Revenue Department

3.6 Computerisation of Land Records (Land Record Management System "Bhu Abhilekh")

Highlights

Government of India launched the Centrally Sponsored Scheme of computerisation of land records in 1988-89 with the objective to provide timely and accurate copies of Records of Rights (RORs) to landowners and updating of changes which occur in the Land Record database. The Department failed to implement the scheme completely due to noninstallation of computer centres in three districts and 97 sub-divisions and non-functional computer centres at three districts and five tehsils computer operators were not made available. In 7 tehsils RORs were being issued in manuscript and data entries for 18440 villages were not updated in absence of monitoring at district level.

Computerisation of land records was not yet complete as RORs were still being issued to landowners in manuscript.

(Paragraph 3.6.7.4)

Updation work of database was not carried out in 18440 villages due to diversion of services of EDP staff and because of lack of monitoring.

(Paragraph 3.6.7.5)

Discrepancies were noticed in the database due to absence of input controls and lack of proper validations at tehsil levels.

(Paragraphs 3.6.9.1 & 3.6.9.2)

There was lack of general IT controls in the absence of any IT policy/ strategy in the department.

(Paragraph 3.6.10)

3.6.1 Introduction

The scheme of computerisation of Land Records was launched in 1988-89 by Government of India (GOI) and executed as a Centrally Sponsored Scheme. The scheme was initially started as a pilot project in the district of Morena and subsequently extended to the rest of the districts of the State.

All expenditure was to be borne by GOI. The scheme envisaged to provide computerised copies of Records of Rights (RORs) at a reasonable price to landowners besides ensuring speed, accuracy transparency, dispute resolution and on-line management of land records.

Non-availability of comprehensive database and properly updated land records in manual system hampered implementation of decisions concerning land reforms and the dearth of databases on land reforms continued. For effective planning, implementation and monitoring of land reforms and related activities, a computerised land records system was considered crucial. This necessitates creation of a comprehensive computerised database on land records, which would help in land tenancy, land ceiling, and land consolidation.

Bhu-Abhilekh is an ISO certified application software designed and developed by National Informatics Centre (NIC) for the Commissioner, Land Records & Settlement, Department of Revenue, Government of Madhya Pradesh (Commissioner), to deliver grass root (up to tehsil level) governance within the domain of Land Management. Computerisation of Land Records (CLR) is a joint venture of NIC, Ministry of Rural Development (MRD) and State Government. Presently, version 2.0 of BHU-ABHILEKH, i.e. a superset of BHU-ABHILEKH version 1.0 had been implemented in all Tehsils of 48 districts of the State. Visual Basic 6.0 was being used as front end software and SQL server was being used for the maintenance of database.

As per GOI instructions (December 2002), initial data entry of Land Records was done by private vendors and updation work of the database was being done by the Data Entry Operators of the Department. Updation of Land Records and distribution of **Khasra**^{*} (**ROR**) and **Khatauni**^{**} (**B1**) were being done using this software. BHU-ABHILEKH version 3.0 was under pilot implementation for subsequent utilisation in all tehsils.

3.6.2 Objectives of the scheme

The objectives of the scheme, interalia are:

Facilitate easy maintenance and updation of the land data base, plot-wise details for issue of timely and accurate copies of the RORs to the landowners, creation of 'Land Information System'(LIS) and database for effective land reforms, revenue administration and developmental planning at the grass root level and low cost and easily reproductive storage media for reliable preservation for longtime. Fast and efficient retrieval of information, both graphical and textual.

3.6.3 Organisational set-up

Principal Secretary, Revenue Department was responsible for planning, implementation, monitoring of the scheme at Government level whereas Commissioner, Land Records was the nodal officer for planning, implementation monitoring and supervision at State level. District Collectors and Tehsildars were responsible for implementation, monitoring and supervision of the scheme at District and Tehsil level respectively. Revenue Inspectors and Patwaris responsible for field were to feed the basic information.

3.6.4 Audit objectives

Audit of the computerisation of Land Records was taken up to assess whether there was proper and easy maintenance and updating of land record database. It was also to be examined whether the accurate computerised copies of the

^{*} *Khasra: Crop inspection register, giving details of the cultivator, crop and area under such crop.*

^{**} Khatauni: Record of rights that indicates the ownership of each parcel.

RORs to the landowners were being issued on time. Besides this it was also to be checked whether various controls relating Information Technology were built in and were being adhered to during computerisation of Land Records.

