

E-land Management System in Military Estates Office (MEO) in Bangladesh: A Study on Northern Circle.

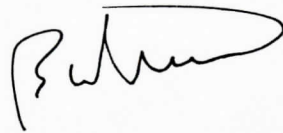
Submitted to
Dr. Muhammad Abu Yusuf
Member Directing Staff (Project)
Bangladesh Public Administration Training Centre



Submitted by
Avijit Ray
Roll: 117
Deputy Secretary
Military Estates Officer
Ministry of Defense
e-mail: avijitray77@gmail.com, Mobile# 01712072939
126th Advanced Course on Administration and Development
Bangladesh Public Administration Training Center
Savar, Dhaka-1343
September 22, 2019

CERTIFICATE

This is to certify that the seminar paper entitled '**E-Land Management System in Military Estates Office (MEO) in Northern Circle**' has been prepared by Avijit Ray, Deputy Secretary, Military Estates Officer, Ministry of Defense, who is a participant of 126th Advanced Course on Administration and Development (ACAD) held at Bangladesh Public Administration Training Centre (BPATC), Savar, Dhaka. The paper has been prepared under my direct supervision and guidance accomplishing all the activities satisfactorily. The quality of the paper is above satisfaction to me and the course management can accept the paper as a fulfillment of the course.



Date: 08.09.2019

(Professor Dr. Bashir Ahmed)
Research Consultant and Professor
Department of Government and Politics
Jahangirnagar University
Savar, Dhaka.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude and deep appreciation to my consultant Dr. Muhammad Abu Yusuf, Member Directing Staff (Project) Bangladesh Public Administration Training Centre, Savar, Dhaka for his guidance, valuable advice, supervision and encouragement throughout. I am equally grateful to Professor Dr. Bashir Ahmed, Department of Government and Policies, Jahangirnagar University for his guidance, comments and encouragement. They were never lacking in support and kindness.

I would like to express my deepest gratitude to Bangladesh Public Administration Training Centre (BPATC) Savar, Dhaka to give me the opportunity to do the research work.

My research couldn't be completed without kind support from the Military Estates Office, Northern Circle, Bogura Cantonment. The officers and staffs were helped me a lot with necessary information and for their kind permission and cordial assistance to work in the respective study site. I am grateful with the officers from Bangladesh Army, Airforce, Navy and Directorate General of Forces Intelligence (DGFI) for their effortless support to me. They were always willing to help me in everything.

Finally, I am extremely grateful to my Course Advisor, Course Director, Course Coordinators and the support staffs of 126th ACAD Course for their kind support.

Avijit Ray

Abstract

In Bangladesh, the Military land management follows the conventional British Colonial system. Where the existing system is laden with huge printed and hand written paper records. This sector has been spotted as one of the Time, Visit and Cost (TVC) worthy sector of Bangladesh. Existing land management and land acquisition process consume more time, cost and number of visit and stake holders where Requiring Body (RB) faces many harassments. This seminar paper inquiries into the labyrinth related to the existing pattern, and offers an automated substitute, that would be easy to execution, yet effective and operative. The researcher has modeled a framework whereboth transparency and effectiveness were included to the existing land management pattern in Military Estates Office. The ultimate goals in designing the framework for the new Web-based e-Land Management Systems are user friendly, transparent data system and cost effective. The recommended system contemplates to digitize all the sequences, from cadastral surveying (C.S) to creating new records of right and have a networking between the concern offices through central data bank. National and international threats in security issues of the Defense Forces were kept in consideration. The seminar paper also addressed the different issues regarding data accessibility, data entry and safe and security of data bank.

Key words: Military land, E-Land Management, TVC (Time, Visit and Cost)

Introduction and Literature Review

Now in Bangladesh the average land per person is only 0.05 hectares (World Bank 2013). So, land is limited and its demand is too high for multifunctional activities. To accommodate a huge population, to fulfillment of various development demands and to grow food for the increased people, a modern digitized prompt software based land use and management system is needed. In the light of Digital Bangladesh, land sector of Bangladesh is also enlightened. Bangladesh is a small country in the world perspective. But due to her over population land is treated as piece of gold here. It is decreasing day by day due to industrialization, river erosion, development works etc. Land transfer and land conversion rate is very high in Bangladesh due to rapid population growth. Bangladesh is also an economic rising country and it is already a least developing country from a developing country. Bangladesh achieved Millennium Development Goals

(MDG) and trying to achieve Sustainable Development Goals (SDG). Bangladesh will become develop country by 2041. As of 2019, Bangladesh's GDP per capita income is estimated as per IMF data at US\$ 4,992 (PPP) and US\$ 1,888. Many foreign investors are very much interested to invest their capitals in Bangladesh (Wikipedia). For their safe investment government insure political stability and providing suitable lands to build EPZs. It also another cause of land degradation. So, to proper use of limited land assets modernization of land administration is crying need in Bangladesh. Like development works of other departments, Bangladesh Military has also increased in size and spread its multidimensional works. So, sometimes land acquisition is needed. Military Estates Office is a liaison office of Ministry of Defense (MOD) and this office act as a bridge between military and civil administration. This office also the custodian of military lands in its jurisdiction on behalf MOD.

