About the Centre for Rural Studies

The Centre for Rural Studies (CRS) is a Research Centre of Lal Bahadur Shastri National Academy of Administration, Mussoorie. It was set up in the year 1989 by the Ministry of Rural Development, Government of India, with a multifaceted agenda that included among others, the concurrent evaluation of the ever-unfolding ground realities pertaining to the implementation of the Land Reforms and Poverty Alleviation Programmes in India. Sensitizing of the officer trainees of the Indian Administrative Service in the process of evaluating of land reforms and poverty alleviation programmes by exposing them to the ground realities; setting up a forum for regular exchange of views on land reforms and poverty alleviation between academicians, administrators, activists and concerned citizens and creating awareness amongst the public about the various programmes initiated by the government of India through non-governmental organisations are also important objectives of the Centre for Rural Studies. A large number of books, reports related to land reforms, poverty alleviation programmes, rural socio-economic problems etc. published both externally and internally bear

IDENTIFYING EXISTING CAPACITIES TO EXECUTE THE NATIONAL LAND RECORDS MODERNIZATION PROGRAMME IN WEST BENGAL: AN APPRAISAL



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FOREWORD

Focus on the welfare of citizens is key to the fundamental structure of a federal and democratic nation like India. This is addressed by different programs and schemes under various departments. Modernization of land records has been crucial to give recognition to tenurial rights of farmers and landholders. NLRMP is the most comprehensive tool so far towards modernization of land records. It has emerged in 2008 with multiple approaches in institutional and technological interventions in the areas of creation, updating and maintenance of land records. Land issues are state affairs. Therefore, implementation of the program is vested with state governments. However, the Centre plays a significant role to coordinate with the state governments and facilitates states with formulation of new policies and schemes in the related field. The Department of Land Resources (DoLR) has been the Nodal Agency in the country to coordinate and facilitate with the states. It provides financial support to all the states in the country. Meanwhile, it keeps a close watch for effective implementation of various programs related to land resource in the country. NLRMP has been rolled out in all the states but the degree of its implementation and also the quantum of its progress varies widely across all the states in the country. The DoLR had engaged the Centre for Rural Studies of NIAR, LBSNAA to assess the physical and financial progress of NLRMP in several states of the country. I am very glad that the CRS has brought out a report on "Identifying Existing Capacities to Execute the National Land Records Modernization Program in West Bengal: An Appraisal". Hope, this will help immensely to understand the ground realities with regard to implementation of NLRMP in the State.

Charanjit Singh

Director, DoLR Government of India

PREFACE

The West Bengal state is an exemplary for its successful land reforms, distribution of vested land to the poor and landless, and also to enforce legal rights to the tenants. This is the only state which has a single dedicated department for land and land reforms headed by a senior IAS officer of the Commissioner Rank. With its long tradition of protection of tenant farmers, the state has also better cadastral records with periodic survey frequently taken place by the state government. Therefore, the mauza maps are updated and accurate. Each mauza map contains a large number of plots. Unlike in Maharashtra and in some other states, there is no distinct plot sheet maintained by the administration. However, with the systematic resurvey undertaken, the dimension of plot maps is found to be accurate and mostly compatible with the existing land records. With the implementation of the National Land Record Modernization Program (NLRMP) in the State, the state has modified the Bhumi software in its new name, 'Bhuchitra'. As the name indicates, the software is designed to accommodate both textual and spatial land record information (RoR and mauza map in a single software). The Mauza maps are scanned, digitized and made management friendly as well as user friendly. The Plot maps showing size and landholding details with additional information about the adjacent plots are extracted from the mauza maps as and when required. This facility is already extended across all the districts in the state. However, the task is still unfinished. The scanning and digitization of all the cadastral maps and their integration with RoRs are to be done for all the revenue villages/mauzas. Wherever, there is need, modern cadastral survey approach has to be adopted. The present effort does not commensurate with the modern cadastral approach which advocates for geo-referencing of plot maps. "Identifying existing capacities to execute the NLRMP in West Bengal" is a sincere effort of the author to reflect the realities about concurrent physical and financial progress with regard to implementation and execution in the state. I hope, the report will be very helpful for further extending the study in other states. The inputs given in the report will also be helpful for the Nodal Agency to further facilitate the state for better implementation of the ambitious programme.

Dr. Prem Singh, IAS

Centre Director, CRS, LBSNAA

We wish to express our sincere thanks and appreciation to Dr. Prem Singh for his constant inspiration and encouragement in taking up this study in West Bengal.

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We express our sincere thanks to Shri Charanjit Singh, Director, DoLR, Government of India; and Shri P.K. Pramanik, Sr. Technical Director of NIC, West Bengal for extending their wholehearted support in the study.

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INTRODUCTION

Background

India has brought many significant policy and administrative reforms in the recent past among which land administration is a vital area of reform initiatives taken place in the form of NLRMP in 2008. Reform in land administration has taken place in different states but in different degrees with the conscious facilitation by the Centre. However, this has taken place in such a manner to look beyond traditional institutional reforms as introduced in the form of land reforms during an early independence period. All major functions of land administration, such as creation of land records, maintenance and updating of land records, registration of land property, etc. are revisited with a fresh outlook. Leveraging modern technology in addition to legal and institutional support in land administration has been key strategies for revival in the recent period. Three major departments that work under the ambit of land administration, such as Revenue department, Survey and Settlement Department and the Property Registration Department are being facilitated with new policies, approaches and modern technologies.

Management of urban land has gradually become more complex due to partition of property with the increase in sale, purchase, inheritance and other related transactions. The non-elastic resource land is basic for all fundamental economic and development planning. The rising demand for land by investors, farmers, landless poor, etc. has further pushed interest to look into land record management more seriously than ever before. Land is a state subject in India. Land administration, even today, inherits more or less same practice since British regime. While majority parts of India, including in West Bengal, undivided Bihar, Jharkhand, parts of Odisha, and also some parts of Uttar Pradesh have features of the zamindari system, the southern and some western parts in Maharashtra and Gujarat have ryotwari system; mahalwari system found in the northern states such as Punjab, Haryana, Himachal Pradesh, and parts of Uttar Pradesh. Land record management in India has developed in accordance with the survey and settlement system practiced during the British administration. Therefore, both similarities and differences exist in different regions and also in different states. Textual and Graphical outputs of the survey are important to assess the land revenue and land record management. Tippans or plot maps have been created since pre-independence in ryotwari areas, mauza map or village cadastral maps are found in the permanent settlement areas. The types of land records largely vary among states in the country. In addition to basic record of rights, the record of accounts, the record of tenants, sharecroppers and *bargadars*, crop related information are also maintained in some states. While Karnataka has the record of crop grown; the record of share croppers and bargadar is the practice in West Bengal.

Over the years with increasing demographic pressure, policy and development intervention, the states are overburdened with additional responsibilities. The pressure on revenue administration has been proportionately increased. In addition to follow traditional land reform measures such as the account of ceiling surplus land, vesting surplus land, distribution of vested land, etc. approach towards modernization of land records has been key to the whole revenue and land administration because of increasing land and property value. While the land revenue collection out of land and property holding has been diminishing importance in rural areas, property registration in urban areas has contributed significantly to the state revenue. Land and property registration has been the second most important contributor to land revenue in states like West Bengal, Maharashtra, Tamil Nadu, Haryana, Karnataka, etc. except after excise and custom department. Therefore, it can be easily imagined how significant it is to facilitate the property and registration department for more efficient and effective manner.

'Land records management is an important sovereign function in both rural and urban areas. In the rural areas, it has significant impact on the livelihood of the people, who directly or indirectly depend on agriculture and other allied sectors. Further, to ensure proper development planning and decision making about agriculture or industry, the accurate database on land is crucial. An accurate database can only be ensured through proper land records management system' (Vachhani & Behera, 2010). The welfare approach on one hand, and growth and development approach on the other hand has induced reforms in the land administration as a whole.

The welfare approach

Management of rights, restrictions, responsibilities and risks in relation to property, land and natural resources are the functions of land administration. These functions include the processes related to land tenure (securing and transferring rights in land and natural resources); land value (valuation and taxation of land and properties); land use (planning and control of the use of land and natural resources) and more importantly land development (Williamson, Enemark, Wallace, and A. Rajabifard, 2010). In order to give justice to the poor, every inch of the land has to be surveyed and mapped. All the land records have to be documented and kept updated. Pramanik (2012) noted that each small parcel of land is to be accurately measured & identified using precision

survey techniques. Therefore, land records should capture all relevant information including land and landholding details, crop details, irrigation details, to name a few. Land data should capture details about land classification, size and location of land, etc. The land holdings should depict details about land ownership with all legal heirs, tenants or sharecroppers amongst others. The land use pattern should be recorded and maintained properly. The market valuation of land should be clearly established and kept up-to-date. The process of property registration should be smoother and easier. Further, the land be efficient, effective, transparent administration should and accountable. By so doing, both state and its citizen will benefit and progress. These are some of the visions of a good land administration. Gone are those days when collection of land revenue and extraction of rent was a sole motive of the revenue administration.

Changes in ownership, division or even amalgamation of plots and their usages are a continuous phenomenon that ought to be accounted for in real time so that land records mirrors the ground condition. Various policy measures on land are taken to safeguard the interest of various social groups, for the purpose of food security, the interest of the state as a whole to meet the aspiration of the Government. Measure of land holdings for an individual may have a limit; conversion for land usage may be restricted so that there should not be a crunch of land resource for the production of food. Many such restrictions are in vogue and a quite a good number are legislated every year. Implementing the same always was a challenge in itself (Pramanik, 2012)¹.

¹ Unpublished paper submitted to the National Workshop on Land Records Management in India: A Plea for Reforms, organized by the Centre for Rural Studies (NIAR), LBSNAA, Mussoorie on 23-24 January 2012

With states like Karnataka, Gujarat, Madhya Pradesh, Rajasthan, Maharashtra, Haryana, Tamil Nadu, Odisha and West Bengal have already made good progress in computerization of land records and computerization of registration, modern cadastral survey is taken up in some states with the application of ground survey methodology by using total station and GPS or by hybrid approach such as aerial survey, satellite imagery and use of ground survey methods.

Economic growth and development approach

Several World Bank studies have reported that the efficient land administration has facilitated economic growth. For example, Thailand, after successful land titling, there is a boost to economic growth. A report on www.doingbusiness.org of the World Bank noted that India holds 94th position as far as efficiency or the time taken for property registration is concerned. The time taken to the property registration in the whole South Asia is longest in the world. It is the third most corrupt sector in India and most corrupt sector in other South Asian countriesⁱ. Involvement of middlemen is large in this sector. Rent seeking behavior is high. There is a lack of adequate transparency and accountability as well. India loses 1.3 % potential growth rate due to poor governance in land administration (McKinsey Global Institute Report on India, 2001).

