



Revenue Management from Traditional System to Modern System in Himachal Pradesh

Amar Jeet Singh¹ and Mohini Bhardwaj^{1*}

ABSTRACT

The present study is based upon E-Governance initiatives in revenue administrations through computerisation of land records, registration and issuing of various certificates under HImbhoomi, Himris and E-Praman projects in HImachal Pradesh. The paper revolves around the use of ICT in bringing efficiency, effectiveness and transparency in the revenue governance to make the availability of vital information through E-Governance. The findings based upon the available data shows that the people are benefited by this new technology and comes out to a citizen friendly.

Keywords: ICT, HImbhoomi, Land Record, Himris, Registration Information System, (Electronic Certificate)

1. Introduction

The history of using of land for agriculture and dwelling purposes were found in the historical documents and the systematic and planned development of land can be seen in the ruins of Mohan-Jo-daro and Harappa civilisations. Tracing back the recorded history of revenue records in the country in 1580, Emperor Akbar instituted a new system called the 'Dahsala'. Under this system, the average produce of different crops as well as the average prices prevailing over last ten (dah) years was calculated and one-third of the average produce was the state share. Later on, a further improvement was made by not only taking local prices into account; parganas having same type of productivity were grouped into separated assessment circles. Thus the peasant was required to pay land revenue on the basis of local produce as well as local prices. Being deeply interested in the improvement of land records, the peasants were given loans for seeds, implements, animal etc. in times of needs and loans were recovered in easy instalments during the period of good produce. In order to keep track of all such information, the records were maintained to know the extent of ownership/possession, cultivation, land types etc.

During the colonial period, the Britishers used the records, maintained after carrying out such modifications as were deemed necessary, primarily for the purpose revenue collection. At the time of independence in 1947, the lands were broadly held under Zamindari System and Royatwari System. The main aim of British's for enforcement & strict administration of land records was mainly focused on the collection of land revenue. Himachal Pradesh is the only state in the country where 91% of the total population lives in rural areas and two districts namely Kinnaur and Lahaul-Spiti has no urban areas. According to 2001 census, inhabited villages are 17495, town and cities are 57, total population is 60,77,900 lakhs (Rural-

¹ Department of Computer Science, H. P. University, India

* *Corresponding Author:* (Email: mohini_bhardwaj@rediffmail.com, Telephone: +91-94180-47686)

54,82,319 Urban-5,95581), density of population is 109, whereas literacy rate is 76.5%. The state economy of the state is based upon agriculture and the contribution of agriculture in Gross Domestic Product (GDP) is 21%, the importance of land is primarily to the people of state.

In all the states, the land record computerisation has been started and in Karnataka, Tamilnadu, Goa and Gujarat, the system is fully operational. In these states various kinds of land record's softwares are operational viz. Bhoomi (Karnataka), Tamil Nilam (Tamil Nadu), e-Dharni (Goa), Bhuyan (Chhatisgarh), APna Khata (Rajasthan), e-Dhara (Gujarat), Bhumi (West Bangal), Himbhoomi/Himris/E-Praman (Himachal Pradesh). The scheme of comprehensive modernisation of Land Records has been launched by the Govt. of India from the first year of 11th Five Year plan. Cent percent Central assistance being provided to the states for computerisation of land records.

2. Land Records Administration in Himachal Pradesh

Himachal Pradesh with an area of 55673 sq. Kms comprises of 12 districts having 109 Tehsils. The districts are further put under three revenue divisions namely Shimla, Kangra & Mandi. The class of Revenue Officers who administer and exercise the general superintendence and control over all the other revenue officials viz. Financial Commissioner (Revenue), Divisional Commissioners of Shimla, Kangra & Mandi Division, Collector or Deputy Commissioners, Assistant Collector and the nodal officer for the state is the Director of Land Records.