For better public service, firstly a thorough rethinking and re-examination about the formation of public services is required. Then to utilize probabilities of making value by performing across limitation and perimeters to cherish feasible profit of redesigned services in terms of fastness and value (Fountain 2007). To bring efficiency in land sector, digitalization can play a vital role. Recently a project titled, 'Land Management Automation' and taken by the Land Ministry, has been sent to the Planning Commission for its approval. If Planning Commission think that the proposal is good enough and it has positive impact on service delivery process, then they give their concurrence for replicate the project whole of the country. The unique feature of the project is simplification of service delivery process in the land administration system.

Recently digital system is used for inputting the khatian records in the e-Service Center and Department of Land Records & Survey (DLRS). For preserving land records digitally, the current system may be effective, however, for maintaining up-to-date record keeping in an integrated manner, a broader Land Information System (LIS) needs to be developed. Now digitalized land management system and e-filing for land related activities is taking position on the conventional system. The government of Bangladesh formed an Act to make the acquisition by the state of the public interest to do something which will may create job opportunities or some income generating activities. This Act is known as "The State Acquisition and Tenancy Act" (SA&T Act 1950). At any time After the commencement of this Act, the Government is lawfully empowered to acquire any land for public interest by notification in the official Gazette,

with effect from such date as may be specified in the notification 3. (1) (SA&T Act 1950). Deputy Commissioner is the person who is doing the business on behalf of the government. When an acquisition proposal appears to the Deputy Commissioner (DC) that any property in any locality of his jurisdiction is needed or is likely to be needed for any public purpose or in the public interest, firstly he shall make a notice to be published at the places on or near the property in the prescribed form stating that the property is proposed to be acquired by the Government. Religious worship, graveyard and cremation ground used by the public shall not be acquired.

Military lands of Bangladesh Government is managed by "The Cantonment Land Administration Rules, 1937" (CLA Rules 1937). Compilation of this rules are known as the "Bible" of defense land management. As per CLA Rules-1937, Government land is divided mainly in to two classes, namely: (a) Class "A" land which required for specific military purpose; and (b) Class "B" land which is not so required, or reserved, but which is retained in the cantonment for the effective discharge of the duties of the Government in respect of military administration; and (b) Land which is vested in the Cantonment Board under section 108 of this Act shall be called class "C" land. For the proper management of Military Lands, under rule 2(c) Military Estates Officers are the agents of the Government of Bangladesh for the administration of certain lands the property of that Government and perform the functions prescribed by this rules for the acquisition, custody and Relinquishment of lands (thereafter referred to as the A.C.R Rules). They hold a position of official independence from the Military Authorities and are also officially dependent of the Cantonment Boards and are subject to the order of the Government of Bangladesh alone. Official correspondence between the Military Estates Officer and the Government of Bangladesh and vice versa will be carried on through the Director General, Military Lands and Cantonments, not through the Military authorities.

In Bangladesh, the present land laws, land administration and land management are full of intricacy, procedural difficulties and mismanagement. These system is also not accessible and responsive to the interest of the common people of the country. Furthermore, the present mechanism to settle land dispute is not time saving, cost effective, peaceful and sophisticated' (Shahidul Islam et al. 2015). Gandhi Subedi et.al in his study Economic Implications of Land Administration Services: Findings from Nepal and Bangladesh mentioned that bribery and

malpractices prevailed in land administration organizations has also increased the costs of transactions and threatened its security. This study is concern to introduce automaton in defense land management system and make the service more stakeholder responsive. ICT has an increasingly fundamental role to play in improving the operation of land administration and in making information services more readily available in support of land management and economic development (Goyal, A 2011). The current traditional land administration systems have so many limitations in dealing with a critical issues of land Rights, Restrictions and Responsibilities (RRR). These phenomena are influenced by local and global circumstances such as sustainable development, urbanization, globalisation, economic reform and the technological revolution, which cause a constant change in the relationship between people and the land (Williamson et al. 2000). Weak land management system can discourage investments in land and sustainable resource use, and ultimately affecting broad-based economic growth (Grover et al. 2007). In United Kingdom (UK) the Ministry of Defense (MoD) is evolving rapidly to make the acquisition process fit for purpose. Acquisition of the Military Land is one of the huge and hectic issue other than any business. This clumsy paper based system will be replaced by the efficient, tendentious staffs and smart system. Comparative study with Indian, Pakistan and even Sri Lanka defense land management system, that land situated within the notified Cantonments is managed in accordance with provisions of Cantonment Act, 2006, the Cantonment Land Administration Rules (CLAR), 1925 and 1937, Cantonment Codes of 1899 and 1912. Specially Both India, Pakistan and Sri Lanka were the colonial states ruled by Britain. Most of the Acts and Rules which were formed in British era are prevailing in the sub continents still today.