Therefore, modernization of land record can facilitate the better growth rate. The lack of survey and resurvey and also lack of updating of land records has been a serious issue addressed by the Report of the Committee on State Agrarian Relations and the Unfinished Task of Land Reforms. The Report noted that the key elements of an effective land policy are the following:

- Modernization of management of land records
- Reforms relating to land ceiling

- Security of homestead rights
- Reforms relating to tenancy laws
- Protection of the rights in land of tribals
- Access to agricultural services

National Land Records Modernization Program (NLRMP): A Brief Outline

The National Land Records Modernization Program introduced towards the end of the last decade is an impetus for growing synergy between the Centre and the States in relation to land administration (Singh and Behera, 2012). Some believe that the National Land Records Modernization Program (NLRMP) is an outcome of a series of reforms in land administration. The National e-Governance Plan (NeGP) emphasizes its speedy implementation. Within a state itself, the program has effect to bring coordination among departments such as Survey and Settlement, Revenue Department, and Registration Department to deliver service effectively and efficiently. The Department of Land Records (DoLR), Ministry of Rural Development has put tremendous effort to develop this new program and get it approved by the Cabinet in 2008.

The main objective of the NLRMP is 'to develop a modern, comprehensive and transparent land records management system in the country with the aim to implement the conclusive titling system with title guaranteeⁱⁱ. The components of the program are computerization of land records that include the digitization of cadastral map and its integration with textual data, survey/resurvey and updation of all survey and settlement records, computerization of registration and its integration with the land records maintenance system. The program emphasizes on technology upgradation, infrastructure development by establishment of modern record room, state and district level data

centre, training and capacity building, etc. It is believed that the program has significant impacts on the revenue administration and on the landholders that can enhance quality service delivery.

The old schemes such as the computerization of land records and the strengthening revenue administration and updating of land records (SRA &ULR) are merged with the new program. In addition, the NLRMP emphasizes on the computerization of registration. The important departments namely, the Revenue Department and the Registration Department are now interconnected with the launch of NLRMP. This will help registration to follow automatic mutation.

The program is based on four principles: mirror principle, curtain principle, single agency and title insurance. Mirror principle, which signifies that in any given moment the land records mirror the ground realities. The curtain principle signifies that a record of right (RoR) is a true depiction of the ownership status. Therefore, the mutation process can be followed automatically after registration without further going into details of the past records. The establishment of a single agency is advocated under the NLRMP due to the fact that the existing process of land records management by multiple Departments is cumbersome and takes a lot of time to process the records management. Therefore, a single agency can deal all the matters related to land records management such as survey, resurvey and settlement, creation, updating and maintenance of land records, land related transactions and registration of documents, etc. Moreover, the provision of title insurance is a great attempt under the NLRMP. The titleholders are proposed to be insured for any loss arising out of inaccuracy.

Components under the NLRMP

Some of the important components of the NLRMP are:

- 1. Computerization of land records-this covers computerization of textual data and digitization of cadastral map and their integration, establishment of Data Centre at the State level and both at the district and at the tehsil level.
- 2. Survey/resurvey and updating of land records by using pure ground method using modern technology such as GPS and ETS, hybrid method using aerial photography and ground truthing by ETS and GPS and High Resolution Satellite imagery.
- 3. Computerization of registration- interconnectivity among SROs, data entry of valuation details, data entry of legacy encumbrance data, scanning and preservation of documents, etc.
- 4. Creation of modern record room or land records management centres at tehsil/circle/block level.
- 5. Capacity building that includes organizing workshops/training, development of infrastructure, strengthening of the survey and revenue training institutes.

Benefits of NLRMP

Some benefits under Computerisation of Land Records (CLR) and Computerization of Registration (CoR) are already being noticed in several states. Both the CLR and CoR have reportedly improved turnaround time. Efficiency has increased substantially wherever the program is operational. Centre for Rural Studies (CRS), LBSNAA evaluation studies have reported that under computerization of land records there is an increase in efficiency with regard to delivery of RoR and mutation process, but no overwhelming positive response to a decreased corruption and reduction in land related disputes in the states. IIM Ahmedabad study has reported that there is a reduction in the number of trips by the landholders to access RoR after computerization. The majority of states have reported increases in revenue collection through user charges some portion of which is applied for the maintenance cost of the system. CoR is very significant in reducing transaction cost, expenditure in conveyance, helped in e-valuation or standard calculations of stamp duty and registration fee, increased transparency, efficiency and accountability in the system. NLRMP provides support for resurvey activities so as to capture ground realities and accommodate changes in the land related information. It facilitates modern technology application for speedy and accurate survey/resurvey to create or update land records.

FAO has noted number of benefits, which can be drawn from computerization of land recordsⁱⁱⁱ. Some of them are

- 1. Make significant reductions in the cost and space required for storing and retrieving land records.
- 2. Prevent unnecessary duplication of records.
- 3. Accelerate the processing of data for the first registration of title.
- 4. Provide mechanisms for quality control
- 5. Facilitates monitoring and analysis of market and rental values of land and property taxes
- 6. Improve efficiency and effectiveness in collecting land and property taxes

Issues of storage and maintenance are pertinent in the land administration system. Therefore to address this issue, the NLRMP has the proposal for the modern record room which will have facilities of modern instruments like compactor, computer storage facility and others. There are many other benefits which can be accrued with implementation of the NLRMP.

In view of above the Centre for Rural Studies has undertaken a study in West Bengal under the direction of the Department of Land Resources, Ministry of Rural Development, Government of India with the following objectives.

- 1. Identifying existing capacities of the state based on the progress achieved and time frame developed to execute all the components.
- 2. To assess infrastructure support/supporting wherewithal in the form of record rooms, data centres at various levels, kiosks, etc. for making available updated land records for general public and their locations district wise in each state.
- 3. Identification of the technological interventions required not only to achieve the objective of having correct and up-to-date land records but also to give easy access to such records to the common man.
- 4. The steps taken or to be taken by the state to provide citizen services under the NLRMP

Specific Objectives of the study

- 1. To understand features of Bhuchitra software and hardware components and their implications in land record management
- 2. To appraise the progress made in land record computerization that includes computerization of textual data, digitization of cadastral maps (mauza map and plot maps), online mutation, etc.
- 3. To appraise the progress achieved in infrastructure development such as Computer Centre, Kiosk setup, modern record room and data centres, NLRMP Cell, etc.
- 4. To examine the status of service delivery such as Record of Rights, mauza maps, plot map and online mutation in the state

- 5. To understand capacity building measures/initiatives in modern cadastral survey
- 6. To identify the gaps and needs in technology intervention, infrastructure development, capacity building and service delivery under NLRMP

Methodology

The study is based on primary data collected from the nodal Offices such as the Directorate Land Records and Surveys, and IG Registration, NIC and other relevant Offices and institutes. Here, for the study in West Bengal, the field study was undertaken in March 2013. Most of the data collected was through questionnaire/formats designed by the CRS followed by the author's interaction with the revenue officials and also field observation. Interaction and discussion with the Officials such as the Director, Joint Director, and ASOs in the Directorate of Land Records and Surveys, Senior Technical Director, NIC DLRO, BLRO and other field offices concerned was much helpful in understanding the program more minutely. Moreover, the field visit in the block levels helped in further understanding the issue.

AN APPRAISAL OF BHUCHITRA PROJECT IN WEST BENGAL

I. Brief history Of Land Reforms and Land Administration In West Bengal

West Bengal has a long history of land record management. It was the place where the East India Company was first set up. The undivided Bengal including Bihar and Parts of Odisha is known to be a permanent settlement area where the original land records were created by the colonial administration to extract maximum land revenue. Unlike in other states, the lands of West Bengal are frequently surveyed or resurveyed. Therefore information on land holding, ownership, tenancy, and measurement are more accurate and precisely recorded in the state.

Land and Land reforms Department is one of the oldest departments in the state established by the British administration. It is also an apex level body for planning, monitoring and administrative affairs. The principal tasks of the departments is implementation of Land Reforms Acts, especially West Bengal Estates Acquisition Act 1953 and West Bengal Land Reforms Act 1955. The Estates Acquisition Act is the principal legal instrument to abolish estate rights and titles of intermediaries or zamindars. This Act imposed ceiling limit of landholdings. The land above the ceiling limit was vested with the Government. Revised RoRs and cadastral maps were prepared under this Act. According to many thinkers, the Estate Acquisition Act hasn't highlighted the issues of the bargadars or the sharecroppers. It didn't give them any land rights. The land rights of the bargadars or the sharecroppers were addressed in the West Bengal Land Reforms Act. "The Land Reforms Act 1955 was enacted to reform the law relating to land tenure consequent on vesting of estates and of certain rights therein and to consolidate the law relating to land reforms. The Act most notably recognizes the rights of the bargadars or sharecroppers. They are given a heritable but non transferable right of cultivation.^{iv}"

West Bengal and Land Reforms Manual 1991 delineate the function and executive power of each Officer concerning to land administration. The Board of Revenue is the highest body that decides matters pertaining to land management, revenue management, etc. According to the manual, 'it has the power to supervise and guide the implementation of the integrated set up of land reforms administration and functions thereof and issues from time to time, such directions as may be necessary for smooth performance of land and land reforms functions'. "There is a separate land records directorate headed by the Director, Land Records and Survey who is also the Joint Land Reforms Commissioner. He is assisted by Joint Directors at the Directorate of Land Records and Surveys (DLRS). DLRS is a major directorate under the Land and Land Reforms department in West Bengal for maintenance and develop land records and also mauza maps in the state. It has large sets up comprising 341 Block level land and land reforms offices, 3354 Revenue Inspector Offices.

The Record of Rights is called khatian, in West Bengal. It records ownership details of land, the landholders, the area and size of landholdings and nature classification of land, etc.

In a report submitted by Ahuja and Singh (2003), there is a detailed description about preparation of RoR in the state,

Khatians are prepared in a number of stages which are known as Khasra enquiry, Khanapuri, Bujharat, Attestation, Hearing of Objection and final publication. To start with the particulars of a plot such as standing crop, name of owner etc, are recorded on a sheet of paper known as Khasra. Simultaneously, all the relevant particulars are put on the khatian form and this process is known as Khanapuri. The Khatians so prepared are again subjected to further check in the field by examining the persons concerned. The process is known as Bujharat. The records so prepared are known as parcha in common parlance are then distributed to the person concerned and these records are then processed through attestation where the revenue officer designated as an attestation officer puts his signature and stamp on the draft khatian. The attested khatian is then put into draft publication inviting objections. Objections in the form of petitions received are then heard and the records are corrected again on the basis of orders passed by the objection officers. After this the cohesion receives the final shape, and is published and printed.

Chapter-III of the Land and Land Reforms Manual has described preparation and revision of record of rights in land.

"Preparation and revision of record of rights in land under chapter-VIIA of the West Bengal Land Reforms Cat, 1955 is normally carried out in a district or in a part thereof if the government have reason to believe that record of rights in land have become out of date or there has been an intensive change in the topography."

