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Prospects of Modern Technology in Land Record System: Safeguarding the Land Rights of the Landowners in Bangladesh

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DECLARATION

I hereby certify that the thesis I submitted for my graduation from East West University, “Prospects of Modern Technology in Land Record System: Safeguarding the Land Rights of the Landowners in Bangladesh” was entirely written by me under the guidance of Sayeed Hossain Sarwar, Senior Lecturer, Department of Law. I further declare that the work's material is entirely mine and has never been utilized in any review. The references accurately acknowledge the information from other sources, and the authors' and institutions' work has been properly cited.

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LIST OF ABBREVIATIONS

- 1. DLMS= Digital Land Management System**
- 2. SAT Act= State Acquisition and Tenancy Act**
- 3. ECNEC= Executive Committee of the National Economic Council**
- 4. DLRS= Directorate of Land Record and Surveys**
- 5. LIS= Land Information System**
- 6. GIS= Geographic Information System**
- 7. GPS=Global Positioning System**
- 8. AC (Land) = Assistant Commissioner (Land)**
- 9. LRO= Land Record Officer**
- 10. ROR= Record of Rights.**

ABSTRACT

The land management system of Bangladesh remains based on the colonial legal system. The current legal system of Record of Rights still relies on the manual method. This traditional and obsolete process leads to uncertainty and misunderstandings about land ownership and rights. The aim of the paper is to analyze how Bangladesh's present legal system of land management system and obstacles experienced by land owners are violating the land rights of the land owners. Furthermore, it also aims to highlight the importance of implementing modern technology in land management system to protect the Constitutional right of the land owners. For the purpose to assess efficacy in supporting and safeguarding landowner's constitutional rights this study looks at the current legal framework and administration procedures in Bangladesh. While doing so, it discovers a number of governance obstacles resulting from the present dispersed registry and record of rights systems, as well as from restricted accessibility of technology; such challenges have an unfavorable impact on landowners' titles and rights which is inconsistent with the Constitutional Framework of guaranteeing fundamental human rights of Bangladeshi people. This article examined several laws, cases and academic articles to explore multiple approaches for safeguarding land rights and offers a wide range of methods for handling land disputes. The paper additionally concentrated on the Fundamental challenges that might be created for the implementation of technology in the land management system of Bangladesh. However, this study solidifies the necessity for a unified, central land management system by amending or introducing tech-friendly laws as well as for increased access to modern technology for all current and aspiring landowners. The research continues by highlighting how the implementation of modern technology in the legal framework of Bangladesh will have an impact on the safeguarding of persons' titles and other rights and lead to a more effective and rigid land management system in Bangladesh.

Key Words: Bangladesh, Land administration, Land management system, Landowners, Right, Technology, Legal Framework.

Prospects of Modern Technology in Land Record System: Safeguarding the Land Rights of the Landowners in Bangladesh

CHAPTER I

Introduction

1.1 Introduction

Landowners in developing countries like Bangladesh rely on their land more than in developed nations. The conventional colonial method in Bangladesh leads to complex, time-consuming, and painful processes that fail to ensure landowners' titles.¹ This lack of cooperation causes administrative tangles that affect individual rights and national economic development. Land titles are prone to fraud and improper practices, stripping many landowners of their rights.

However, the traditional system of land administration is unable to keep up with the market's rapid changes and rising demand. Unplanned growth which leads to issue in society is a result of an inefficient land administration and management system. As a result of this the security of land tenure and land transfer has become more challenging. Bangladesh's land management system faces significant needs of changes, including land titling, recording, which will empower individuals to transform the reality.²

It becomes a need of the time to build a tech-friendly land management system. Any technology will be expensive to adopt and likely to be replaced by newer ones. The goal should be a

¹ Abul Hasanat, 'Technology and Torrens: How to support Bangladesh Land Owners Rights'(Pacific Real Estate Society,Australia,2022) < <https://eprints.qut.edu.au/230677/> > accessed 30 june,23.

² Ibid.

technology-neutral solution. Since technologies are important for developing an efficient land management system in Bangladesh, this paper will focus on why the present legal framework of land management should be modified and how an IT-based land management system can support landowners' rights.

1.2 Research Question

1. What are the major challenges faced by landowners in the existing land record system and how can they be overcome by implementing modern technology?
2. What legal and regulatory frameworks are required to facilitate the technological integration in the land record system and protect landowner rights?

1.3 Research Objects

The main objective of this paper is to evaluate the existing legal system of Bangladesh regarding the land record system and point out the challenges faced by the landowners. Besides, how proper implementation of technology in land record system can smooth the system and safeguard the rights of landowner. However, this research aims to suggest some recommendations in the current legal framework for implementing technologies and their effectiveness addressing the existing challenges faced by the landowners.

1.4 Literature Review

The book 'Land Law: Text, Cases and Materials' by Mohammad Touhidul Islam encompasses land administration, ownership, establishment and transfer of property rights, mutation, easements, record-of-rights, non-agricultural land, land taxes and land law procedural difficulties. The land management system of Bangladesh requires a very efficient

system. Unfortunately, reality is too far away, and this country's land management system has turned into a burden that is now incapable of addressing emerging land challenges. The Constitution of People's Republic of Bangladesh safeguards the rights of landowners. Article 42 of the Constitution of Bangladesh defines that every citizen has the right to enjoy, hold and transfer the property.

A study by Kasphia Nahrin on “Land Information System (LIS) for Land Administration and Management in Bangladesh” which shows how Manual information systems inadvertently hamper field operations and digitization in the land industry, limiting accountability. The conventional system of land service and title changes takes time and money. Land mutation takes 3–4 months or requires intermediary payment. The land mutation requires being computerized to better serve the public.