Problem Statement

Acquisition of land for defense and security purpose is a large and truly complex problem. Cadastral data usually references ownership boundaries on the ground without specific reference to geographic coordinates (National Research Council 1982). Different countries in the world and in Bangladesh various initiatives and steps have been taken to explore their traditional systems used in land administration and commence some tools and techniques to uplift the traditional system. The Prime Minister's Office of Bangladesh through the Access to Information Program (A2i) introduced Service Process Simplification (SPS) model for Public

Sector service providers. Due to conventional land management system, mismanagement, and corruption is very common phenomenon of this section. In Bangladesh, most of the land management system is based on primitive rules, laws, regulations and provisions that were enacted in the British era. Generally, there are three main functions of land administration. These are; i) Management or Record keeping, ii) Registration and iii) Settlement. In this study, we will emphasize on Military Land administration issues. The most clumsy but important section of defense land management system is to define every part of the land with adequate information. The clarification includes the tenants name, splitting or merging of recorded land which are user friendly both service provider and the service seekers. Collection of data and digitization of data should be cost effective, time consuming, sustainable and accurate. In case of maps, using suitable software and maps should be stored in the computer from central data bank. For any purpose maps, should be combine, add, subtract, multiply and divide by using software. Different types of offices related to land management need different types of software for their mode of action. But some similarity and sequences should be maintained. Always keep it in mind that software must be user friendly and easy accessible to service provider as well as stakeholders.

Objectives

The broad objective of the study is to provide the insights and understanding on the elevation of e-land management in Military Land Management in Bangladesh from the perspectives of public administration and the world trend. However, the specific objectives of the study are:

- i) To understand the existing pattern of e-land management in MEO Northern Circle.
- ii) To identify the constraints of e-land management process.
- iii) To point out the policy recommends in e-land management.

Research Questions

- i) What is the existing pattern of e-land management in MEO Northern Circle?
- ii) What are the constraints of e-land management process?
- iii) How to improve the existing pattern of MEOs in Bangladesh?