The preparation of mauza maps on the other hand is again more complex, which requires thorough precision in measurement of land in terms of size, boundary determination, elevation or projections if any, and of course other dimensions along with determinations of plot maps and their dimensions. Diagrammatic interpretation of Land Administration in West Bengal



Sharecropping and tenancy

'The ultimate aim of land reforms in India is to confer the rights of ownership to tenants to larger possible extent^v. Numerous state laws (including Gujarat, Harvana, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, UP and West Bengal) call for including the names of tenants in land revenue records. But, except West Bengal, no state has effectively implemented such a provision (Hanstad, 2005). Chapter III of the West Bengal Land Reforms Act 1955 dealing with the rights of the bargadar did not provide for recording of their names. It only provided for updating the village record-of-rights by specially empowered revenue officer. The left front government amended Rule 21 and Schedule A of the WBLR Act to correct the situation. The second provision of Schedule A was amended to provide that the Settlement Officer could direct "that names of bargadars shall be incorporated in the record of rights by the revenue officer subordinate to him after holding such enquiry, and after giving the persons claiming as bargadars and owners of the land concerned, such opportunity of being heard as the Revenue Officer may deem fit" (Datta, P.K. 1988). Parcha is the rights given to the bargadars on the land identified by the state government where the bargadar has right to cultivate. The parcha is given under Section 51. Since then West Bengal is known for 'Operation Barga'-a significant attempt for record of the tenants.

District at a glance

Districts-18 and Kolkata

Blocks-341 blocks plus 5 additional blocks Hugli (Kholisani), Burdawan (Asansol, Kulti), Howrah (Howrah town survey), South 24 Parganas (Additional Thakurpukur Mahestola) Total No. of RoRs in the state- 39.20 million (approx.)

Revenue villages-42,042

Cadastral map-68,328 sheets of LR Map

Total Geographical Area of State-8879076.00 Ha

Total area surveyed (in Ha.)- 8860576 Ha

Total Area Resurveyed: 500000 Ha in Purulia district

Total area unsurveyed (in Ha): 18500.00

Raiyats: 3.67 Crores

No. of Plots-6 Crores

No. of Officers and staff-35000

Source: Data collected from the Directorate of Land Records and Surveys, West Bengal

West Bengal has Mauza (a revenue village) maps showing plots (land parcels) in the scale 16'' = 1 mile which is equivalent to 1:3960. In densely populated areas such maps are prepared in bigger scales i.e. in 32''=1 mile (1:1980) or in 64''=1mile (1:990). There are 66,348 such map sheets in A0/A1 size paper covering all the 42042 Mauzas of West Bengal, prepared by well established detailed cadastral survey techniques. Each Mauza map contains 1200/1500 plots (property parcel boundaries) on the average surveyed true to scale by Theodolite traverse and chain survey. Later on the lengths of the each side of the

plot and its area its extracts from the paper map itself using acre comb. No field dimensions of the individual plots are noted on the map².

II. FROM 'BHUMI' TO 'BHUCHITRA'

Land Record Computerization in West Bengal

The first computerization of land records project in West Bengal is called 'Bhumi' which emphasizes computerization of khatiyans. While the project was initiated during 1990s, but the achievement till early 2000s remain uneven and not implemented effectively. An evaluation study by Ahuja and Singh (2003) had observed that the state had not fully achieved the required objectives of creating a clean, up-to-date database by mid 2003. The system worked in offline mode and standalone way. The Bhumi software was primarily operated through DOS. The procedure to obtain RoR was hectic and cumbersome as it was in the manual process (ibid.). However, almost after a decade of the project was first evaluated by the Centre for Rural Studies, LBSNAA it is expected that there might be improvement in the system of land record management particularly in the backdrop of NLRMP that was came into effect in 2008-09.

Bhuchitra is a major transformation of the simple Bhumi model that has the facility for computerization of textual data or the RoR attributes to combination of graphical and map related data (cadastral map) and textual data. The major information and services provided by the Bhuchitra are: RoR or khatian, plot information, plot index, mauza map, extracted plot maps with dimensions and neighboring plots, mutation and other record corrections. The record of rights in West Bengal is called khatian which includes ownership details, tenant details,

²<u>http://nlrmpportal.nic.in/secWorkshop.aspx#</u> accessed on 4-12-2012

including address of the raiyats, plot information with boundary and other dimensions, shared plots, classification of plot, etc. under recent initiatives of computerization, details about property is available online for the public or the citizens. Anyone can view the property online anywhere in the country with access to khatian number of the respective mauza.

The other mode of access to land records is by approaching the BLRO-Block Land Reform Office. Every block office is provided with land record computer centre that operated through service-client mode. The computer centres are supervised by the BLRO and the officers below the rank of BLRO such as the Revenue Officer or Circle Officer. No private party members engaged in service delivery such as delivery land record information. However, the mutation function varies. Mutation is done online. But since many revenue offices are not connected functionally to the SROs, complete online process is yet to be achieved.

Popular website:



Source: www.banglarbhumi.gov.in

'Bhuchitra' provides citizen centric services such as online access to land record information or the property information. Both khatiyan and plot related information can be accessed through the module on the website "know your property". An individual knowing about khatiyan number or the plot number can access the related information. The website is connected through WBSWAN-West Bengal State Wide Area Network. Similarly, the mauza map and plot map can also be accessed online based on the database available on the website. This is unique of its kind in the State.



A functional outlay of Bhuchitra

Chapter-3

STATUS OF NLRMP IN WEST BENGAL

I. Progress under Computerization

Computerized Records of Rights, which carry both maps (spatial) and (nonspatial) attributes, are issued to the landholders upon request through Block Level Computer Centre. The manual process has been completely banned by law in the state and the computerized certified copies are considered legal in the state. In the state, all the RoRs are computerized except in the areas where there is ambiguity in possession, ownership rights and lack of clarity in land records. Out of the eighteen districts for which data has been gathered, in 11 districts all the RoRs are computerized. Of the rest seven districts, Hugli, Malda, West Medinipur and Nadia have above 92% computerization of land records. Though we could not access exact figure about progress of CLR in Jalapaiguri, East Medinipur and N-24 Parganas we are still assured about good performance of these districts as well.

i. Computerization of Land Records

Table-1.1

Computerization of Land Records (as of 31.12.2012)

Name of	No. of	No. of	Total	No.	RoR
District	Subdivision	Blocks	No.	Of RoRs	Computerized ³
			Villages		
Bankura	3	22	3847	2129266	2129266 (100%)
Barddaman	5(6)	33	2826	2653425	2653425 (100%)
Birbhum	3	19	2493	1949820	1949820 (100%)
Darjeeling	4	12	615	149678	149678 (100%)
				(Siliguri	
				sub-divn.	
				only)	
Haora	2	15	836	1412215	1412215 (100%)
Hugli	4	19	1999	2207000	2049852 (92.9%)
Jalpaiguri	3	13	743	526076	
Kochbehar	5	12	1170	909921	909921 (100%)
Malda	2	15	1814	1716502	1624781 (94.7%)
West Medinipur	4	29	8820	3128277	2996612 (95.8%)
East Medinipur	4	25	3199	2586684	
Murshidabad	5	26	2290	3487743	3487743 (100%)
Nadia	4	17	1406	1900176	1755973 (92.4%)
Purulia	2 (3)	20	2700	578143	578143 (100%)
N-24 Parganas	4(5)	22	1829	2468208	
South 24	5	30	2293	2819456	2819383 (100%)
Parganas					
D. Dinajpur	2	8	1646	789030	789030 (100%)
U. Dinajpur	2	9	1516	844465	844465 (100%)
Total	63	346	42042	32256085	

Source: Data collected from the Directorate of Land Records and Surveys, West Bengal

 $^{^3\,}$ Based on the available data on computerization of land records has achieved about 98%.

Khatiyan or plot information

Certified copies of both khatiyan and plot information can be accessed from the respective BLROs by submitting prescribed user fee at the counter. However, one can view it online anywhere in the country. By knowing the khatiyan number and the plot number one can access detailed information both attributes and spatial information. The plot map can also be viewed online. The below is an online view of plot and khatiyan information accessed from the website

থতিয়ান	ઉ	দাধ	গর	তথ্য
Khatian &	& Plot Information	on		
Home Page				1
			চয়ণ করুন	
			(Options)	
মৌজা	পরিচিতি	(Mouza	:	
Identificati	on): <u>Must See</u>	`	 থতিয়ান 	গতিয়ার রং
জেলা (District):	? 7777 ?????? ???	•	নং	বাওরাল লং (Khatian
(District).			অনুযায়ী	No):
রক	7777777- ?	•	(Search By	
(Block):			Khatian)	
মৌজা	????????	•	০ দাগ	
(Mouza):			নং	
			অনুযায়ী	
			(Search	

	by Plot)		
জে.এল নং (J.L No.): 55 থানা (P.S.): বাঁকুড়া (As on 11/02/2013)			
খতিয়ান নং (Khatian No):	10		
রায়তের নাম (Owner Name) :	অতীত আঠা		
পিতা/স্বামী (Father/Husband):	ভূৱন আঠা		
ঠিকানা (Address) :	ৰড়কুড়্যা		
জমির পরিমাণ (Total Land) :	2.9778 (একর/Acre)		
দাগের সংখ্যা (Total Plot) :	126		

The detailed about plot information (plot number, plot classification based on land use and soil quality), share, share area is available online. While there is provision for integration of spatial and non-spatial data, mauza map and plot maps are still not uploaded fully. Therefore availing mauza map and plot map has not been possible yet.

Mutation disposal

Under the old scheme, computerization of land records, mutation disposal through computer was an important objective. This was emphasized even during the NLRMP. In West Bengal, online mutation was successfully achieved after implementation of NLRMP. This is undertaken in most of the Block Level Revenue Offices (BLROs). The detailed status figure is mentioned below. The figures given in the table below show that in a few cases the disposal of mutation through computerization might overtake applied for mutation.

Table-1.2

mutation disposal arter computerization	Mutation	disposal	after	computerization
---	----------	----------	-------	-----------------

Name of	Total No. of mutation	Disposed so far	Mutation
District	applied since	through	Pending
	computerization	computerization ⁴	(No.)
Bankura	124130	120388	13335
Barddaman	349374	305204	44170
Birbhum	150762	133335	29654
Darjeeling	33311	32564	2633
Haora	161239	136981	31579
Hugli	413015	429633	45088
Jalpaiguri	28790	33219	3856
Kochbehar	110550	112823	13593
Malda	186558	199485	32850
West Medinipur	325912	312235	98647
East Medinipur	579845	625600	90278
Murshidabad	384694	458068	25770
Nadia	389590	435273	81814
Purulia	8899	8065	860
N-24 Parganas	486569	520521	109377
South 24 Parganas	310150	284601	91569
D. Dinajpur	83199	82820	7344
U. Dinajpur	96385	73786	34322
Kolkata	NA	NA	NA
Total	4222972	4362164	756739

Source: Data collected from the Directorate of Land Records and Surveys, West Bengal in March, 2013

ii. Computerization of Registration

⁴ A few figures disposed through computerization are bigger than the mutation applied after computerization. This is because some mutations applied before computerization have also been included for computerization.