Another study by Sajedul Talukder on “Digital land management system: A new initiative for Bangladesh” has discussed how integrating an e-Service Centre and DLRS to input and publish khatian land records in Bangladesh may safeguard them digitally.

Bangladesh took several steps to digitize the system but progress is far away from reality. Some officials and staff are uninterested in using digital services because they worry it might hinder the chance of committing corruption and irregularities

The research analyses major scholarly works, reports, and legal cases to determine the beneficial aspects, drawbacks and legal gaps in Land administration of Bangladesh.

1.5 Research Methodology

This research is Doctrinal and qualitative research. The research examined legal doctrine in legal and scholarly sources. The relevant statutes, academic and related literature, and legal case decisions from Bangladesh were examined. This study uses primary sources and secondary sources to enhance legal materials. The research includes material about Bangladesh systems and how modern technologies might empower people to safeguard their right.

1.6 Research Limitations

The paper's deficiencies are its failure to find judicial precedents, laws and other relevant journal papers regarding technology implementation in Land Management System of Bangladesh. Due to the complexity of present procedures and the cost and time of litigation, disputes can take years to resolve, if the parties can afford to do so. In addition to literature from similarly developed jurisdictions, non-legal scholarly publications, reports, and studies, and newspaper articles were used to support the research.

CHAPTER II

Land Rights in Accordance with the Constitution of Bangladesh

2.1 Introduction

In the era of rights, the land right is an essential. It gives a person exclusive authority to do what they want to do with their property. In Bangladesh, right to property is a fundamental right according to its Constitution.

2.2 Right to Land in Bangladesh Context

As to Article 42, the right to property has been recognized as a fundamental right.³ Every individual possesses the inherent right to obtain, retain, and transfer property whether it movable or immovable without any kind of difficulties, unless such rights are lawfully curtailed.⁴ According to the Definition of the Act⁵ land is an immovable property.

Moreover, it can be claimed that the right to land comes within the realm of human rights. The significance of land rights becomes apparent within the current global framework for protecting human rights, wherein it is a fundamental principle and subject of debate. The right to property ownership, whether held alone or with others, is defined in Article 17.⁶ Furthermore, it points out the principle that no property should be seized in an arbitrary or unjust manner from any individual.⁷ The adoption of this came about in 1948 by the United Nations.

³ The Constitution of People's Republic of Bangladesh, a 42

⁴ *ibid*

⁵ The General Clauses Act, 1897, s 3(25)

⁶ The Universal Declaration On Human Rights (adopted 10 December 1948)217 A(III)(UNGA), art 17

⁷ *ibid*

Despite having a number of declarations asserting the right to land, the citizens of Bangladesh are still facing challenges in enjoying their constitutional right to land. The widespread presence of criminal activities and corrupt practices in Bangladesh primarily revolves around land-related services, as indicated by a recent study conducted by the World Bank. According to the research, there is now a backlog of over 3.2 million land-related cases awaiting resolution in the judicial system. The citizens of Bangladesh are currently facing plenty of challenges regarding land-related issues, which hamper their exercise of constitutional rights.⁸

Upon closer examination of land-related offenses in Bangladesh, a range of unlawful conduct becomes apparent. These include planned land seizures, acts of falsification and deception, unlawful transfers and sales, incursions on public property, disputes over ownership, instances of violence related to land disputes, and acts of criminal harassment. The citizen of Bangladesh is unable to fully enjoy their constitutional rights due to the inefficiency and inaccuracy of the land management system.

However, safeguarding land rights, it needs to exist there a reliable and effective system of land management and titling, for this to be simple to use and available to its citizens, and for laws and procedures to be upheld equally and justly to all citizens, not just those who enjoy financial advantages. Therefore, it is necessary that land management systems incorporate relevant and available technologies in the twenty-first century. The Bangladesh Constitution does not directly permit the use of technology in land management or the upholding of land ownership or rights, nor does it mention right of having access to technology per se, but it subtly encourages the application of technology.

For instance, Article 16, which is stated as being for "rural development and agricultural revolution," states that the State must take effective measures to bring about a radical transformation in the rural areas through the advancement of an agricultural revolution, the

⁸ Mohammad Faysal Saleh, 'Drawbacks of land administration system in Bangladesh and some feasible solutions'(2015) BDBLD < <https://bdlawdigest.org/drawbacks-of-land-administration-system-in-bangladesh-and-some-feasiblesolutions.html#>> accessed 19 July 2023.

provision of rural modernization, other industries, and the improvement of education, communications, and public health, in the respective regions, so as to gradually eliminate the disparities that presently exist between the urban and rural areas.⁹ The introduction and implementation of technology in safeguarding and encouraging land rights would appear to be essential given that the Constitution's Preamble states, among other things, "it is our sacred duty to safeguard, protect and defend this Constitution and to maintain its supremacy as the embodiment of the will of the people of Bangladesh so that we may prosper in freedom." The use of such technology is both constitutionally permitted and required for the creation of a technologically advanced, rights-based society.

Bangladesh has generally been successful in defending the land rights of its residents, but frequently falls short in defending citizens' rights and interests regarding land titling and transfer. The primary contributing factors for this condition is the country's complicated land administration systems and titling processes are still based on systems and practices developed during its colonial past. The lack of involvement with widely available and easily accessible technologies is the secondary problem.

2.3 Conclusion

In Bangladesh, for its tendency to colonial land management systems the rights of land of people are violated in many ways. Sufferings of people are boundless while it is time for any transfer of property or any proceedings related to land.

⁹ The Constitution of People's Republic of Bangladesh, a 16.

