

# **Application of E-Governance in District Land Administration for Citizen-Centric Services**

**Dissertation**

**by**

**A. K. M. Moniruzzaman,  
ID NO. 08272002, MAGD (3<sup>rd</sup> Batch)**

**Submitted to the  
Institute of Governance Studies  
BRAC University  
Dhaka**

**In partial fulfillment of the  
requirement for the degree of  
MA in Governance and Development**

**Institute of Governance Studies (IGS)  
BRAC University, Dhaka, Bangladesh  
November, 2009**

# **Application of E-Governance in District Land Administration for Citizen-Centric Services**

**Dissertation**

**by**

**A. K. M. Moniruzzaman,  
ID NO. 08272002, MAGD (3<sup>rd</sup> Batch)**

**Approved as to style and content by**

**Shah Mohammad Sanaul Hoque, Ph.D  
Director  
Bangladesh Public Administration Training Centre  
Savar, Dhaka-1343  
&  
Visiting Faculty-member  
IGS, BRAC University**

**Institute of Governance Studies  
BRAC University, Dhaka, Bangladesh  
November, 2009**

### **Statement of the Candidate**

I hereby declare that I am the sole author of this thesis.

I authorize the Institute of Governance Studies of BRAC University to lend this thesis to other Institutions or individuals for the purpose of scholarly research.

I further authorize the Institute of Governance Studies and BRAC University to reproduce this thesis by photocopying or by other means, in total or in part, at the request of other institutions for the purpose of scholarly research.



## **TABLE OF CONTENTS**

	<b>Page No.</b>
<b>List of Table</b>	<b>01</b>
<b>List of Figures</b>	<b>01</b>
<b>List of Abbreviations</b>	<b>02</b>
<b>Acknowledgment</b>	<b>03</b>
<b>Abstract</b>	<b>04</b>
<b>1.0 Introduction</b>	<b>06</b>
<b>1.2 Defining Governance and E-governance</b>	<b>07</b>
<b>1.2.1 What is Governance</b>	<b>07</b>
<b>1.2.2 What is E-governance?</b>	<b>07</b>
<b>1.3 Present State of Land Administration in Bangladesh</b>	<b>08</b>
<b>1.3.1 Current Services Provided by District Land Administration</b>	<b>10</b>
<b>1.4 Justification of Application of E-governance in Land Administration</b>	<b>13</b>
<b>1.5 Research Questions</b>	<b>14</b>
<b>1.6 Objective of the Study</b>	<b>15</b>
<b>2.0 Literature Review</b>	<b>16</b>
<b>3.0 Research Methodology</b>	<b>18</b>
<b>3.1 Method of Study</b>	<b>18</b>
<b>3.2 Data Sources</b>	<b>18</b>
<b>3.3 Secondary Method</b>	<b>18</b>
<b>3.4 Selection of the Case Studies</b>	<b>19</b>
<b>4.0 Case Studies</b>	
<b>4.1 Case Study-01: The Bhoomi Project of Karnataka in India</b>	<b>20</b>
<b>4.1.1 Summary of the Case Study</b>	<b>20</b>
<b>4.1.2 Background of the Project</b>	<b>20</b>
<b>4.1.3 Description of the Project</b>	<b>21</b>
<b>4.1.4 Implementation Challenges of the project</b>	<b>23</b>
<b>4.1.5 Assessment of the Project</b>	<b>27</b>
<b>4.2 Case Study 02: Manikganj Land Automation Project</b>	<b>33</b>
<b>4.2.1 Summery of the Project</b>	<b>33</b>
<b>4.2.2 Description of the Project</b>	<b>33</b>
<b>4.2.3 Implementation Challenges of the project</b>	<b>34</b>
<b>4.2.4 Assessment of the Project</b>	<b>36</b>
<b>5.0 Findings</b>	<b>37</b>
<b>5.1 Recommendations</b>	<b>43</b>
<b>5.2 Conclusion</b>	<b>52</b>
<b>Bibliography</b>	<b>54</b>



### **List of Tables**

<b>Table: 1</b>	<b>Different purposes of RTC use</b>
<b>Table: 2</b>	<b>Differences of service quality in percentage</b>
<b>Table: 3</b>	<b>Comparison between old and new System</b>
<b>Table: 4</b>	<b>Rectification of errors</b>

### **List of Figures**

<b>Figure: 1</b>	<b>National land administration structure</b>
<b>Figure: 2</b>	<b>Land survey, recording and administration at district level</b>
<b>Figure: 3</b>	<b>District land administration set up</b>

### **List of Abbreviations**

BS	:	Bangladesh Survey
CS	:	Cadastral Survey
DC	:	Deputy Commissioner
DGLR	:	Director General's office of Land Record
ICT	:	Information and Communication Technology
LA	:	Land Acquisition
MLA	:	Member of Legislative Assembly
RM	:	Revenue Munshikhana
RS	:	Revisional Survey
Rs.	:	Rupees
RTC	:	Record of Tenancy and Crops
SA	:	State Acquisition
SICT	:	Support to ICT
SMART	:	Simple, Moral, Accountable, Responsive and Transparent
UNO	:	Upazila Nirbahi Officer



## *Acknowledgments*

*At first, I express my wholehearted gratitude to almighty Allah who provided me the opportunity to be in the MAGD program and helped me to prepare this dissertation paper.*

*My sincere gratitude goes to my supervisor Dr. Shah Mohammad Sanaul Hoque, Director, BPATC. I humbly thank him for being a source of great inspiration to write this thesis. I also express my gratefulness towards him for his overwhelming contribution in preparation of this thesis.*

*I have also been graced by Professor Gowher Rizvi who greatly inspired my epistemological curiosity to learn, think, experiment, and analyze critically on the research topic. I also thank Dr. Emdadul Haq, our course coordinator who guided me with his profound knowledge and special care. All through this work, he provided me immeasurable counseling.*

*I am grateful to my family and friends who assisted me in many ways.*

*A. K. M. Moniruzzaman,  
ID NO. 08272002, MAGD (3<sup>rd</sup> Batch)  
Institute of Governance Studies  
BRAC University*



## Abstract

This thesis mainly focuses on the lessons of e-governance application in land administration based on two case studies-one from Bangladesh and another from India. At the beginning, the concept of governance and e-governance has been defined. Then present state of district land administration in Bangladesh has been described with the view of its effectiveness in delivering citizen-centric service to the people. The nature of current services provided by district land administration is also pictured. Later the justification of application of e-governance in land administration is shown in this paper. Mainly, my thesis has tried to answer two major questions- “How e-governance can be applied in district land administration for citizen-centric service?” and “what qualitative changes will e-governance bring in district land administration?” Case study method has been applied for research. The “Bhoomi” project of Karnataka of India and “Land Record Archiving and Automation of Record Room at Manikganj DC’s Office” project of Bangladesh have been studied as cases in this dissertation.

In Karnataka in India application of e-governance in land department has revolutionized the quality of land services. Initially, they have computerized the records of land ownerships. They have also created online based computerized land record kiosks at each *taluk* (the lowest tier of district land administration in India) and uploaded the automated land records in the webs. Now from those kiosks people can easily collect the notices of mutations and RTC (Record of Tenancy and Crops). Previously, people used to go to the village accountant who was in charge of *taluk* to get a copy of RTC. But the system was characterized by procrastination, non-transparent, unaccountable and corrupted. But after the system been automated the studies strongly demonstrate its



effectiveness. People have rated the procedure of collecting RTC as easily accessible and simple. How the project faced the challenges and eventually made it a successful one is the main part of analysis in this paper.

In Bangladesh, the “Support to ICT (SICT) Task Force” is a project initiated by the government to implement e-governance throughout the nation. Under this program, a pilot project of “Land Record Archiving and Automation of Record Room at Manikganj DC’s Office” started in 1998 in Manikganj. The main objective of this project is to develop a computerized system for imaging, archiving, retrieving and printing of khatian (an owner’s records of rights for lands) and mouza (particular defined land area demarcated for mapping) maps in Manikganj district. Under this project, 2.72 lakh pages of records have been automated so far. An analysis has been made on this incomplete project and I tried to identify the flaws. At the end, I present some lessons from those studies and on the basis of that recommendations have been made.

## **1.0 Introduction**

The use of computer with internet has brought a new global communication order which has touched almost all people in various ways. With the help of advanced technologies, the service oriented private organizations are going ahead and becoming capable to cope up with the changing demand of the people. But unfortunately, the public sector is not responding quickly. On the other hand, one of the greatest challenges for the government is to ensure good governance and e-governance is an effective approach for bringing all the good adjectives of good governance like transparency, accountability, responsiveness in a state. We have lot of hindrances in attaining this in administration and especially in land administration. People have so much dissatisfaction and grievance against the quality of service of land administration. The government now looks for some innovations for achieving the purpose of good governance in a faster way. Adopting e-governance in land administration can provide a greater scope for offering far better solution in this regard. The government of Bangladesh has recently declared ICT sector as the thrust sector. The formulation of the National Information and Communication Technology Policy 2002 gives due emphasis to the gradual implementation of e-governance in all government offices. The government has also promised to build digital Bangladesh by Vision 2021. Now, in question of priority of applying ICT, land administration should come first, since ICT has least been introduced in this field.



