

Chapter 9

*Integrated Finance & Forest Works Management System, Madhya Pradesh *§*

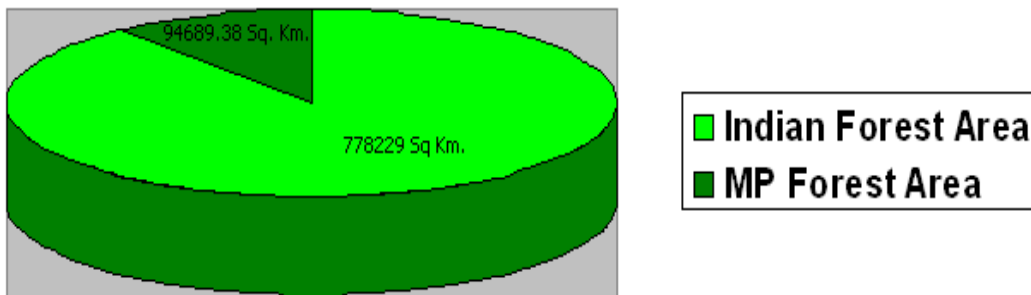
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I) OVERVIEW

Forests are essential for survival and sustenance of life. They are source of many direct and indirect benefits and need to be managed in such a way that extraction of benefits does not deplete the resource. Their growth should be optimized so that greater benefits are derived from them. It can be achieved using forestry science. Madhya Pradesh (MP) has a long history of scientific forest management. The forest policy provides conceptual guidelines for forestry work. MP has got the maximum forest area in our country and is very important from the Forest prospective.

The geographical area of the State is 3,08,252 sq. km which constitutes 9.38% of the land area of the country. The forest area of the State is 94689.38 sq. km constituting 30.17% of the geographical area of the State and 12.44% of the forest area of the country which is maximum forest cover in country.

MP Forest Department is engaged in management of this largest forest area in the country. For proper administration and management, the state has 16 Forest Circles, 62 Territorial Divisions, 129 Territorial Subdivisions, 362 Territorial Forest Ranges, 1,354 Sub ranges and 7,056 Beats.



Effective maintenance, management and monitoring of the funds and various forestry works are key and challenging tasks of the department. All the

§ § * Winner of CSI e-Gov Awards, 2009-2010

activities of the department can easily be monitored and expedited by efficient handling of the works, accounts and related activities and various offices of the department spend sizeable time and efforts in these activities.

One of the other challenges of Forest Department is that the staff is supposed to work in remote forest areas that do not have proper infrastructure and banking facilities. Most of the Forestry works carried out by the department are carried out by using the services local manpower and the payment to such manpower is to be paid in cash on daily basis. Other challenges in the effective, timely & transparent functioning of the department :

1. Synchronizing the functions of various administrative units under multiple departments was not possible in isolated system of operations
2. The manual and distributed system of operations is highly prone of errors & falsification of records.
3. Non-availability of centralized and reliable data of various works, buildings, assets etc adversely affected planning, monitoring and timely analysis/evaluation of problems & prompt interventions.

In view of the above, Integrated Forest Financial & Works Management System has been designed and developed as a ICT based system for efficient handling, monitoring and management of the accounts, budget and works. The system facilitates online, effective, project (work)-wise, scheme-wise and head-wise monitoring and effective budget utilization at the lowest level of the department. The project supports roles for various stakeholders like BCOs, DDOs, SDOs, Range Officers, Range Assistants and Public.

II) RESULT INDICATORS

1. Key Performance

a. Stakeholder services and benefits achieved through ICT interventions

Stakeholders of the project & (G2G) services being extended using the project

Budget Controlling Officers (BCOS)	<ol style="list-style-type: none"> 1. Receipt and allocation of approved and available budget 2. Online monitoring of the expenditure and Revenue Receipt
Drawing and Disbursing Officers (DDOs)	<ol style="list-style-type: none"> 1. Get sanctioned budget from BCO 2. Approve expenditure bills within budgetary limits 3. Access and approve the work-plans under various schemes 4. Earmark the budget for various projects/works