The basic functions of the Revenue administrative set-up in Himachal Pradesh are to maintenance of various documents and regular updates, implementation of various laws and policies, Survey, Settlement and special Girdawari during the natural calamities to assess the damage. The revenue department of the state has launched a special drive for computerisation of land records. Rs. 10.29 crores has so far been spent under this scheme and data entry has been completed in 88 out of 109 tehsils/ sub-tehsils. Computerisation of land records has commenced in 88 tehsils and 19506 of the total 20683 villages has so far been computerised.

Land Records Maintenance in Himachal Pradesh

The land records are maintained in the manner prescribed under Section 31 - 37 of Himachal Pradesh Land Revenue Act. Under this Act, elaborate procedures for making the new records at the time of new settlement and their periodical updating have been laid down. The system of land administration is similar to a great extent to that in Punjab and is perhaps one of the best in the country. In the present manual system, the revenue authorities maintain different types of periodical documents namely Shajra Nasb, Jamabandi and associated statements (Records of Rights), Intkal (Mutation Register), Khasra Girdawari (Harvest Inspection) Register

Overall growth, technological and social hazards, environmental degradation have all taken into account today by the policy makers, resource planners and administrators who make decisions about the land. They need more detailed land information that has been traditionally available. Although efforts are made to improve the manual system of maintenance of land records but these efforts are not sufficient. Computerisation of this oldest system offer improved way of acquiring, storing, processing and retrieving information.

Realising the importance of e-governance in revenue management, the Govt of India has initiated a Pilot Project in 1991-92 in District Kangra for computerisation of core data contained in the land records so as to assist development planning and to make the records more accessible to the people, planners and administrators. Centrally Sponsored Scheme on computerisation of the land records was formulated in 1994:

Before introduction of ICT, the land holders faced many problems and some times he has to spent lot of money and time to get his own land records. The major problems faced by the land holder :

- The process of registration used to take more time than actually required due to human interventions and sometimes vested interest.
- The people had to visit the Patwari for obtaining average rates of land in the area in which transaction proceed to take place. In many cases even people has to pay the bribe to get their work done.
- The calculation of average land prices depend upon the transactions taking place in that area. Manually calculation put state exchequer on loss.
- The quality of services provided to the people were very poor.
- Loss to the govt. due to under evaluation of registration, stamp duty and ser-charges.
- No transparency in the manual system.
- The rates of stamp duty, registration and ser-charges which were changed from time to time by the govt were not properly charged from the public.

Initially in a Pilot Project in District Kangra, the Software was developed in Foxplus under UNIX. The computerisation efforts involved were confined to production of the Jamabandi (Record of Rights) in order to give copies. In the twelve districts of the state, the total numbers of tehsils are 109 and sub-division 50. Him-Bhoomi project has been implemented in 92 tehsils, Himris in 57 tehsils and E-Praman in 88 tehsils of the state.

Table 1: District Wise current status

District	Total number of		E-Praman	Him Bhoomi	Himris
	Tehsils	Sub Div	Tehsils		
Bilaspur	4	2	2	4	2
Chamba	10	6	10	9	6
Hamirpur	6	3	5	6	1
Kangra	19	8	12	12	12
Kinnaur	6	3	6	6	0
Kullu	6	3	6	5	1
Lahual-Spiti	3	3	3	3	2
Mandi	16	6	11	16	6
Shimla	17	7	17	14	17
Sirmour	10	3	7	7	1
Solan	7	4	5	5	5
Una	5	2	4	5	4
State Total	109	50	88	92	57

Source: Revenue Department, Himachal Pradesh

3. HimBhoomi

From the experience gained from the initial implementation in Kangra and Sirmaur districts of the state, comprehensive land records computerisation system was developed. Technically the improvement started with development of the Software in Oracle 7.0 under UNIX instead of Foxplus under UNIX, because Oracle was more powerful Software and also improved the security of the data so essential to land records. The Software was made more comprehensive by including all the main land records. Separate Software modules were envisaged for Shajra Nasb, Jamabandi and associated statements, Mutations, Khasra Girdawari, Agricultural statistics and Kisan Pass Books etc. Under this software, a Unique code is assigned to each individual appearing in any capacity in land records thereby enabling anyone to know the extent of land possessed, which could be a basis for many e-governance applications. In addition to this, numerous inferences can be derived from analytical studies to be carried out on the basis of this Unique Code. For