## **1.2 Defining Governance and E-governance**

### **1.2.1 What is Governance?**

Governance is defined as the set of traditions and institutions by which authority in a country is exercised. It is also defined as the manner in which power is exercised in the management of a country's economic and social resources for development (World Bank, Governance and Development 1992). In other words, Governance is a broader concept that encompasses the state's institution arrangements, decision-making process, implementation capacity and the relationship between government officials and the public. In our context, we can define it as the process by which governments are selected, held accountable, monitored, and replaced. It can also be viewed as the capacity of governments to manage resources efficiently, and to formulate, implement, and enforce sound policies and regulations.

### **1.2.2 What is E-governance?**

E-governance has been defined as the process of enabling communication and transactions between concerned citizen or groups and the government through multiple channels by linking all transaction points, decision points, enforcing/implementation points and depositors of data using information and communication technologies, to improve the efficiency, transparency, accountability and effectiveness of a government. E-governance is the use of ICT by the government, civil society and political institution to engage citizens through dialogue and feedback to promote their greater participation in the process of governance of these institutions. E-governance is about establishing good governance by using technology. On our valiant national journey towards better



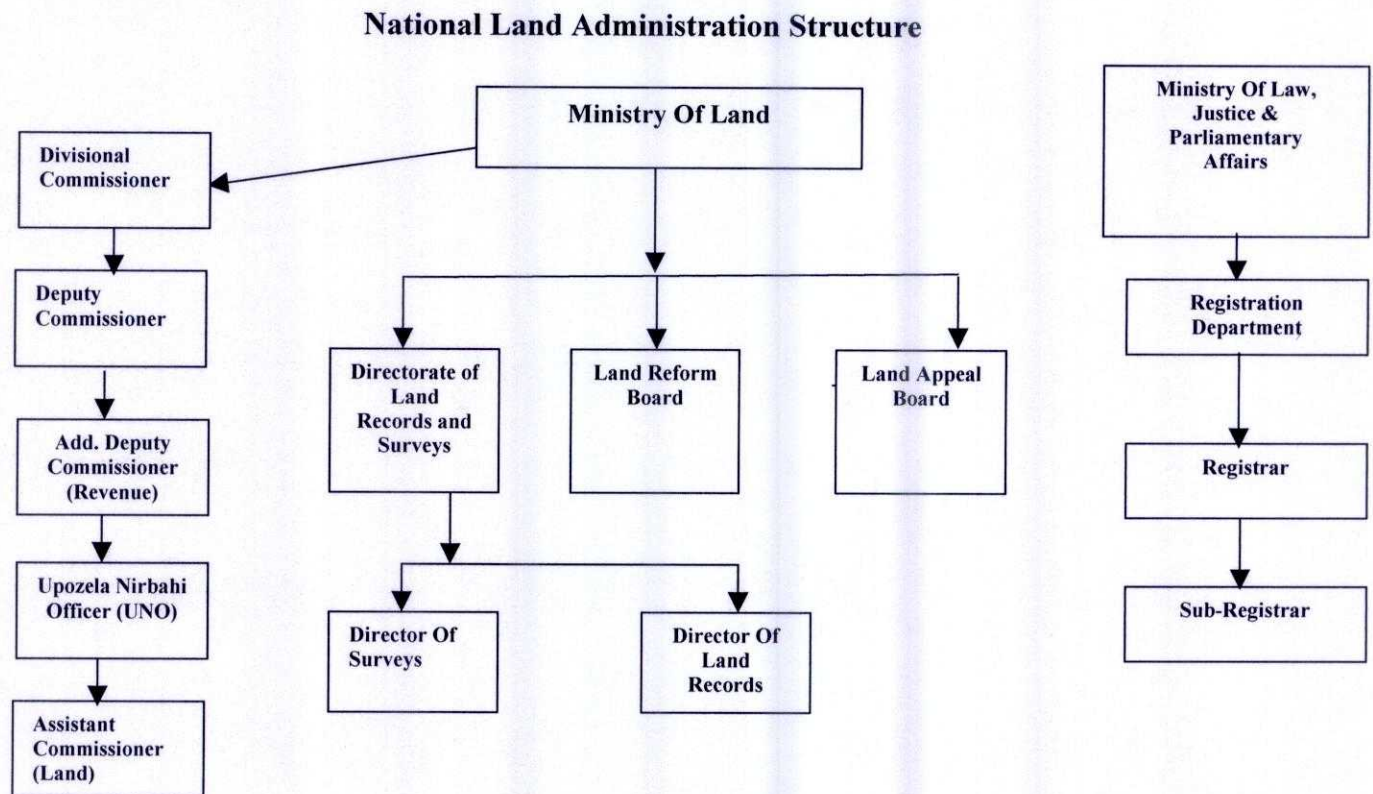
governance, e-governance is an essential vehicle. In general sense, e-governance is the delivery of government services and information to the public using electronic means. In other words, it is the use of Information and Communication Technologies (ICTs) to promote more efficient governance by allowing better access to information and making government more accountable to the citizens.

### **1.3 Present state of Land Administration in Bangladesh**

Land is considered as the most valuable asset in Bangladesh. Therefore, land administration is important to the government. For the purpose of that government of Bangladesh has a separate ministry for Land. This ministry works through the divisional commissioner's office run by a commissioner. An additional divisional commissioner performs this on behalf of him. Divisional commissioner supervises district land administration which is run by a deputy commissioner. An additional deputy commissioner performs all land functions on behalf of him. On the other hand, government has a separate organizational structure for land records and surveys. It has also a board for bringing reformation in land administrations. Indeed, for the land registration, government has a different ministry which is called Ministry of law, justice and parliamentary affairs which supervises district registrar's office. Under each district registrar there are the upazila registrars who are responsible for the registration of land transfer function done within a district.



The following figure shows the national land administration structure existing in the country:



**Figure: 1-National Land Administration Structure**

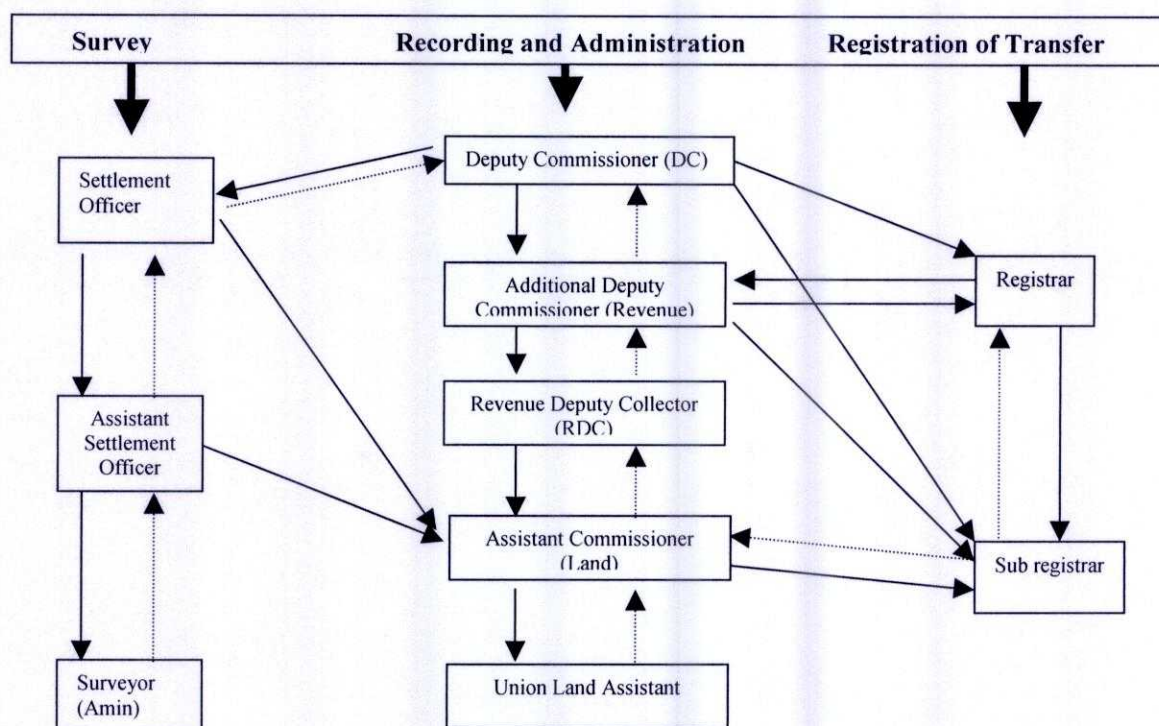
Mainly the following three jobs are performed in the district land administration:

- Land Management
- Land record and Survey
- Land Registration

Land management is basically performed by the Deputy Commissioner's office. Two other land related jobs are performed by the Settlement office and registrar's office.