CHAPTER III

Existing Legal Framework and Challenges

3.1 Introduction

Around 31 million people become involved in any kind of legal trouble each year.¹⁰ The most severe of all of these challenges are those that are connected with the land¹¹. A large number of landowners in Bangladesh are unconcerned with legal issues and regulations, which leads to the country's high rate of land-related conflicts. Further, Bangladesh continues depending on an administrative system that is quite outdated

3.2 An Overview of Existing Land Record System

Three Ministries, the Ministry of Land, Ministry of Law, Justice and Parliamentary Affairs, and Ministry of Establishment, are responsible for managing and administering land in Bangladesh. Land record systems which is prepared by operating Bengal Tenancy Act, 1885 or The Sylhet Tenancy Act, 1936 or The SAT Act, 1950 in Bangladesh serve as a key for land administration, including preparing Record-of-Rights (ROR) by surveying¹² and mapping, registering deeds during property transfers, and updating ownership¹³. The Act creates a framework for preparing ROR and updating land records to take into account ownership and tenancy changes.¹⁴

ROR is created by the DLRS within the Ministry of Land. Cadastral surveys and settlement operations are used to create land records, and the DLRS uses its Zonal and *Upazila* settlement

¹⁰ '31 million face legal issues every year, land dispute more severe'(brac,10 May 2018)
<https://www.brac.net/latest-news/item/1152-31> accessed 21st July 2023.

¹¹ *ibid*

¹² The Survey Act, 1875, s 2.

¹³ The State Acquisition and Tenancy Act, 1950, s 143.

¹⁴ The State Acquisition and Tenancy Act, 1950, s 17 &18.

offices to carry out these tasks. ¹⁵ For correcting ROR there are several procedures such as Revenue officer for fraudulent entry¹⁶, for any bona-fide mistake Land Appeal Board may order to correct¹⁷. Besides, under section 145A, for a mistake in final published report one may go to Land Survey Tribunal. ¹⁸

The Ministry of Law, Justice, and Parliamentary Affairs' Registration Department which follows Registration Act, 1908 is in the role of registering transfer deeds. After registering a deed, the Land Transfer (LT) notice must be sent to the Office of Assistant AC, Land Office. Mutation changes and updates the ROR on property transfers, subdivisions, and amalgamations.¹⁹ After completing land records, the DLRS convey *khatians* and *mauza* maps to the DC office for keeping in the District Record Room. A finally published ROR may be revised.²⁰ A revised ROR also has a presumptive value of correctness until and unless it is rebutted by reliable evidence.²¹

3.3 Problem in Present Land Record System

The land administration and management system of Bangladesh suffers from significant flaws and vulnerability. Lack of digitization of all the public records along with land records leads them being outdated and corrupted. That gives rise to various disputes among the landowners. Here an attempt has been made to point out some existing issues faced by landowner for manual land record system.

¹⁵ The State Acquisition and Tenancy Act, 1950, s 144.

¹⁶ The Tenancy Rules, 1955, r 23.

¹⁷ The State Acquisition and Tenancy Act, 1950, s 149 (4).

¹⁸ Ibid, s 145A.

¹⁹ Ibid, s 143.

²⁰ Ibid, s 114A

²¹ Dayal Chandra Modak and others v Assistant Custodian, Vested and Non-resident Properties (L&B) and others 50 DLR 186 at 8 para.

3.3.1 Un-unified System

The land administration system revolves around three factors. Each matter is dealt with by three different offices. The responsibility of the registration of the deed is assigned to the Sub-registry office which is established under section 7.²² Even it is under the Law Ministry. On the other hand, under the Land Ministry, *Tahsil* office is responsible for maintaining the ownership records and there are other offices for settling the dispute.

Additionally, Sub-registrars fail to detect false documents as the sub-registry office is unable to assess land mutation, land development tax, *parcha*, or *khatiyani* paperwork due to the lack of connection to the land office. This case ignores the sub-registrar's assessment of land sellers' ownership. According to Section 53 (c)²³, immovable property cannot be transferred without the land seller's *khatiyani*.

However, the problem is when there arises any dispute regarding land ownership due to any mistake in any document of these offices. The most important prerequisite for properly resolving these conflicts is ownership verification.²⁴ The problem is that each party may offer various proofs from various offices. Since all the offices are legally constituted, which one shall prevail in regard to proving ownership?

3.3.2 Error in ROR

The existing survey and recording systems are complicated and flawed, depriving many people of fair land ownership and service. Preparation of record of right under section 144 was totally done manually and had to depend on several persons.²⁵ The Directorate of Revenue officer

²² The Registration Act, 1908, s 7.

²³ The Transfer of Property Act, 1882, s 53(c).

²⁴ Ayub Ali, 'Settlement of Land Dispute in Bangladesh: Legal Issues and Challenges' (2017)3 South East University Journal of Law 1, 5.

²⁵ The State Acquisition and Tenancy Act, 1950, s 144.

conduct surveys for the Record of Rights.²⁶ For the purpose of survey it requires measuring the land and drawing a map of the land. This is done using tape and Gunter Chain by Amin from the DLRS office.²⁷ This cadastral survey procedure can be affected by human error in situating the tape or Gunter Chain, recording measurements, and other process difficulties. Any inaccuracies in the Record of Rights, property transfer deeds and mutation documents can cause major problems with land ownership and rights.

Though there is a solution to correct the mistakes. AC (land) is empowered to correct the clerical mistakes under rule 23.²⁸ But all the procedures are time consuming.

3.3.3 Multiple Transfer of the Land

Another regular scenario allowed by the present framework is being able to sell a block of land to several buyers at once and register all sale deeds. People use false personation, false deeds to sell land to several buyers which is a crime under section 205.²⁹ Under the section 65(e), 1872 sale deed is a private document.³⁰ As a result, there is no way to check the sale deed until the seller shows it. After that, under section 74(2) of the same Act, the entry book of registration deed is a public document³¹ but still it is not feasible to readily or quickly get a clear check from the registration office due to its complicated nature.

