPL category, fulfilling inclusion/exclusion criteria of NFSA, were to be covered under PHH category of NFSA.

³ As per TPDS (Control) order 2015.

2.2.3 System framework for computerization of TPDS

A *web-based* application software developed by State National Informatics Centre (NIC), Lucknow and the centralized TPDS database was hosted at the State Data Center, Lucknow. The TPDS database consisted of two databases viz., Existing Ration Card Management System (eRCMS) and NFSA database in Structured Query Language (SQL) Server 2012. The eRCMS database pertained to the APL, BPL and AAY category of beneficiaries whereas the NFSA database pertained to beneficiaries identified under NFSA. Separate transaction tables for districts are maintained in the database.

2.2.4 Organisational structure

The Principal Secretary, Food and Civil Supplies (F&CS) Department of the State Government at the Government level and Commissioner Food and Civil Supplies at the Department level were responsible for implementation of the scheme. At division level, Deputy Commissioner, Food and at district level District Supply Officers (DSOs) assisted by Area Rationing Officers (AROs) were responsible for monitoring and implementation of the scheme.

Besides, as required under the scheme guidelines, GoUP constituted following institutional framework for overall project monitoring and management as detailed in Table 1:

Table 1: Institutional framework and their role and functions

State Apex Committee (SAC) headed by Chief Secretary, GoUP	Overall guidance; review; monitoring and coordination; decisions on policy matters; approval of deliverables and timelines; financial powers as per the delegation.
State Project eMission Team headed by Principal Secretary, Food and Civil supplies, GoUP	Preparation of DPR/Financial proposal; set up of dedicated State Data Center for TPDS; overall responsibility of project implementation at State level; detailed functional requirement at State level; implementation of Business Process Re-engineering (BPR) and Change management; selection of technical partner for TPDS implementation; ensure certification from certifying agency before full State level roll out.
State Project Management Unit (SPMU) headed by Additional Commissioner F&CS Department.	Undertake preparatory work for system infrastructure and process related contingencies plans, assess activities accomplished and yet to be undertaken, assess current Information and Communication Technology (ICT) levels at State and district levels, close coordination with all stakeholders, assess training needs of F&CS staff, prepare hardware and software requirements, prepare draft agreement for implementing agency, monitoring of service levels of implementation agency, monitoring status and progress of activities under the scheme, etc.

(Source: Scheme guidelines)

2.2.5 Audit objectives

The Information System (IS) Audit was undertaken to examine whether:

- the project planning by GoUP for implementation of the scheme was effective and in accordance with scheme guidelines;

- the application software was developed comprehensively covering all the scheme activities to encourage transparency in the system;
- acquisition and deployment of IT infrastructure was as per standards and timelines of service level agreements;
- system had adequate inbuilt IT control mechanism to ensure correctness, reliability and security of database;
- requisite training was imparted to TPDS personnel to ensure smooth operation of the computerised system;
- automated transparency portal and grievance redressal mechanism was operational for efficient tracking and timely redressal of complaints of the beneficiaries; and
- project implementation was effectively monitored by the institutional framework to ensure achievement of envisaged objectives of the scheme.

2.2.6 Audit criteria

The following audit criteria was adopted for IS Audit of the scheme:

- Implementation guidelines for End-to-End computerization of TPDS operations;
- Orders and circulars issued by the GoI and GoUP;
- Agreements/MoU signed by GoUP for implementation of the scheme;
- Provisions of Budget Manual and Financial Rules of the State.
- User Manual of the e-Ration Card Management System,
- Metadata and Data Standards for PDS and relevant e-Governance standards.
- National Food Security Act and guidelines formulated thereunder.
- Information Technology Rules 2011 (Reasonable security practices and procedures and sensitive personal data or information)

2.2.7 Audit Scope and methodology

Information System audit of End-to-End computerisation of TPDS operations was conducted covering the period 2012-2016 during April 2016 to July 2016. An Entry conference with Special Secretary, Food & Civil Supply (F&CS) Department, GoUP was held in April 2016 and records were examined at the offices of the Commissioner F&CS and eight⁴ districts selected through simple random sampling without replacement. From each selected districts, two blocks (one rural and one urban) and five Fair Price Shops and concerned block godowns were selected for test-check.

Centralised database from NIC-State unit, Lucknow was obtained (May 2016) and examined using Computer Assisted Audit Techniques (CAATs) to ascertain whether data in the system was valid, complete, reliable, authorised and was as per business rules. As records updated in the e-RCMS database

⁴ Allahabad, Aligarh, Chitrakoot, Ghaziabad, Kanpur Nagar, Lucknow, Mirzapur and Varanasi.

were incorporated in the NFSA database, analysis of NFSA database was done for the selected test-checked districts.

Exit conference was held on 30 December 2016 and replies of the Government have been suitably incorporated in the report.

Audit Findings

Audit observed that against the original target date of October 2013 fixed for completion of interventions under component-I, none of the key activities was completed even after the extended completion date of June 2015 set by GoUP.

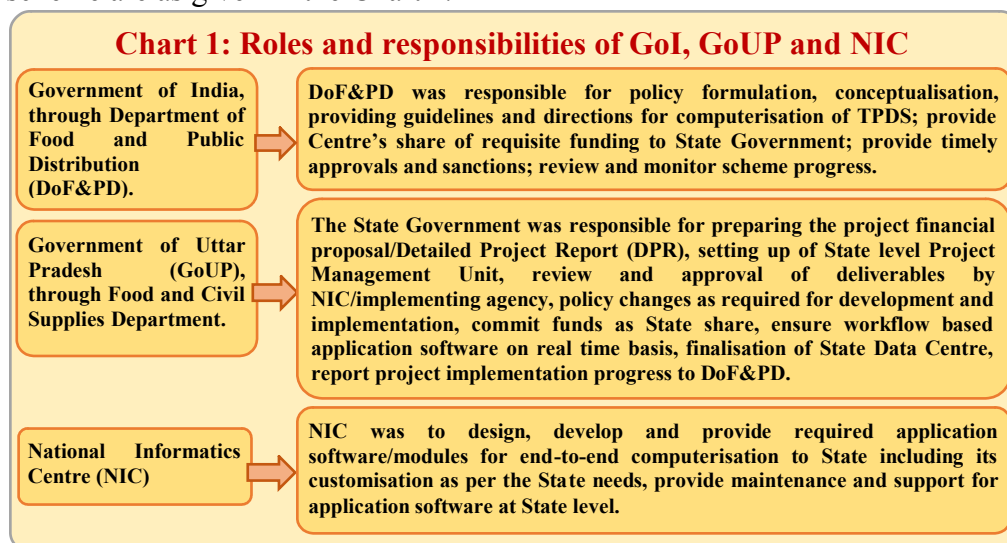
The delays and deficiencies noticed in project planning, implementation, operationalisation and monitoring are discussed in the succeeding paragraphs:

2.2.8 Project planning, implementation and operationalisation

As per MoU agreed between GoI and GoUP in May 2013, National Informatics Centre (NIC), the implementing agency for DoF&PD was to provide the Common Application Software (CAS) for Centre and States under the scheme. NIC at the GoI level was also responsible for carrying out the configuration/customisation of the application software for meeting the requirements of the State and also facilitate its roll-out in the State in a time bound manner. The State had the option to either undertake the implementation themselves, or through NIC or hire System Integrators (SIs) for rolling out the technology solution at the State level.

GoUP opted for implementation of the scheme by engaging State NIC unit for development of the application software. GoUP also authorised district authorities to engage vendors for both procurement of hardware and carrying out data digitisation activities at the district level.

Roles and responsibility of GoI, GoUP and NIC for the implementation of the scheme are as given in the Chart 1.



(Source: Scheme guidelines)

2.2.8.1 Delay in Signing of MoU

Entering into MoU between DoF&PD, GoI and GoUP was a pre-condition for release of funds by GoI for implementation of the scheme.

Audit observed that DoF&PD directed GoUP for signing of the MoU in December 2012. However, MoU was signed by GoUP only in May 2013 with a delay of more than four months. As a result, no funds were released by GoI during 2012-13 and the same were released in June 2013 after signing of the MoU, thereby delaying the project initiation in the State.

In reply the Government stated that action was initiated at the earliest. The fact remains that signing of the MoU was delayed by more than four months resulting in delayed receipt of funds.

2.2.8.2 State Project Management Unit

As per the scheme guidelines, State Project Management Unit (SPMU) was to be set up at the State F&CS headquarters for a minimum tenure of three years by engaging consultants for overall project planning and implementation.

Audit observed the following:

Delay in constitution of SPMU

As per terms of MoU signed with GoI, constitution of the SPMU was the responsibility of the GoUP. However, it was observed that GoUP constituted the SPMU in October 2013 after five months of signing of the MoU due to delay in engagement of the consultants. Delayed constitution of SPMU resulted in delayed start of project activities as preparation of the project preparatory plans was the responsibility of the SPMU.

In reply the Government stated that constitution of SPMU was done after due deliberations in minimum possible time.

Key activities not executed

Key activities of SPMU included preparation of preparatory plans for system infrastructure and process related contingency plans; assessment of activities accomplished and yet to be undertaken by the State; assessment of current ICT levels at State and district levels; identify issues/risks and provide mechanism to resolve the issues; and coordinate with stakeholders for issue resolution.

Audit, however, observed that work order issued to the firm, for assisting in all activities of computerisation, did not specify the detailed scope of work and timelines for achieving the key activities. No assessment report/documentation of the activities executed by the consultants were available with the Department.

Thus, in absence of any preliminary assessment study and preparatory plans for project implementation at the initial stage, the project implementation

suffered from frequent changes in methodology for execution, impacting project implementation, as discussed in *paragraph 2.2.8.4*.

In reply the Government stated that SPMU team was apprised about the works relating to the scheme through meetings and orders issued from time to time. Reply was not acceptable as detailed scope of work and timelines for achieving the key activities were not defined.

2.2.8.3 Financial position

Financial assistance under the scheme was provided to the States by GoI on 50:50 cost sharing basis. GoI was to release its share of 50 *per cent* in three installments of 60, 30 and 10 *per cent*. GoUP prepared a financial proposal with the help of State NIC unit and submitted to GoI for according approval and sanctioning project funding. GoI in June 2013 approved ` 108.53 crore under 17 scheme heads. GoI against its share of ` 54.27 crore released ` 45.52 crore to GoUP during 2013-16. GoUP allotted ` 96.39 crore, during 2013-16, against which the expenditure was ` 54 crore as detailed in *Appendix-2.2.1*.

Year wise summarised position of allotment of funds by GoUP and expenditure there against is detailed in Table 2.

Table 2: Year wise allotment, expenditure and savings

(` in crore)

Year	Allotment	Expenditure (per cent)	Savings/Surrender
2013-14	21.08	7.80 (37)	13.28
2014-15	47.77	20.71 (43)	27.06
2015-16	27.54	25.49 (93)	2.05
Total	96.39	54.00 (56)	42.39

Source: Commissioner Food and Civil Supplies

From the above table it was evident that GoUP failed to spend the allotted funds and only 56 *per cent* of the allotted funds was spent, leading to savings of ` 42.39 crore. Audit further observed that:

In 47 out of 75 districts, the percentage expenditure against the allotted funds during 2013-16 was less than 60 *per cent*.

Under the digitisation head, against the allotment of ` 41.05 crore to the districts, expenditure incurred was only ` 17.65 crore (43 *per cent*). In 52 districts it was less than 50 *per cent* whereas in two districts⁵ it was in excess of allotted funds.

In contravention to the terms of the MoU and GoI sanction orders, GoUP neither maintained the audited accounts for the scheme nor refunded unutilised GoI funds of ` 96.33 lakh relating to four⁶ scheme heads, as required in the terms of the MoU.

The details of aforementioned instances are given in *Appendix 2.2.2*.

⁵ Hamirpur and Pratapgarh.

⁶ State Data Center, web portal, SMS cost and Assessment.

Excess expenditure/ surrender of funds reflected poor financial planning and in-effective monitoring both at the district and State level.