3.6.5 Audit coverage

Test check of records of the implementation of the scheme during 1988-2006 was conducted in the Commissionerate of Land Records, Gwalior, Collector Land Records in 11^{*} out of 48 districts and 11 tehsils one each in district during March 2006 to August 2006. The application software was examined for its correctness, suitability and availability of controls. Data in the 11 selected Tehsils for the crop year 2004-05 (July 2004 to June 2005) were analysed in audit using Structured Query Language (SQL). Results of test-check are mentioned in succeeding paragraphs:

3.6.6 Financial management

The scheme was Centrally sponsored with cent percent financial assistance from GOI with the conditions that after completion of the project in a district, financial assistance would be stopped and the State Government would bear the expenditure required for its continuation and maintenance in future.

The budget provision and expenditure alongwith Central assistance received during 1988-2006 are as under:

	(Rupees in c				
Year	Central assistance received	Expenditure	Excess(+)/ Savings(-)	Transferred to Chhattisgarh State	
From 1988 to 3/98	4.66	4.66			
1998-99	5.46	5.46			
1999-2000	6.81	4.55		2.26	
2000-01	5.01	3.21		1.80	
2001-02	7.70	6.70	(-) 1.00		
2002-03					
2003-04	5.43	4.82	(-) 0.61		
2004-05	2.86	2.01	(-) 0.85		
2005-06	3.88		(-) 3.88		
TOTAL	41.81	31.41	(-) 6.34	4.06	

Out of Central assistance of Rs. 41.81 crore received from GOI during 1988-2006, Rs. 4.06 crore were transferred to Chhattisgarh State during 1999-2001. Of the balance assistance of Rs. 37.75 crore pertaining to the State, expenditure of Rs. 31.41 crore was incurred during 1988-2005. Of the unutilised assistance of Rs. 6.34 crore remaining with State Government, Rs. 3.56 crore meant for establishment of computer centres in 97 sub-divisions of the State were parked in 'Civil Deposit' during 2005-06 while Rs. 2.78 crore related to Data Entry Work (Rs. 76.02 lakh-2001-02), Digitization pilot Project II installment (Rs. 24.33 lakh-2001-02) and establishment of computer centres at Divisional, district, sub-division and tehsil level (Rs. 1.77 crore-2003-06) were not drawn although sanctions from GOI had been received in respective years.

Betul, Bhind, Chhatarpur, Damoh, Datia, Dhar, Morena, Satna, Shivpuri, Ujjain, Vidisha.

On being pointed out, Commissioner intimated (March 2006) that Finance Department had permitted (March 2006) withdrawal of Rs. 3.56 crore from Civil Deposits, which is being utilised for establishment of centres and Rs. 2.78 crore would be utilised after revalidation of sanction by GOI.

3.6.7. System Implementation

3.6.7.1 Lack of definite time frame

As per Government of India guidelines (1994), a time limit of three years from release of funds was set for completion of programme of Computerisation of Land Records in project districts. No records showing completion of programme in project districts within the prescribed timeframe of three years for which funds were released during 1994-2002, were made available. Even in the 11 tehsils selected for audit, it was observed that manually prepared Record of Rights (RORs) etc. were given and as such the computerization was not complete. However, the revised guidelines (2002) did not provide any specific target date for the completion of the project. State Government also did not frame any time bound action plan for the implementation of the project, which contributed to the delays in the implementation of scheme.

3.6.7.2 Networking

As per the guidelines issued by GOI (1999/2002) it was decided to establish the networking among the computer centres established at tehasil, subdivision, district and state level. However, networking connectivity was not established among the Computer Centres by August 2006.

3.6.7.3 Non-installation of computer centres in districts and sub-divisions

Commissioner, Land Records had shown cent percent computerisation of land records in the State in their progress report of January 2005.

Scrutiny of records of Commissioner and districts revealed, that the computer centres in 3 district¹ headquarters, and 97 sub-divisions were not installed, in spite of availability of Central assistance.

Computer materials costing Rs. 19.41 lakh supplied to the above mentioned three districts during 2004-05 had remained unutilised as of June 2006.

Funds of Rs. 3.88 crore released by GOI (2005-06) for establishment of computer centres at 97 sub-divisions, as shown in **Appendix 3.10**, at the rate of Rs. 4 lakh per sub-division remained unutilised.

On being pointed out in audit, Commissioner assured (April 2006) to take necessary action. However, the fact remains that in spite of availability of funds the computerization at district and sub-division level has not yet been completed and progress report (January 2005) of the Commissioner, Land Record office showing hundred per cent computerization was therefore not correct.