Three types of land related affairs performed in district level namely, survey, recording, administration and registration.

A diagram showing these three departments affiliated in land functions is as follow-



**Figure: 2- Land survey, recording and Administration at District Level**

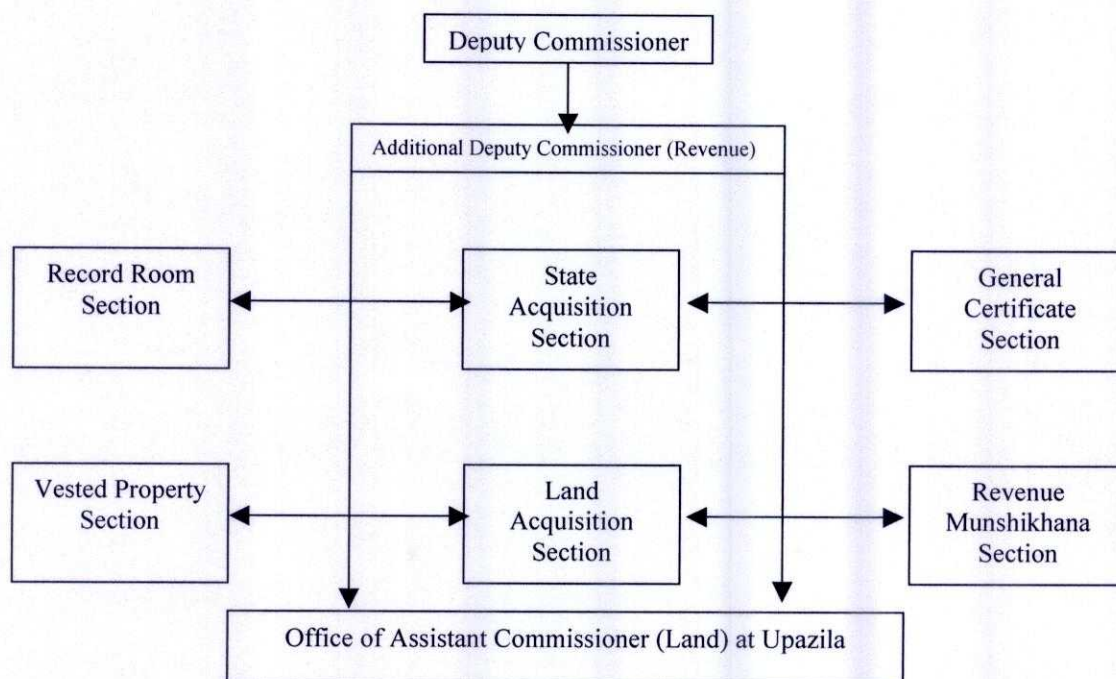
### 1.3.1 Current Services provided by District Land Administration

The most important task DC's office perform is closely related to land. Most People come to DC's office is to take information regarding land. Specifically, if the land related information is available on the web, especially the record of rights (ROR) then the work load of the DC office will be reduced significantly.

In every district, there is an Additional Deputy Commissioner (Revenue) under Deputy Commissioner for running the land administration. Through different sections in his



office, different land related services are provided. He supervises the land offices at the upazila and unions along with the following sections with Land Administration:



**Figure: 3 District Land Administration Set up**

#### **Jobs performed by the Record Room Section:**

This section maintains all land related records. This includes the maintenance and security of maps and all volumes of CS (Cadastral Survey), SA (State Acquisition), and RS (Revisional Survey) records. Besides, it performs the following functions:

- Issue hand-written duplicate after verification of records
- Sell land maps and supply for official work
- Preserving Supplying of certified copies of CS, RS, PS and BS *khatian*.
- Preserving and Supplying of RS, PS and BS *mauja* maps of the District.
- Supply certified copies of any public document

**Tasks performed by State Acquisition Section:**

- Management abandoned properties of the district
- Settlement of non-agricultural government-owned land
- Eviction of illegal public land possessors
- Management of Upazilla-wise agricultural government-owned land
- Management of Waqf, Debottor and trustee properties
- Collect of land revenue from different sources
- Settlement of government-owned land
- Supervision of Mutation cases done by the Upazila offices
- Settlement of Sairat Maha;
- Settlement of Hat-Bazar-Chandina-Viti
- Settlement of different cases for the change of class of land

**Works performed by RM section**

- Dealing Civil suits in favor of the government
- Affidavit of all civil suits.

**Jobs done by the General Certificate section**

- Collecting govt. revenue as per the provisions of Public Demands Recovery act 1913.

**Tasks performed by Land Acquisition (LA) section**

- Conducting inquiry before acquisition.
- Determining compensation to the land-owners for acquired land.
- Acquiring buildings and installations for different purposes.



- Allocating land for govt. offices and industry.
- Relinquishing excess land to the owners.

#### **1.4 Justification of Application of E-governance in Land Administration**

##### **Real Cost of Government Services**

The justification for e-government stems from an analysis of the *real* cost of obtaining government services. In the traditional land administration

- Delay and uncertainty
- Lack of transparency
- Corruption
- Mistrust / ill-treatment at the offices
- Loss of wages / productivity of the citizen / business
- Cost of travel & stay at the place of service

It is observed that the quality of service provided by the district land administration (office of the Deputy Commissioner) is not good and citizen friendly. The first and foremost reason is land records preserved in district land office are not digital and electronic. People do not feel happy to go to the district offices for the purpose of submitting an application, for complaining or for certified copies. For the lack of easy access to land related information land related disputes are so frequently observed in Bangladesh. Almost 90% of the civil suits and about 80% of the criminal cases emerge from land related disputes. In this context, to make the district land administration more citizen-centric, application of e-governance is a must. Besides, district administration is frequently alleged for administrative corruption, bribery and extortion which not only

undermine the efficiency and effectiveness of government but also make the citizens suffer a lot. For the following grounds, application of e-governance in land administration is justified:

01. Land is still the prime source of prestige and financial strength of the general people as well as the elite people.
02. Our administration has no alternative in future but to adapt with the future electronic service delivery system.
03. Land administration is the major part of the entire administration. So. E-governance in administration reasonably indicates greatly to the land administration

Besides, land administration of Bangladesh could not be modernized after many initiatives and to give people their service we have no option but to adopt internet and web assistance in delivering some of the substantive land services.

### **1.5 Research questions**

My thesis will be based upon the following two questions:

- **How e-governance can be applied in district land administration for citizen-centric service?**
  - How citizens are getting different land services under existing land administrative system
  - How e-governance can be applied in service delivery system in land administration.



- **What qualitative changes will application of e-governance bring in district Land administration?**

- Innovations and new reforms that application of e-governance will bring in land administration.
- How the citizens will be benefited from e-governance.

### **1.6 Objective of the Study**

The objective of the thesis is to bring innovations and new reforms in land administration through application of e-governance to meet the expectation of the citizen. This thesis will focus on organizational aspects of application of e-governance in district land administration to provide citizen-centric services. Mainly, this research seeks the feasibility and compatibility of application of e-governance in district land administration. Basically my objectives of the study are the following:

- to study the existing land administration system of the DC Office,
- to explore the potentials of ICT integration in the land administration system of DC Office
- to recommend some policy guidelines while implementing e-governance initiatives

## **2.0 Literature Review**

The process of e-governance in Bangladesh has begun a decade ago. So we do not have much practical experience in this regard. Some good research works on land administration have also been done. But attempt of research for applying e-governance for the land administration has not performed yet. It is only the SICT project of the government was the first formal initiative for implementing e-governance in Bangladesh. My research mainly based upon two case studies, namely 'Bhoomi' project of Karnataka in India and "Land Record, Archiving and Automation of Record Room at Manikganj DC's Office" project under the Ministry of Land.

There are a good number of books written by Indian writers on the applying approach of the e-governance. But, it is the case studies which give the practical lessons out of the analysis of the projects implemented. In Karnataka, Indian government sincerely attempted application of e-governance in land administration.