2.2.8.4 Inconsistent strategy for implementation

GoUP issued (October 2013) order for implementation of the End-to-End computerisation of TPDS operations comprising of activity-wise timelines for digitisation of ration cards, updating of database and issuance of new ration cards. As per the Government order, the entire process of digitisation and printing of the ration cards was to be completed online within 75 days by engaging vendors at the district level as detailed in Table 3 below:

Table 3: Activity wise timeline set for computerisation process

Activity	Timeline set	Process
Collection of information and digitisation of ration cards.	15 November 2013	Existing digitised ration card data was to be downloaded, printed for distribution to the beneficiaries for updating the personal details. Filled-in forms collected back from the beneficiaries were to be digitised, verified and compiled.
De-duplication/cleaning of data	25 November 2013	De-duplication process was to be carried out by NIC and fake/bogus cards identified were to be verified and cancelled by the district authorities.
Freeing of data	30 November 2013	After completion of de-duplication process data was to be freed by NIC.
Printing of RCs for distribution	15 December 2013	Finalised RCs were to be printed online for distribution to the beneficiaries.

Audit observed that short term tenders were called (October 2013) to carry out data digitisation work in online mode. However, citing poor network connectivity at the districts and block levels, the Department switched over to offline mode process for digitisation immediately.

GoUP issued (January 2014 and February 2014) directives for data validation/de-duplication, cross verification with other database using Election Commission, UP electoral database and printing and issuance of new ration cards. The said orders were issued after the target date of completion of the entire digitisation process i.e., 15 December 2013. As a result of this, the schedule to complete the activities was revised (January 2014) and it was decided to complete data entry by 15 February 2014, freezing of data by 28 February 2014 and online printing and issuance of ration cards by 15 March 2014.

Under offline mode, data validation and de-duplication process was carried out at the district NIC offices for which DSOs were required to provide the digitised data and two computers to NIC. Outcome of the de-duplication process in excel sheets was to be verified by the DSOs and after getting corrections done through the vendors, the final list was to be provided to NIC for uploading on the central server.

The digitisation process was again changed to online mode from October 2014 and completion date extended upto June 2015. However, as of June 2015, in none of the districts, the digitisation of APL cards was complete and the

progress was less than 50 *per cent* in 20 districts. Hundred *per cent* digitisation was not achieved in respect of BPL and AAY cards in 58 and 25 districts respectively. It was again decided (June 2015) by the department to include all those priority household beneficiaries in the APL list who applied online under NFSA, but not in the APL list. Thus, due to inconsistent strategy, implementation of computerisation of TPDS was delayed. This also reflected poor planning in the implementation of the scheme.

Further, as per NFSA Act 2013, identification of the beneficiaries was to be completed by the States within 365 days. GoUP issued guidelines detailing the inclusion and exclusion criteria for identification of priority household in urban and rural areas in October 2014, whereas survey form for identification was circulated only in January 2015.

Thus, GoUP failed to plan and formulate firm policies for carrying out the TPDS computerisation process, which was a pre-requisite for implementation of the NFSA in the State.

In reply the Government stated that offline mode was adopted due to lack of internet connectivity and the work was distributed at various levels to complete the work within time. Government did not furnish any reply on the observation on implementation.

2.2.8.5 Extension of validity of existing ration cards

According to the policy (October 2013) defined for process for digitisation of ration cards and issue of new ration card, fake/bogus cards of ineligible families were to be cancelled and fresh cards to eligible beneficiaries were to be issued under TPDS.

Audit observed that ration cards issued⁷ were valid for a period of five years. The validity of these ration cards was extended time and again due to activities under TPDS computerisation not being completed on various grounds. The extensions were granted up to 31 March 2014 (due to time taken in online printing and issuance of new ration cards); June 2014 (on the ground of Lok Sabha elections); December 2014 (on the ground of removing errors in data). In January 2015, validity was extended till implementation of NFSA on the ground that feeding of ration card work was still ongoing.

Thus, due to delay and not completing the digitisation activity, the very purpose of digitisation and issue of fresh cards by eliminating the fake/ bogus cards was defeated as the cards issued as of February 2005 remained in existence. As per a system generated report (6 April 2016) against 4.51 crore ration cards in the State, 3.81 crore cards were digitally signed. Of these 3.81 crore digital cards, 3.61 crore cards were printed.

Analysis of database revealed delayed issuance of cards, cards with duplicate aadhaar number, voter-id number and bank account number in the test-checked eight districts as brought in paragraph number 2.2.9.2.

⁷ As per GO dated February 2005.

In reply the Government stated that since data of identified PHH beneficiaries was also being digitised along with digitisation of APL, BPL and AAY cards, to avoid any commotion among the beneficiaries validity of cards was extended.

2.2.8.6 Application software development and documentation

As per terms of the MoU, GoUP had the option to choose Common Application Software (CAS) modules/services in whole or in part as per their requirement or hire System Integrator (SI) for development of the application software and providing complete technology solution.

GoUP was required to define the detailed scope of the agency engaged for work and well defined Service Level Agreements (SLAs) with clearly identified deliverables and timelines to be executed by the agency.

Audit observed shortcomings in development of application software and its documentation, as discussed in the succeeding paragraphs:

Scope of work and service level agreement

GoUP, instead of opting for the CAS or engaging SI for providing the complete technology solution, continued with the State NIC unit for development and enhancement of the application software already in use. However, against the provisions of the MoU, neither a detailed scope of work was prepared nor any SLA was signed by GoUP with State NIC unit. In the absence of clearly identifiable deliverables and timelines, neither monitoring of the activities was feasible nor penalties for not executing/delayed execution could be enforced on NIC.

In reply the Government stated that under the MoU signed with GoI, State NIC unit has been assigned the work. NIC has been performing the work based on the decisions taken in meetings conducted from time to time. The reply is not acceptable as GoUP had deployed State NIC unit for development of the application software without specifying any scope of work or executing any SLA with State NIC unit.

Software documentation and approval

As per Scheme guidelines for End-to-End computerisation of TPDS operations, development of the application software required proper documentation and approval at each stage of design, development, testing, and Go-Live. Essential documents required to be prepared and approved viz., Software Requirement Specification (which describes the functionality and outcomes of the software), Business Process Re-engineering (ground-up design of business processes) and Change management documentation (procedures that govern the change in the software) were not prepared by NIC.

Thus, the computerisation programme was implemented on *ad-hoc* basis without formulating a firm documentation policy. As a result, neither the changes carried out in the application software nor the proposed architecture

of the software developed could be referred to at the time of audit. Due to the ad-hoc approach there was a risk of un-authorized changes in the application software.