Lack of definite time frame to complete the computerization of Land Records.

Networking connectivity not established.

Computer centers at three district headquarters and 97 sub-divisions were not established in spite of availability of funds.

Bhind, Morena, Shivpuri

3.6.7.4 Non functional computer centre at district and tehsil level due to non-availability of computer operators

During test check of records of 3 district² headquarters and 5^3 tehsils it was found that though the computer centres were installed and initial data entry work was completed excluding 5 villages of Datia district yet they were not operational as on August 2006 due to non-availability of computer operators.

Further, test check of records of Datia district, revealed that out of 256 villages, the data input work in five villages (Kamrari, Datia Gird, Basai, Jujharpur and Chanderia) was also not completed (May 2006).

As per the booklet (Procedure of Computerisation of Land Record in MP Part I) issued (2004) by the Commissioner, only computerised copies of RORs were to be distributed or issued to the land owners.

However it was observed in audit that in seven Tehsils as detailed below, RORs were still issued to the landowners in manuscript thus defeating the objective of providing computerized RORs.

	SI.	Name of	2001-02		2002-03		2003-04		2004-05		2005-06	
RORs were distributed in manuscript in place of	No.	tehsil	RORs issued in manu- script	Compu -terised RORs issued								
computerised	1.	Chhatarpur			4260		3599		2387	3000	897	6500
copies in 7	2.	Damoh			117		132		602		946	118
tehsils.	3.	Bhind			438		772		796		839	
	4.	Datia ⁴			3115	10911	7350	6946	2900	11286	3370	9327
	5.	Satna	3425	1993	3489	6864	3680	3631	3989	2369	4253	2583
	6.	Shivpuri	960	5623	982	11093	1019	10373	1116	8370	520	5736
	7.	Betul	2786	Nil	3076	1421	3679	557	4342	1308	4726	1288

3.6.7.5 Non-updating of Data entries

As per instructions laid down in the guidelines issued by GOI in 1999, data was to be updated each year and expenditure on data updating was to be borne by State Government. However, it was found that the updating of database was not done (February 2006) for 18,440 out of 55,657 villages in the State as given below:

Year	Total number of villages in MP	No of villages for which data was updated	No of villages for which data was not updated
2003-04	55657	55626	31
2004-05	55657	55265	392
2005-06	55657	37640	18017
			18440

Database in 18440 villages was not updated.

Computer centers at

headquarters and

non availability of

five tehsils were not operational due to

three district

DEOs.

² Computer installed in Chattarpur (July 2005), Datia (February 2006) and Damoh (February 2006).

³ Computers installed in Khachrod (December 1999), Badnagar (December 1999), Ghatiya (December 1999), Nagda (August 2001) and Damoh (August 2001).

Data entry work in respect of 5 villages (Kamrari, Datia gird, Basai, Jujharpur and Chanderia) of Datia district was not completed).

On being pointed out, the Commissioner intimated (March 2006) that the responsibility of updating of data rests on the districts. Reasons advanced for not updating the database was irregular power supply, non-maintenance of hardware at district level and engagement of EDP staff in other miscellaneous work along with data entry work at tehsil level.

3.6.7.6 Non-refund of unspent balance of Rs. 11.98 Lakh by the districts

The Commissioner, provided a sum of Rs. 14.52 crore to the districts for data entry work during 1997-98 to 2001-02. On verification of expenditure statements as of Feb 2006 sent by 8 districts shown in **Appendix 3.11**, an amount of Rs. 11.98 lakh was found lying unspent in Banks, while the work of data entry was completed in all the districts. After completion of data entry work, unspent amount was required to be refunded, which was not done.

On being pointed out, Commissioner assured (April 2006) to clarify the position from the districts concerned.

3.6.7.7 Non-furnishing of utilisation certificates

GOI issued instructions that interim utilisation certificates along with item wise expenditure against expenditure incurred should be sent by the State Government. Details of assistance received, expenditure incurred, and utilisation certificates sent were as under:-

				(Rs. in lakh)
Year	Grants received	Expenditure incurred	Utilisation Certificate sent	Amounts for which Utilisation Certificates not sent
2003-04	542.50	482.08	284.00	198.08
2004-05	286.30	201.13		201.13
Total	828.80	683.21	284.00	399.21

Utilisation certificates of Rs. 3.99 crore not furnished to GOI. Thus, utilisation certificates for Rs. 3.99 crore were not sent to GOI. The Commissioner stated (June 2006) that the utilisation certificates would be sent to GOI at the earliest.