3.3.4 Lengthy Procedure

Any transfer of immovable property must be registered under section 17.³² The Registration office's isolation, maintenance of registration deeds and delayed forwarding of LT notices to the AC (Land) office make ROR mutation and upgrading a lengthy procedure. Upon application

²⁶ Ibid.

²⁷ The Survey Act, 1875, s 7.

²⁸ The Tenancy rules, 1955, r 23.

²⁹ The Penal Code, 1860, s 205.

³⁰ The Evidence Act, 1872, s 65 (e).

³¹ Ibid, s 74(2).

³² The Registration Act, 1908, s 17.

under rule 23,³³ AC (land) open files for mutation under section 143(c) (1).³⁴ Later on it is sent to Tehsil office under rule 22. Depending on his inquiry mutation is prepared. The whole process takes a long time. Even it is an open secret that applicants have to pay an amount to the Tehsil office in time of mutation. Otherwise a false report from the *Tahsilder* during the time of inquiry may distort the mutation record. To correct an erroneous mutation is another hassle. Error in the mutation might be two types. One is bona fide mistake. Another one is fraudulent mistake. To identify which type of mistake occurs in mutation is another challenging and time consuming procedure.³⁵

Further, it requires a revision settlement. Amending land records is more complicated and time-consuming. All current stages of traditional ROR preparation is at risk of tampering and distortion

3.3.5 Lack of Access to Information

Besides, lack of access to information makes the whole process more complex. Such buyers are not able to know any information, such as land tenure records or land documents, before purchasing any land. As a result, due to lack of information people are not aware about the updated information about any land. Even due to lack of information, problem like selling land multiple times, multiple ownership and multiplicity of land related documents arise³⁶.Lack of access to information also violates the right to access information.³⁷

³³ Tenancy Rules,1955,r 23

³⁴ The State Acquisition and Tenancy Act,1950, s 143(c)(1)

³⁵ Syed Ashfaque Hossain and others vs Bangladesh, represented by Secretary, Ministry of Land Administration and Land Reforms and others [1989] 41 DLR (1989) 364

³⁶ 13 Sajibur Rahman, 'Digitising land documentation limps through dilemmas' The Financial Express (Dhaka, March 2022) <

<https://thefinancialexpress.com.bd/national/digitising-land-documentation-limps-through-dilemmas-1647570669>>

accessed 4th july,23.

Accessed 24 July 2023.

³⁷ The Right to Information Act,2009, s 4.

3.3.6 Case Backlog

By statute, the suit nature in civil is entirely the competence of civil courts.³⁸ Suits regarding property or office rights are civil in nature.³⁹ Land disputes take long time to resolve through civil courts. The majority of land disputes involve how land ownership is obtained. Such as, a person who was forcibly evicted can file suit for the return of their possessions.⁴⁰ Partition suit under Partition Act, 1893⁴¹ and SAT Act⁴² eventually reach court. These suits take a long time to resolve. To prove the suit in favor one must visit at least 10 government offices for evidence. This office has almost 100-year-old handwritten records and documents. They are eaten by booklice, woodworms and rodents devour many moist or half-eaten. Land conflicts arise from database gaps.

However, these take a long time to collect documents from different offices and these how civil suits are running after years.

3.3.7 Corruption

The inadequate implementation of the technological resources has made the system more vulnerable to corruption. There are lots of corruptions in the land management system in Bangladesh. As a result, problems like fake land deed, fake ownership, illegally possessed others land and bribery has been increased day by day.

Harassment in the land office is a regular phenomenon. Abdul Mannan Mia, a school teacher shared his experience of numerous difficulties which he faced in the land office on 4th July with Bangla Tribune. He went to fulfill his tax payment for the first time. In spite of providing all the documents to the office staff, he was asked for bribe of TK 5000⁴³.

³⁸ The Code of Civil Procedure, 1908, s 9.

³⁹ Mohammad Hamidul Haque, Trial Civil Suits and Criminal Cases, Universal Book House, Dhaka, 2010, P.3.

⁴⁰ The Specific Relief Act, 1877, s 8 & 9.

⁴¹ The Partition Act, 1893, s 2 & 4.

⁴² The State Acquisition and Tenancy Act, 1950, s117&143B.

⁴³ Ashiqur Rahman, 'The uncomfortable truth about land disputes in Bangladesh: Insights from a household Survey' (science direct,2020) < <https://doi.org/10.1016/j.landusepol.2020.104557>> accessed 21st July 2023.

3.4 Conclusion

The findings showed that the current land management system is unable to handle the needs and difficulties of the time. Therefore, it has been suggested to implement digitization together with extensive institutional and structural reforms in order to improve the administrative ability to satisfy the requirements of the people.

CHAPTER IV

Implementation of Modern Technology in Land Record System of Bangladesh

4.1 Introduction

Modern land administration systems have influenced sustainable development, trade and commerce, transparency and land management in developed nations. Contemporary advances in technology have been utilized by nations like Australia, Singapore and India to redefine land ownership and protect property rights. These systems demonstrate how technology can modernize an outdated process and safeguards citizen's property rights. Bangladesh is also moving forward to the technology based Administration system. It introduced the Digital Land Management System (DLMS).

4.2 What is DLMS

Digitization of land administration means an effective system that would improve the entire existing land administration which requires three functions of land management. The digital land management system will be based on the latest record and mutation.⁴⁴In case of DLMS, any further changes *in khatian* or *mouza* map during the transaction of a land will be automatically updated. In a word the entire system of land management will be in a unified platform.⁴⁵

⁴⁴ Bipul K Debnath, 'Digital Land Management' The Independent BD (31 August,2018) < <https://m.theindependentbd.com/magazine/details/164272/Digital-Land-Management> >accessed 10 August, 2023.