In reply Government stated that in meetings conducted from time to time instructions were issued to the NIC. The reply is not acceptable as no documentation and approvals on application development were available.

Recommendation: Government should ensure proper documentation of the application software. Efforts should be made to document changes carried out in the application software.

Application modules not developed

The Common Application software (CAS) provided to the States by DoF&PD, GoI covered the entire spectrum of TPDS operations as per the scheme requirements comprising of four⁸ main modules for different activities.

Audit observed that out of the four modules, one module viz., Allocation order generation of food grains and its sub-modules viz., commodity off-take from FCI to State godowns and commodity off-take from State godown to FPSs were still not in operation. As a result, these activities were being done manually.

In reply Government accepted the fact and stated that Food and Essential Commodities Assurance and Security Target (FEAST) software under the Supply Chain Management was to be provided by NIC Delhi but the customised FEAST software as per the requirement of the State is not yet made available. The required software is being developed by NIC-UP.

2.2.8.7 Procurement of IT infrastructure

Under IT infrastructure, hardware and software items were to be purchased for deployment at the State Data Center (SDC), F&CS headquarters, District, Block and Godown level F&CS offices. GoI approved ` 31.23 crore for procurement of hardware items. During 2013-16 GoUP allocated ` 29.41 crore against which ` 19.18 crore was spent as of March 2016.

The shortcomings emerged in audit on the procurement of hardware and software are discussed in the succeeding paragraphs:

State Data Centre

Hardware and software for State Data Centre (SDC) was to be purchased and installed for creation of centralised database and online TPDS operations. GoUP was to finalise the specifications for the purchase of the hardware and software items. GoI approved ` 1.25 crore for the procurement of hardware and software items.

⁸ Preparation of master data, Allocation order generation, Ration card digitisation and Grievance redressal mechanism.

Audit observed that approval for purchase of IT hardware through NICS I for establishment at SDC was accorded by the State e-Mission Team in November 2013 and by the purchase committee in December 2013. However, no hardware was procured for SDC due to specifications of hardware items not having been finalised by the State Government. As a result, dedicated hardware/software could not be procured in SDC. Audit also observed that in absence of dedicated infrastructure, initially the NIC server and subsequently (July 2014) hardware/software resources of the State IT Department installed at the SDC, were utilised for hosting of the web based application software and management of the centralised database.

Thus, despite availability of funds, the required hardware/software for TPDS scheme was not created and funds remained unutilised for last three years.

In reply Government stated that as the approved specification were subsequently found obsolete and the new estimated cost was higher than the approved cost, resources of e-District cloud based infrastructure was used. The reply is not acceptable as neither additional funds were sought from GoI nor funds released by GoI under SDC refunded to GoI.

IT infrastructure at F&CS headquarters, district, block and godowns

Desktops/laptops were provisioned under the scheme for data entry, online allocation, utilisation reporting, monitoring of operations of TPDS at State headquarters level (eight computers and five printers), at district (five computers and three printers) and block level (two computers and one printer). At godown level, one laptop computer and one printer were to be provided for data entry through online application software for capturing receipts and issuance of food-grains, view of Management Information System (MIS) reports, etc.

GoUP adopted (February 2015) the decentralised approach for purchase of hardware items by authorising the district authorities to engage vendors. Hardware items were to be purchased by 25 March 2015 by inviting technical and financial bids from firms registered under Commercial Tax Department for a period of more than one year or authorised firms registered under the IT and Electronics Department, GoUP. Audit observed following irregularities:

Excess procurement of hardware/software

As per the scheme guidelines, quantities of hardware items to be procured were specified for the State and districts F&CS offices. Audit observed that in four⁹ districts, five desktop computers, three laptops, 36 laser printers, and six MS-Office software amounting to ` 7.83 lakh were procured in excess of the quantities prescribed in the guidelines (*Appendix 2.2.3*). Information regarding procurement and installation of hardwares at State headquarter was not provided to Audit though called for.

⁹ Allahabad, Kanpur Nagar, Mirzapur and Lucknow

Delay in supply and distribution of hardware items

As discussed above, the procurement of hardware items were to be completed by March 2015 and as per terms of the supply orders issued to the firms in the test-checked districts, the items were to be supplied within three to ten days. Audit however observed that, in five districts there were delays ranging from seven to 188 days in supply of the hardware items.

Further, districts distributed the hardware items to the blocks with delay ranging from three to 11 months. The distribution of hardware items to the godowns by the DSOs were made with a delay of one to 13 months. Records also revealed that in four districts, hardware items were not distributed (June 2016) to blocks and godowns and the same remained at the district level. Details are given in *Appendix 2.2.4*.

Thus, items procured were not effectively put-to use for the purpose for which these were procured.

In reply Government stated that information was being sought for from districts.

2.2.8.8 Network connectivity

Bandwidth connectivity was provisioned for connecting offices and godowns through various available options such as leased lines, State Wide Area Network (SWAN), National Informatics Centre Network (NICNET), Mobile-General Packet Radio Service (GPRS), broadband, *etc.* The minimum bandwidth for State, district and block offices was 1-2 Mbps.

GoUP provided broadband connectivity at the district and block level whereas mobile GPRS connectivity was provided at the godown level. Scrutiny of records in the sampled districts revealed that against five computers at the district level and two computers at the block level, broadband connectivity for accessing web-based application was available in only one or two computers due to lack of network cabling.

In the test-checked godowns¹⁰, mobile GPRS connectivity through dongle was not available in any of test-checked districts as dongles were not purchased in these districts. In Mirzapur district though dongles were procured they were not put to use.

Audit further observed that no effort was made by the Department to avail SWAN connectivity at the district and block level, though SWAN connectivity was available upto the tehsil and block headquarters under implementation of National e-Governance Project in the State.

Thus, proper bandwidth connectivity for smooth operation of the web based application software was not ensured and objective to leverage infrastructure already available was not achieved.

¹⁰ Karvi & Pahadi (Chitrakoot), Meja (Allahabad), Rajapur (Ghaziabad), Talanagri & Jawa (Aligarh), Sahar (Mirzapur) and Aishbagh & Kakori (Lucknow).

In reply Government stated that information was being sought for from districts.