Registration and Stamp department is one of the oldest departments of the state government. Further, Computerization of Registration is an important initiative of the State Government. State Government started computerization of registration in 2011. The computerization of registration deals with scan and digitization of documents. Market value assessment is done automatically from the existing database. The Computerization of Registration is in full swing and all 240 SROs are computerized. The inter-connectivity among the departments is currently under process. Three SROs are undertaken on a trial basis to automatic mutation process in implement the action. The interconnectivity helps the Revenue Department to follow automatic mutation procedure.

Vision, Mission and Objectives as described by the Government of West $\textsc{Bengal}^{\text{vi}}$

Vision: "The computerization of registration offices in West Bengal is designed to eliminate the shortcoming of the conventional registration system and to improve citizen services by making them quicker, friendlier and transparent by reengineering Departments process as well as to build capacity of the project team and infrastructure through the use of e-governance tools".

Mission: For improved and prompt citizen service delivery

Objectives:

- 1. To improve the quality of services to citizens.
- 2. To introduce transparency in the determination of market value of the property through CORD.
- 3. Complete replacement of manual records.
- 4. Replacement of current manual system of indexing, endorsement, according and reporting.
- 5. Introduce biometric, web camera and signature pad for capturing thumb impression, photographs and signatures.
- 6. Seamless integration of all related systems

7. Post registration functionalities like searching of deeds and printing of certified

Status of Computerization of Registration							
District	No. Of SROs	No. of SROs Compu terized	Internet Con. to SROs (No.) (Note 1)	e-Reg. Facility Avai. in SROs (No.) (Note 2)	e- Stamp. Facility in SROs	e- Valuat ion Fac. SROs	
Coochbehar	10	10	-	-	-	10	
Jalpaiguri	8	8	-	-	-	8	
Darjeeling	5	5	-	-	-	5	
Uttar Dinajpur	8	8	-	-	-	8	
Dakshin Dinajpur	7	7	-	-	-	7	
Malda	10	10	-	-	-	10	
Murshidabad	20	20	-	-	-	20	
Nadia	14	14	-	-	-	14	
North 24 Parganas	20	20	3	3	-	20	
South 24 Parganas	25	25	1	1	-	25	
RA, Kolata	3	3	3	3	-	3	
Howrah	10	10	2	1	-	10	
Hoogly	16	16	2	2	-	16	
West Medinipur	18	18	-	-	-	18	
Bankura	11	11	-	-	-	11	
Purulia	7	7	-	-	-	7	
Burdawan	20	20	-	-	-	20	
Birbhum	10	10	-	-	-	10	
East Medinipur	18	18	-	-	-	18	

Table-1.3	
Status of Computerization of	Registration

11

240

240

10

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240

Note-1: The Registration Offices and land offices will be connected through MPLS (Multi Protocol Level Switching). The tender process has been completed and work order has been issued. It is expected that connectivity shall be established by next financial year.

Computerization of Registration Department (CORD)

By the time of fieldwork, all the 240 SROs were computerized. It is expected that with the implementation of Computerization of Registration Department, only 30 minutes taken for registration processes, starting from the presentation of a document to the registering officer to its final delivery to public (NIC, West Bengal). However, this function under server-client mode again. Internet connectivity to all the Sub-Registrar Offices is not complete as yet. Only a few SROs located in the Howrah, Kolkata and other city offices are connected with internet which is again not complete. Therefore, the e-registration facility is not fully materialized.

Payment of stamp duty for a deed is processed through old stamp paper, treasury challan, demand draft and SABR (Serialized Authenticated Bank Receipt). However, as noticed this process is time consuming, non-transparent, and encounters with delay and harassment. Therefore, the demand for e-stamping by the government to ensure transparency, hassle free, prompt, authenticated and secured way of paying stamp duty and fees to government. Payees can be confirmed that payment is made to its rightful recipient and for the desires (NIC, n.d). E-stamping is successively introduced by NIC in 10 registration offices (A.R.A-I Kolkata, A.R.A-II Kolkata, A.R.A-II Kolkata, A.D.S.R Barasat, A.D.S.R. Barrackpore, A.D.S.R Chinsura, A.D.S.R Howrah and A.D.S.R. Sreerampur). This shows that the e-stamping is only introduced in and around Kolkata city where property value is very high.

The steps of e-stamping and Registration fee as noted by NIC are as follows.

- Registrant public will feel an e-Requisition form containing the property to be transacted and transferer and Transferee details of the proposed transaction using the website of the Directorate of Registration and Stamp Revenue, Government of West Bengal from anywhere anytime. System will automatically generate e-assessment slip informing required stamp duty and registration fee payable for the registration of the deed.
- Registrant public can also fill printed requisition form and submit at Registration office and get assessment slip.
- Registrant Public can also fill printed requisition form and submit it at Registration office and get assessment slip
- Registrant public will pay stamp duty and registration fee online using Net banking facility using Government Receipt Portal System (GRIPS) website https://wbfin.wb.nic.in/GRIPS/.
- After payment of Stamp Duty (SD) and Registration fee, registrant public shall present the deed for registration
- Registered Deed shall be delivered to the party upon completion of the entire registration process.

Impact on revenue collection after e-stamping

E-stamping is yet to roll out across the blocks, but based on the successful implementation of e-stamping in as communicated expected to have some positive impact on the increase in revenue collection. Year wise target of revenue collection and achievement is mentioned below in table 1.4. Over the year starting from 2004-05 to 2011-12 there is a continuous increase in net revenue collected from stamp duty and registration. West Bengal has witnessed a 35 percent growth in revenue collection to reach Rs. 14,176 crore during the first six months

(April-September 2012. According to Mr. Amit Mitra State Finance Minister, "the implementation of electronic transaction systems in tax collection aided the government in revenue collection. The Government expects to maintain an average of 25 percent growth in revenue collection." (Business Line, The Hindu, November, 19, 2012).

Year	Revenue Collection	Growth rate	Achievement
	in Rupees	(In %)	(In %)
	(In Crore)		
2004-2005	964.28	25.74	111.21
2005-2006	1087.02	12.73	103.03
2006-2007	1168.54	7.49	83.13
2007-2008	1352.21	15.72	90.14
2008-2009	1501.31	11.00	85.13
2009-2010	1916.27	27.64	95.57
2010-2011	2418.59	26.15	96.74
2011-2012	2905.00	20.11	90.78

Table-1.4Revenue targets and achievements:

Source: Directorate of Registration and Stamp Revenue's own figures, not taken from AG, West Bengal (Annual Administrative Report 2011-12), Government of West Bengal

Revenue collection (an increasing trend) over the years

In concurrence with the above, the figure cited below show a steady increase in the trend of revenue collection over a period of time starting from 2004-05 to 2011-12.



Fig-1 Showing increasing trend in revenue collection

Table-1.5

District wise collection of revenue for the financial year 2010-11 and 2011-

	N C.J J.		N C.J J.	TT - 4 - 1
Name of the	No. of deeds	Total	No. of deeds	Total
District		Revenue		Revenue (Rs.
		(R s)		In Crore)
	2010-11	2010-11	2011-12	2011-12
Cooch Behar	43904	18.32	43278	21.91
Jalpaiguri	29721	57.49	32422	73.97
Darjeeling	12692	63.19	17156	79.84
Dinajpur (U)	40635	20.72	41965	25.07
Dinajpur (D)	33631	12.75	34115	15.60
Malda	82606	41.20	88839	50.65
Murshidabad	151380	63.58	161106	78.75
Nadia	105094	66.50	103815	78.20
North 24 Pgs	137210	336.60	165843	438.55
South 24 Pgs	161590	618.15	180940	742.44
Kolkata	38623	498.15	37001	557.14
Howrah	58992	139.51	60147	171.50
Hooghly	77056	112.30	81819	134.80
Mednipore (W)	78624	72.94	80400	92.09
Bankura	28823	36.40	27317	37.32
Purulia	21827	13.64	20178	15.52
Burdwan	101727	135.18	103459	143.41
Birbhum	66505	32.63	67770	37.41
Medinipore (E)	102947	79.34	114725	89.15
State Total	1373587	2418.59	1462295	2883.82

12

Source: Directorate of Registration and Stamp Revenue (Annual Administrative Report 2011-12), Government of West Bengal

The above analysis shows that the net revenue collection through registration and stamp is one of the prime revenue generating sources for the Government of West Bengal. This is one of the largest revenue sources for the government. Therefore, the vitality of the department and its modernization cannot be simply ignored. The department has largest user interface, the approach of the citizens to this department is the highest. In a city like Kolkata, every inch of land is highly precious, so as in other cities. In order to bring accountability and transparency in the system of registration has been increasingly taken up after the NLRMP rolled out across the state.

iii. Digitization of Cadastral Maps

The state is probably the first state that has developed "Bhuchitra", software that is designed to integrate both textual data with cadastral maps. Generating a computerized record of rights (RoRs) is just a click away under the new initiative. Digitization of cadastral maps has been undertaken through use of AutoCAD, where the private vendors are engaged under direct supervision of the revenue officials.

Steps of Cadastral Map Digitization

As noted by the Revenue Department the steps of cadastral map digitization are as follows.

- 1. Scanning from source map
- 2. Vectorization of scanned map with AutoCAD Map 2000i
- 3. Line Work checking on the glass table with printed copy of AutoCAD output map (print copy).
- 4. Rectification of print copy
- 5. Preparation of Digitized map with related Database (softcopy)
- 6. Softcopy checking with the help of software made by the NIC (open source)
- 7. Composition of checked map
- 8. Final printout of Composed Maps
- 9. Updating of the digitized map

Table 1.6

Digitization of L. R. Maps as of December 2010 and 25 Feb, 2013

SI.	District	Total	Total	Actual	Sheet	Sheet
No.		Mouza	Sheet	Sheet	Digitized	digitized
				Digitized	As of 25-	As on
				As on	02-2013	25-02-13
				Dec, 2010		(in percent)
1	Bankura	3847	5776	5184	5462	94.56
2	Bardhaman	2826	5754	4834	5199	90.35
3	Birbhum	2493	3809	3680	3733	98.00
4	Darjeeling	615	1504		132	8.78
5	Howrah	836	1552	1035	1045	67.33
6	Hooghly	1999	3241	674	2436	75.16
7	Jalpaiguri	743	2649	2019	2276	85.92
8	Kochbihar	1170	2423	2127	2360	97.40
9	Malda	1814	3133	3007	NA	NA
10	Paschim	8820	10242	8764	9166	
	Medinipur					89.49
11	Purba	3199	3960	3383	3810	
	Medinipur					96.21
12	Murshidabad	2290	4298	3656	4037	93.93
13	Nadia	1406	2899	2476	2687	92.69
14	Purulia	2700	4078	1646	2905	71.24
15	North 24 Parganas	1829	3824	2732	2850	74.53
16	South 24 Parganas	2293	4793	4043	3854	80.41
17	Dakshin Dinajpur	1646	1986	1935	1982	99.80
18	Uttar Dinajpur	1516	2407	2185	2295	95.35
	Total	42042	68328	53380	59416	86.96

Source: Directorate of Land Records and Surveys, West Bengal

The above table shows that as on 25th February 2013 87% of the sheets are digitized leaving the rest for final decision of the concerned authority. Upon discussion with the concerned officials at the Directorate and DLROs it was found that some sheets are either ambiguous, vague/invisible, or under review

for final decision which are likely to be settled in the future. The figures shown below represent how online views of the digitized maps showing plot, adjacent plots, with dimension and ownership details. This process is different from the other states, namely Maharashtra, Haryana and Gujarat. Here the state governments have scanned, digitized and uploaded on software, but have limited scope for geo-referencing without utilization of advanced satellite imagery. Though this is one of the major objectives of the NLRMP to georeferencing the cadastral maps, but this present approach does not give space for its utility.