⁴⁵Nurul Kabir, 'Hasina wants Digitalized Land Management, Hassle Free Services' ,BDnews24.com (Dhaka,2022) < <https://bdnews24.com/amp/story/bangladesh%2F9lgkkrm56a> > accessed 9th August,23.

The Bangladesh government has taken initiative to digitize the entire land administration system by 2026.⁴⁶ From land purchases to the *Jalmahal* system and E-mutation, the Land Ministry is automating every aspect of its operations. Online access to a number of services, including land development tax, *E-Namjari* mitigation, *E-Porcha*, *E-Dakhila*, and *mouza-map*, will be available to the public.⁴⁷ The country's 138000 maps will be digitally converted by the land ministry using satellite photos.⁴⁸ The government already provides DCR with QR codes, online land transactions, and land tax payment-mutation, e-settlement, and land zoning processes are all now being worked on, according to sources and work is already beginning to digitize the ledgers. But people from all over the country are not able to avail the service⁴⁹. Several reports say that the law ministry is still trying to work on it to develop the system.

In December 2004, a Computerized Land Management System (CLMS) was put into effect in the *Demra* region of Dhaka, with an initial allocation of Tk. 97 lakh (US\$ 140,000) to reduce public hardship and prevent land grab.⁵⁰ Former owners and use categories were to be compiled and stored in an easily accessible system. The System had been anticipated to drastically reduce land related disputes. The Environmental and Geographic Information Centre was hired to develop land record software. However, for various reasons, the project had diminished by April 2007.

All the steps toward digitizing the land management can only be seen in papers but not in reality. The most important system is still divided; the land ministry is in charge of survey and record-related matters, while the law ministry handles registration-related matters. Several sources say that Online sources can now be used to access services like *RS Khatian*, *SA Khatian*, *City*

⁴⁶ Rick Haque Shikder, 'Smart land management by 2026' Bangladesh Post (Dhaka, 9th April 2023) < <https://www.bangladeshpost.net/posts/smart-land-management-by-2026-109818>> Accessed 13th August,23.

⁴⁷ Sayed Md. Abdullah Al Nahyan, 'Smart Land Services: New Deal in Land Reforms' Daily Sun (Dhaka,30th March,2023) < <https://www.daily-sun.com/post/681978/Smart-Land-Services:-New-Deal-in-Land-Reforms> > accessed 19th August,23

⁴⁸ *ibid*

⁴⁹ *ibid*

⁵⁰ *Ibid.*

Khatian, and *Mouza* map. However, not all (areas) have access to those records. Mutation is the first step regarding the digitization of land management. People can apply for e-mutation online.

All the initiatives are taken to mitigate the sufferings of the people and to end corruption but the progress of digital land management is so far from the reality. A report on The Financial Express says that only 17 *Upazilas* out of 495 *Upazilas* offer digital land services.⁵¹

4.3 Example of Some Modern Technology and Rationality of Using It in Bangladesh Context

To proper digitization requires usages of modern technologies in land management systems and the entire land management systems must be digitized to be benefited from these services.

4.3.1 Example of Some Modern Technology for DLMS

Digital land administration would be a unified system with the help of technology. Such as LIS and block-chain, which would include data where the land is located, how it is oriented and the land owner's history.

GIS helps in capturing, storing, displaying data which is related to position of a surface on earth and LIS refers to data in a GIS that is related to several quantitative and qualitative elements of land resource.⁵² The majority of the time, LIS is founded on the ownership and management. It also analyzes the part of earth that is mostly interesting to humans. LIS gathers data from GPS

⁵¹ Shahiduzzaman Khan, "Digital land management on the card" The Financial Express (Dhaka,2023) < <https://thefinancialexpress.com.bd/views/columns/digital-land-management-on-the-cards-1601738172> > accessed 11th August,23.

⁵² M Shafiqur Rahman, "Land Information System (LIS) for Land Administration and Management in Bangladesh"(Research Gate, 2022) < https://www.researchgate.net/publication/340827326_Land_Information_System_LIS_for_Land_Administration_and_Management_in_Bangladesh > accessed 5th August,23

and conventional survey method.⁵³ These data may be used when surveyors need to find any exact location.⁵⁴ Completion of all the data from GPS and LIS helps to create a digital *mouza map*.

Such as Singapore, by bringing numerous land-related services and information under a single platform, INLIS enhanced accessibility and efficiency.⁵⁵ INLIS combines information from many sources, including the Inland Revenue Authority of Singapore, the Urban Redevelopment Authority, and the Singapore Land Authority. Users will receive thorough and reliable information about properties due to this connection.⁵⁶

For the secure transfer of land property, the land register uses the Block-chain.⁵⁷ Recently India adopted this.⁵⁸ It is possible to follow changes made to land records for the transparent nature of block-chain. This technology increases the confidence level between the parties in a transaction. In block-chain there is no single governing body because the network is maintained by a number of blocks.⁵⁹ The public will be able to verify the property registration data on the Block-chain as well as the workflow system of the registration software.⁶⁰ So these how the entire property chain will be informed from the first buyer to the most recent one even in detail. There are many countries such as India that have adopted Block-chain technology to preserve land register records.⁶¹ The government and *Chromway*, a startup company located in Sweden, collaborated up to develop software to improve the land registry procedure.⁶² With the help of the software,

⁵³ *ibid*

⁵⁴ *ibid*

⁵⁵ *ibid*

⁵⁶ *ibid*

⁵⁷ Alexandru Oprunenco, "Using blockchain to make land registry more reliable in India"(UNDP,2018) < <https://www.undp.org/blog/using-blockchain-make-land-registry-more-reliable-india> > accessed 15th August,23

⁵⁸ *ibid*

⁵⁹ *ibid*

⁶⁰ Kuldeep Vayadane, "Blockchain-Based Land Record System"(Dec,2022), Reseachgate < https://www.researchgate.net/publication/366311884_Blockchain-Based_Land_Record_System > accessed 6th August 23.