2.2.9 Computerisation of TPDS operations

Under component-I of the scheme, four key activities were to be covered under End-to-End computerisation of TPDS operations viz., digitisation of beneficiary and other databases; computerisation of supply-chain management; and setting up of transparency portal and grievance redressal mechanism. Deficiencies noticed in implementation of key activities are discussed in the succeeding paragraphs.

2.2.9.1 Digitisation of stakeholders (departmental) database

A central repository of all TPDS stakeholders which could further be used by other applications was to be prepared by the State as per the scheme guidelines. Digitisation of stakeholder (department) data involved creation of master database of districts, blocks/tehsils, F&CS offices, Fair Price Shops (FPSs), godowns, card types, etc. Creation of master data was a pre-requisite for subsequent digitisation of beneficiary data and computerisation of the supply chain as the data of beneficiary ration cards and FPSs etc. were to be mapped.

Audit observed the following:

Creation and mapping of master data

The coding for Master data was to be done based on the Meta Data and Data Standards (MDDS) for PDS as per e-Governance standards. The purpose of MDDS was to bring uniformity in capturing demographic and biometric data of PDS beneficiaries to ensure seamless inter-operability while interchanging data.

As per MDDS read with ePDS schema, Permanent Location Code (PLC) consisting of a 16 digit code viz., State (2 digit), District (3 digit), Tehsil (5 digit) and village/town code (6 digit) was to be ensured for unique identification of the locations. However, analysis of the village/town codes as used in the MDDS codes and as captured in the system in all the test-checked districts revealed that the codes captured in the system were not exactly the same but were different.

Further, in the village/town master table, five village/town codes were found mapped with 10 different PLC codes.

Thus, creation and mapping of codes were not as per the MDDS data standards defeating the purpose of having uniformity in capturing of data.

In reply Government stated that master data coding scheme was based on national PDS data guidelines and due to constitution of new districts concerned villages also got affected and hence the old data was also maintained. The reply is not acceptable as after mapping of new village codes status of old codes should not be active in database. No specific reply was

furnished in respect of difference in the village/town codes found in the database.

Quality of master data

Master data is the core data essential for business operations. However, uniqueness of master data was not ensured in the system. Four panchayat codes were found duplicate whereas six duplicate blocks were found in the block master table. Audit further found that out of 77,347 active FPSs, 190 FPSs had no license number, 749 FPS had no RCs mapped and 491 FPSs had unmapped bank account number.

In the absence of uniqueness and completeness of master data, the reliability of Master data was questionable.

2.2.9.2 Digitisation of beneficiary database

As per the MoU, digitisation of beneficiary database was to be undertaken and the same was to be verified by comparing with other databases like Unique Identification Authority of India (UIDAI), National Population Register (NPR), Socio Economic and Castes Census (SECC), Census, electoral data, etc. Seeding of Aadhaar number into the TPDS database was to help in eliminating the duplicate ration card holders. Special drives to eliminate fake and bogus ration cards were also required to be taken up by the State Government.

Once digitisation process was over, a workflow based approach for issuance/modification/cancellation of ration cards based on the digitised data, using application software was to be adopted by the State Government. All information pertaining to ration cards was to be made available on the *web-site*.

Audit observed:

Engagement of vendors for data digitisation

GoUP decided (October 2013) to undertake the digitisation of the beneficiary database in decentralised manner by authorising the district authorities to engage vendors for carrying out the work. The tender was floated under two bid system and bidders were required to submit the details of TIN, PAN along with their working capacity, Infrastructure availability and past experience in the said field.

The shortcomings noticed in engagement of vendors for data digitisation were as below:

In none of the test-checked districts, working capacity was furnished by the firms selected, except for Varanasi and Ghaziabad districts.

Work orders were issued to two firms in Allahabad though these were not registered with the Commercial Tax Department. In Chitrakoot and Lucknow districts, First Information Reports (FIR) were lodged against the firms engaged for data digitisation in these districts, for erroneous capturing of

beneficiary data leading to erroneous printing of ration cards. The fact confirms that technical competence of the firms was not ensured by the district authorities prior to awarding of contracts.

No privacy policy/undertaking from the vendors for maintaining confidentiality and security of the data was taken as required under the Information Technology Rules 2011 (Reasonable security practices and procedures and sensitive personal data or information).

Thus, without proper vetting of the bid documents by the district authorities, works were awarded.

In reply Government stated that information was being sought for from districts.

Collection, compilation and certification of beneficiary data

In the State, number of total ration cards as of February 2005 were 4.51 crore and as of 2012 the number of digitised cards was 4.41 crore. Digitised cards were provided to the beneficiaries with pre-filled details for updating and providing fresh personal details *viz.*, beneficiary bank account number with Indian Financial System Code (IFSC), Electoral Photo Identity Card (EPIC) number, Aadhaar number, mobile number and Date of Birth (DOB).

Besides, the district authorities were to compile the forms, FPS-wise and verify them for completeness for onward transfer of the forms to the vendors for carrying out the digitisation work. Record of forms handed over and taken back from vendors were to be maintained at the DSO level. Forms digitised by the vendors were to be re-checked by the district authorities for certifying the cards for completeness and correctness.

However, neither the record of pre-filled forms distributed, collected, compiled, certified, and entered in the system were maintained at the district level nor physical forms were safely kept for record purposes in any of the test-checked districts. Scrutiny of handing over receipts of physical forms by the vendor in Kanpur city revealed that the receipts captured only number of sacks returned without specifying the number of forms it contained.

Scrutiny of 200 beneficiary forms made available to audit in three test-checked districts¹¹ pertaining to 13 FPSs revealed that details of EPIC number in 14 forms, family details in 11 forms, annual income in 22 forms and gas connection details in four forms were furnished by the beneficiary but the same were either not captured or incorrectly captured in the system.

Further, it was noticed that 12 out of aforementioned 200 forms were not certified by the district authorities but the same were found uploaded on the portal. As a result of flawed data feeding, data captured in the system was neither complete nor reliable, reflecting lack of verification by the district authorities.

¹¹ Mirzapur, Kanpur Nagar, Lucknow

In reply Government stated that information was being sought for from districts.

Beneficiary database verification and updation

As per the order (October 2013) of GoUP, fake/ bogus cards of ineligible families were to be cancelled and fresh cards to the eligible beneficiaries were to be issued. For cross verification of the beneficiaries, Election Commissions database of Electoral Photo Identity Card/Voter-ID was to be used. Database updation was to be done by running the de-duplication process on unique field viz., voter id number and applicant name, father's name and date of birth. Entries of all cancelled and new cards issued as a result of de-duplication process were to be captured in the database.