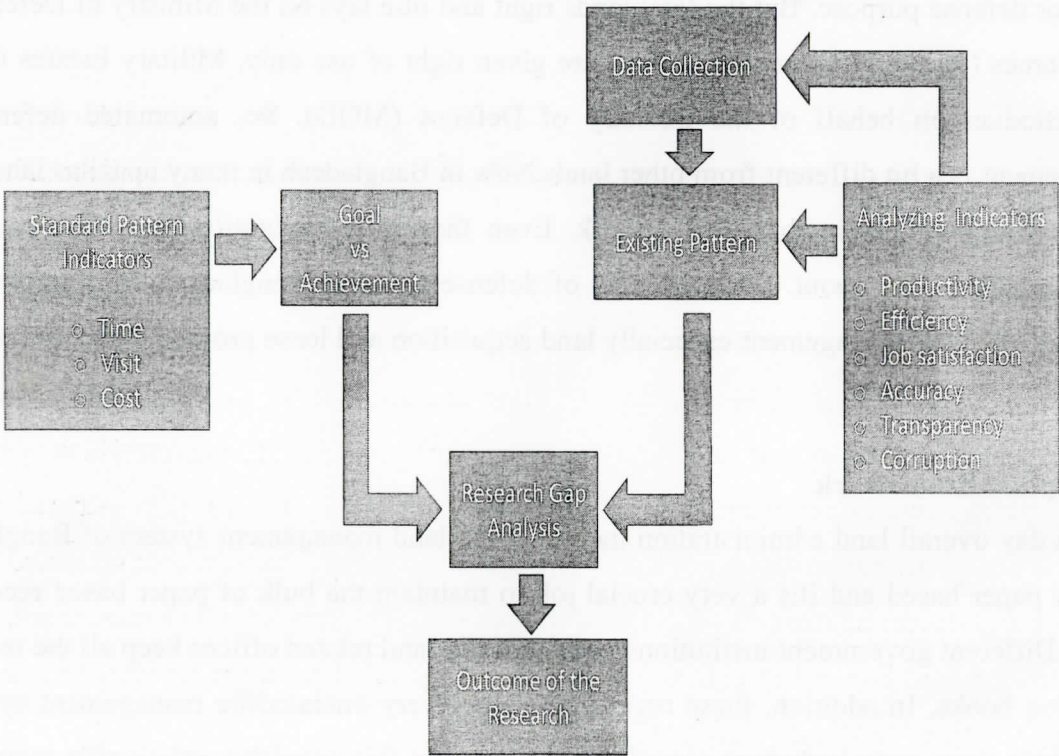
Rationale of the study

In Bangladesh, land management system still follows the traditional method in providing land acquisition and lease process, which creates many problems in providing and getting land service. Existing land acquisition process consume more time, cost and number of visit and stake holders and Requiring Body (RB) faces many harassments. In the world's perspective defense land and its immovable assets are all always considered very sensitive, restricted and Key Point Installation (KPI). Management of defense lands are also different from the traditional land management systems. Except defense lands the ownerships are changed very often in civil lands. In case of constructed new garrison, air base or naval port land acquisition is needed and this lands remain unchanged either further use. Sometimes Government lands are also taken through lease for defense purpose. But the total lands right and title lays on the Ministry of Defense. The Arm Forces (Army, Air force and Navy) are given right of use only. Military Estates Office is the custodian on behalf of the ministry of Defense (MOD). So, automated defense land management is a bit different from other lands. Now in Bangladesh in many upazilas land offices using e-filing system in their office work. Even they start e-mutation also. But there is no evidence still a day about e-management of defense lands in Bangladesh. It is imperative to automate the land management especially land acquisition and lease process for more responsive service.

Conceptual Framework

Now a day overall land administration including the land management system of Bangladesh is mainly paper based and it is a very crucial job to maintain the bulk of paper based records and maps. Different government institutions and especially land related offices keep all the records on thick log books. In addition, these organizations use very outdated file management systems to perpetuate these very important records of the state. In this primitive existing file management system, it is very difficult to manage, update, modify and synchronize the records and linked the records with other related government institutions. So, to resolve the problems those old traditional primitive land management system should be replaced by smart digitized automation land management system. The government of Bangladesh is very much willing to promote Information and Communication Technology (ICT) in every tire of the governments service delivery system. To facilitate digitization, the government of Bangladesh has exempted any kind of taxes on computers and ICT related equipment (SICT 2008). It will obviously

promote the automation the land related records. The most essential and integral part of the land management and land records are sketches and maps. They may be scanned in a pdf or jpg format and can be stored in a big Data Bank. All this data should be read only and accessible to all. A master plan to be set for define assessment and analysis present status of e-land management in military estates office. Find out the gap or deficiencies of conventional process and policy recommendation for overcome the situations. In analyze stage, assessment process will be reviewed, analyzed and calculation assessment will be done. At execution stage e-land management system will be replicate. But, this process will need more time to reach its optimum level.



Source: Conceptual Framework developed by the author

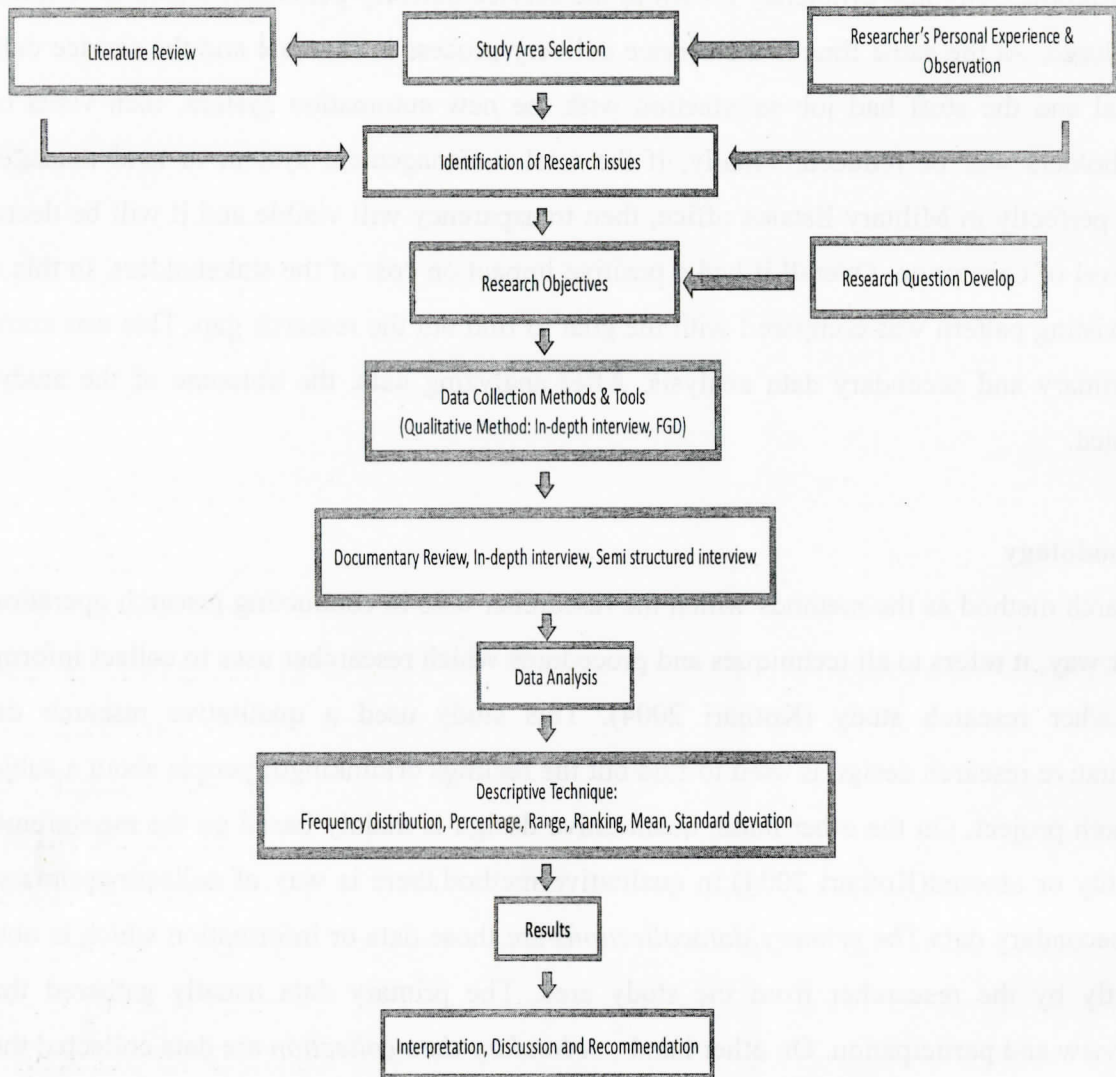
In conceptual framework three indicators were taken for standard e-land management process. They were (i) Time, (ii) Visit, and (iii) Cost. On the other hand, six indicators were taken for justification the first three indicators. They were (i) Productivity, (ii) Efficiency, (iii) Job