⁶¹ C. K. Sah and B. R. Chandavarkar, "Adoption of Blockchain Technology in Land Registry System", (IEEE Xplore, 2021) < <https://ieeexplore.ieee.org/abstract/document/10176550> > accessed 15th August,23.

⁶² *Ibid*.

property deeds will be able to be registered on a government land registry, allowing for the approval of property transfers from seller to buyer via the land department.⁶³

4.3.2 Rationality of Using Modern Technologies in Bangladesh Context

In Bangladesh buying land is a difficult and risky task because of its complicated and erroneous nature. But it needs a system that could make it easier by giving immediate access to information about all previous ownership changes, such as the number of divisions, the number of shares, the number of new owners who have joined and the number of shares that have recently changed according to the most recent online survey. Even the National Identification number of the sellers will also assist to verify their claims. Following the acquisition and registration of the land, the creation of a single owner-based *Khatian* (Record of Right) and *Mouza* map (Holding Map), as well as the modification of the land and the creation of holdings for land development taxes, all take place simultaneously. Additionally, a single certificate of ownership for the purchased land is all that is needed to prove ownership!

Besides, the backlog of cases is an alarming problem for Bangladesh. According to a report almost 4.6 million civil suits have been pending before the court for the last 6-7 years.⁶⁴ A unified system may reduce the backlog of the suits by fastening the procedure of evidence collection.

The government land offices would be able to deliver the necessary services in a timely and (ideally) error-free way. To prove the legitimacy of the documents of any land provided by the vendors, people do not have to rely on shady people or organizations.

Moreover, it will enhance transparency and accountability in the land management system. As a result, in future, it is expected to get a corruption free land administration and management

⁶³ Alexandru Oprunenco, “Using blockchain to make land registry more reliable in India”(UNDP,2018) < <https://www.undp.org/blog/using-blockchain-make-land-registry-more-reliable-india>> accessed 15th August,23.

⁶⁴ Sohul Ahmed, “Melt backlog of cases in the courts in Bangladesh” Lawyers Club Bangladesh.com (Dhaka,2023)< <https://lawyersclubbangladesh.com/en/2021/01/30/melt-backlog-of-cases-in-the-courts-in-bangladesh/#:~:text=The%20Supreme%20Court%20administration's%20statistics,and%20insufficient%20Judges%20and%20Courts.>> accessed 9th September.

system. The land administration will be more efficient which will have a great impact on socio-economic aspects. These how the rights of the land owners will be protected.

3.4 Conclusion:

After taking the initiative to digitize the land management system, Bangladesh is still far away from digitization. Lack of resources Bangladesh is still struggling with it. But it is also important to make the initiatives as fruitful as possible. There are so many countries in the world who implemented an IT based land administration and they are successfully running it. These may be taken as examples of a successful IT-based land administration system.

CHAPTER V

Analysis of Introducing DLMS in Bangladesh's legal context

5.1 Introduction:

Bangladesh is still carrying the colonial legacy in its land management system. It has taken several steps to bring the system under a unified computerized system. Due to lack of coordination all the initiatives have gone in vain; a complete digitization requires a structural legal framework to solve the current issue.

5.2 Analysis of Legal Challenges for DLMS in Bangladesh

If digitization only refers to digitized land records, online property transactions, and secured land ownership, this is an excellent purpose. Generally, in countries like Bangladesh, the problematic records and possession are generally left unresolved while disputable records are digitalized. The land management system's deep-rooted weaknesses arise from an extensive legacy of structural and social factors that cannot be rectified by digitizing documents only. More significantly, premature digitalization may exacerbate inefficiencies and cause more issues if the fundamental factors are not dealt with first. Despite at least ten projects since 1995, Bangladesh's efforts to digitize land management still remains elusive. Most automation programs since 1995 were overly mutation-focused. According to a recent report, anyone in

Bangladesh who wants land deeds must pay hefty bribes.⁶⁵ The initiative of Bangladesh towards Digitization has several loopholes. Such as:

5.2.1 Records, demarcations and entitlements are not clean

Changes in land usage and demarcation necessitate regular updates. Four land surveys have been undertaken in Bangladesh since colonial times. The oldest and most exhaustive map is the Cadastral Survey (CS), and the latest is the Bangladesh Survey (BS), which is still taking place. None of these surveys were completed hence none provide a complete map of our land. Additionally, the surveys were not based on a template or matched previous surveys. In many regions of the country, CS records continue to be used. Based on this survey, many transactions occur. This survey took place during the *zamindar* era, therefore divisions within huge landholdings are still disputed. Different surveys often contradict other parts of the country with more recent survey data. It is typical for two individuals to claim ownership of the same land based on CS records and survey records. Although the law suggests the RS (Revisional Survey) record takes priority. These differences can cause challenges which are usually resolved informally by local arbitrators or land authorities. Of course, these loopholes allow rent-seeking and corruption.

Digitization with no record reconciliation will lead to informal resolution, causing deadlocks in opposing rights. To get out of this is to sue every tiny issue caused by these inevitable disparities, which will take years and worsen landowners' suffering. This is one of the simpler record discrepancy circumstances.