Audit, however observed that details of ration cards cancelled were not captured in the database. Analysis of database in eight test-checked districts revealed that proper verification and updation was not ensured leading to existence of duplicate cards in the system.

Analysis of TPDS database

NFSA database contained different tables for each district capturing details of beneficiary ration cards. An analysis of table containing personal details of the ration card holders (46.14 lakh records) and table containing applicants family members details (1.97 crore records) pertaining to the test-checked districts revealed following deficiencies:

Incomplete data: Out of 46.14 lakh ration cards records in the name of head of the family (card holder), information was not found captured for bank account number in 29.14 lakh records (63 *per cent*); family income in 29.39 lakh records (64 *per cent*); Aadhaar card number and voter-id number of valid¹² length for the head of the family was not captured in 30.09 lakh records (65 *per cent*) and 26.73 lakh records (58 *per cent*) respectively. Further, Aadhaar card number for family members was not captured in 1.41 crore records. Thus, the entire process to update the database was futile as the bank account number necessary for transferring NFSA benefits directly in beneficiary account not allocating food grains, family income for ensuring eligibility criteria of NFSA and Aadhaar number necessary to uniquely identify the beneficiary was not captured in the database.

Duplicate Voter-Id number and Aadhaar number: Out of 1.97 crore records of family members, voter-id was captured in 54.63 lakh records of which only 23.25 lakh voter-ids were of valid length. Analysis further revealed that out of these 23.25 lakh voter-ids, 1.81 lakh were found duplicate of which 1.41 lakh voter-ids were in the same beneficiary's name. In 4954 records, same voter-id was used for different card holders. Besides, same voter-id was captured in multiple beneficiaries' records, ranging from two to 626 times. Similarly, out

¹² Aadhaar card number of 12 digit length issued by Unique Identification Authority of India and Voter-id card number of 13-17 alpha numeric/special character length prior to May 2000 and thereafter of 10 digit issued by Election Commission of India.

of 1.97 crore records of family members, Aadhaar number was captured only in 24.91 lakh records (13 *per cent*) of which 3.50 lakh were found duplicate.

Verifying/issuing authority of cards not captured: Out of 46.14 lakh records, in 30.77 lakh records (66 *per cent*), details of card verifying authority was not captured whereas in none of the cards details of issuing authority was captured. It was also observed that in place of capturing the user code number of the entering, modifying, verifying authority, 'DSO', 'ARO', 'Szi', 'Voo', 'NFSAY', etc., were captured reflecting that proper validation checks for allowing authorised users into the system was not ensured.

Digital signature on cards: After verification of the beneficiary details by the district authorities, beneficiary cards were to be digitally signed prior to printing and distribution to the beneficiaries. Audit analysis in eight test-checked districts however revealed that out of 46.14 lakh records, 9.81 lakh ration cards were not digitally signed. Analysis also revealed that in 3.12 lakh records, cards were printed without digital signature.

Duplicate bank account numbers: Under the provisions of NFSA, in case of foodgrains not being distributed to the beneficiaries, food security allowance was to be transferred to the bank account of the beneficiary. However, analysis revealed that out of 46.14 lakh ration card holders (HOF), bank account number and IFSC code was captured only in 29.14 lakh records of which 2.30 lakh were duplicate account numbers. Analysis further revealed that 0.88 lakh records were having same applicant name. The number of units in these duplicate records was 3.79 lakh. In absence of unique bank account numbers in the database, chances of transfer of food security allowance under NFSA in wrong bank accounts can not be ruled out.

Ineligible identification as per NFSA norm: As per the NFSA exclusion criteria, total family income above two lakh rupees per annum in rural area and three lakh rupees per annum in urban area were not eligible for the scheme. Out of 46.14 lakh card holder's total family income was captured only in 29.39 lakh cards (64 *per cent*). Number of beneficiaries residing in rural area having total income over two lakh rupees were 0.12 lakh whereas families having income over three lakh in urban areas were 0.16 lakh. This indicated that the specified criteria was not checked due to which ineligible families still existed in the system. Besides, total family income was captured in the range of ten paise to ` 999.99 crore reflecting that validation checks were not in-built in the system.

Head of family name and family relation code not captured: The card was issued in the name of head of the family. However, in 0.23 lakh records out of 46.14 lakh card holders, name of head of the family was not captured of which 0.20 lakh cards were printed.

Out of 1.97 crore family members records in 24.08 lakh records relationship of the family member with the head of the family was not captured. Further, family relations not covered as per NFSA norms were also captured viz., 'Husband of wife sister', 'Husband of husband-sister', 'Aunt (Mother sister)',

‘Aunt (wife of mothers brother)’, ‘Son-in-law’, ‘Other’, *etc.* Besides female relationship code were also captured as ‘Male’ under gender field and *vice-versa*.

Erroneous capturing of ration card category: In 19 cases BPL category cards were captured under AAY category cards whereas 60 AAY category cards were captured under BPL category card.

Delay in printing/issuance of cards: Analysis of 46.14 lakh records of card holders revealed that record entry date and card print date was captured only in 38.94 lakh records. In 96 *per cent* of the records (37.47 lakh) there was delay of more than 90 days in printing of the cards. Further, records with entry date prior to card print date was also observed reflecting lack of validation checks in the system.

Weak access controls: Access control grants users access during operations, by associating users with tasks/ resources that they are allowed to perform/ access based on pre-defined policy/ roles. Analysis of system users of Lucknow district revealed that out of 20 users who entered data in the beneficiary table (HoF table) seven users were not authorised to access the system as their user-id was not captured in the user master table. In 208 records in place of user code ‘DSO’ was captured while in 6147 records ‘NFSAAAY’ was captured. In absence of effective access controls in the system, there was risk of unauthorised access and manipulation of data.

The above mentioned discrepancies indicated that system checks were not enforced while going in for offline/ online entry of application forms. The objective of capturing additional fields to cross verify the details from other databases to eliminate fictitious beneficiaries claiming benefit, beneficiaries claiming benefits in the names of the others was not achieved.

While accepting the above facts Government stated that from time to time directions to the regional and district level officers were given to ensure complete and error free data in the database.