Satisfaction, (iv) Accuracy, (v) Transparency, and (vi) Corruption. Here hypothetically assumed that if productivity and efficiency grown in the service delivery personnel's then time limit will be reduced. At the same time if the service delivery process is accurate and the service delivery official and the staff had job satisfaction with the new automation system, then visits of the stakeholders will be reduced. Finally, if the total e-management system in land management work perfectly in Military Estates office, then transparency will visible and it will be decreased the level of corruption. Overall it had a positive impact on cost of the stakeholders. In this study the existing pattern was compared with the goal to find out the research gap. This was compiled by primary and secondary data analysis. After analyzing data, the outcome of the study was revealed.

Methodology

Research method as the methods which the researcher uses in conducting research operations. In either way, it refers to all techniques and procedures which researcher uses to collect information in his/her research study (Kothari 2004). This study used a qualitative research design. Qualitative research design is used to find out the feelings or thinking of people about a subject or research project. On the other hand, quantitative design is mainly based on the measurement of quantity or amount (Kothari 2004). In qualitative method, there is way of collecting primary data and secondary data. *The primary data collections* are those data or information which is obtained directly by the researcher from the study area. The primary data usually gathered through interview and participation. On other hands, *secondary data collection* are data collected through materials and document analysis of other works which have done by other researchers such as books and journal. For this research, the researcher conducted both, the primary and secondary data, in collecting the relevant information for the study.

Research Design



For collecting qualitative data, questionnaire was used. Study was also conducted Survey, some In-depth Interviews, Focus Group Discussion (FGD), data also collected from Key Informants Information (KII). Primary data were collected from In-depth interview, focus group discussion and key informant information. Relevant clients and service recipients had been reviewed as primary sources and interviews were conducted with officials of both Military and Civil land administration and concerned stake holder. Secondary data were collected from books, journals, articles and web sites. A simple but effective survey was made to know the demands and shortage of the existing service providers and their thoughts about the automated land management system about MEO. The data were analyzed by using thematic analysis.

Procedure	Methodology	Outcome
Data collection	Survey	i) Understand the existing pattern of e-land management in MEO Northern Circle.
	In-depth interview	ii) Identify the constraints of e-land management process.
	Focus Group Discussion	i) Identify the constraints of e-land management process.