⁶⁵ Md Ayub Ali, 'Settlement of Land Disputes in Bangladesh: Legal Issues and Challenges'(Research gate, December

2020)

<[https://www.researchgate.net/publication/346799327 Settlement of Land Disputes in Bangladesh Legal Issues and Challenges](https://www.researchgate.net/publication/346799327/Settlement_of_Land_Disputes_in_Bangladesh_Legal_Issues_and_Challenges)>

accessed 22 July 2023

Besides, we have illegal possessions, forged paperwork that cannot be checked, and conflicts between land documents (deed, *khatiyān*, registration, *mutation*, etc.) that have endured for centuries. Those erroneous data will be formalized after digitization and it will be nearly impossible to fix this.

Recently a new act was placed to curb land-related forgeries and offences.⁶⁶ It will abolish all the forged, false deeds, even the deeds which are made for inherited land, defrauding co-heirs.⁶⁷ For a proper digitized land administration it is essential to clear all the past fraud deeds and mistakes in ROR. This requires combining physical and digital records.

5.2.2 No rigid legal framework for DLMS

Currently the Land Ministry is running 4 projects⁶⁸ of DLMS through approval by ACNEC.⁶⁹ No legal provision has been passed for DLMS. Physical survey records and digital records may conflict when moving to a digital land management system, creating legal misconceptions and issues in upholding the law. Such as, correcting ROR requires physical papers for land transactions.⁷⁰ Amending laws, making rigid rules, which technology supposed to be used through laws is required. Such as the "One Map Initiative" in Indonesia combining land-related data into one map. Land conflicts caused by different data sources became legal issues. This showed that data harmonization and conflict resolution require legal changes.⁷¹

Bangladesh must build a thorough legal framework that explicitly supports tech based land management system before digitizing it.

⁶⁶ Land Crime Prevention and Remedy Act, 2023

⁶⁷ *ibid*

⁶⁸ Jahidul Islam, 'Land Automation Merely On Paper' The Business Standard (Dhaka, 2022) < <https://www.tbsnews.net/bangladesh/land-automation-merely-paper-362599> > accessed 1st Sep, 23.

⁶⁹ *ibid*

⁷⁰ The State Acquisition and Tenancy Act, 1950, s 144.

⁷¹ Rina Chandran, 'Indonesia's map project ignores indigenous land, risk conflicts' (Reuters, Indonesia, 2021) < <https://www.reuters.com/article/us-indonesia-landrights-map-trfn-idUSKBN2BN10I> > accessed 5th Sep, 23.

No laws regarding land management directly indicate the use of technology but that does not mean not to use. Recently it added a provision regarding the admissibility of digital evidence.⁷² It indicates the use of technology.

Act such as Registration Act, 1908 may be proposed to adapt Technology-friendly registration procedures changes. For online registration an updated computer system which stores all the data is needed. But in case of online registration it is unclear whether e-signature⁷³ is permitted, how will be stored data, whether they are accessible to all as registered deed is a private property⁷⁴.

For online survey, technologies such as LIS, GIS and remote sensing changes are needed. Whereas The Land Survey Act, 1875 only recognized manual survey by Amin using tape and scale.⁷⁵ When there will be any conflict between physical survey and online survey, which one shall prevail, any law does not mention that.

However, provisions regarding the unified system to fasten the judicial proceedings also must be introduced. All the offices related to land management must be brought under a single system by enacting laws. An owner must prove ownership and title to prove his ownership otherwise it will be questionable. To prove ownership one has to depend on several documents such as deed of title, *bia* deed, *khatiyan* and land receipt. However, To prove title over a property always *Kabala* deed shall prevail over ROR.⁷⁶ Every transaction of the immoveable property must be registered under section 17.⁷⁷ *Bia* deeds are mainly deals with proving chain ownership of the last 25 years.⁷⁸ When a person owns property by inheritance he may not have a name in the deed. In this regard *khatiyan* are essential to prove ownership. Further, in the case⁷⁹ it was held that to prove possession land receipts may be used as collateral evidence.

To verify these documents is a time taking and complex procedure. Since different offices have to be visited, collecting data from their registry books and volumes is a lengthy procedure. Even

⁷² The Evidence Act, 1872, s 65B.

⁷³ The Information and Communication Technology Act, 2006, s 36.

⁷⁴ The Evidence Act, 1872, s 65(e)

⁷⁵ The Survey Act, 1875.

⁷⁶ *Chan Mahmood vs Hossain Ali* 3 BLC 364.

⁷⁷ The Registration Act, 1908, s 17.

⁷⁸ *Ibid*, s 52.

⁷⁹ *Irfan Ali vs Joynal Abedin Mia*, 35 DLR (AD) 216

sometimes these offices fail to provide duplicate documents to the applicant for the destruction of the main volume. Therefore, if it comes under a single system where a court can find all the documents in a single database system by single entry of any information, the hassle of the civil court proceedings might be reduced.

5.2.3 Risk in Cyber Security and data

To digitize the Land Management system must ensure a secured database system and legal provision regarding this. When a computer based system is fully established, what will be the consequences of the personal data such as information about land, NIDs, biometric data, whether it will be accessible to all, whether anyone is allowed to bring any change in data or what will happen if data piracy happen by hacking the website, everything must be in legal framework to protect the service receiver.

There are several laws regarding cyber security and data protection in Bangladesh but still Bangladesh's laws are not sufficient to safeguard against unauthorized access. Such as in 2021 Facebook breached data of 3 million Bangladeshi.⁸⁰

First it needs a legal framework where the right to data protection will be a fundamental right like other rights under Articles 44 and 102.⁸¹ It also may extend the provision of Article 43 which says about privacy⁸² to data protection rights.