"E government" from vision to implementation-a practical guide with case studies is a book on e-governance written by Subhash Bhatnagar which describes different case studies on application of e-governance in different countries. It mainly shows the objectives and challenges of the e-governance initiatives have been faced. This writer also has a specific publication on the "Bhoomi" project. It is titled as "Bhoomi: Closing the digital divide through Innovative Reforms and Partnership." On the same subject, Albert Labo and Suresh Balakrishnan wrote "Report Card on Service of Bhoomi Kiosks: An Assessment of Benefits by Users of the Computerized Land Records System in Karnataka," explaining the advantages of e-governance.



Vivek Gupta authored a book on “E-governance: Lessons from District Computerization,” which focuses on practical experience of the computerization which is the primary level task for the application of e-governance. Another book on “Information Age Government: Success Stories of Online Land Records and Revenue Governance from India” written by Baharul Islam again shows the entire Indian experience in the area of online services.

### **3.0 Research Methodology**

My research has used both qualitative and quantitative data. Facts stated in the thesis are empirical and descriptive in nature. For the purpose of achieving objective of the research following techniques and methods were adopted:

#### **3.1 Method of Study**

Case Study method has been adopted for collection, processing, analysing and presentation of data regarding successful implementation of e-governance in district land administration of Bangladesh. This method also emphasised on status of e-governance and key factors and implementation challenges of e-governance in Bangladesh.

#### **3.2 Data Sources**

Only secondary source of data both published and unpublished documents and literatures have been used to collect necessary data to conduct the study. Relevant Internet websites have been visited.

#### **3.3 Secondary Data**

The relevant secondary data from both published and unpublished sources were comprised of related books, journals, periodicals, thesis, articles, newspapers, reports, government documents, project documents, the Internet materials, etc. These sources were made available through visiting different libraries, offices and through browsing the Web. For shortage of printed literature in Bangladesh on the emerging field of e-governance, the Internet was a major source for many of the literatures. Electronic documents including research studies, articles, survey reports, journals, newsletters, fact sheets, governmental and organizational websites, e-governance websites, etc. were extensively explored.



### **3.4 Selection of the Case Studies**

To implement e-governance across the country, ‘Support to ICT’ project was undertaken by the government. Complying with that vision, Land ministry took the initiative of ‘Land Record Archiving and Automation’ project at Manikganj Deputy Commissioner’s office which was the first ever attempt to computerise the and records. Therefore, the experience from this initiative had lot to do with e-governance launching in Bangladesh. No other cases could be more suitable to study than this project. Secondly, the “Bhoomi” project of Karnataka of India had the same context to be considered as a model case to study. Moreover, being a fresh initiative there were a good number of lessons to be taken to implement an e-governance initiative in district land administration.

## **4.0 Case Studies**

### **4.1 Case Study 1: E-governance in Land Administration of Karnataka in India**

#### **4.1.1 Summary of the Case Study**

The Department of Revenue in Karnataka, India has computerized 20 million records of land ownership of 6.7 million farmers in the state. Previously, farmers had to go to the village accountant to get a copy of Record of Rights, Tenancy and Crops) which briefly called RTC. This RTC is a document which is needed for many tasks such as obtaining bank loans. There were complaints against this system like delays and harassment. The farmers had to give bribes. Now, only for a fee of Rs. 15, a printed copy of the RTC can be obtained online at computerized land record kiosks (Bhoomi Centers) in 177 taluk offices. The state has the plan to make databases for all the taluk are to be uploaded to a web-enabled central database. RTCs would then be available online at Internet kiosks, which are likely to be set up in rural areas (Bhatnagar 2004, p.71).

#### **4.1.2 Background of the Project**

In Karnataka, land records were maintained by 9000 village accountants. In the manual system, each accountant used to serve a cluster of three to four villages. Two types of records were maintained:

- a. Registers, which indicated the current ownership of each parcel of land, its area and cropping pattern and
- b. Village maps that reflected the boundaries of each parcel.

Upon sale or inheritance of a land parcel requests, land records had to be filed with the village accountant. The village accountant, for various reasons, could afford to ignore the “mutation” requests. Upon receiving a request, the village accountant is required to issue



notices to the interest parties and also paste the notice at the village office. Often, neither of these actions was carried out, and no record of the notices was maintained. Notices were rarely sent through the post. An updating of the land records was to be carried out by a revenue inspector if no objections were received within a thirty day period. In practice, however, it could take up to years for the records to be updated.

It was difficult for Landowners to access the village accountant as he is always on traveling. The time taken by him to provide RTCs has ranged from three to thirty days, “depending upon the importance of the record of the farmer and the size of the bribe” (Bhatnagar 2004, p. 72). A typical bribe for a certificate could range from Rs 100 to Rs 2000. If some details were to be written in an ambiguous fashion, out of selfish motives, the bribe could go up to Rs 10,000. Land records under village accountant were not open to public scrutiny.

#### **4.1.3 Description of the Project**

The beginning of computerization of land records in Karnataka goes back to 1991 when the first pilot was initiated through a centrally sponsored scheme, fully funded by the Government sanctioned for all districts in the state of Karnataka. However, no provision was made to install computers at the *taluk* level where manual records were actually updated. The project fizzled out without achieving its objective of creating a clean, up-to-date database. Then attempt made with a new approach.

### **New approach applied in the project**

In the first phase, the project was implemented on a pilot basis in a controlled environment at four *taluks*. After gaining experience in data entry operations and implementation of the software, the scheme was extended to one pilot *taluk* in each of the twenty-seven districts. In the third phase, the project was rolled out simultaneously to all the remaining 177 *taluks*.

A computerized land record *Kiosk* (Land centre) has been made operational in all the 177 *taluks* in Karnataka. At these *taluk* offices a farmer can obtain a copy of RTC online by paying Rs 15 fee. A second computer screen faces the clients to enable them to see the transaction being performed. Copies can be obtained for any land parcel in the *taluk* by providing the name of the owner or the plot number. A village accountant is available full-time at these kiosks.

### **How task is performed In case of Land Transfer in New System**

When a change of ownership takes place through sale or inheritance, farmers can file for a mutation of the land record at the Bhoomi centre. Each request is assigned a number by the computer. The computer automatically generates notices, which are then handed over to the village accountant stationed in the field who is responsible for servicing the particular village. Most village accountants stationed in the field visit the central *taluk* office once in two to three days to pick these papers.

The process of issuing notices by village accountants to the interest parties remains the same. As before, the revenue inspector who is stationed in the field approves changes to the land record thirty days after the notices are served, provided that there are no objections. A significant change in the process makes it mandatory to stick to a first-



come first-serve discipline. It takes a few days for the approval to reach the land **Kiosk**, where it is scanned on the day of its arrival. An inward and outward register is maintained. The updated RTC is printed at the Land **kiosk** and handed over to the village accountant for the record. The new owner receives a copy on demand. Land kiosks create scanned copies of the original mutation orders and notices to avoid unnecessary litigation due to claims that the notices were not served.

With the computerized system, administrators can quickly determine the number of approved and overdue mutation orders. Information collected from one urban **taluk** indicates that 3,000 mutations were handled annually earlier. After computerization, there has been a 50 percent jump in the number of mutation requests. This change seems to indicate a level of approval of the new system by the citizens, and willingness to update changes in landownership that were previously left undocumented.

#### **4.1.4 Implementation challenges of the Project**

Initially the project had faced the following challenges:

- Roll-out of the application to 177 locations was a challenge due to the poor quality of manual records and the enormity of the data entry task.
- Records in the field were not up-to-date due to poor work culture and lack of training amongst the revenue officer. As revenue officials were not up-to-date due to poor work culture and lack of training amount the revenue staff. Also, farmers do not report transactions within the family either because they are discouraged by the attitude of the revenue staff or due to internal family problems. The maintenance of land records is not uniform across districts.

- Revenue officials were not interested in data-entry; private data entry agencies tackled the 20,000 man-months of work in an offline mode at the *taluk* level. Comprehensive software that accommodated all variations in manual records across districts was used. After the initial data entry, prints were validated against the original record books by the village accountants.
- Many problems were encountered in offline data entry. The process was slow and error prone due to poor work quality by data entry agencies. Technical guidance from officers of the district informatics centre was not easily available as they were overloaded with other work. And data entry agencies were unwilling to recruit more manpower as it required investment in training on specialized data entry software which could not be useful to them for other projects.
- Interruptions in electrical power in the taluk headquarters and delay in maintenance of computers at the taluk level by vendors were a problem.
- Every district has been provided with a consultant to act as a bridge between the data entry agency and the district administration. After the system is operational, the consultant trains the taluk staff and helps the district administration in day to day work at the Land kiosks.
- Operators have been provided for one year to handle online data entry at the Land kiosks. Village accountant will take over the work of these operators after a year. A comprehensive training module was designed jointly by the department and the National Informatics Centre (NIC, a software development agency of the central government) to train the accountants. Training lasted for seven days, 11 hours each day, followed by a paper-less test on the last day.