3.6.7.8 Excess payment to the contractor

District Collector, Ujjain, invited (November 1997) sealed tenders for data entry work of land records. Lowest rate of Rs. 1.25 per record offered by M/s Pick Computer Technique Pvt. Ltd, Ujjain was accepted by the Collector, Ujjain in January 1998. As per the agreement (January 1998) the data entry work was required to be completed by the end of March 1998. After completion of 30 per cent work, the firm requested the Collector, Ujjain to enhance the rates which were accepted by the Commissioner Land Records in December 1999 and the rates were enhanced from Rs. 1.25 per record to Rs. 2.15 per record with the condition that the enhanced rate shall be paid for remaining 70 per cent work.

Unspent balance of Rs. 11.98 lakh not refunded by eight districts after the completion of data entry work.

Excess payment of Rs. 6.30 lakh were made to the contractor due to irregular acceptance of higher rates.

Discrepancies found due to lack of input controls.

Test check of records of collector, Ujjain in August 2006 revealed that there was no provision in the agreement for enhancement of rate midway. Against the payment of Rs. 12.50 lakh (at Rs. 1.25 per record for 9,99,856 records) Rs. 18.80^{*} lakh were actually paid upto August 2006. As a the result, Rs. 6.30 lakh were excess paid to the firm.

On being pointed out, Commissioner stated (September 2006) that the accepted rates of the firm were very low and the data entry work was also to be completed timely and in full accuracy, therefore the data entry rates were enhanced. The reply was not tenable, as there was no provision in agreement to enhance the rates midway.

3.6.8 Application Controls

Application controls are those controls which ensure that the transactions are done according to the business rules of the organization. These controls cover the input, processing and output operations of the systems. Input controls ensure that the procedures and controls inbuilt into the system guarantee that the data received for processing are genuine, complete, accurate and properly authorised and also to ensure that the data is entered accurately and without duplication. Existence of input controls also assumes importance as it helps in preventing incorrect or fraudulent input. Following discrepancies in feeding of data by department were noticed in audit:

- Ы No procedure was laid down and no checks were carried out to ensure that all source documents were received and data were updated properly. The accuracy and completeness of data held in the computer at the tehsil level would thus always be suspect.
- Ы In the traditional system of maintenance of Land Records, patwari was having the monopoly on the maintenance of land record data and possibility of unauthorised changes in the data was always present. Landowners were also not getting copies of RORs timely. Therefore, one of the objectives of the guidelines (1991) issued by Commissioner, Land Record was to reduce the burden of patwaris. However, it was found that the scenario was still the same after the computerisation and department was still heavily dependent upon the patwaris for keeping the track of the changes in land record database.
- Ы Possibility of the malicious manipulation in the data was always present as the Data Entry Operators were also authorised to distribute the RORs to the land owners in 4^{\$} test checked tehsils.
- Only P-II forms received from the Patwaris were kept as the source Ы input documents. No register or other document was maintained to keep a watch on the amendments in the records. Even the office copies of the RORs issued by the computer centre were not kept in hard copy at three tehsils^{*}.

 $^{30\% \}text{ of } 9,99,856 \text{ records} = 2,99,257 \text{ records} (a) \text{Rs. } 1.25 = 3,74,946.00$ 70% of 9,99,856 records = 6,99,899 records @Rs. 2.15 = 15,04,783.00Total

Rs. 18,79,729.00

Bhind, Dhar, Morena and Ujjain

Dhar, Moren, and Ujjain

- A separate provision was made in the application software to record the changes in land records in case of any mutation to prevent the unauthorised modifications in original data entry. But it was noticed in $10^{\#}$ tehsils that changes were carried out by using Khasra Modification module. In this scenario it was not possible to exercise the various checks such as mode of mutations, name of court and case number etc, which were available in the mutation module
- ▶ Data Entry Operators were made responsible for data validation at five tehsil[@] level and no system restricting any change after the validation was provided in the software. Therefore, possibility of unauthorised changes in the original database was always present in this scenario.
- ▶ Though, provision was available in software to record the revenue collection figures for the individual owners but these figures were not found fed into the database, due to which it was not possible to ascertain the revenue collection figures through this software.

3.6.9 Discrepancies in the Computerisation of Land Record (CLR) database

Key to the success of the CLR Scheme depended on the reliability of data captured. An examination of the backup data of 21.61 lakh records for the crop year 2004-05 of 11 selected tehsils^{*} disclosed that there were several inconsistencies in the data that was captured rendering the data undependable/ unreliable as brought out hereunder. Most of the errors were due to lack of appropriate input and validation controls at the data entry stage.