The above mauza map contain large number of plots with each plot map is placed with the adjacent plot maps. Each khatiyan may contain number of plots, so as a plot could be shared in number of khatiyans. The digitized map enables editing which is required after trasanction of plots or partition of plots due to sale, purchase, inheritance, etc.

Plot Map:



২৪ নং দাগ এবং উহার চারিপার্শ্বস্থ দাগসম্	হ
Plot No.24 with adjacent Plo	ts

বাহ	বৈথিক দূরত্ব ফট জিসি		ণাগের সীমানা বরাবর পৃর ফুট জিসি	
A-B	\$20,068	3,626	540.658	3649
B-C	\$\$0.009	2,698	220,809	3.698
C-D	20282	2009	202.602	5.66
D-E	2.285	0.078	0.085	0.018
E-A	22055	2.693	22050	3.093

পরিমাণ - (০.২১ একর) বা (১১৭৩.৫৭৯ বর্গ মিটার)

😳 Map Delivery System		_ 8 X		
Sketch Map of Plot(s) 209,009,, of Khatian [05] of Mouz	৪-'কবিষটাঁ ,District-'হ্বানী ,J.L-১৪	-		
N N VR VR VR VR VR VR VR VR VR VR VR VR VR	N Stor was well as a store of the store of t			
Edges Linear Distance Along the Line	Edges Linear Distance Along the Line	- 11		
A-B 86.754 1.314 87.649 1.328	A-B 82.638 1.252 85.257 1.292	- 1		
B-C 90.793 1.376 92.188 1.397	B-C 5.977 0.091 6.193 0.094			
C-D 50.710 0.768 51.227 0.776	C-D 57.617 0.873 58.535 0.887			
D-A 101.341 1.536 102.282 1.550	D-E 2.725 0.041 2.747 0.042			
Area (485.830 Square Meter) OR (0.120 Acres)	E-F 118.280 1.792 122.234 1.852			
	F-G 107.211 1.624 108.325 1.641			
	G-H 158.186 2.397 159.760 2.421			
	H-I 30.903 0.468 31.202 0.473			
	I-A 219.522 3.326 240.459 3.643	_		
Area [3319.838 Square Meter] OR [0.820 Acres] [For Office Use : Jun 10 2005 : 25 : LR] [For Office Use : Jun 10 2005 : 27 : LR]				

Courtesy: NIC, Government of West Bengal

During our last visit in West Bengal during March 2013 we discussed with various key officers about state preparedness to execute the NLRMP. During this visit, we interacted with senior officials such as Director and Senior Revenue Officers in the Directorate of Land Records and Survey, Senior Technical Director, NIC, IG Registration and a few other officers in the department of Revenue in Government of West Bengal.

During our interaction, the Revenue Officers briefed about the program and its implementation in the state. The Director has shown all enthusiasm to execute the program. The Revenue Officers are competent enough to know the nittygritty's of the program. The NIC Senior Technical Director, Mr. P.K. Pramanik, who is the brain behind developing this software, has devoted himself since last two decades to develop this software. A few from his vast experience that he could share with within a short time gave some ideas to know that how the software has successfully evolved. It was thought to be a one man show. Mr. Pramanik has spent a longtime to understand the West Bengal Revenue system and principles of land records management. His clear understanding of the system is first step towards success of the programme. A long time back he and his team had undertaken a feasibility study and had produced detailed project report to execute the computerization of land records programme. The state has been a historic success in implementing land reforms. Most of the areas of the state, the Survey has been completed and record of rights have been created. The cadastral maps have been prepared. There is precision in survey and measurement. This is a fundamental support to the revenue department to digitize cadastral maps. He has got all cooperation with the state and the bureaucracy. The officials from the land records have provided whole hearted support. Finance has never been a constraint for the program. Both centre and state have adequate grants for the project. The motivation from the higher officials has been instrumental to develop this software. He has constantly engaged himself in developing and further updating the software and never been diverted from his primary interest to develop this user friendly software. The common interest among the politicians, concerned administrators and the technical personnel is key to success of the project. There has been mutual cooperation from both officials of directorate of land records and the NIC officials. The NIC is too competent to develop and design the software. But still then it is not the end of the journey without having any sincere effort from the state government to approach for Geo-referencing.

II. Survey, Resurvey through Modern Survey Methodology

Table 1.7

Survey/Resurvey and Updatings of Survey and Settlement Records (including ground network and ground truthing using modern methods as on 25-02-2013)

(Physical and Financial component)

District	Last survey	Area	Method	Cost	Central	State	Expected
	undertaken	under	ology	Per sq.	fund	Funding if	data
		resurvey	used	km	release	any	For final
		(rural)			d for		output
					survey/		
					resurve		
					у		
Burdwan	1974-2000	6001.16			337.56		
					525		
South 24	1974-2000	6225.82			747		
Parganas							
North 24	1974-2000	3637.37			307		
Parganas		4					
Howrah	1974-2000	1369.73			77.047		
					5	50% State	
Coochbehar	1974-2000	3289.83			185.05	share	March, 2016
					275		
Jalpaiguri	1974-2000	4697.36			264.22		
					8		
Purba Medinipur	1974-2000	4116.37			231.54		
					6		
Paschim	1974-2000	8096.5			455.42		
Medinipur					8125		
Bankura	1974-2000	5492.28	S		308.94		
			ŪĞ		075		
Kolkata	1974-2000	0	I pu		0		
Birbhum	1974-2000	4312.4	S ai		242.57		
			ET	Ŧ	25		March, 2016
Darjeeling	1974-2000	2089.24	by	atec	117.51		
			ing	tim	975		
Hoogly	1974-2000	3057.37	uth	(es	171.97		
			l Tr	km	725		
Malda	1974-2000	3690.8	nnc	sq.]	207.60		
			Gro)er	75		
Murshidabad	1974-2000	5178.42) pu	0/ F	291.28		
			ا S a	550	5		
Nadia	1974-2000	3755.06	sing RS]	S 1:	211.22		
			Η	К	25		

Purulia	1980- till	6075.27	Aerial	Rs.	341.73		March, 2014
	date		Photog	16500/	375		
			raphy	Per sq.			
			and	km			
			ground	(estima			
			truthin	ted)			
			g			50% State	
DakshinDinajpur	1974-2000	2187.78		ц	123.06	share	March, 2016
			Using	k	3		
Uttar Dinajpur	1974-2000	3118.97	HRSIs	Ъs	175.44		
			and	<u> </u>	225		
			Ground	be			
			Truthin	\geq			
			g by	6d ed			
			ETS	15 mat			
			and	.s. estii			
			DGPS	ж Э			
Total		76391.7			4796.2	4796.232	
area		34			3188		

*No GCP set up under NLRMP

Source: Directorate of Land Records and Surveys, West Bengal

District	Landholding	Plot information	Plot maps
	certificate (RoR)		
Howrah	7985	19323	0
Hugli	21780	32128	0
Nadia	376	906	0
Malda	7774	8228	0
Bankura	5595	10452	0
Bardwan	14715	27411	2
Birbhum	5521	7494	0
Jalpaiguri	1779	179	0
Coochbehar	8005	15917	39
Paschim Medinipur	19876	22057	0
Purba Medinipur	23390	20430	8
Murshidabad	12589	22695	23
Purulia	535	717	0
North 24 Parganas	18930	41280	4
South 24 Parganas	24633	27773	1
Dakshin Dinajpur	3069	5285	3
Uttar Dinajpur	4175	3508	0
Darjeeling	2586	2943	0
Total	183313	268726	80

Table-1.8

Issuance of landholding, plot information and plot maps

Source: Directorate of Land Records and Surveys, West Bengal

Financial progress

The Government of West Bengal in the Land Reforms Department has received a sum of Rs. 3626.79 lakh only as Grants-in-aid during 1989-90 to 2009-10 from Government of India as a Central share as per the details given below.

SI No	Latter No. and Date	Amount		
51. INU.	Letter No. and Date			
		(in Lakh Rupees)		
1.	1989-90	103.31		
2.	18013/6/90 LRD dt. 11.03.1991	200.00		
3.	1991-192	Not credited		
4.	18013/6/90 LRD dt. 24.03.1993	110.90		
5.	1993-94	92.50		
6.	18013/6/90 LRD dt. 13.03.1995	86.50		
7.	18013/6/90 LRD dt. 14.03.1995	150.00		
8.	18013/6/90 LRD dt. 07.01.1997	200.00		
9.	18013/6/90 LRD dt. 19.03.1998	275.25		
10.	18013/6/90 LRD dt. 18.01.2000	120.00		
11.	18013/6/90 LRD dt. 18.02.2000	252.50		
12.	18013/6/90 LRD dt. 19.03.2001	216.00		
13.	18013/6/90 LRD dt. 25.07.2001	42.43		
14.	18013/6/90 LRD dt. 27.09.2001	267.50		
15.	18013/6/90 LRD dt. 31.07.2002	392.00		
16.	18014/04/07 LRD dt. 26.11.2007	67.50		
17.	18014/04/07 LRD dt. 23.02.2008	1050.40		
	Total	3626.79		
* N.B. A sum of Rs. 173.75 Lakh is not included as this amount was not				
credited from GOI in 1991-92.				

Table-1.9

Source: Office of the Director of Land Records and Surveys and Joint Land Reforms Commissioner, West Bengal

The State is able to utilize Rs.2436.90 lakh with effect from 1989-90 to 2009-10 for the purpose for which it was sanctioned and the unspent balance Rs. 1189.89 lakh only remaining at the end of the year has been allowed to be utilized for the program during the financial year 2010-11.

Further a sum of Rs.2508.89 lakhs has been received from the state government as state share during 1989-90 to 2009-10. The department is able to utilize an amount of Rs. 2439.62 lakh for within the said period.

III. Training and Capacity Building

At present Murshidabad and Salboni in Paschim Medinipur are the two places where land record training is imparted to the revenue officials. We visited Salobni area in West Medinipur district where the Officer Trainees of West Bengal government were undergoing training on use of traditional survey methodology such as plain table survey and chain survey. Moreover, on enquiring further, we found that the program is designed for the OTs and the Revenue Officers were very comprehensive and were also compatible to the modern day requirement. The whole training module is covered within two months comprehensive training period. Both theoretical and practical training are delivered to the Officer Trainees and mid career officers. This shows that the Government of West Bengal has planned well in advance foreseeing the importance of training on modern survey equipment. A detailed training module of the ATI, Salboni is cited below.