- The village accountant who would be in charge of the new *kiosks* was chosen very carefully. Young persons fresh out of a college were recruited and trained at the headquarters. These officials had not experienced the power that a village accountant could exercise over rural farmers. The project leader (Additional secretary of the department) personally participated in the training given to every batch of accountant to ensure that they felt complete ownership and a sense of importance in being assigned to this new initiative. Accountants were encouraged to talk to the project leader either at his home or at his office. Nearly 500 officials, including all deputy *tahsildars* were trained at the state headquarters and more than 1,000 officials were trained by the Land consultants at the district level.

### **Orienting the Staff with New System**

For introducing the staff with the new system various strategies and programs were undertaken. To drive away the fears of field officials that their job descriptions would change in a major way, twelve state-level information seminars were organized for 1,200 senior and mid-level officers. These seminars emphasized that maintenance of land records was only one of their many functions and that computerization would remove the drudgery of maintaining these records manually. Revenue officials would continue to be responsible for field enquiry. Reducing corruption was not a key message at these gatherings.

### **Cost-benefit Analysis**

The expenditure on data entry operations for about 2 million RTCs in twenty-seven districts was Rs 80 million. The unit cost of providing hardware and construction of computer rooms and kiosks was of the order of Rs 0.04 million for each taluk. Thus the



total out of pocket expenditure on the project was Rs 185 million. This does not include the cost of software development done grows by the NIC. The cost of processing on RTC has been roughly estimated at 13. Assuming a life of five years of a million RTCs issued from all the kiosks (10 per cent of all holdings). This cost includes an assumed operational expenditure of Rs 2 for stationary, cartridges and electricity. The current user fee of RS 15 seems sufficient to cover these costs. However, if the scheme is extended to 700 sub-taluk offices, then there would be an additional expenditure of Rs 0.25 million per kiosk on hardware (1 pc Rs 45,00 ; printer-Rs 20,000; UPS- Rs 5,000; generator-Rs 30,000) and site preparation, raising the unit cost of processing above Rs 15 per record. Statistics show that by the end of November 2001, Rs 5 million had been collected through user fees for the distribution of 330,000 RTCs through 140 kiosks operational for periods varying from there to twelve months. An additional 12,000 RTCs were issued for official purposes. The benefit in terms of person-days saved is approximately 1.32 million per annum, leading to savings of Rs 66 million per annum in wages. The weighted average value of bribe paid in the manual system was Rs 152.46 per person, while that in Bhoomi was Rs 3.09. Even if we reduce the saving by the fee that they have to pay, of Rs 15, the net saving is Rs 134.37, and translate to a saving of over Rs 806 million annually.

### **Strong Political will**

The political executive was completely involved in the computerization project. The state chief minister and revenue minister highlighted the importance of the project publicly. The chief minister wrote regularly to all district deputy commissioners exhorting them to get fully involved in the computerization. He inaugurated a large number of land record



*kiosks*. Meanwhile, the revenue minister regularly reviewed the computerization process and also inaugurated a large number of *kiosks*. A committee of members of the Legislative Assembly (MLAs) visited the *kiosks* and Deputy Commissioner invited MLAs of their districts to witness the functioning of *kiosks*. All this helped demonstrate that there was a strong political will for computerization. Selected field-level personnel were invited to participate in the software development process for various Land modules through a formal state-level Land committee. Meetings were held with participation from various levels in the improvement; and decisions taken at these meetings were incorporated into the software design. Nearly 125 people spent months on software development. It has been decided to spare a further effort of thirty person-months would be given to upgrade to the next version. The project leader in charge preferred to appoint four independent consultants who could tour sites randomly in each division and report on the problems and problem of Land.

#### **4.1.5 Assessment of the Project**

##### **Social and Economic Impact**

Improving the land record delivery system has a significant social and economic impact in rural areas in Karnataka in India. Nearly 2500 bank branches in Karnataka loan approximately Rs 40 billion to farmers as working capital every year. A copy of the RTC is absolutely essential for the farmer to procure the loan. Effective land record management can help banks in recovery.

### **Dispute Resolution**

More than 70 percent disputes in courts are land based. Adjudication of disputes can be faster if access to land records is made efficient. Land as a transparent land record system is a vast improvement over the manual system that it has replaced.

### **Easy access to Land related Information**

For a fee of Rs 15, a printed copy of the RTC could be obtained online in minutes at computerized Land *kiosks* in 177 taluk offices. The land records are in the public domain. Copies of RTC can be obtained for any land parcel in the taluk by providing the name of the owner or the plot survey number. Any record can be viewed through a touch screen at a few *kiosks*.

### **Citizens' Response towards New System**

The people who were mainly poor farmers accepted the new system very quickly and with positive attitude. Information collected from one urban *taluk* indicates that 3,000 mutations were handled annually earlier. After computerization, there has been a 50 percent jump in the number of mutation requests. This change seems to indicate a level of approval of the new system by the citizens, and willingness to update changes in landownership that were previously left undocumented.

### **Quick service**

Farmers can apply for mutation and expedite the process by reviewing the status of their request online, presenting documentary evidence to supervisors in the event that their request is not processed within the stipulated time period.



### **Growing Rate of Service Taking**

It is estimated that between Rs 90 and 100 million would be collected each year from charges for RTCs. Nearly 78.3 percent of all Land users take an RTC whereas 1.2 percent apply for a modified RTC (involving mutation) and 4.5 percent collect a copy of the mutation order. The users of Land collect these documents for a variety of reasons.

The following table shows the different purpose people collect RTC:

SL No	Purpose of taking RTC	Percentage
01.	Banking Purpose	51
02.	Mutation Purpose	14
03.	For Litigation purpose	16
04.	Miscellaneous	19

**Table: 1 - percentage of purpose of RTC use**

### **Ease in use of the Land kiosks:**

Many users (66%) were able to utilize the Land kiosks with no help, in contrast with 25%, in the case of the manual system. Most users of the Land system (78%) found the system to be very simple. Many of the Land users (68%) had also made use of the manual system in the past; a majority of users (78%) who had past experience with the manual system found the Land system more simple. Statistics are presented in a table-

	Manual System	New System
Able to take service without help	25%	66%
Found the system very simple	22%	78%

**Table: 2- Differences of service quality in percentage**

### **Complexity of procedures**

Most users (79%) of the Land kiosks did so without having to meet any official except the counter staff, in contrast with 19% who had to meet one official, in the case of the manual system. The extent of complexity is reflected in the fact that 61% of the users of the manual system had to meet two to four officials for their work. Legacies of the manual system have not completely faded away. About 18% of Bhoomi users reported that their document was not signed by the appointed village accountant, operating the kiosk. 6% reported that they filled out an application form for issue of an RTC.

### **Less error in documents received**

The statistics show that the Land kiosks provided error free documents to more users 74%, in contrast with 63%, in the case of the manual system. Among those reporting errors, wrongly spelt names were the most frequent error (81% in case of manual system, and 53% in the Land system). However, major errors in land details were the issue for 31% of those who reported errors in the manual system, in contrast with 4% in case of new system users. Statistics are presented below-

	Manual system	New System
wrongly spelt names	53%	81%
major errors in land details	31%	4%
Error free documents	74%	63%

**Table: 3- Comparison between old and new System**

### **Rectification of errors:**

Almost all users of the Land system had confidence to complain and sought rectification (93%) as compared to less than half (49%) in the manual system. Half the complainants



(58%) got timely response in case of Land, while such response was reported by only 4% of those using the manual system. Statistics are presented in a table-

	Manual system	New System
Confidence to complain for rectification	49%	93%
Got timely response	4%	58%

**Table: 4- Rectification of errors**

#### **Cost of service:**

All users of the Bhoomi facility who wish to receive a hard copy of the RTC are to pay a fee of Rs. 15/- each and receive a receipt for the same. A large segment of users (66%) reported that they did not get a receipt for the payment they used to make in manual system.

#### **Hidden costs:**

Citizens also used to incur hidden costs of time and effort to secure these certificates. Most Land users (79%) reported a minimal waiting time in the queue of 10 minutes or less, in contrast with 27% who could meet the concerned official in such short time. The bigger issue is the number of times a citizen had to visit these offices to get the certificate. While most users got the RTC (72%) with one visit to the Land *kiosk*, only 5% got it that fast in the manual system.

#### **Reduction of Bribery**

The most serious issue is that of corruption and bribery. Two thirds of the users of the manual system paid a bribe - 66% of them reported having to do so very often. In contrast, only 3% of the users of the Land system reported paying bribes.

**People's Attitude**

While technical capacity of the system plays an important role in its success, the approach of people who handle the task is of critical significance too. Most Bhoomi users (85%) rated staff behavior at the Bhoomi kiosks as 'good'; none of the users of the manual system rated staff behavior as 'good'.