3.6.9.1. Discrepancies due to lack of input controls

Area of the land was not mentioned in the database in 17,816 cases. Names of the owner of the land were left blank in 162 cases. It has been found that the father's name of the owners of the land were left blank in 3.42 lakh cases. Address of the owners was not found mentioned in 0.86 lakh cases. Instead of feeding owner's names one meaningless character was found fed in 1,307 numbers of cases. Caste of the owner was not indicated in 3.84 lakh cases. Fathers' names were left blank in 182 tenancy cases. Instead of feeding fathers' names, one meaning less character was found fed in 116 tenancy cases. In 180 tenancy cases address fields were left blank. Instead of mentioning name of encroachers one meaning less character was found fed in 410 cases of encroachement of land. In 19 encroachment cases, names of the encroacher were not mentioned. Father's name of the encroacher of the land was not found mentioned in 4,641 cases. In 3,084 cases of encroachment, addresses of encroachers were not found mentioned in address field.

3.6.9.2 Discrepancies due to lack of proper validation checks in the system

Amount of the lagan (land revenue) due on farmers was not mentioned in 8.08 lakh cases though the type of land in these cases was "PRIVATE". Other taxes were not mentioned on private holdings in 16.92 lakh cases. In 1.53 lakh cases, lagan of Rs. 0.37 lakh was mentioned against the Government land. In

Discrepancies in the CLR database due to lack of input and validation controls.

[#] Bhind, Chhatarpur, Damoh, Datia, Morena, Satna, Dhar, Ujjain, Betul and Vidisha

[@] Datia, Bhind, Satna, Ujjain and Dhar

^{*} Betul, Bhind, Chhatarpur, Damoh, Datia, Dhar, Morena, Satna, Shivpuri, Ujjain, Vidisha.

41 cases, total area of land under encroachment was more than the actual area of these survey numbers. In 8,768 cases, crops sown on the land were mentioned, but the area on which the crops were sown was not found mentioned. In the absence of land area it was not possible to calculate the taxes by the patwaris. Land area was shown as 0 in 165 cases, but some amount of taxes was found indicated against these cases. In 7,809 cases, land was shown irrigated but mode of irrigation was not mentioned. In 131 cases total tax collection was greater than the actual tax to be collected.

On being pointed out by the Audit, Commissioner assured (September 2006) that all these discrepancies would be rectified through the concerned topsiders.

3.6.10. General Controls

General controls are those controls which regulate the environment in which the IT operations are run. These cover areas pertaining to IT security and information protection, software change management, segregation of duties, business continuity planning and system documentation. Major deficiencies in General Controls are detailed below:

3.6.10.1 Absence of Information Technology Policy

No IT policy/strategy, for coverage of the information system of the department was formulated by the department. On being pointed out by the audit, Commissioner assured (September 2006) to formulate an IT policy for the department.

Department was not having adequate documentation policy. In the absence of any policy, system documentation was not found to be up to date. Documentation in respect of BHU-ABHILEKH version 2.0 was not available. Also, there was no policy for retaining electronic documents and computer prints thereby increasing the risk of unauthorised working practices being adopted. Department had also not framed any security policy. Poor or lack of documentation could cause problems such as system unavailability, loss of data integrity or delays in recovering from system failures. Internal Audit of the computerised system was also not carried out by the Internal Audit wing of the Department.

On being pointed out by the Audit, Commissioner stated (September 2006) that the on line help is available in the software and user manuals are being prepared.

3.6.10.2 Deficiencies in maintenance policies

- ▶ Business Continuity Planning and Disaster Recovery Plan was not formulated by the department. However, back up copies of the data were kept in CDs on different locations. But fire proof storage is not available at the State as well as Tehsil level.Commissioner stated that the District data centres and computer centres established at the tehsils will be connected through networking and in case of any disaster at tehsil level, RORs would be issued through district data centres. This confirms that the present system is not integrated and lacks prompt restoration of IT operations in the event of a disaster.
- > Though adequate protection for Fire and Water logging was made and Air conditioning with backup power supplies for IT infrastructure was

available in Commissioner office but at tehisil levels no arrangement for Fire protection was found made in any of the selected 11 tehsils. Inadequate environmental controls could lead to system damage and the subsequent loss of computer facilities/database.

Annual Maintenance contract for the hardware items which were not covered under the warranty was not available. Thus the work relating to updation of data entry and issuance of RORs was delayed due to frequent breakdown of hardware items.