	<ol style="list-style-type: none"> 5. Receipt of revenue and challans generation 6. pass and validate the vouchers 7. Budget and cost control 8. Revise/cancel budget allotment 9. 9. Surrender un-spent budget\
DDO Assistant	<ol style="list-style-type: none"> 1. Examine and scrutinize the vouchers received from the SDDOs. 2. Monitoring the activities of the range officers
Sub Divisional Officer (SDO)	<ol style="list-style-type: none"> 3. Examine & Pre-pass the vouchers submitted by the SDDO
Sub-DDO	<ol style="list-style-type: none"> 1. Get sanctioned budget from DDO 2. Get the list of approved works and allocated budget for the works 3. Executed works in the field 4. Approve expenditure bills within budgetary limits 5. Receipt of revenue and challans generation 6. Verify and validate the vouchers prepared by the assistant 7. Budget and cost control 8. Surrender un-spent budget 9. Maintain various books and ledgers 10. Maintain advances given to the employees
Sub-DDO Assistant	<p>Initiate online voucher, Submit the voucher to SDDO for confirmation</p> <p>Record the revenue collected.</p> <p>Submit the revenue and enter challan details.</p>

b. % of services covered as ICT interventions

Different core Process and their entire lifecycle have been streamlined and made online using the work-flow system

- Annual Plan Preparation - Online registration of various forestry works up-to detailed sub-component level for approval, Online correction and approval by competent authority.
- Online Budget Receipt and Allotment: The system facilitates the entry of the main & supplementary budget allotted to the department by the government. The allotted budget can be further allotted/earmarked up-to detailed accounting head to DDOs and Sub-DDOs. **Budget Surrender** – has been implemented so as to ensure that the needy office gets the budget.
- Budget allotment/earmarking to Sanctioned works: The system also facilitates the Account Head-wise budget allotment for each activity of the approved forestry works.

Forestry and other Works

- The system also facilitates geo-mapping of the registered forestry works. At any moment of time, the progress of the work can also be viewed on

the google map. The progress of the work and the status of the forest area can also be viewed on time line using Google earth

Expenditure

- Online preparation of various types of vouchers so as to ensure that **expenditure is done only for sanctioned works, under approved accounting head & under the approved budget limits.**
- Online examination/passing/pre-passing of vouchers by competent authorities: The work-flow for examination/passing/pre-passing of vouchers by competent authorities (i.e. Sub DDO Assistant, Sub DDO, SDO, DDO Assistant and DDO) has been implemented. Various authorities can also write notes/comments while executing various functions delegated to him.
- Various attribute data pertaining to works, stores, buildings, roads, assets etc is being captured at the time of voucher preparation. These attributes are being used for various reports & analysis.
- The voucher transaction shall also automatically update various registers being maintained for the record keeping i.e. stock register, road register, building register, vehicle log and posting in cashbooks

Revenue

- Revenue Receipts Management- Online capturing & dissemination of revenue receipts along with the attribute information. Challan Management- Online capturing of treasury challans details and their reconciliation with the treasury report using CTR, reconciliation with treasury, automatic posting in cashbook
- Automatic calculation of the voucher amount, man hours etc has also considerably reduced time taken in the preparation of the vouchers.
- Automatic generation of the work proposals, vouchers, cheque drawn register, Cashbooks, abstracts etc have also minimized the manual work and introduced efficiency in the system.
- Online Compilation of all expenditure, revenue, works related expenditure
- Online Generation of cash copy and abstracts, Account of the DDO office & reports.
- Online generation of Cash-book and all related reports and abstracts

c. Geographical Spread in the State achieved

The project has successfully been implemented at the State level

Districts covered	State-wise rollout
Forest Circles	16
Forest Divisions	62
Sub-Divisions	129
Sub-DDOs	450
Forest Ranges	362

2. Efficiency improvement

a. Time saving / improvements in the delivering the above set of services.

Almost all the major functions, processes and services related to all stakeholders have been automated and facilitated by ICT intervention and various application facilitated by the project. This has resulted in substantial improvement in the productivity of the staff and tremendously improved the response by automating the routine manual processes and thereby improving the efficiency of the system.

The application facilitates role based applications. All the authorities have been provided with the authorization and access to use the application to discharge their functions online. The transactions are being captured and all the related reports and other processing is being taken care by the application. The time spent by the staff in the several routine functions and compilation has been eliminated. The highlights are as under:

The integrated work-flow system has eliminated the delays at various levels. The project has reduced the work of officials and other key stakeholders by eliminating around 75% of manual work such as processing, calculation, documentation, accounting, compilation, reconciliation, reporting, monitoring etc. This has resulted in increased efficiency and faster processes.