**Empowerment of People**

Land empowers the small rural farmer in any ways. Their relationship with lower ranges of civil savants can be on a more equal footing. Armed with genuine certificates, farmers can raise loans for a variety of purposes and cannot be easily harassed by bank staff. Mutations became an instrument for rural corruption, exploitation and oppression. In case of disputes, landowners simply bribed the officials to get the records changed to favor their position. Now the records are in the public domain and can be easily verified by anyone.



## **4.2 Case Study 2: Land Record Archiving and Automation of Record Room at Manikganj DC's Office under the Ministry of Land**

### **4.2.1 Summery of the Project**

To automate all the RS and CS records of 3 Upazila of Manikganj. Subsequently, issue porcha and maps electronically printed.

Under the SICT Program, the following tasks had been undertaken:

- To develop customized application software for Imaging, Archiving, Retrieving and Printing of Khatian and Mouza Maps
- Digital storage of images of all CS, SA & RS 'Khatian' records and respective CS & RS mouza maps for 3 Upazillas, namely Manikganj, Singair and Saturia. Total Khatians of those Upazillas are about 2,720 volumes containing about 2.72 lakh 'Khatian' records and 550 Mouza maps.
- Installation of necessary equipments, e.g, Computer Hardware, Software, Accessories etc. will be installed in the Record Room in Manikganj DC office
- Establishment of LAN in the Record Room at Manikganj and also at the Ministry of Land.

### **4.2.2 Description of the Project**

This project was taken under SICT program. The Support to ICT Task Force (SICT) Program is a project initiated by the Government of Bangladesh to implement e-governance throughout the nation. SICT's objectives included development of a new

Land Record Management System for the Manikganj Land Record Office in central Bangladesh, enabling the digital storage of maps and associated documents.

### **Government Policy Support**

The national ICT policy of 2002 gives due importance to the issue of e-government, declaring that “the government shall use ICT systems within the public administration to improve efficiency, reduce wastage of resources, enhance planning and raise the quality of service.”

The policy further states that “the Government shall implement ICT systems to provide nation-wide coverage and access by any citizen to the government database and administrative systems which can be used to extend public services to the remotest corner.’

### **4.2.3 Implementation Challenges of the Project**

- Manage digital images of maps to determine land ownership
- Deliver seamless integration between the image-capture software and the database
- Incorporate different security levels to accommodate user privileges
- Include an efficient search function with multiple criteria
- Employ a non-proprietary data format and enable access by multiple applications for different tasks
- Ensure scalability to accommodate growth and migration to higher-capacity server
- Provide backup to minimize loss in the event of a disaster



### **Suggested Solution**

- Engaged Oracle Certified Advantage Partner IBCS-PRIMAX Software to implement Oracle Database 10g with Oracle Real Application Clusters 10g to deliver high availability and scalability using low-cost hardware
- Minimized the impact of disasters and ensured rapid recovery with stable database platform and clustered server framework
- Reduced forgery with a secure system that tracks user changes
- Cut disputes over land, reducing costly litigation
- Increased visibility of pending jobs and enabled easier administration
- Improved accountability and governance across the organization
- Enhanced employee job satisfaction and citizen confidence in the speed, integrity, and functionality of the system

### **Counting the cost**

The inefficiencies and corrupt practices that have been described incur heavy costs. Table 1 suggests that land administration by itself accounts for almost 40% of the total cost of corruption at the local level, and this record only the direct payments. If the indirect costs of having to travel to the office and of income earning opportunities foregone are also taken into account, a further 60% would need to be added to the expense incurred. But even this does not measure the full cost, since a significant part of the expenditure recorded here as relating to courts, and a smaller proportion of police expenditure, also arise in relation to issues having their origins in land related matters.

#### **4.2.4 Assessment of the project**

The benefits that citizens were supposed to get after successful completion of this project are listed below:

- Citizens will receive much quicker services in obtaining porchas
- They will get a good quality printed and certified copy of Khatian/ Mouza map, instead of a hand-written copy

The ways in which governance will improve after successful completion of this project are listed below:

- The process of retrieving and printing a khatian or map will take much less time
- Digital storage will prevent tampering of old records



## **5.0 Findings**

Implementation of land records computerization was difficult in Karnataka in India. This project succeeded because there was a champion who worked a 15 hour day for over a year, devoting 80 percent of his time to the project. Minimizing resistance from staff by harnessing political support was an important contributory factor. Extensive training coupled with a participating style also helped to diminish resistance. Implementation of land records computerization has been difficult in India. Land succeeded because there was a champion who worked a 15-hour day for over a year, devoting 80 per cent of his time to the project. Minimizing resistance from staff by harnessing political support was an important contributory factor. Extensive training coupled with a participatory style also helped to diminish resistance. Project managers need to balance the potential benefits against the risk of implementation failure in deciding how much reform (re-engineering) to tackle at any one time.

### **Findings from Case Studies**

Some valuable lessons have emerged through the case studies, which provide important considerations for government developing countries as they begin to implement e-government projects in Land Administration:

#### **Starting form a small Pilot Project**

However, making the scope of a project very ambitious from the beginning increased the risk of failure in implementing. Often a large scope project involves a very large number of stakeholders who are affected by the application. Managing such large scale change proves to be difficult. Pilot projects can allow the government to experiment and tailor

their product to fit the needs. The safest approach to adopting a new technology with a steep learning curve is to take small steps with activities that are manageable within a relatively short frame.

### **Design a citizen-centric service delivery mechanism**

There are a number of tasks to perform which for which citizens interact with government. Significant effort and resources need to be spent to make citizens aware of the added advantages that Internet channels can offer as opposed to traditional one. The number of access points has sufficient to be within easy reach citizens also need to be trained to navigate through service delivery portals. Additional technical assistance may also be needed. The design of the website is critical, it should be simple to search for information and the information should be complete. Many successful portals are seem to be citizen centric because they follow a navigation structure that closely mimics the life cycle of a citizen.

### **Portion of Documents necessary to be automated**

It is not necessary that all documents are automated but only the documents which are necessary to complete the whole process of citizen-centric service are necessary. It is also not necessary that all the steps in the delivery of a service should be handled electronically.

### **Fear of Unknown Introduces resistance**

This may happen because of introduction of new technology, changes in procedures and different work assignment. Uncertainty in benefits that may accrue from the new system or a perception that disadvantages outweigh advantages for individuals can also lead to resistance.



### **Attitudinal Factors**

The greatest obstacle to apply e-governance in land administration is the negative attitude towards new technology. Besides, the perception that someone else will get the credit for the success of the system can also create resistance in the higher echelons of civil service.

### **Technological performance**

Technological performance such as poor access lack of bandwidth, downtime, slow response, frequent breakdowns and software problems can also build resistance.

### **Cost Reduction in service delivery**

Although many applications in developing countries have shown significant benefits in general, cost reduction has not taken place. Even in developed countries where Internet penetration is high, the proportion of citizens using a portal for services is low. Until this proportion reaches a level so that there can be some cutback in the number of personnel employed in delivering services through traditional means. In fact, initially the costs will rise on account of investments in organizing electronic delivery.

### **Involvement of all Employees**

By ensuring shared values with advocates of change creates a sense of ownership which can be generated amongst employee's feedback. Involvement helps shape the new initiative /process/system can contribute to greater acceptance.

### **Ensure all stakeholders understand**

The expected pay-off and the role of stakeholders in terms of new tasks and development of skills is very much necessary. Counseling is often a useful mechanism. It is also necessary to gather stakeholders' feedback on their understanding of these changes.

Champions are to be identified and motivated

Some useful mechanisms are to be taken to identify champions and legitimize their role.

### **Identify obstacle in Advance**

Identifying obstacle to change in advance of implementation is important as it helps in defining strategies to overcome obstacles. These obstacles may be financial, technical, organizational; social is the presence of anti-champions.

### **Performance of the Office Enhanced**

With the help of new system performance in extent of quality and quantity have dramatically increased. Now, the administrators can easily quickly get the amount of approved and overdue mutation tasks. With the help of statistics collected from one urban *taluk* indicates that 3,000 mutations were managed annually before the implementation of this project. After successful computerization, there has been a raise in the number of mutation performed by the office.

### **Software Applied for the automation**

The land software incorporates the bio-logon metrics system from Compaq, which authenticates all users of the software using their finger-print. A log is maintained of all transactions in a session. This makes an officer accountable for her decisions and actions.

### **Necessary Law has been approved**

For the smooth operation of the automation project and to give legal support to this new service delivery system a new government order decentralizing land to the village level has been passed.