Recommendation: Government should take effective steps for updating the TPDS database to eliminate the existing fake/ bogus cards in the system. Efforts should be made to capture the beneficiary’s bank account number and aadhaar number to uniquely identify the beneficiary. Efforts should also be made to strengthen the access/ validation controls to ensure integrity, confidentiality and availability of data at all times.

2.2.9.3 Computerisation of Supply-Chain Management

Allocation of food grain not based on beneficiary database

Most of the TPDS operation related information was to be generated by respective application modules and its database and, therefore, the same was to be linked to output of respective modules. As per scheme guidelines, the allocation of foodgrain was to be based on the beneficiary count of the database. However, it was observed that allocation orders uploaded on the

portal were not based on the beneficiary count as per the beneficiary database. The same was, however, being done manually.

The number of AAY beneficiaries in the State was fixed at 40,94,500 and the allocation is also made accordingly. Against this, in the public portal, the number of beneficiaries figure was shown as 40,97,374 as on February 2016. Similarly allocation of food grains for PHH for the month of March 2016 for the State was for 11.42 crore units while the number of units uploaded on the public portal as of February 2016 was 12 crore.

Further, GoI sanctioned allocation of 7,75,961.33 MT of rice and wheat for PHH and AAY beneficiaries for distribution *w.e.f.* August 2016. Based on the GoI allocation State distributed the allocated quantities to the districts with different scales of distribution for PHH and AAY beneficiaries. However, in the test-checked districts it was observed that further distribution of food grains to the blocks (both of rural and urban areas) as per the allocation orders uploaded on the portal for the month of August 2016 mismatched with the district wise allocation as per the State allocation. There was short allocation of 574.91 MT in six districts and excess allocation of 3.13 MT in two districts (*Appendix 2.2.5*). The situation was risk prone as manual intervention still existed in the system.

In reply Government did not furnish any specific reply and stated that based on GoI allocation orders food grains were allocated to the Districts.

Tracking of movement of food grains

Computerisation of supply chain involved use of ICT tools for tracking of movement of allocated food grains at both the stages *viz.*, from FCI to intermediary storage points and further to FPSs. Scrutiny of records, however revealed that following key activities were not covered:

Food grains receipt and issuance was to be entered in the system to obtain stock position of PDS commodities in respect of all godowns. However, the same was not operationalised as of March 2016. In absence of this, stock position was maintained manually, as noticed in the test-checked districts.

For movement of food grains from FCI to State godowns, the State was required to computerise the operations like receipt of payment from State agencies, generation of release orders and allocation, generation of truck-challan, gate-pass and capturing the information in the system. However, the same was not operationalised as of March 2016.

In reply Government stated that implementation of supply chain management system was in progress.

Recommendation: Government should ensure operationalisation of entire spectrum of TPDS operations. Efforts should be made to computerise the supply chain management operations in entirety.

Delay in issuance of foodgrain allocation orders for FPS dealers

As per GoUP order (October 2015), Fair Price Shop (FPS) dealers were to deposit the cost of food grains upto 20th day of the preceding month of allocation through e-challans for lifting of the food grains from godowns. This was to ensure transparent and accountable system for offtake and distribution of food grains. Allocation orders for the FPS dealers were uploaded on the Departmental web portal in downloadable form by the district authorities. Based on the allocation order, FPS dealer deposits the cost of food grain through e-challan. Database of e-challans was not made available to audit and information relating to the allocation order/e-challans on the web portal was available for the current month only. Therefore, scrutiny of downloadable allocation orders for 626 FPS dealers was conducted in nine blocks of five test-checked districts¹³ for the allocation month of August 2016.

Scrutiny disclosed that 68 allocation orders for the FPS dealers were not uploaded in the public portal upto 31 July 2016.

In reply Government stated that NIC had been instructed to provide monthly details of districts issuing e-challans with delay.

2.2.9.4 Transparency in system and grievance redressal mechanisms

Transparency through portal

State TPDS portal was to be created for achieving total transparency in TPDS by ensuring all information pertaining to the TPDS in the public domain. The portal was to be used to display information related to FPS-wise digitised database of ration cards, entitlement of beneficiaries, stock position at godowns, lifting of foodgrains, stock availability at FPS, movement and date of stock/ quantity supplied to FPS every month for all the shops, etc.

The State public portal depicted the list of FPS-wise ration cards and details of each ration card and monthly allocation upto the block level. However, details of actual off-take were not available on the public portal.

Further, the e-PDS portal of GOI did not depict the State status pertaining to FPS wise allocation orders, Master stock register of State godowns, allocation generation status, sales register, block wise allocation orders, district-wise allocation of commodity, allocation policy of the State Government.

The information displayed on the website was not dynamically linked with the web portal page. Since manual intervention continued to exist, complete transparency was not ensured.

In reply Government stated that supply chain management software was under development by State NIC unit.

SMS facility

¹³ Allahabad, Kanpur Nagar, Lucknow, Mirzapur and Varanasi

Mobile SMS alerts were to be sent to pre-registered individuals such as beneficiaries, FPS dealers, etc., to inform them regarding lifting of foodgrains at State depot, delivery and availability of foodgrains at the respective FPS, any change in policy of entitlements or rates etc. However, scrutiny of SMS alert reports (February 2016) of six¹⁴ test-checked districts revealed that against 12.41 lakh beneficiaries requesting for mobile SMS alerts only 3.55 lakh (29 *per cent*) beneficiary mobile numbers were seeded in the application software and SMS alerts were sent to only 0.81 lakh beneficiaries (**Appendix 2.2.6**). Further application for sending SMS alerts to the FPS dealers was not operational in the test-checked districts. Thus, SMS alert facility was not fully operational.

Further, no SMS facility was envisaged to alert the beneficiary about issue of foodgrain made to a beneficiary which could have acted as deterrent to fraudulent allocation and facilitate transparency in the system.

In reply Government stated that information in respect of lifting of food grain by FPS dealers was being provided to the registered beneficiaries. The reply was not acceptable as in the test-checked districts SMS to all registered beneficiaries was not sent.

Grievance Redressal Mechanisms

For efficient tracking and timely redressal of complaints/grievances of the beneficiaries, the State grievance redressal mechanism was to be automated. As per the scheme, NIC was to provide requisite application software including software for toll free call centre operations.