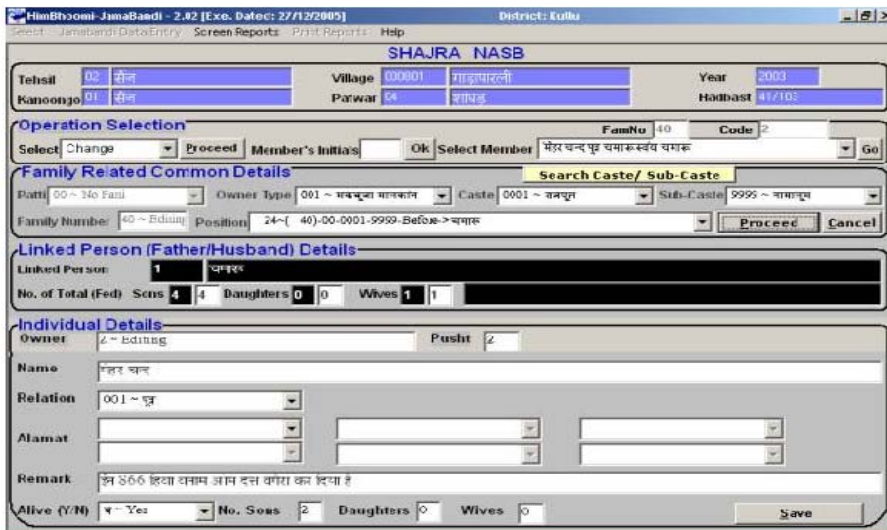
instance, person claiming to be a small farmer (but actually having scattered land at numerous locations) can be easily identified. Similarly, extent of fragmentation of land and its impact on yield over the decades can be quantified. Moreover, a person enjoying different statuses illegally (e.g. a tenant and landowner at the same time) can be identified. This software facilitates mutation entry and generation of Nakal and Jamabandi. This software creates a complete MIS as it encompasses Minor Irrigation Census, Agriculture Census details there by helping the Department in smooth conduct of irrigation & agriculture census which are conducted after every five years. This may lead to substantial saving of effort and resources as much of the information related to it can be extracted from HimBhoomi databases. In addition to it the new technology has helped in creating Revenue village code same as the census village code, hence, all the data can be correlated with the Land Records database to carry out various even micro level studies down to the individual level. This has helped in getting revenue documents within a shorter possible time as earlier 3-4 months were taken to get the same and made it cost effective.

HimBhoomi Modules

The HimBhoomi software has different modules viz. Gram Nideshika, HimBhoomi-LaPort Module, HimBhoomi-Mutation module and HimBhoomi-ROR (Nakal) Distribution Module. This software has used the old traditional Terminology viz. Khewat Number, Khatoni Number, Khasra Number, Min & Salam, Mortgagae, Awaal / Doaym / Soyam.

Himris

The powers of sub-registrars have been vested in Nayab-tehsildar. The landholders leaving in far flung areas come to offices after spending hours to get as many service at the same time from a single trip. With the introduction of computerisation of land records since 2005, e-governance related services, including certificates of different kinds issued on the spot and thus the whole process is run through Property Registration software.



(Courtesy NIC Web site)

Figure 1: Himbhoomi Jamabandi

Objectives

The underline concept of implementing Himris, to provide benefit of ICT in the revenue system with following objectives:

- To provide timely and efficient service to the people in a efficient and transparent manner
- Enforce the changes in the system uniformly.
- Tapping of leakages in the revenue to due under value of rates of stamp duty and registration.
- Better services to the citizens by providing them spot registration and single window service.
- Prevention of frauds like impersonation, professional witness and proxies by capturing of photographs of all the parties and witnesses on the spot.
- Better monitoring of revenue collection, evaluation and implementation of policies and programme of the govt besides replacing non-uniform, person specific processes.