3.6.10.3 Access Controls

- Y The systems designing, programming and systems support work were being done by NIC and Data input and database administration by the employees of the department. But the responsibilities of IT staff and functional areas of sections were not clearly set out. Department had not given appropriate job descriptions, IT employees were engaged in other miscellaneous works.
- Any formal documented logical access control policy was not available in the department. However, restricted menus for users were available in the software. User Ids and passwords were issued for the users. However, no password policy was formulated in the Department for BHU ABHILEKH version 2.0.
- ▶ Facility to maintain unauthorised attempt logs was not available in the application. Automatic terminal time-out facility was not available in the application. There was no limit on multiple sign-ons in the application. However, restricted access through password was available to restrict the unauthorised person's access to use some system utilities and audit tools. But staff had not been prohibited from sharing the machines. Therefore, data was always at the risk of manipulations.

On being pointed out, Commissioner assured (September 2006) that Password security controls will be included in the IT policy of the department.

3.6.10.4 System of change management

A committee headed by Commissioner was formed for the authorisation of changes and all the changes in the software were done on the request of the committee by NIC. Prior to transfer to the live environment, these updated application software were checked with sample data. During the pilot run, officials of the department were involved for acceptance testing. However, proper and up to date documentation for the amendment in application software was not kept. To make the emergency changes in the application software, patches were loaded by the NIC, as and when required. Thus, due to absence of documentation it is not possible to ascertain whether only authorised amendments were transferred from the test to the live environment.

On being pointed out by the audit, Commissioner stated (September 2006) that all the amendments in the software are being implemented after checking of departmental supervisors. The reply was not tenable as no documentation in support of reply was shown to Audit.

3.6.11 Monitoring and supervision

As per the revised guidelines issued by GOI (December 2002), all the districts were to have district level implementation and review committee under the chairmanship of collector/Dy. Commissioner/District Magistrate with Local MP/MLAs as members alongwith ADMs/SDMs and District Information Officer, NIC. This committee was to formulate the district level implementation plan for effective and speedy implementation of the project and submit the status report to the Revenue Department by 10th of every month. Revenue Department was to compile the status report of all the districts and submit the same to Department of Land Resources, Ministry of Rural Development on quarterly basis.

On verification of records of Commissioner and 11 districts^{*} it was noticed that though District level committees were constituted (March 2004-Jan 2005) but neither monthly meetings were held nor implementation plans were formulated and status reports submitted to Revenue Department. In absence of receipt of status reports from Districts, the same was not being submitted to GOI by the State Revenue Department which shows that the performance of the scheme was not being properly monitored.

On being pointed out, Commissioner intimated that to evaluate the project, no agency has been nominated by the Ministry of Rural Development.

3.6.12 Conclusion

Despite incurring huge expenditure of Rs. 31.41 crore the department has not been able to implement the scheme as per target and guideline. Due to non installation of computer centres at districts and sub divisions, the hardware and software worth Rs. 19.41 lakh procured during 2004-05 remained idle and unutilised in 3 Districts. The State Government could not utilise Central assistance worth Rs. 6.34 crore, which was kept in 'Civil Deposit'. Due to abnormal delay in the execution of scheme, desired objectives could not be achieved. The landowners were not getting intended benefits of the scheme and in large number of cases manual RORs were issued.

Due to lack of data validation control, reliance on Land Record Database for major policy decisions for land reforms was not possible. Systematic monitoring and control mechanism was weak.

3.6.13 Recommendations

- A comprehensive written formal IT policy/strategy involving various aspects such as documentation policies, separation of duties, physical access and environmental controls, change management controls, logical controls, coverage of the information system of the department may be formulated. A Business Continuity Plan and Disaster Recovery Plan to minimise the impact of the natural or manmade disaster on the critical IT infrastructure of the department may also be formulated.
- Networking connectivity may be established among the computer centres established at State, District and Tehsil level so that, the Land Record Data could be assessed at various levels.

Lack of monitoring and supervision at District and State Headquarters level.

^{*} Betul, Bhind, Chhatarpur, Damoh, Datia, Dhar, Morena, Satna, Shivpuri, Ujjain, Vidisha.

- **>** Posting of the DEOs at tehsil level, where vacant, may be done at the earliest so that, computerisation work is properly maintained and regularly updated.
- **u** Involvement of the District level committees for the monitoring and speedy implementation of the scheme may be ensured and their report may be reviewed at the State Level.

The matter was referred to the Government in September 2006; reply had not received (December 2006).