- System also reduce the manual work, eliminate repetitive tasks and bring in efficiency in the system at various levels by facilitating online generation and dissemination of all vouchers, work proposals, budget allocation, consolidation and reports etc
- On account of the online and integrated system, monthly account closing can be done instantly. Earlier it used to take 15 days.
- System automatically creates centralized registers and databases of Stock, Works, Assets etc
- Earlier hand filled vouchers were submitted after the completion of the work Tracking of the ongoing works and related expenditures was extremely difficult and the same could not be obtained in a timely manner inspite of the high level involvement from controlling authorities. In the new system, automated voucher and cash book generation is facilitated. This ensures the live updation of all expenditure related to the works.
- The project has also resulted in **reduction of redundant** efforts at various offices and timely submission of the accounts to all concerned.
- Faster approval of vouchers and payments to the parties as the vouchers can be passed electronically.
- Monthly reconciliation of accounts of DDO and sub-DDOs is facilitated online.

- The new system has replaced the laborious and mistake prone manual system and will brought about consistency, quality and reliability in accounts.
- Monitoring of expenditure and progress at all levels can also be done in real time
- Elimination of the chances of the vouchers being rejected by treasury due to non availability of budget.
- The budget, expenditure, revenue etc are being maintained under various accounting heads electronically, there by helping all the users to check the fund availability instantly.
- Online availability of the updated and detailed data on budget availability, expenditure, assessment of the budget requirements, revenue position.

b. Cost savings for delivering above set of services.

- The system has helped the department in checking the expenditure of the funds without formal sanction as the system does not allow the preparation of any voucher if the works has not been sanctioned and funds have not been allocated.
- Capturing the data at source of origin results in the timely availability of information at all levels and minimize the chances of manipulation.
- Transparency in the approval and sanction/rejection of the vouchers.
- Physical progress of the works/activities can be monitored on screen using GIS and Remote Sensing Technologies. In build strict monitoring system at various levels resulting into substantial cost savings.
- Possibility of expenditure on non-sanctioned works/activities has been eliminated.
- Possibility of the booking the expenditure in wrong accounting head has also been eliminated
- Efficient allocation, management and monitoring of funds at various levels has now been made possible
- The application facilitates timely and accurate information to the decision makers and planners for monitoring and control & possibilities of under utilization of funds have also been minimized.

c. Cost Saving for availing these services

- Minimization of the routine and repetitive tasks and duplicity of efforts involved in compilation and consolidation has also resulted in substantial saving of time and efforts of accounts staff that is being put in the

preparation of various account books, compilation and consolidation of the accounts and reports and verifying the data with the treasury data.

- Work-flow system has also enforced accountability on all the users of the system, as it is now very easy to track the following:
 - a. Undistributed budget lying with BCOs
 - b. Undistributed Budget lying with DDOS
 - c. Unutilized budget with DDos/Sub-DDOs
 - d. Vouchers pending with DDOS, SDOs, SDDos for passing/pre-passing
 - e. Vouchers that have been passed but the payment has not been made.
 - f. Cheques that have been prepared but not handed over to the party.
 - g. Revenue that has been collected but have not been deposited in the treasury.
- Voucher-wise data is available for all including office of AG.
- Monitoring of the revenue receipts can also be done in real time
- Monitoring and Tracking of progress of the works/projects being carried out under various schemes can be done in real-time and the same can also be viewed using the google earth.
- The system has also facilitated the introduction of transparency in the system and empowerment of all stack-holders

The automation of financial accounting has lead to systematic, error free and live maintenance of accounts of Range and DFO offices, ease in preparation and compilation of voluminous accounts and related reports.

d. Cost savings for availing above set of services.

- All the services are available to the authorized users on the click of mouse.
- The contractors, suppliers can view the status of the passing and payment of their vouchers online. They can also view the details of the cheques prepared and issued to them.