**Potential Future benefits:**

There are plans to use the Land kiosk for disseminating other information, like lists of destitute and handicapped pensioners, families living below the poverty line, confessional food grain card holders, mandi rates and weather information such information is already available at one taluk on a pilot basis. The system generates various types of reports on land ownerships by size, type of soil, crops, owner's sex, etc, which would be useful for planning poverty alleviation program and supplying agriculturist inputs. Banks and other lending institutions could be provided electronic access to the database for processing requests for crop loans, and conduct some advance planning on the quantum of landing required. Similarly, the high court, district and taluk courts could access the database for resolving legal disputes surrounding land. The system could also lead to better administration of the land reforms act, such as enforcing a ceiling on landholdings.

**Provision of lodging a complaint through web**

Through empowered citizens committee and NGOs are to be there for check and balance. Ultimately, the only resource that a citizen has against such practices is to lodge a complaint. The process for lodging a complaint should be facilitated through the web. The back end has to be geared to handle complaints received electronically.

As an implementation strategy, manually written RTCs were declared illegal from the day on which the computerized system became operational in a taluk. The notification was issued on a taluk-by-taluk basis as and when the scheme became operational here. This forced the department and the farmers to completely rely on the new system. The strategy worked because the application design was robust and did not fatter. There was some concern in Karnataka about raising the user fee to Rs 15 from Rs 2 in the manual

system. Often these fears about user fees are exaggerated, particularly if services have genuinely been improved. The response of the people at taluk has been overwhelming. Queues can be seen at the kiosks in 140 taluk centre, and 330,000 people have paid the fee without grumbling.

The Bhoomi project benefits the rural people dramatically. Citizens have benefited from reduced delays, availability of many services under one roof, avoiding frequent visits to government departments and reduced corruption. By publishing information (rules and procedures) online, transparency and has been increased (Bhatnagar 2004, p.26.).

In regard to rural community the following conclusions can be drawn from e-governance projects implemented in Karnataka:

01. Rural people are willing to pay a fee for systems that have very clear business or personal uses
02. Villagers are not reluctant of taking of electronic service delivery. The uptake depends on whom significant value is being delivered in comparison with existing ways of receiving information and services.
03. Intermediaries are often needed to respond to the specific information needs of rural citizens, and to interest and disseminate knowledge from public documents (Bhatnagar 2004, p.47)



## **5.1 Recommendations**

For the successful application of e-governance in land administrations following things are to be ensured by the government:

### **Enabling Environment Issues**

The enabling environment includes the necessary environment to ensure a successful implementation of e-Governance. Followings are some imperative enabling environmental issues which are necessary for e-Governance.

### **Infrastructure Development**

We do not have the infrastructure necessary to immediately deploy e-Governance services throughout country. To be successful, e-Governance need to have an IT infrastructure that is capable to support and enable the execution of e-Governance. Therefore, we need to develop infrastructure that are compatible with the nation's ICT position. An e-Governance infrastructure in general comprises network infrastructure, security infrastructure, application server environment, data and content management tools, application development tools, hardware and operating systems, and systems management platform (Christian et al., 2003). We also need to build public access kiosks and mobile centers to provide single, unified portal for one stop services as well as information access to citizens. New digital technologies are to be introduced to accelerate the development the present state of e-governance. Technology adaptation as infrastructure development is beginning of the e-Governance. To ensure that all citizens have equal access to technology, government have to establish the different access method such as network of kiosk, computer systems, remote access by cellular phones,

satellite receivers, wireless technology etc. It's urgent need for government to ensure the sufficient infrastructure in the rural areas.

### **Continuous Power Supply**

24 hours of electricity supply should be ensured. Only the uninterrupted power supply can give continuous service. Indeed, power generator for the backup or the other backup system should be there for the continuous power supply.

### **Regulatory or Legal Framework**

The regulatory or legal framework regarding e-governance in Bangladesh has to be modernized to accommodate the growing needs of the electronic world. E-mail has to be given of official value, considered as an acceptable mode of production and legal. There should be new law to be enacted to protect against cyber-crime.

### **Publicity and Awareness**

For a successful e-Governance require good marketing to encourage citizens to make use of e-Governance services. People, especially if they are unfamiliar with technology, may be reluctant to try e-Governance services out of distrust or belief that online services will not meet their needs or due to lack of understanding of the technology. People must be indulged into using the e- services, provided, of course, that these services were designed with members of the public in mind (Info Dev Report, 2002).

Although Bangladesh government provides some necessary e-services to citizens, but most of citizens are not used this facilities properly in lack of proper awareness and publicity. In this scenario, government should be actively marketing its e-Governance services. The marketing strategies include advertisement on television and radio, advertisement in airline magazine and newspaper. This is just to get the citizen and



business to use its e-services. Public officials are also to be made aware of the whole process of applying e-governance.

### **Security and Privacy**

Security and privacy are to be established for sake of building trust with the service receiver. And for preservation of security, the method of registration can be introduced by which a user gains a credential such as a username or digital certificate for subsequent authentication. This may require the user to present proof of real- world identity such as birth certificate, passport and/or proof of other attributes depending on the intended use of the credential (e.g. proof that an individual works for a particular organization).

Privacy must be addressed in the planning and design of e-Governance systems since it is much harder to interject privacy protections after a system is built and have to ensure the limit access to personally identifiable information - do not automatically allow employees to tap into databases of personally identifiable information. Since land issues are sensitive, government has to be very cautious about applying technology.

In some country such as Italy, Belgium, Finland, Australia adopted for e-governments service to its citizens and to protect electronic communications, it is imperative that it identifies each citizen uniquely; which brings the issue of UIN (Unique Identity Number). Such a UIN is needed to prove the involvement of a citizen in a particular transaction and to eliminate chances of repudiation. A UIN can be stored within the electronic certificate or outside the certificate on the chip depending on the implementation scheme (Amir et al., 2005). In contrast, Still Bangladesh could not develop an effective and completely reliable method of uniquely identifying citizens (Farooq et al., 2004). At this time, it's crucial for government that to make a unique

identity number to identify the citizen. One of the most recent inspiring news is that government of Bangladesh has taken initiative to build up an effective and complete method of uniquely identifying the citizens which is called National Identity Card.

### **Training**

Many e-Governance or computerization projects of Bangladesh government suffer gravely from lack of adequate training facilities. Training is of vital necessity in familiarizing users with e-Governance and breaking their fears (Mahbubul, 2007). E-training supports e-Governance transformation, but e-Governance needed to have an integrated management system to form communities of interest to address key issues across the government and private sectors. E-training is a common infrastructure which could assist in the implementation of each e-Governance project. Governments needed to communicate policies and provide training on new processes and procedures and IT skills that boost the success of e-Governance. E-training provides flexibility and useful for training both officials and citizens. A well developed training strategy is a key to success for project implementation. The scope of e-training planning focused on user education and training strategy, specifically: (a) organization: new roles, responsibilities and competencies; (b) process: business practices and associated operating principles; and (c) IT: understanding of and facility with any new package or system. The scope needed to be the development of training material, e-training user documentation, change communication, delivery of training, assessment of training, documentation of maintenance and post implementation support. The key concerns of the e-training program would be identified according to the needs of the e-Governance project master



plan, with e-training considered as a common e-Governance application (Asian Development Bank Institute Report, 2004).

### **Bangla Format Standardization**

Currently, there is no standardization for use of Bangla in the electronic format. Different people use different fonts, often resulting in documents not opening in someone else's computer. Another major issue is that none of these fonts maintain the international standard-UNICODE-as a result of which Bangla content cannot be put up uploaded on the web as files only.

### **Leadership**

In order to achieve the e-Governance transformation, elected officials and administrators are needed at all levels of government who understand the technology and the policy goals and who will push reform. E-Governance requires strong political leadership in order to succeed. According to Hee (2007), numerous e-Governance projects in developing countries tend to fail because the political leaders do not have precise understanding on e- Governance or maintain continued concern from the beginning to the end of the project. Therefore, it is crucial to set relevant laws and regulations to institutionalize for leadership which will and interest early in his/her term so that resources appropriate for the project can be allocated in a proper and timely way during implementation, preventing outside influences.

A survey of Chowdhury (2008) stated that one of the reason to failure to e-Governance in Bangladesh, because of internal political leadership also mentioned that political desire may not be enough to successfully implement e-Governance. However, lack of political desire may work as high barrier to implement e-Governance A leading player

(organization, institution), which is able to understand the real costs and benefits of the project, to motivate, influence, include and support other organizations and institutions, is required. Leadership is necessary before, during and after project implementation. Before the project is initiated, leadership is needed in order to explain the concept, the model and create awareness; during the project, leadership is needed to manage change and support the project; and after the project, it is needed to pledge the required flexibility and adaptability of the initiative (Valentina, 2004). Top leadership can ensure the long-term commitment of resources and expertise and the cooperation of disparate factions.