Data Analysis

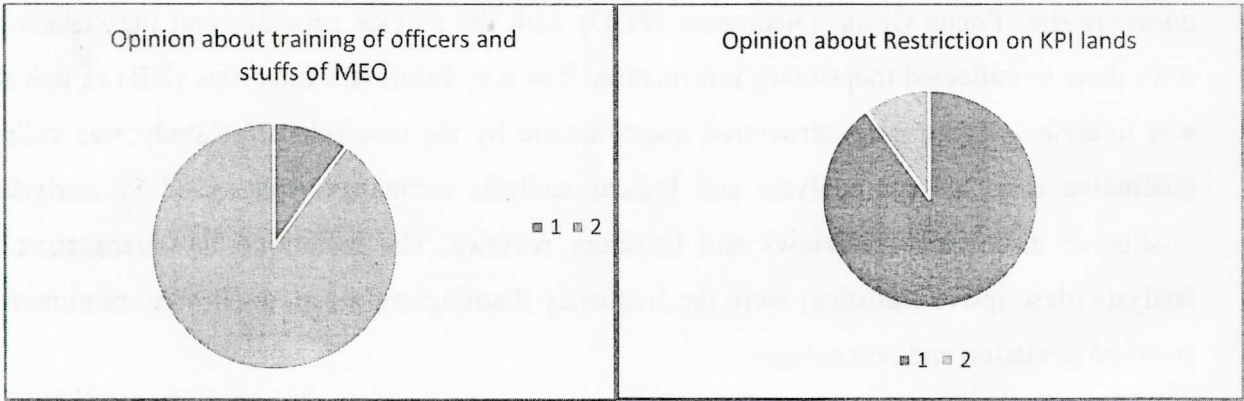
The study mainly focused on the existing pattern of the digitization and to find out the research gap between existing office management and automated system and effective e-land management which will be more user friendly in Military Estates Office, Northern Circle. In analyzing the automation of the land management in Military Estates Office the researcher adopted a research design where qualitative method and analytical study were used to get the optimum results. In this study, in-depth interviews were done via a semi-structured questionnaire, Focus Group Discussion (FGD) with the service provider and the stakeholders were done to collect the primary information. The Key Informant Interview (KII) of this study was interviewed through a structured questionnaire by the researcher. The study was collected qualitative data. Content analysis and logical analysis techniques were used to analyze the qualitative data from interviews and literature reviews. The technique for quantitative data analysis (descriptive statistics) were the frequency distribution, mean, maximum, minimum and standard deviation and percentages.

Results

(i) Existing pattern of e-land management in MEO Northern Circle

In this study, there were 20 (twenty) persons were selected for interview. 08 (eight) persons from Military Estates Office, Northern Circle and KII other 12 (twelve) persons were taken from Army 03 (three), Air Force 03 (three), Navy 03 (three) and DGFI 03 (three) officials who are the stakeholders of the Military Estates Office. The results of the study shown that e-land

management system already started in the Military Estates Office (MEO) Northern Circle in limited scale. The office stuffs using digital index number in their files. They had digital attendance system, close circuit (CC) camera for security measures. This office also had a web address where they show different activities done by this office. It includes list of officers and stuffs, list of the cantonments under the jurisdiction, citizen charter and so on. But due to restrictions about defense land they did not display the land related papers of this office. Among 20 (twenty) interviewees 18 (eighteen) persons told that they know that MEO office started working with automation. Only 2 (two) persons from the service recipients they said about total digitization of land relevant papers including khatians, sketches and maps. But in case of the office stuffs they said that they not even digitized all the documents. In case of training, two interviewees from out of office stuff said that MEO, Northern Circle Office was well trained in e-land management where 18 (eighteen) persons said that this office stuffs were not trained at all in e-management and that was true. Again, 18 (eighteen) interviewees out of twenty thought that Military Lands were KPI so, those should maintain restrictions for safety and security issues.



Pei chart: 1. Opinions about training for stuffs and restriction of Military lands.

This office is now spending a transition periods between fully automation and paper based office management system. Besides this, there are some restriction about defense lands and maps. The study revealed that the employees of Military Estates Office, Northern Circle did not get adequate training on automation especially in e-land management. The findings of the study also indicated that like other new system, the service providers of the MEO office also had some

discomfort, uneasiness and fear of cope with the new e-management systems. One answer, 15 (fifteen) interviewees thought that both automation and paper base land management system should run side by side where, only 5 (five) interviewees were told for automation. Thus, they are not capable enough to serve properly. They did not digitize all the land related documents and maps yet.

(ii) Constraints of e-land management process

It is true that to activate same percent e-land management service is a chain works of some relevant offices such as Union Land Offices, Office of the Assistant Commissioner Land, Office of the Deputy Commissioner (DC), Directorate of Military Lands and Cantonments (DML&C), Army, Air Force and Naval headquarters and Ministry of Defense (MoD). The study revealed that the automated land management systems were not active in the relevant steps in the concern offices that a stakeholder can get his service smoothly. Comparison with the one stop shops in Vietnam, a service seeker can get his service within very short time. Lac of good linkage of data with highprofessionalism service is the main barrier to the satisfactory services. Another limitation was the non-linkage of information to the key offices. If all the tiers work together then a perfect service can possible. In some cases, especially for land acquisition the process is linked with office of the Deputy Commissioners and its subordinate offices. Cause military estates offices are the custodians of defenses lands but on behalf of the Government Deputy Commissioner (DCs) are the custodian of all types of lands in their jurisdiction. So, for taking decisions for action and completion a long time is needed. This study also revealed that there are no data transfer facilities among the linkage offices through a central networked system.