E-Praman

Various types of certificates viz. Bona fide Certificate, Rural Area Certificate, Indigent (Needy Person) Certificate, Domicile Certificate, Agriculturist Certificate, Character Certificate, SC/ST Certificate, Dogra Class, Minority Community, Other Backward Class Certificate, Income Certificate, Non-Employment, Backward Area Certificate and Legal Heir are issued by all the tehsildar and sub-divisional magistrate offices. To make the availability of these certificates easier, E-Praman has been introduced in Himachal Pradesh since 2005. This ICT system has helped the citizens to get the same easily and thereby the state has also generated revenue on account of it. Also the Tehsil centres are becoming hub of e-governance centres where in various services like issuance of RoR Nakal, property registration are going on, it seemed appropriate to expand the scope of services from the Tehsil centres so that in one visit citizen may get as many services as possible. Also in 29 sub-divisions 'Pehal' e-governance centres are already established and offering services like issue of driving license, vehicle registration, with the introduction of computerized system of issuance of certificates in these centres again the scope of services has been enlarged.

The three components viz. HimBhoomi, Himris and E-Praman has been successfully implemented in all the districts of the state. Under HimBhoomi 127124 nakals were issued, 64327 number of mutations attested in the field, 68473 mutations were entered, 78233 mutations are pending, 4820 villages for which next Jamabandi generated and 1520 villages for which Khasra Girdawari printed. Under Himris 36494 registrations were made and under E-Praman 328796 various certificates were issued and the total revenue generated under three components was Rs. 94,09,054.

Impact of Revenue-Governance

The computerisation of land record has brought efficiency and transparency in land revenue Administration besides making the revenue record temper proof, leads to easy maintenance and fast updation. It has empowered the land holders to get their records easily. The earlier manual system was time consuming and having many hurdles in getting the vital information for various purposes. This has also helped in obtaining a loan from bank, serves as a proof for getting various benefits under different govt schemes, submission during court cases and requirement for seeking compensation and crop insurance during natural calamities.

The ICT system allows better management by Divisional Commissioners, Collectors, tehsildars and lower level revenue officers in implementing the revenue laws and by-laws. With this various reports can be generated easily and the data available with the revenue department can be timely submitted to various national and international agencies for getting various project and schemes. ICT has also resulted in giving better services, thereby giving a better image of the govt. The record keeping has also been better in comparison to the earlier manual system.

Future Benefits

The introduction of ICT have played a significant role by not only standardizing the Land records documents, procedures and implementation of various Acts & Policies but has also made life of people

easy by making available legible records of rights (ROR) in time without any hassle and they need not chase the Patwari for copy of ROR. The computerisation has been adopted overwhelmingly both by department as well as the public. Patwari has more time to serve public and perform multiple official duties and at the same time, the public has been put into convenient position as one can obtain ROR from Tehsil/Sub-Tehsil centre on any working day by filling a simple application form. Instances have come to notice where for taking copy of ROR, one had to wait 2-3 months where as now it is available in just 10 minutes.

Table 2: District wise Tehsil Cente performance upto June 2007-07-27

District Name	Village	Himbhoomi				Himris		E-Praman	
		Number of Nakals Issued	Total Revenue generated (Rs)	Number of mutations entered	Number of villages for which next Jamabandi generated	Number of registrations done	Total Revenue generated	Number of certificates issued	Total revenue generated
Bilaspur	1416	698	7461	2635	301	1710	222195	2394	11920
Chamba	1834	1406	16120	789	181	940	136330	31182	155940
Hamirpur	1707	4888	70616	9665	618	2364	313700	64218	325800
Kangra	3100	108	1311	19638	110	4657	1919908	30385	154085
Kinnaur	744	6354	63730	2396	266	0	0	4240	21200
Kullu	314	510	0	120	5	0	0	1296	12960
Lahual-Spiti	521	145	1912	799	446	81	12615	4441	22205
Mandi	4181	11033	150172	5789	1706	1657	313100	42914	214575
Shimla	4633	94491	476438	12552	907	9669	1516975	48324	487070
Sirmour	1018	105	2630	1818	50	324	45455	19234	96170
Solan	3533	0	0	511	149	2955	299715	8757	32645
Una	866	7386	249036	11761	81	12137	1698760	70961	357305
State Total			1039426	68473	4820	36494	6477753	328796	1891875