### **Partnership and Collaboration**

Collaboration and cooperation at local, regional and national levels, as well as between public and private organizations, are to be built for e-governance development process. Collaboration among government entities, private enterprises and NGOs can assist policymakers in crafting meaningful reforms and can expedite the implementation of e-government. As, Bangladesh government does not have adequate technical, managerial or financial resources to venture into e-Governance on its own. It's vital that the Bangladesh government will have to explore new relationships among the government agencies as well as partnerships with the private sector and NGOs to ensure resources, skills and capabilities that the government lacks. For example, the ICT of private sector is able to support government with technical skills and infrastructure; meanwhile. Furthermore for collaboration government should ensure the following initiatives (Info Dev Report, 2002):



- In the planning phase, establish a consultative process that includes opportunities to hear from and speak with business, NGO's and other government agencies. Explain the goals of the e-governance initiative and solicit suggestions.
- Local champions will help projects succeed. To decrease disbelief in local communities, directly involve local leaders by making them representatives, and by teaching them IT skills they can pass on to their communities
- Create local ownership. In conjunction with the establishment of a local management committee or body, handover of e-Governance projects should occur as soon as possible.

### **Strategic Investment**

Like other developing countries, Bangladesh government fund are not sufficient to acquire technology for e-governance implementation. Government must choose projects carefully in order to optimize their investment of time and resources. Projects should have clear value in terms of enhancing transparency, increasing citizen participation in the governance process, and saving money. Moreover, governments should prioritize some programs over others to maximize available funds in view of tightly limited resources.

### **Benchmarking**

Governments must regularly evaluate the progress and effectiveness of their e-Governance investments to determine whether stated goals and objectives are being met on right time. According to Patricia (2003) benchmark is to measure the success, failure or progress of an e-government project. Benchmarks act as a "reality check" for managers and policy-makers to measure on a regular basis whether e- government projects are advancing, are sustainable and are delivering on what was promised. During

data collection, most of the respondent mentioned e-government is not people oriented (Data analyzed in Previous Chapter). Hence, Benchmark is quite important issue to full utilization e-government in Bangladesh.

Benchmarks can include the following:

- number of agencies and functions online,
- reduction in average time for processing citizen requests or applications,
- reduction in number of complaints about the level and quality of government services,
- increased citizen participation in consultations and comment proceedings,
- lower costs to government in delivering services, and
- increased revenue

In following some benchmarking recommendations are pointed (Info Dev report, 2002):

Benchmarking Recommendations:

- Create measurable goals during early planning stages.
- Conduct regular audits to ensure progress is being made to achieve stated goals.
- Review benchmarks regularly to ensure that accurate measures are appropriate for rapidly changing technology.
- Create a data collection system to support program operations and “before and after” surveys of knowledge, skills, and applications among participating organizations to assess program impact.

### **Mobilization of Resource for Implementation**

Resource mobilization is not only government responsibility. Participation from donors and private should have to welcome by the government. Key issue in implementation is program should have small enough to scale and monitor, replication should have to be



rapid enough to visualize the greater benefits of e-Governance. A very large program with no immediate benefit will suffer the real implementation of e-governance project

### **Monitoring and Continuing Improvement**

The purpose of this phase is to continually check whether the policy, legislation and its implementation are producing the planned results. Government have to ensured that every program have to evaluate and monitored properly unless the overall reform program will fail to achieve its goal

### **Address Digital Divide**

The digital divide refers to the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communications technologies (ICTs) and to their use of the Internet for a wide variety of activities (Patricia, 2003). As Information society for all is one of the major targets of Bangladesh government. Besides, most the respondent/citizen concentration was about e-services for rural people. Moreover, Bangladesh a country of 130 million people, most of the people lives in village.

Hence, policy-makers should keep in mind that to bridge the digital divide through e-government, they must make e-Governance relevant to citizens.

## 5.2 Conclusion

There are many success stories of E- governance all over the world. But application of E- governance is not a very easy task to implement. It assumes so many conditions. The success rate of IT applications also in Land Administration especially in developing countries is not very encouraging. A whimsically developed poor quality IT application can cost heavily in terms of operation and maintenance in district Land Administration in future. That is why, infrastructure building in an well integrated manner is very much necessary. There is also a lead to be taken for the preparation of e-readiness. But, all effort will be in vain if we cannot manage to support e-governance ambition with continuous 24 hours electricity supply. People will not encouraged if cannot ensure security and privacy. Above all, training is to be given to all the officials and all involved in service providing. For the successful completion and innovation there is no alternative to create environment for having good leadership. Attractive incentives can work in this case. Government can also opt for Public- Private Partnership to transfer the responsibility of development, operation, and maintenance of IT application. Thus it can also reduce the associated risks. But that should strictly be regulated and monitored for public security.

A regulatory framework may also be required to ensure the efficient functioning of the E- Governance. What we need to do is build a well coordinated bridge between the public demand and the smooth application of IT for efficient e-governance. What should be kept in mind is that any kind of development leads to change. This change can affect the overall aspect of the society including people's lifestyle and attitude. So, while some may be ready to embrace these changes, many remain skeptical and often doubt the



effectiveness of such radical change, even if they are for the better. Therefore, the changed processes would have to be properly understood, accepted and adopted to ensure effective citizen-centric service delivery system. The potential of the transparent land service system is limitless and district land administration has to bring changes to flourish them. In this case, E-governance will stand to be the catalyst or tool to develop an effective service delivery system. Above all, we need to remove the fear of unknown from the officials and staff who dare and resist ICT most in district land administration.

## **Bibliography:**

01. Bhatnagar, Subhash, "e government" From Vision to Implementation A Practical Guide With Case Studies, Sage Publications, New Delhi, 2004
02. Bhatnagar, Subhash, "Bhoomi: Closing the digital divide through Innovative Reforms and Partnership," Eleventh International Anti-corruption Conference, Seoul, Republic of Korea, 25-28 May 2003, <http://www.Liacc.org/download/Bhatnagar>.
03. Bhatnagar, Subhash, Public Service Delivery: Does E-Government Help? Presented during Annual Bank Conference on Development Economics 2003 (The World Bank, South Asia Component), Bangalore, May 2003.
04. Bhatnagar, Subhash, Egovernment as a Tool for Improving Public Sector Performance, Indian Institute of Management, Amedabad 380015, (Consultant, World Bank Washington DC)
05. Chawla, Rajeev and Bhatnagar, Subhash "Bhoomi: Online delivery of Land Titles in Karnataka, India," Case Study, World Bank, 2002, (<http://www1.worldbank.org/publicsector/egovernance/bhoomi-cs.htm>)
06. Gupta, Vivek, "E-governance: Lessons from District Computerization," IFIP Newsletter, Vol.12, No. 1, 2002
07. Heeks, Richard "E-government for development: Basic Definition Page," Institute for Development Policy and Management, University of Manchester, 2004 (<http://www.egov4dev.org/egovdefefn.htm>.)
08. <http://www1.worldbank.org/publicsector/bnpp/part1.pdf>
09. <http://www1.worldbank.org/publicsector/bnpp/Bhoomi.pdf>



10. Islam, Baharul, "Information Age Government: Success Stories of Online Land Records and Revenue Governance from India ([http://www.uneca.org/codi/Documents/PDF/ Information.](http://www.uneca.org/codi/Documents/PDF/Information.))
11. Labo, Albert and Balakrishnan, Suresh "Report Card on Service of Bhoomi Kiosks: An Assessment of Benefits by Users of the Computerized Land Records System in Karnataka," public Affairs Centre, Bangalore, November 2002, <http://www1.worldbank.org/publicsector/bnpp/Bhoomi.pdf>
12. Land administration in Bangladesh 2 (CARE SDU Reports and Studies Land Policy Lit Review Final.doc)
13. Mathur, Nidhi & Chakraborty, Sagarika, "Efficient Administration Through E-Governance"(<http://kmap2005.vuw.ac.nz/papers/Efficient%20Administration%20Through%20E-Governance.pdf>)
14. Srivastava, Anil, "E-governanceor Dvelopment: What comes First: Issues and Correaltions," Syracuse: The Maxwell school of citizenship and Public Affairs, Syracuse University.
15. United Nations, "Benchmarking E-government: A Global perspective-Assessing UN Member States", Division of Public Economics and Public administration, 2001,[http://unpan1.un.org/intradoc/groups/public/documents/un/unpan003984.p  
df](http://unpan1.un.org/intradoc/groups/public/documents/un/unpan003984.pdf)
16. World Bank, Governance and Development, Washington DC: World Bank, 1992, [http://publications.worldbank.org/ecommerce/catalog/product? Item-id=194297](http://publications.worldbank.org/ecommerce/catalog/product?Item-id=194297)
17. World Public Sector Report 2003, E-Government at the Crossroads