The NLRMP Cell is in the process of establishment. Rooms for accommodating equipments, computers, server, training hall and class rooms are already allotted.

Registration of	Concept of Map: A brief discussion, Cadastral
Trainees,	System of Map Making. History of Cadastral Survey
Inauguration, of	in West Bengal, Basic principle of Survey, Basic
Overview of	concept of traversing. Finding of Missing pegs.
Training Programme	
Finding of pegs and	Concept of SM & GM. Technical Rules 12-18. Error
missing pegs,	Distribution (linear and angular) with mathematical
	examples, principle of division of polygons into
	morabbas, section of Sikmi Line. Obstruction
	chaining. Technical Rules 7,37.
Closing of polygon	Construction of diagonal scale with mathematical
formation of	examples, (Ref KanitkarCh-II). Principle of Optical
morabba	Square, Teasting and adjustment of Optical Square,

(quadrilateral)	length of offsets. Instruments of measurement of
Formation of Sikmi	length & Area
lines and Visterson has	length & Alea.
lines and Kistwar by	
Kistwar by Chain	Error in length and area due to incorrect chaining,
Survey-Distribution	mathematical formula and example. Partal in chain
of error	survey
Kistwar by Chain	Detail survey – TR 38-41. Conception of plots.
Survey	
Kistwar by Chain	Survey of village boundary, survey of Stream and
Survey	large rivers. TR-47-50,55
Kistwar by Chain	General maintenance of sheet. TR - 45-46, 51-54,
Survey-	56, 145-150.
Demonstration of	Chain triangulation. Prolongation, Horizontal
obstacle chaining	chaining. Technical Rules 21-22,26-27.
Kistwar of Chain	TR 57-72. Survey government land, Alluviated/
Survey –	Dilluviated land. TR 115 Relay of LA plans- TR
Prolongation,	117-121.
Triangulation	
Kistwar in the	Theory of Plane Table Survey- Testing and
extended portion	adjustment, Setting up and orientation of Plane
_	Table, Advantages and Disadvantages of Plane Table
	Survey.
Plane table survey –	Methods of Plane Table Survey - Plane Table
Table set up, use of	Traverse, Different methods resection: (1) two point
sight vane.	Problem (20 tree point problem.
Demo of radiation,	Numbering of plots, numbering in multiple sheet,
intersection	Principle of Acre comb, Blue Inking of map TR -43-
resection	46, final inking of map TR 135-144. numbering of
	plots.
	-
Practice of radiation,	Concept Mouzathoka line & sheet thoka line.

intersection	Roundary comparison Roundary delineation from				
intersection,	Boundary comparison, Boundary demication from				
resection,	sheet to ground. Principle of Acre Comb, Area				
	extraction,				
Two point three	Badar and passing of village area TR 122-134				
noint problem	Mark map and list of register, incorporation of				
point problem.	Mark map and list of register, incorporation of				
	changes in master copies of mouza map after final				
	publication, issuance of certified copies of map,				
	supervision & out turn TR 154-165.				
Extension of	Details discussion on work of Drawing section.				
polygon by plane	Maintenance of Registers				
Kistwar on the	Numerical problems on diagonal scale, scale of map				
extended region by					
plane table.					
Kistwar in the	Boundary comparison, Demo of Boundary				
extended region.	comparison on P-70 sheet involving change of scale				
	(16" to 64")				
Boundary	Practical demonstration of Preparation of Hal Sabek				
comparison	list due to change of scale, renumbering of plot				
Numbering of plots.					
Blue Inking	Map Digitization-Roles and responsibilities.				
	Condition of LR maps in State Responsibilities of				
	TA.				
Area extraction	Sheet Junch: A complete Discussion				
Preparation of R-O-	Prelimiary work at drawing section. TR chapter X-				
R Introdution to	TR 107-116 except 115.				
A,B,C files					
Mid Term exam-	Mid Term Exam – Written test.				
Practal test on Chain					
survey and Plane					
table survey					

Introduction to the	Basic of control survey using Theodolite- Concept of
instrument-	Bearing and coordinate
Theodolite (T2),	
EDM, Station	
setting	
Hands on –	Numerical problem on Bearing and angle calculation
Theodolite (T2),	
EDM, Station	
Setting, Taverse.	
Theodolite Traverse	Calculation of Astronomical Observation
Theodolite traverse	Calculation of Set-up from, Distribution of error,
	Calculation of U.T. Area
Astronomical	Calculation of UT area and preparation of P-70
Observation	
Introduction to Total	Data download and processing and Drawing.
Stations – Set up	Map Digitization for Boundary comparison.
and	
Total Station-	Drawing conventional (manual method) on P-70
observation,	Traverse and detail.
Introduction to GPS-	
setting and	
observation	
Total Station-	Lab Demo – Data download and processing
observation,	
Introduction to GPS-	
setting and	
observation	
GPS observation -	Establishing GCP, Concept of Datum, Coordinate,
Radial Method /	Projection
ETS Detail Survey	
GPS observation -	Mission planning with software. Introduction to the
Trilataration /ETS	instruments
Detail	

GPS Observation -	Downloading and processing of GPS data-
Trilataration /ETS	Demo+lab practice
Detail Survey	
GPS Observation -	Downloading and processing -Lab Demo
ETS Detail Survey	Traverse adjustment-Demo
ETS Details Survey	Drawing in digital medium Lab Practice
Plane table survey –	Khanapuri Map corrections Ch V
64"=1 mile scale	Bujharat Map Correction Ch VI
	Map correction in Atteslation, Post DP,TRCh VII,
	VIII, Post FP corrections Ch - IX. Use of map
	correction from with example in various stages.
	Updation of Map after final publishing TR 108
Plane table Survey	Revisional Survey Ch XI
64"=1 mile scale	
Revisional survey –	TR CH –X (H)- Jurisdiction List, Creation of New
sheet to ground	Mouza, Splitting and amalgation of mouza, & PS
relay. (update RS	
maps)	
Revisional survey -	Visit to the District Drawing section record room of
sheet to ground	PaschimMedinipore.
relay. (update RS	
maps)	
Practical Exam -	Groups discussion and presentation among and by
Theodolite/	the trainees on the topics selected by the authority.
ETS/DGPS	

Source: ATI, Salboni, West Bengal

A Case Study of West Medinipur

Paschim Medinipur bifurcated from the old Medinipur district in the year 2002 and remained one of the biggest districts in the state. The district having long archeological, cultural socio-economic and environmental significance lies 22 degree 15 minutes north and 87 degree 39 minutes east. A wide mixture of the Hindu, the Muslim, the Christian, and the tribal communities, Paschim Medinipur symbolizes great unity in diversity.

The total geographical area of the state is 9275.28 square kilometer covered most part as rural area with 9076.43 square kilometer. Urban area covers 218.85 square kilometer. Forest cover constitutes 19% of the total area in the district.

West Medinipur	In Sq km	In Ha
Total area of the district	9275.28	940817.82
Rural	9076.43 sq km	918667.00
Urban	218.85	22150.82
Forest	1747.6	174762 Ha

Further, land classification and land utilization statistics represent gradual increasing of net sown area from a period starting 2002-03 to 2006-07. In the contrary, barren and uncultivable land has increased in the district. Forest area shows a sign of decrease.

(Area in thous	and hectare)									
Year	Reporting Area	Forest Area	Area under Non- agricultural use	Barren &Uncultura ble land	Permanent pastures & other grazing land	Land under misc. tree groves not included in Net area sown	Culturable waste land	Fallow land other than current fallow	Current fallow	Net area sown
(1)	(2)	(3)	(4)	(5)	(9)	(1)	(8)'	(6)	(10)	(11)
2002-03	928.58	180.72	163.19	1.77	1.01	5.82	5.07	7.42	18.32	545.26
2003-04	928.58	169.69	146.07	2.44	0.65	6.46	4.19	3.82	29.98	565.28
2004-05	928.58	171.93	158.46	4.03	0.62	9.93	5.06	4.59	21.84	552.12
2005-06	928.58	171.93	154.32	4.93	1.70	11.70	6.49	6.37	19.42	551.72
2006-07	928.58	171.93	156.93	1.74	0.89	9.49	6.32	4.26	21.40	555.62
Source: 1	uttps://wwv	v.paschir	nmedinipur.	gov.in/distr	ict/Show.php?	Topic=05				

Table-1.11 Classification of land utilization statistics

Computerization of Land Records

West Medinipur, a successful district with 100% computerization of RoRs across all the sub-divisions namely, Sadar, Kharagpur, Jhargram and Ghatal. Total 8820 villages in the district having 3900943 khatiyans are all computerized. But mutation is too operational but the rate of success varies across each sub-division. For example, in Sadar, the total number of mutations applied for since computerization was 58675 but the mutations disposed through computerization was 22173 (37.8%). In Kharagpur the request for mutation in Jhargram was 14021 with 10039 (71.6%) disposals, and in Ghatal the demand for mutation was 58682 and the disposal was 22180 (37.8%).

SI.	Name of	No.	Total	Khatiya	RoRs	Total	Mutations	1	Mutatio
No	The	of	No.	ns/RoRs	computeriz	no. of	disposed		ns
	Subdivisio	Blo	of	(No.)	ed	mutati	So far		pending
	n	cks	Villag			ons			(No.)
			ers			Applie			
						d for	Online	Total	
1	Sadar	6	2389	650078	650078	58675	22173	22173	36502
2	Kharagpur	10	2719	1967485	1967485	60661	29601	29601	31060
3	Jhargram	8	3021	580967	580967	14021	10039	10039	3892
4	Ghatal	5	691	702413	702413	58682	22180	22180	36502

Table-1.12 Computerization of Land Records

Computerization of registration

In Paschim Medinipur, all the 18 SROs are computerized. But the issue is that there is no internet connectivity. The process is done on an offline basis. There is no e-Registration facility available. Further, there is no e-stamping or e-valuation done so far.

		1		0		
District	No. of	No. of	Internet	E-	Е-	E-
	SROs	SROs	Connectivi	Registration	Stampin	Valua
		compute	ty	facility	g facility	tion
		rized		available in	in No of	facilit
				SROs (No)	SROs	y in
						no of
						SROs
PaschimM	18	18	No	No	N	No
edinipur					INO	

Table-1.13Computerization of Registration

Digitization of cadastral maps

Digitization of cadastral maps in West Bengal is taken up under the NLRMP. But the percentage of map digitization greatly varied from block to block with average 24.4% progress in digitization. Upon asking, it was found that there are multiple reasons for the district not been able to complete digitization. First, the disputes in landholding; second, no revisional survey thus no updated CS maps; and third, the existing maps with not in good conditions are some of the major reasons for poor progress in digitization of cadastral maps. Five blocks, Ghatal, Ch-I, Ch-II, Das-I, Das-II there was no compass digitized. The details about map digitization is found in the below table.