Secondly military lands, assets and structures are treated as Key Point Installation (KPI) all over world for defensive and strategic perspectives. There are some limitations and restrictions adopted for cantonments, airbases and naval ports for their safety and security purposes. So, it is not possible for the researcher to get total automation system in land management in defense sectors due to national security issues. So, defense related offices using automation in a limited scale. These offices using paper based file proceedings for security relevant issues including land management. During the interview with the stakeholders, they said that it is usual that to acquire lands for military is time worthy but due to strategic plans they are used to with this situation. To

getting some decisions the file may go the defense minister and sometimes it may require a meeting for getting decisions. The defense experts think that hackers may hack the automation systems of Arm Forces Division (AFD) or Army, Air Force and Navy. If the automation system may be hacked the hackers can steal all the security systems of the government. So, they suggested to use paper based file management except some routine works or the issues which are not directly connected with the securities.

There was some experience of limitation found during data collection time. Very often the respondents were disinterested, recoiling and adverse to uncovered information and fact for feeling discomforts. Those embarrassed situations were conquered by identifying those as innominate respondents. Time constraints is one of the limitation of this study. Further limitations of the study were the fact that the system is still new and therefore, there is still a lot of old practice, which make assessment of the gains rather difficult. Notwithstanding of some negative conceptions, the study brings to light an overall positive sentiment to electronic land management system.

(iii) Improvise the existing pattern of MEOs in Bangladesh

Electronic land management system has reciprocal the understanding of working environment where the efficiency, volume of work and accessibility of information were elevated in the service delivery process of land offices. Before automation system in land management it was not possible to service providers from their tiresome, unwieldy and traditional bookish work and offer them a new environment where they provide services rapidly. In conceptual frame work it was stated that a valid and purposive e-management system can be measured by three parameters. They are (i) Time, (ii) Visit and (iii) Cost (TVC). To understand the existing pattern of e-land management system some analyzing indicators were taken. These indicators were (i) Productivity, (ii) Efficiency, (iii) Job satisfaction, (iv) Accuracy, (v) Transparency, (vi) Corruption. In this research, the researcher wanted to investigate the consciousness of the workers whom are involved with the automated land management system. The results shown that most of the stuffs of clerical level thought that due to mechanization of service delivery system, they will lose their importance and their self-interest will be decreased. On the other hand, officials were happy and welcomed the e-land management system cause of the automation system will reduce

time, visit and cost. It also reduces the level of corruption and harassment. Researcher of this study tried to make a relation between productivity and efficiency with time. If productivity and efficiency of an office may be developed it had a positive impact on time duration. It consumes less time than paper based office management. During the time of interview some stake holders were complained that before the e- land management system, it was time worthy to get any land related service from Military Estates Offices. Some time it was more than a year after applying or a proposal. On the other hand, automated land management process offering accurate information without deviations through central data bank. It creates job satisfaction of the employees. They encouraged to serve better service to the recipients. So, service recipients were happy and they have less visit to the service provider's office. Lastly e-land management can ensure transparency and less corruption in an office. It may reduce cost of the service seekers.

Implications and Recommendations

Bangladesh is a land hungry country. Here peoples are fight for lands. Land litigation is the major parts in Civil Suits in Bangladesh. Traditional paper based land administration systems and money loving stuffs and touts made the system more critical and clumsy. Some services are available online and some documents have also become digitized. But irregularities and corruption still prevail since land administration and land management are not fully digitized yet, resulting in inconvenience for people. The service recipients often become victims of staff of land offices. Sometimes the recipients also take unjust benefits by bribing the officials. Sometimes officials made delay to take undue privileges, which is known as disturbance of Red Tape. Bangladesh Government try to change the conventional land administration process and introducing automated land management. In existing process, updating of record of rights kept in the Union Land Offices are confirmed that the owner has the absolute title of the proposed land by checking the old and shabby records. Sometime pages of the record books were teared. Recovery of necessary information from the record volumes are stiff at that moment. Sometimes that was quite impossible. In computer based e-land management it is simple to retrieve any loss information cause this computer based system has a backup system. In computerized and automated system, there are no manual information of land records. All the manual activities of land records formatted in a very easy and understandable way with the essential facts. The database will consist the permanent address and other important

information like profession, police report ownership certificate of the land owner who has the right to sell the land. Specifications of the specific selling land including current market value fixed for the individual area, history of the land last 25 years, boundary and registration fees will be incorporated in this database. Every land owner has the right to access the data base and can performed any land connected jobs through online. They can also send an intimation to the local land office for necessary update. They can also advertise for land selling and buying through the system. This database will be constructed under Deputy Commissioner's office and will relate to the central database system for use of relevant offices and ministries for their individual purposes. Thus, the Government land offices do not need so many officials purpose of this business. Moreover, huge different types of skilled manpower, time and budgetary allocation are important for land survey operation after a stipulated period. Finally, the e-land management process is act as the mirror of a corruption free land administration.