Online pre-passing and passing of vouchers has resulted in minimizing the visits of the Range Officers for obtaining the advance for forestry works and followu-up for the passing of the vouchers

III) ENABLER INDICATORS

1. Processes

a. Major front end process changes and implemented

In view of multiple users, large number of Verification/sanction/disbursal authorities, controlling offices and huge array of stakeholders and works, one required a platform to facilitate collaboration, coordination, seamless integration of activities, functions and smooth automation of key processes and updation of key information in real-time. Some of the key front end operations that have been automated and implemented include the following

A. Range Offices (Sub-DDOs)

- The online system facilitate the Sub-DDOs and all other stakeholders of the system to view and print the latest status on the following:
 - (a) Approved works under various accounting heads & schemes, amount sanctioned and amount available, amount spent.
 - (b) Amount available for various works under various schemes as on date.
 - (c) Validate the Voucher – for availability of funds

Preparation of the voucher:

- The user can use any system from any location to log onto the server using internet connectivity and then perform following actions:
- Select the type of voucher from the following -
 - (a) Forestry works
 - (b) Construction works
 - (c) Store Articles (perishable/ non-perishable items)
 - (d) Miscellaneous Vouchers
 - (e) Treasury Vouchers
 - (f) Vehicle Maintenance
 - (g) Forest Advance Vouchers
- Enter the required details on in the voucher form and related link form
- The system validates the voucher.
- Correct the voucher.
- Generate the voucher form and print it.
- Send the voucher along with the supporting documents to competent authority for pre-passing as per the existing practice.
- Complete the online-voucher after making the payment to the concerned by entering the required fields. The user is not allowed to edit/modify the voucher once it has been finalized.
- The cash copy and other documents/records etc is updated only after the user completes the voucher on the online system and freeze it.

- The Sub-DDO can not edit the voucher after it has been finalized and freezed.
- The sub-DDO is also given a facility for surrendering the works/budget to higher authorities. Incomplete works can also be surrendered.
- The sub-DDO can record the completion of the work and surrender the remaining budget.
- The sub-DDO can enter the details of the revenue received and generate the challans.
- The sub-ddo can generate, print and file the following reports/registers from the system for completing the office records:
 - (a) Cash book/copy
 - (b) Abstracts
 - (c) Stores register

B. Drawing and Disbursing Officers (DDOs)- The system facilitates the DDO to get the latest information on the following:

- Sanctioned amount under various schemes to his division and to various offices under his control.
- Amount already spent , Amount available.
- The system facilitates the DDO to register the works to be carried out at various Coupes under various schemes by the ranges and earmark (allot) the budget.
- The DDO can also revise the budget allotment/cancel the approvals for works in case the work has not been initiated.
- The DDO can also be enter the details of the revenue received and generate the challans.
 - (i) DDO can use the online system to verify and validate all vouchers before pre-passing.
 - (ii) DDO office can also use online system for the generation of vouchers for its own expenditure.

Budget Controlling Officers

- (i) Enter the Budget received from the Government
- (ii) The system facilitates the BCO to allot budget to DDOs.
- (iii) BCOs can also use system for online monitoring of the budget utilization, progress of works.
- (iv) Compilation of accounts of receipts & payments received.
- (v) Generation of Report & Dissemination of information through web.

Reports and business intelligence generated by the system include the following

- Live availability of the scheme-wise, head0-wise budget allocated and utilized at various levels
- Live availability of the progress of the works being carried out.
- All Vouchers
- Cash book of range – shall involve the details of the forest advances received from the DDO and expenditure.
- Abstract of CR, Abstract of DR
- Cash book of DDO – shall incorporate the details of the treasury transactions, accounts of the Sub-DDO, direct payment made to various parties and revenue.
- Office-wise opening balances
- Cash abstract of cash accounts
- Form 7 (A) (DDO Level) – Head wise summary of revenue
- Form 7 (B) (DDO Level)- Head wise summary of expenditure
- Form 14 – Expenditure, Form 14 – Revenue
- Form 54 – Register of cheque drawn
- Building Maintenance Register
- Stores Activity Register
- Vehicle Maintenance Register
- Expenditure Register

2. *People and Resources*

a. Project management & Monitoring – Full time team in place

- Master Trainers has been identified and trained to carry out training programs, work shops at district & Block level to ensure the capacity building of existing staff.
- The pilot implementation of the application and online system was carried out in all the offices in year 2008-09.
- User manual of the application was also formally released during
- Trainings- Trainings and awareness programs were conducted at Bhopal and various divisions with the help of NIC to educate users about the the operation of the system
- Internet connectivity was facilitated to all DDO Offices and range Offices. Option of using Internet Kiosk was also allowed.
- Regular workshops/hand-on training programs were conducted at district level to facilitate the implementation.
- The application was continuously improved and enhanced to incorporate the additional requirements of various offices and users.