A toll free helpline number was available on the website for grievance registration and redressal. However, details of redressals made against the complaints received online were not available in the test-checked districts.

2.2.10 Training

For smooth functioning of the computerised TPDS System, State F&CS officials and staff at various levels were to be imparted training on the use of technology and for day to day operations. As per guidelines training activity was to be taken as a one time activity and was to be planned keeping in mind the training needs.

Various categories of trainings were envisaged for users/stakeholders, based on their roles and computer awareness viz., training of trainers, basic computer training, TPDS application software training and training of top and middle management. At the State and district level five officials, at block level three officials and at godown level two officials were to be trained at the rate of ` 2,500 at each level for 5 days. Under the training head GoI sanctioned ` 1.17 crore against which an expenditure of ` 17.29 lakh was incurred.

¹⁴ Allahabad, Chitrakoot, Ghaziabad, Kanpur Nagar, Lucknow and Varanasi.

No training plans and details of training imparted at the State level was furnished to audit. In test-checked districts against the allotment of ` 12.07 lakh an expenditure of ` 2.21 lakh was incurred in two districts (Mirzapur and Ghaziabad). However, in Mirzapur district the entire expenditure of ` 1.57 lakh was diverted to purchase of computer hardware. Thus, no efforts were made by GoUP to ensure training of the staff.

In reply Government stated that from time to time training was provided to the officials on software operation through demos. The reply was not acceptable as no training plans were formulated and expenditure on training head was only 15 *per cent* of the amount sanctioned under training head by GoI during the period 2013-16.

Recommendation: Government should plan capacity building for the departmental staff to make them acquainted to the computerised system.

2.2.11 Monitoring

2.2.11.1 IT assets not maintained

As per the MoU signed (May 2013) between GoI and GoUP, an audited statement in the form of a register for permanent and semi-permanent assets acquired solely or mainly for the scheme was to be maintained. The assets acquired were not to be utilised for purposes other than those for which sanctioned. However, no such asset register was maintained at the Department level or in the test-checked districts. It was noticed, in test-checked districts, that neither proper stock registers were maintained nor assets physically verified annually. Absence of these checks and regular monitoring of the same exposed the assets to the risk of misuse/pilferage.

In reply Government stated that districts have been directed in this regard.

2.2.11.2 Standardisation Testing and Quality Certification audit

As per the scheme guidelines Standardisation Testing and Quality Certification (STQC) audit was to be undertaken by the State to ensure that the application software for TPDS is error free, meets State specific needs and able to operate with higher level of transactions.

STQC audit comprised of review of system, software documentation, software artifacts/work products, software testing and evaluation. Apart from STQC audit, security audit of TPDS application modules was to be ensured by the Department to plug in application security vulnerabilities, weaknesses and concerns related to authentications, authorisation, session management, input/output validation, processing errors, information leakage, denial of service etc.

However, neither STQC audit was conducted nor security audit of the system was ensured prior to operationalisation of the application software. Thus, system was at risk in absence of STQC audit and security audit.

In reply Government stated that web security audit of application software from empaneled vendors of CERT-IN was being carried out from time to time. The reply was not acceptable as no documentation in support was provided to audit.

Recommendation: Government should ensure Standardisation Testing and Quality Certificate audit of the system.

2.2.11.3 Joint physical inspection of IT infrastructure

During the course of joint physical inspection conducted by audit in April 2016 to June 2016 at DSO Mirzapur it was observed that 12 printers were lying packed while from DSO Chitrakoot two desktops with one printer was transferred (July 2015) to District Election Officer, Chitrakoot. All five computers with UPS and three printers, allotted to DSO Lucknow, were installed at Divisional Commissioner, F&CS office, Lucknow. Proper cabling for networking and earthing was not done in any of the test-checked districts.

Out of 12 test-checked blocks, hardware infrastructure in five blocks was installed at the district supply office. Printer was not in use in Varanasi rural block. Each godown was issued with a laptop and a printer but they were not found in six out of nine test-checked godowns. As such hardware infrastructure provided at all levels was not being effectively used. Further, asset register and complaint register were not maintained in any of the test-checked districts. This indicated lack of monitoring by SPMU and the district authorities.

In reply Government stated that information was being sought from districts.

2.2.11.4 Preparation of monitoring reports

States were required to report the status of various activities/ sub-component on fortnightly basis to GoI. DoF&PD was to review the progress of the State regularly and at least once in a fortnight through visits, video-conferencing and meetings. However, neither at the Departmental level nor at the district level, separate records/minutes of the meetings conducted to monitor the progress of the scheme were maintained. No fortnightly progress reports were made available to audit. Further, districts were required to submit ration card print verification report (32 point report) to State headquarters prior to printing of the ration cards duly approved by District Magistrate. However, in none of the test-checked districts, the report was made available to audit.

In reply Government stated that various daily progress reports were prepared with the help of State NIC. The reply was not acceptable as no fortnightly reports were being prepared and sent to GoI.

2.2.12 Conclusion

End-to-End computerisation of the TPDS operations aimed to address various challenges of the existing system such as leakages and diversion of foodgrains in the TPDS supply-chain, fake and bogus ration cards, inclusion and

exclusion errors, lack of transparency, weak grievance redressal and social audit mechanisms. Timely implementation of the project was to be ensured by GoUP. An expenditure of ` 54 crore was incurred on the project by GoUP for application development, purchase of hardware, data digitisation activity as on March 2016. However, project planning suffered from delays and deficiencies due to delayed signing of the MoU with GoI and late constitution of SPMU. Timeline set for completion were not achieved due to key activities not being executed by SPMU and inconsistent implementation strategy. Application software developed by State NIC failed to address the entire spectrum of the TPDS operations as manual intervention still existed in the system. The objective of eliminating fake/ bogus cards from the system for better targeting of subsidy through cross verification with other databases and capturing of beneficiary bank account number and Aadhaar number to eliminate all bogus beneficiaries and those claiming benefits more than once was not achieved. Computerisation of supply chain management was not fully functional as system generated allocation orders based on the beneficiary database count was not achieved. Details of actual off-take of food grains FPS wise were not available on the portal. No effective training plans were formulated for imparting training to the personnel engaged for carrying out day to day operations. The system was at risk in absence of system certification and security audit of TPDS application modules.