Military Estates Office already started e-management system in their office work. This study revealed some lacking and observations in electronic-land management process. The study suggests some recommendations to improve the existing land management pattern of the Military Estates Office, Northern Circle are:

- Ensure same percent computerized data used for record keeping, land acquisition, land registration, mutation and tax payment.
- Using a Central Data Processing System owned by the Bangladesh Government.
- Obeying the security and strategic guide lines for national security issues.
- Online linkage between the concern Government offices to access their land management database.
- All data should be sheet protected and read only. Authorized officers can be engaging for any correction and update.
- All officer and stuffs should be trained.
- Ensuring efficient upgrading system etc.

Conclusions

The findings of the study shown that though the use of e-management process in the Military Estates Office, Northern Circle, Bogura Cantonment started in a limited scale, but it had a positive impression to the service seeker and it enhanced the competency, quality and job gratification in land management which indicates the reduction of time, visit and cost (TVC). The digitization in land management is a big achievement of land administration in Bangladesh. Litigations of land related issues are now simple to mitigate through automated land management. Thereafter, mechanized land transactions and correction of Records of Rights (RoR) offer a huge scope for the stake holders as well as the common people to access to the information and be a part of government mechanism which is one of their fundamental rights stated in the constitution of Bangladesh. The e-land management system in civil land management offers the tenants to cope with the new automated land administration system where they have easy access in the system and the rights and security of the tenants are properly kept. Except some cases like military land administration due to its security issues over all e-management is already started in different sectors in Bangladesh. Bangladesh Military is the highest security authority of the country. To cope with the changing world, they also automated their services to make it easy for the stakeholders but for security purpose they started it in a small scale. Lastly it can be said that every electronic software has some good and bad effect. Sometimes they create some disturbance and it may occur massive problems also. Nothing is enforceable without its bad implications. E-management system has open a new window for us and creating a big opportunity for its users. So, it should be provided the optimum facilities with necessary sentinel.

References

- Burrough, PA 1986, *Principles of Geographical Information Systems for Land Resources Assessment*, Oxford University Press, N.Y.
- Barkat et al., "Towards a Feasible Land Use Policy of Bangladesh", for Association for Land Reform and Development (ALRD), August 2007.
- Dwight, D. Eisenhower, State of the Union address to a joint session of Congress, 9 January 1958. (Jenkin, July, 2015)
- Choudhury et al., 2011 'A web-based land management system for Bangladesh'. In *Computer and Information Technology (ICCIT), 2011 14th International Conference on*. IEEE, pp. 321–326.
- Hossain, Monzur, *Improving Land Administration and Management in Bangladesh*, Bangladesh Institute of development Studies (BIDS), Dhaka, 2015, p34.
- Nahrin, K&Rahman, MSU, 'Land information system (LIS) for land administration and management in Bangladesh'. *Journal of Bangladesh Institute of Planners ISSN*, vol. 2075, p. 9363.
- Land Management. Services in Bangladesh: Governance Challenges and Way-forward, Transparency International Bangladesh, Bangladesh, 2015, pp. 6-9.
- Photogrammetric Engineering and Remote Sensing, vol. 54, No. 11, November 1988, pp. 1547-1549.
- Toaha, M&Khan, S 2008, 'Automated Digital Archive for Land Registration and Records'. *11th International Computer and Information Technology (ICCIT) Proceedings of a Conference) 25-27 December*, Khulna, Bangladesh.
- '*The Acquisition and Requisition of Immovable Property Ordinance, 1982*'. Section 3.

Questionnaire

Name: _____ Age: _____ Years

Length of Service: Years Profession:

1. Does the Military Estates Office, Northern Circle start working with e-land management system?

i) Yes ii) No

2. How far have you digitalized all your land related documents (Khatians, Maps, Sketches etc) in MEO office?

i) Yes ii) No

3. Did Military Estates Office stop working paper based land management traditional system already?

i) Yes ii) No

4. Is there any webpage of Military Estates Office, Northern Circle?

i) Yes ii) No

5. Do MEO, Northern Circle display the digitized land documents on their office webpage?

i) Yes ii) No

6. Is there any restriction about KPI land related papers and documents display in the office webpage?

- i) Yes ii) No

7. Are all the officers and staffs well trained to cope with the e-land management system?

- i) Yes ii) No

8. Defense lands are different from civil lands. So, do you think both traditional and automated system should run parallel to keep secrecy?

- i) Yes ii) No

9. Do you avail the same automation system in other relevant offices? (like

DC office, DML&C, Army/Air Force/ Navy H/Q and MOD)

- i) Yes ii) No

10. Do you think this process will reduce cost, time and visit?

- i) Yes ii) No

11. Do you think this system will take some time to work properly?

- i) Yes ii) No

12. What is your recommendation to improve the existing pattern?

i)

ii)

iii)