User Feedback, Project Assessment mechanism

- The implementation the project and the problems being faced by the users was regularly reviewed on Video Conferencing.

- The feedback received from various stakeholders is also analyzed very rigorously for planning the improvements/modifications in the applications.

The State level authorities conduct review meeting through Video Conferencing to interact with the field authorities to obtain their feedback and review their performance

b. Achievements of training of internal & external members on the new system

- Master Trainers were identified and trained at various levels.
- Trainings- Continuous Trainings and retraining have been/are being provided to all the users to use the system effectively to minimize their work load and improve their work efficiency and effectiveness. Training sessions were/are also conducted through Video Conferencing facility.
- User Manual in Hindi was prepared to guide the students, colleges, nodal agencies and sanction authorities in the proper operation of the system
- The application was continuously improved and enhanced to incorporate the additional requirements

c. Change management strategy defined and implemented

- The project facilitates a role based systems and all individuals perform their functions online and hence the workload is distributed amongst various functionaries and is minimized.
- The project replaces the repetitive and time consuming manual system and thus reduces the work load of all the stakeholders and improves their work efficiency and effectiveness.
- The project has also resulted in the improved and professional working environment of staff.
- Proactive Governance - Online mashing and analysis of the transaction data related to various entities and processes generate several analytical reports that are being used for forecasting the requirement of funds, mismanagement, pendency and other problems in the initial stages and help the authorities in taking timely preventive/corrective action. It greatly helps administrators to effectively plan and administer the works and budget.
- Online analytical reports help the Government, management at different levels and community to know gaps and shortcomings and guide focused corrective interventions

d. Leadership support (Political, Bureaucratic) and its visibility

- The project is in the priority list of the Chief Minister and Minister of Forest, GoMP.
 - Orders have been issued by the department for the successful implementation of the project.
 - Media and public at large besides all the employees have easy access to all process information like budget, works, vouchers, expenditure, revenue receipts, cashbooks etc.
 - The system has facilitated transparency in all the processes involved in all the operations as all the vouchers, cashbooks, revenue receipts, work proposals, expenditure status, budget availability etc available online for viewing.
- e. Financial Model (Funding pattern , Business model PPP etc) defined and implemented*

In view of failure of large number of e-governance initiatives involving substantial investments, it was felt that the Project should not entail initial expenditure on procurement of costly hardware, data centers, software licenses, software development, procurement of clients etc. It should also essentially use the existing infrastructure and manpower.

- Zero development & deployment cost - The project has been designed, developed & hosted in-house by NIC, uses in-house resources of NIC, and did not involve any capital expenditure on hardware, software, data center and licenses.
- Zero Implementation Cost- The application requires a low-end PC with browser and Internet Connection and does not require any costly hardware and upgrades. Existing set-up of the Colleges/offices is being used for using the application.
- User can also use Linux based computer systems or use public internet kiosks for using the services of the project.
- The benefits to diverse stakeholders, in-house resource and the institutionalization of the system have ensured that the system will sustain and continue to grow.

3. Technology

a. Disaster Recovery & business continuity plan defined & implemented

- The application is being hosted on the NIC data centers and all the DR related work is being taken care by NIC
- The project is being augmented, improved, and maintained in house by NIC so as to ensure sustainability and continuity.

- No financial requirement for sustaining the project.

b. Technological solution cost effective and maintenance over time

- The project is cost effective as it is being maintained by NIC. It has been hosted on NIC data center. **No financial burden to State Govt. exchequer for its operation**
- From the user perspective, the user needs a low end PC with and Internet Connection for using the services of the project.
- User can also use Linux based computer systems

c. Security and confidentiality standards defined and implemented

The project has been designed and developed using the Service Oriented Architecture and is fully compliant to the web-security guidelines.

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