	Digitization	or outdustriar titups	
Name of the	No. of cadastral	Maps digitized	Percentage
Block	maps		covered
Sadar	430	33	7.7
Garh-I	420	153	36.4
Garh-II	378	190	50.3
Garh-III	276	94	34.1

Table-1.13 Digitization of Cadastral Maps

Keshpur	712	168	23.6
Shalboni	574	279	48.6
Pingla	224	36	16.1
Sabang	287	60	20.9
Debra	504	193	38.3
Keshiary	269	43	16.0
KGP-I	420	138	32.9
KGP-II	367	154	42.0
Dantan-I	233	47	20.2
Dantan-II	151	55	36.4
Mohanpur	113	17	15.0
Narayanga	571	248	43.4
Ghatal	232	0	0.0
Ch-I	199	0	0.0
Ch-II	162	0	0.0
Das-II	177	0	0.0
Das-I	126	0	0.0
Nayagram	421	136	32.3
Gopi-II	261	0	0.0
Gopi-I	219	104	47.5
Bin-I	590	215	36.4
Bin-II	534	74	13.9
Jamboni	372	200	53.8
Sankrail	314	82	26.1
Jhargram	706	102	14.4



The further progress about land map digitization is found below.

Table-1.14
Detailed Status Report for Land Map Digitization(Block Wise)
For LR Map Sheets

Block Code	Total	No. of	No. of	No. of	Found	No.	No. of
&	Maps	hardcopy	softcopy	maps	checki	Of maps	maps
Block name		received	received	checked	ng	transferred	composed
					error	to database	
Nayagram	421	136	136 (32%)	136	0	136 (32%)	136
		(32%)					(32%)
Gopiballavpur-I	261	104	104 (40%)	104	0	104 (40%)	104
		(40%)					(40%)
Gopiballavpur-II	219	0 (0%)	0 (0%)	0	0	0 (0%)	0 (0%)
Sankrail	314	82 (26%)	82 (26%)	82	0	82 (26%)	82 (26%)
Jhargram	706	102	102 (14%)	103	0	102 (14%)	102
		(14%)					(14%)
Jamboni	372	200	200	200	0	200	200
		(54%)	(54%)			(54%)	(54%)

Binpur-I	590	215	215	215	0	215	215
_		(36%)	(36%)			(36%)	(36%)
Binpur-II	534	74	74 (14%)	74	0	74 (14%)	74
_		(14%)					(14%)
Kharagpur_I	420	138	138	138	0	138	138
		(33%)	(33%)			(33%)	(33%)
Kharagpur-II	367	154	154	154	0	154	154
		(42%)	(42%)			(42%)	(42%)
Keshiyadi	269	43	43 (16%)	43	0	43 (16%)	43
		(16%)					(16%)
Narayangarh	571	248	248	248	0	248	248
		(43%)	(43%)			(43%)	(43%)
Dantan-I	233	47	47 (20%)	47	0	47 (20%)	47
		(20%)					(20%)
Dantan-II	151	55	55 (36%)	55	0	55 (36%)	55
		(36%)					(36%)
Mohanpur	113	17	17 (15%)	17	0	17 (15%)	17
		(15%)					(15%)
Pingla	224	36	36 (16%)	36	0	36 (16%)	36
		(16%)					(16%)
Sabang	287	60	60 (21%)	60	0	60 (21%)	60
		(21%)					(21%)
Debra	504	193	193	193	0	193	193
		(38%)	(38%)			(38%)	(38%)
Garhbeta-I	420	153	153	153	0	153	153
		(36%)	(36%)			(36%)	(36%)
Garhbeta-II	378	190	190	190	0	190	190
		(50%)	(50%)			(50%)	(50%)
Garhbeta-III	276	94	94 (34%)	94	0	94 (34%)	94
		(34%)					(34%)
Salboni	574	279	279	279	0	279	279
		(49%)	(49%)			(49%)	(49%)
Keshpur	712	168	168	168	0	168	168
		(24%)	(24%)			(24%)	(24%)
MedinipurSadar	430	33	33	33	0	33	33
		(8%)	(8%)			(8%)	(8%)

Source: Directorate of Land Records & Surveys, Government of West Bengal

The last survey undertaken in the district was 1953 with the use of plain table and chain. No revisional survey under modern methodology was undertaken at the time of field survey. The major observation in the district was that the region is backward with highly heterogeneous population and poor socioeconomic condition.

Field Visit Observation

Case-1

Block: Garhbeta-III

District: PaschimMedinipur

Month of visit: February 2013.

Basic Information:

Name of BLRO: Abdul Jamal

Total Number of ROs-One

Number of RIs-Eight

Number of mauzas under the Block-234

Observations

- 1. One man-one khatiyan system (one khatiyan may contain number of plots).
- 2. Mauza wise maps. But only 43% mauza maps are digitized due to number of factors such as legal discripancies, area and boundary disputes, etc.
- 3. Digitization of maps has again limited scope for geo-referencing without application of satellite imagery.

- 4. There is increasing demand for plot information and computerized RoRs from the landholders. Plot information contains total area of the plot, share possessed by the Raiyat and area possessed by the raiyat in acre. RoR contains mauza number/JL number, khatiyan number, etc.
- 5. The computer centre-Server-Client mode-works in standalone not interconnected with Blocks. Therefore, every month last date, the monthly Progress report in CD sent to SDC through district authority.
- 6. Average application received for computerized RoRs and plot information per day: 40

Case-2

Block: SadarMedinipur

District: PaschimMedinipur

Month of visit: February 2013.

Basic Information:

Name of BLRO: Sanjay Gupta

Total Number of ROs-One

Number of RIs-Eight

Number of mauzas under the Block-234

Observation

1. Weekly two days allocated for mutation disposal and one day allocated for record correction and two day for RTI, reporting and other matters.

- 2. Digitization of maps has again limited scope for geo-referencing without application of satellite imagery.
- 3. Every day 200-500 applications received per week
- 4. There is shortage of Revenue Officers, particularly ROs

Conclusion

The land records in West Bengal are quite updated and accurate due to periodic surveys undertaken by the state. Over the years there is increasing pressure on the land and revenue administration due to demographic pressure, political compulsions and other socio-economic However, the dedicated single agency, the Land and Land factors. Reforms Department in the state has been instrumental in updating of land records, by periodic surveys, complete computerization of RoRs, good private outsourcing mechanism, dedicated NIC, etc. The Directorate of Land Records and Surveys plays significant role in implementing the ambitious NLRMP project in the state. About 90% of the khatiyans are computerized but yet to achieve 100% result due to litigations, court cases, lack of mutation on time, etc. The Bhuchitra Software is compatible to accommodate digitized cadastral maps. At the time of field survey, the digitization of cadastral maps was below 50% successful. All the updated and digitized cadastral maps are not yet uploaded on the software. Computerization of registration department and capacity building initiatives are moderately successful. The modern cadastral methods are rarely implemented in the states. The state seems to be confused with the methodologies and approaches to adopt modern cadastral survey in the state. Both online mutation and seam flow automated registration are not fully materialized in the state.

The state has both strengths and weaknesses to execute the NLRMP. The strength is its dedicated department with its dedicated employees, sufficient manpower, and private outsourcing facilities amongst others. The weaknesses on the other hand are political obligations and compulsions. The state has been able to develop infrastructure facilities adequately only in some BLROs. Modern record rooms are being built up. The interconnectivity is in progress. Capacity building measures are in full swing at its state level ATI in Salboni. The Bhuchitra software and its implementation are unique of its nature in the country. Perhaps, this is the first state to have uploaded cadastral maps online. But this is not yet complete and well below half of the mark. Therefore, the beneficiary landholders are very few who can have access to online cadastral plot maps. Use of satellite imagery for further check of ground reality seems to be a difficult task ahead. Therefore, geo-referencing has not yet been done for the properties. However, it is expected that the state will come up with new approaches to address these issues soon.

Recommendations for the state

- 1. User fee collection-some amount should be allocated for maintenance cost at the Block level computer centres. The BLRO will have the authority to grant for the maintenance from this fund collected. Since this is found to be practiced in the states like Gujarat and Odisha, this can be effectively reflected in West Bengal.
- 2. Most of the states, particularly the southern states have initiated kiosk for delivery of citizen friendly services at village level. Installation of kiosk in the village level can minimize work pressure of the officials working at the block level and save time and money for the people travelling to Block head quarters for accessing a computerized RoR. This can be done through state wide Area network.

- 3. The computerization of BLRO Offices should now be connected to the State Data centre through West Bengal State Wide Area Network. So this will ensure effective management through online.
- 4. Government should take further policy initiative for georeferencing of cadastral maps.
- 5. While the Government of West Bengal does have a wellstructured Ministry for the land reforms and land records management, PMU should immediately set up within the structure for special and specific attention on NLRMP.
- 6. The Registration department is working in silos with very limited interaction with the LR department. Therefore, there need to have framework followed under the NLRMP for more consolidated and integrated department.

Recommendations for the Nodal Ministry

- 1. Rise in unit cost (per hectare) for cadastral survey. Rs. 17000/ha as allocated is not sufficient for modern survey. The Unit cost should be allocated based on Detailed Project Report prepared by the state for modern survey, mapping and also digitization.
- 2. West Bengal is a typical case with high precision survey and map creation for mauza wise. But plot wise survey does not exist. Therefore, going for plot wise survey may incur huge cost and time. In this regard, the Central government should support through adequate fund for the state. Many Revenue Officers also

suggested for flexibility in expenditure from the allocated budget under NLRMP grant. The expenditure should not be based on component wise allocation.

Annexure-I Financial Progress of National Land Records Modernization Programme (in Lakh Rs.)