(source: NIC Website)

Current Status

The Govt. is spending lakhs of rupees on the computerization of this project. But the success rate is not upto the mark, as on today Patwaris are issuing manual Jama-Bandi and Tatimas, which is the basic record for any transactions like getting bank loan, selling of land, deed etc. One of the biggest problems which is being faced is the conversion of old units into new units. Each district has different measurement units, for example in Solan district, 425 sq feet is equal to 1 Biswa, in Una district 450 sq feet is equal to 1 Biswa. That is why they are not issuing certificates.

This computerization is limited to sub-division level & there is no full connectivity of all the offices. As this project is in its initial stage and the actual consumer is not benefited. The revenue officials sitting at the lower ebb are reluctant to shift on to this new technology. They have the monopoly and say. The patwaris are not yet trained and moreover, they do not have a will to shift to this system and maximum number of patwar-khanas are situated in the far-flung areas of the state. Maximum number of patwaris are reluctant to shift to new system, as per their saying, this is not their age to learn to new technology. It is very difficult to change the mindset of the people who are working in the system for the last 3 decades. Large number of posts are lying vacant in the revenue department which is hampering the computerisation project

Future Scope

To make the system more accurate, there is a need to linking land records and registration of property thereby reducing the revenue litigations. Providing back end data for the issue of certificate like cast. There is need of proving full security system like Bar-code, Hologram and watermark in the certificates. There is a scope of making this web-enabled facility. The total system will be totally successful when all the panchayats will be provided computers and on-line facilities at the village level, so that the actual beneficiaries can get the information at their door-step. This system will become more accurate if all the govt. offices are interconnected, so that redundancy of data can be minimised.

4. Concluding Remarks

E-revenue Governance is a new concept to improve the transparency, efficiency and effectiveness of public institution. ICT has revolutionised the basic revenue system in Himachal Pradesh by successfully implementing the HimBhoomi, Himris and E-Praman in the state. The combination of these factors has already brought a sea change in the rural areas of the state, thereby helping the agrarian society. The computerisation has converted the age old manual data into a electronic format and provided revenue record out of the database. This has brought a silent revolution in the state and vital and important revue records are available with the click of button.

Acknowledgement

Author is thankful to the Directorate of Land Revenue, Directorate of Information and Public Relation, Himachal Pradesh and District Revenue Office, Shimla who have provided the vital information for producing this paper.

References

1. Budget Speech, 2007-08 of Hon'ble CM, Himachal Pradesh, p 36-37.
2. Chawla, R (2007), Empowering farmers to obtain records of their land, *e-gov*, vol 3, issue 7, July 2007 p 27,
3. *Four years of Peace*, Progress and Prosperity in Himachal Pradesh, Information and Public Relation Department, p 70.
4. *Jansata* (Hindi), 29 July, 2007, p-3.
5. Kesari, A and Kumar, V (2007), Re-engineering land record computerisation, *e-gov*, vol 3, issue 7, July 2007, p-30.
6. *Land revenue information available* at <http://admis.hp.nic.in>
7. *Statistical Outline of Himachal Pradesh 2005-06*, Economics and Statistical Department Himachal Pradesh, p 1, 8.
8. Statistics available at <http://www//himachalpr.gov.in>

About the Authors

Amar Jeet Singh is a Senior Lecturer in Dept. of Computer Science, H.P. University. He is a Bachelor of Engineering in Computer Technology from MACT Bhopal, Master of Science in Distributed Information Systems from Business School of University of East London and PhD from H.P. University, Shimla. His areas of interest are Distributed Information System, E-Commerce and E-Governance.

Mohini Bhardwaj is a Programmer in Computer Centre, Examination Wing, H.P. University, Shimla. She is Master in Computer Application, IGNOU and pursuing PhD from H.P. University, Shimla. Her areas of interest are Software Development, E-Commerce and E-Governance.