Act such as ICT Act, for accessing an unauthorized protected system the person shall be imprisoned which may extend to three years.⁸³

There is another proposed draft, under section 10A, concerned authority anytime can collect data for the sake of national security which is also an indirect violation of protection of data.⁸⁴

⁸⁰ Shariar Rhman, '3 million Bangladeshi Facebook users' personal data exposed during a massive data leak' The Daily Star (Dhaka,2021) < <https://www.thedailystar.net/toggle/news/3-million-bangladeshi-fb-users-personal-data-exposed-during-massive-data-leak-fb-2071777> > accessed 5th sep,23.

⁸¹ The Constitution of People's Republic of Bangladesh, a 44 & 102.

⁸² Ibid,a.43

⁸³ The Information and Communication Technology Act, 2006, s 68.

⁸⁴ The Data Protection Bill(proposed), 2022, s 10A.

According to this Act, there will be a separate Data protection office.⁸⁵ That is much required for data protection regulations.

To enter into a complete computer based system it must establish a secured data protection system. The Council of Europe Convention on Cybercrime, or Budapest Convention, addresses internet crime. The Convention requires members to criminalize illicit computer access and intervention under Article 9.⁸⁶ These provisions can be applied to prevent illegal data access.

5.4 Conclusion:

It can be said that land rights are ensured in Bangladesh when the people of Bangladesh are able to access a transparent and efficient land management system. For a better DLMS, it must be introduced by enacting laws otherwise the purpose of the DLMS will be frustrated. A digital survey system needs support of technology like LIS, it should be incorporated in laws so that it may have legal effects when there arises any dispute. However, there are also several risks in introducing a tech based land management system.

⁸⁵ Ibid, s.35.

⁸⁶ Council of Europe, Convention on Cybercrime, opened for signature Nov 23, 2001, CETS No. 185 (entered into force Jul 1, 2004).

CHAPTER VI

Conclusion

6.1 Introduction

To implement technology in land administration of Bangladesh has to face several challenges. In order to get an IT-based land management system Bangladesh has to take some extraordinary caution which will take it to a successful Land administration system.

6.2 Findings

1. Lack of Sufficient Laws

Bangladesh did not make any legal framework regarding DLMS which is a bar to progress.

2. Some available online services

A few services are now available online such as e-mutation, e-namjari, online survey. It also took initiative for online registration of deeds. Nearly 65 lakh records of rights have been scanned and indexed into computers.⁸⁷

3. Lack of coordination

An accurate, up-to-date, and quickly available land record system has been emphasized by every government. However, land administration and management in the country remain outdated because of multiple factors. We lack inter-ministerial interdepartmental coordination for land registration, record keeping settlement, planning, and recordkeeping. It is challenging to bring all the concerned department, Ministries, and offices into a single system.

4. Lack of Manpower

Lack of adequate skilled surveyors, cartographers, specialists, or computer programmers is another challenging issue for Bangladesh.

5. Lack of Technical Support

Technology implementation requires technical equipment such as computers, software, GPS receivers, printers and scanners. Additionally, weak network connection especially in remote areas is another problem.

6. Lack of Public Awareness

Land offices are highly corrupted. Many staff want bribes to provide digital land services to clients. Because those receiving assistance have no understanding about how services are offered. Most service recipients in Bangladesh are unaware of the digital land services offered by some land offices. They engage middlemen and spend a lot for a basic service.

6.3 Recommendation:

⁸⁷ UNB, 'Digital land management: 65 lakh records scanned, indexed into computer' Dhaka Tribune (Dhaka,2017) < <https://www.dhakatribune.com/feature/tech/127519/digital-land-management-65-lakh-records-scanned> > accessed 5th sep,23

1. Firstly, all land service delivery offices should be unified to speed up digital service delivery. An integrated system between all the offices is needed so one can help the other with land mutation, registration, and ownership processes.
2. High-speed internet, an effective website and homepage, continuous power, and enough ICT equipment must be available to provide efficient digital land service. All land offices must have sufficient trained employees to deliver fast and accurate local and central digital land service.
3. Introducing DLMS needs a rigid legal framework. The Act⁸⁸ should include that the Registrar would prepare computerized deeds based on the database verified by LRO. The LIS also should be recognized by the Survey Act.
4. Secure software development and data processing should be a top priority. Additionally, strong security rules must be established to safeguard against damage to essential data. Administrators have to grasp the importance of security policies. System should include full crash recovery guidelines. At night, the system must be backed up. If not backed up at the end of day, the system should not boot the next day without data backup.
5. Since in DLMS, a huge amount of personal data is stored in a database, govt. must have to clarify all the regulations regarding how to protect data and consequences of data breach.
6. Knowing what to expect from digital land service is crucial. The land office ought to have a complaint box for service recipients to report corruption. There should also be a way to honestly handle grievances.
7. Some substantial issues must be dealt with as a way to use computerized LIS, such as upgrading the current land recording system to work with LIS and coming up with suitable legal procedures for determining inherent and other types of land rights.

⁸⁸ The Registration Act, 1908.

8. Furthermore, implementing technology is not an easy task since it is generally the aforementioned regulatory, governmental, and technological problems must be dealt with before the LIS's introduction.

6.4 Conclusion:

In Bangladesh, a regulatory framework for effective and efficient land record systems are urgently needed. Bangladesh's land management system is beyond modern technologies. A lot of money is thrown away each year settling disputes. In addition, corruption at all levels plagues this sector. Thus, the people of Bangladesh experience many problems getting land office services.

Bangladesh needs a comprehensive land record systems strategy that takes into account its legal, political, economic, social, cultural, and ecological concerns. Implementing a technology based system to guarantee all land titles and to assist land functions survey, record of rights and register of title. The land office and the public need to work to foster better digital land services communication as well as comprehension. Thus, the Constitutional commitment to safeguard property rights for all shall be fulfilled.

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