Financial Year	District covered (No.)	Data Entry/Re - Entry/Da te Conversi on	Digitiz ation of Cadas tral Map (CS ₁ - 100%)	Intercon nectivity 100%	State Level data center (CS- 100%)	Data Centr e (CS- 100)	Computerization of Registration	
							(CS- 25%)	(SS ₂ - 75%)
2	3	4	5	6	7	8	9	10
2008-09	9 plus Kolkata for registration	45.00	Nil	474.00	50.00	Nil	260.815	
2009-10	9	40.00	Nil	344.00	Nil	Nil	158.815	
2010-11	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2011-12	2 Cells at ARTI, Salboni and LMTC Berhampore for 18 districts							
Total Upto Dec., 2012	18 plus Kolkata for registration	85	0	818	50.00	0	419.63	0
Total Amount Utilized Upto Dec., 2012		89.91185	0	431.5971	0	0	0	0
Unspent balance		-4.91185	0	386.4029	50	0	419.63	0

1 CS- Central Share
Contd.....

NLRMP Center/ Cell (CS 100%)	Survey/ Re-	survey	Modern I	Record Room	Total Sanctio	Total Sanction amount		
	(CS-50%)	SS ₂ - 50%)	(CS- 50%)	SS ₂ - 50%)	Central share CS)	State share (SS)	Total	
11	12	13	14	15	16	17	18	
Nil	2479.745	0	2012.50		5322.0595	0	5322.0595	
Nil	2509.898	0	1300.00		4352.713	0	4352.713	
Nil	Nil	1.66056	Nil	Nil	Nil	1.66056	1.66056	
392.14		0.30645			392.14	0.30645	392.44645	
392.14	4989.643	10.27890	3312.5	0	10066.91	10.27890	10077.1889	
3.81352	10.27890	0	0	535.60137	10.27890	545.88027		
388.3265	0	3312.5	0	9531.30863	0	9531.30863		

				Annexuret				
		Financial	Progress of Co	omput r izatio	on of Land Re of the State: V	cords (CLR) Voet Rongol		
cial	Financial Pr	ogress in Lak	h			Physical Pr	ogress	
	Fund Sanctioned	Fund Utilized	Amount of UCs sent to	Unspent balance	Sanctioned items for	RoR data entrv	No. of tehasils fully	No. teh
			the DoLR	as on Dec., 2012	which the unspent balance is to b e		operational (in terms of computerized copies of	wh mu is t doi
					utilized by 31 December, 2012		RoRs)	lno
	3934.16	2544.34325	2544.34325		1389.8168	3,20,01867	341	30
60	0	299.82908	2844.17233		1089.9877			19
10	0	190.31401	3103.63680*		968.83211			37
11	0	299.72679	3403.36359		599.94687			99
12	0	530.78842	3934.15201		6915845			18
	3934.16	3934.15201	393415201	0.00799	Nil	3,20,01867	341	34,
	Rs.	69.15 Lakh has	been reconciled	as per letter	r no. 18014/02/	2009 -L	RD dt.	

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1802.2010 ofDoLR, GoI

	P	hysical and]	Financial Pro	gress of NLRMP (Cen	ntre: State:	: 50:50)	
Year	Fund	Fund	Total	Fund	Amount	Unspent	Sanctioned items for
	Sanctioned/	Sanctione	available	Utilized	for	balance as	which the unspent
	Released	d/	funds	(indicating central	which	on	balance is to be utilized
	towards	Released		share and State share	UCs	31-12-2012	by
	Central	towards		separately	sent to	(indicated	
	share	State		as on 31-12-2012)	the DoLR	Central and	
		share				State share	
						separately	
Upto 2008	5322.0595	0	5322.0595	0	0	5322.0595	1. Data entry & Data re-
							entry;
2008-09	4352.713	0	9674.7725	0	0	9674.7725	Inter-connectivity,
2009-10	0	0	9674.7725	6.85354	6.85354	9667.91896	3. State level Data Centre,
2010-11	392.14	0	10060.0589	45.58842	52.44196	10014.47054	4. Computerization of
			6				registration
2011-12	0	0.30645	10014.7769 9	473.24129 (CS)	525.9897	9541.22925	5. Survey/ re-survey
				0.30645 (SS)			
2012-13 (upto- Dec.)	0	8.31189	9549.54114	11.57869 (CS)	0	9529.65056	6. Modern Record Room
				8.31189 (SS)			
Total	10066.9125	8.61834	10075.5308 4	537.26194	525.9897	9529.65056	
				8.61834			
				ردد			

Annexure-III Action Plan for Unspent Balance and Financial Progress of NLRMP (Centre: State: :

Annexure-IV

Action Plan for Unspent Balance Name of Scheme – NLRMP

S1.	Unspent	Sanctioned	Action Plan to spent upto	31-03-2012
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No.	Balance	items of unspent balance			
			Activity Name	Amount	Where is lying
1	2	3	4	5	6
1	386.4029	Interconnec tivity	Inter-connectivity in 86 service locations out of 427 locations		Fund is lying with State and Central Govt. Rs. 3.84 crores where allotted to WBEIDC for establishment of interconnectivit y. Upto March, 2013. Upto February, 52 service locations were connected.
2	50.00	State Data Centre	Procurement of hardware and software		Fund is lying with State and Central Govt. The L&LR Department in collaboration with Finance Deptt. Will collocate the central database at SDC, Salt Lake. The specification of hardware is being prepared.
3	419.63	Computeriz ation of Registratio			Fund is lying with State and Central Govt.

		n			
4		NLRMP	ARTI Salboni		Central
		Cell	(1) Procurement	46.415	Government
			of 4 no. ETS and	0.86132	and ARTI,
			1 pair GPS	10.00	Salboni. In
			(2) Procurement	1.00	tender unit price
			of furniture for	3.58	of ETS is
			library		7.58000 lakh
			(3) Procurement		and unit price
			computer		for 1 pair GPS
			hardware		is 16.09500
			(4) Library books		The approval
			(1) Elorary books (5) Organizing		for procurement
			training		and fund release
			training		is pending
					before Fin
					Department
			IMTC		Central
			Barhamnara	16 / 15	Government
			(1) Procurement	0.86132	and IMTC
			(1) The the function (1) of 4 no. ETS and	10.00132	Berhampore
			1 pair GPS	1 00	Bernampore
			(2) Procurement	0.50	
			(2) Trocurement	0.50	
			librory		
			$\begin{array}{c} \text{IIDIaly} \\ \text{(3)} \text{Producement} \end{array}$		
			(5) Floculement		
			bonduuono		
			(4) Librory books		
			(4) LIDIALY DOOKS		
			(5) Organizing		
				100 (20)	
5	4077 704	Company 0	1 Otal	120.0320	Ctota 1
5	4977.704	Surveys &	(1) Procurement	1300.00	State and
		Resurveys	Deselution High		Central Govt.
			Resolution		
			Satellite Image	272.00	
			(2) Purchase of	272.88	

			ETS		
			(3) Purchase of 18	289.71	
			pairs of DGPS		
			(4) Establishment	75.00	
			of Secondary GC)		
			Total	1937.59	
6.	3312.5	Modern	Fabricating	50.00	State and
		Record	Modern Record		Central Govt.
		Room	Rooms: 4		

Annexure-V

Memo No. 5/1374/A/04 Dated, Alipore, the 4th May, 2010

Government of West Bengal Directorate of Land Records and Surveys, West Bengal

Scheme: Computerization of Land Record (CRL Scheme) Utilization Certificate upto31st March, 2010

Sl. No.	Letter No. and Date	Amount (in lakh)
1.	1990-91	25.00
2.	1993-94	85.00
3.	1994-95	65.00
4.	1995-96	235.00
5.	1996-97	180.00
6.	1997-98	173.00
7.	1998-99	266.20
	No. 180/4/31/98LRD dated 21/12/1998	34.58
8.	2000-2001	567.40
9.	No. 18014/29/2000-LRD GOI	545.60
	dated 27.09.2001	34.57
	No. 180/4/31/98-LRD dated 21.04.2001	580.17
	2001-2002	
10.	2002-2003	Nil
11.	2003-2004	Nil
12.	No. 05/2506-Budget/LL/CN/IB-195/2000(Sanction)	355.00
	dated 09/08/2005	
	2004-2005	
13.	No. 18014/29/2000-LRD GOI	870.20
	dated 07.12.2005	
	2005-2006	
14.	No. 18014/02/2007-LRD GOI	390.76
	dated 30.03.2007	
	2006-2007	
15.	No. 18014/04/2007-LRD GOI	106.85
	dated 26.12.2007	
	2007-2008	
Total:		3934.16

Annexure-VI

Details about fund requested and approved for West Bengal

S1.	State	No.	Funds	Funds	Sanction	Approved	Proposal
No		Of	requested	approved	year	date	details
		Districts					
1	WB	10	5322.06	5322.06	2008-09	12/02/2009	<u>19/14/2579</u>
2	WB	9	4352.71	4352.71	2009-10	24/08/2009	<u>19/14/2579</u>
3	WB	1	196.07	196.07	2011-12	15/07/2011	<u>19/17/2635</u>
4	WB	1	0	0	2011-12	02/01/2012	<u>19/17/2645</u>
5	WB	1	196.07	196.07	2011-12	02/01/2012	<u>19/17/2646</u>
6	WB	1	196.07	196.07	2011-12	02/01/2012	<u>19/17/2647</u>

Source: <u>http://nlrmp.nic.in/faces/rpt/rptApprovedClaim2.xhtml</u> accessed on 26-12-2012

Annexure-VII

Districts	Health	Income	Education	HDI	HDI
	Index	Index	Index		Rank
Darjeeling	0.73	0.49	0.72	0.65	4
Jalpaiguri	0.61	0.38	0.6	0.53	10
Koch Behar	0.5	0.41	0.65	0.52	11
Dinajpur	0.62	0.39	0.53	0.51	13
Malda	0.49	0.36	0.48	0.44	17
Murshidabad	0.57	0.29	0.52	0.46	15
Birbhum	0.53	0.27	0.61	0.47	14
Bardhaman	0.74	0.47	0.71	0.64	5
Nadia	0.65	0.41	0.66	0.57	9
North 24 Parganas	0.72	0.49	0.76	0.66	3
Hugli	0.77	0.46	0.67	0.63	6
Bankura	0.67	0.26	0.62	0.52	11
Purulia	0.61	0.18	0.55	0.45	16
Medinipur	0.68	0.45	0.74	0.62	7
Haora	0.77	0.53	0.75	0.68	2
Kolkata	0.82	0.73	0.8	0.78	1
South 24 Parganas	0.71	0.4	0.68	0.6	8
West Bengal	0.7	0.43	0.69	0.61	

West Bengal Human Development Indices District Wise

Source: West Bengal Human Development Report

www.wbplan.gov.in/docs/Executive_Summary_WBHDR2004.doc

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- 2. Vachhani, A. and H.C. Behera (2010). Evaluation of Computerization of Land Records in Gujarat, Centre for Rural Studies, LBSNAA, Mussoorie.
- 3. Nikhil Nirmal, Village Study Report, submitted to LBSNAA, Mussoorie
- 4. Ahuja, Manoj and A.P. Singh (2003). Evaluation of Computerisation of West Bengal, Centre for Rural Studies, LBSNAA, Mussoorie

ⁱProne to corruption and litigation-3rd most corrupt sector (T.I. report, 2009) in India. The most corrupt sector in Nepal followed by Custom Department, police and judiciary (TI 2003). The most corrupt sector in Bangladesh as well (T.I. 2005 a)

ⁱⁱ Conclusive titling with title guarantee, the concept emerged in the developed nations to provide title guarantee to the landholders. Australia, Singapore, New Zealand and other countries have already having conclusive titling system where the state is responsible for loss of land, legal issues of landholders. In India the conclusive titling approach was already advocated in 1980s by the Wadha report submitted and an article was also submitted in the Economic and Political Weekly.

ⁱⁱⁱ<u>http://www.fao.org/docrep/006/V4860E/V4860E06.htm</u> accessed on 10th April, 2011.

 $^{\rm iv}$ Quoted from Mr. Nikhil Nirmal's Village Study Assignment submitted to CRS, NIAR.

vVenkatasubraminan, K. Land Reforms remains an unfinished business, http://planningcommission.nic.in/reports/articles/venka/index.php?repts=mland.htm

 $^{\nu i}$ Annual Administrative Report, 2010-2011, Finance Department, Government of West Bengal

About the Authors

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