

E –GOVERNANCE AND IT'S ROLE IN SUSTAINABLE DEVELOPMENT IN WEST BENGAL

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Abstract

“Governance” is a vital component of sustainable development for a country. Traditional information systems have primarily focused on supplying information but it is now recognized that past systems have been largely ineffective in addressing the needs of the rural poor. Advanced state of information technology in form of e –Governance has helped redefine the way in which the government functions. India has been a pioneer in articulating strong vision for e-Governance .The Government of India has launched the National e–Governance plan (NeGP) with the intent to support 22 projects over the next 3-4 years by both state and central government. As a part of the goal for adopting e–Governance, West Bengal has introduced significant computerization at various levels in several government departments and has been successful to implement several citizen friendly e-Governance projects like GPMS, issuance of birth and death certificates, trade licenses, e SEVA, e-tendering, Vahan and Sarathi, Bhumi, Bhuchitra, Hospital Management Information System and Store Management Information system, electoral governance incorporating all walks of life and help build trust, collaboration and engage people's participation. Several departments of Information Technologies and Electronics, the State e-Governance missions team (SeMT), National Informatics centre, (NIC), West Bengal State Wide Area Network (WBSWAN), state data centres (WEBEL), Common Service Centres (CSC) or Tathyamitra Kendra's and kiosks set up by the Government of West Bengal has been set up to spear head e-Governance in every nook and corner of the state.e-Governance in West Bengal is still at it's nascent stage. My paper aims to study e–Governance initiatives in the state of West Bengal., it's major advantages , analyze it's e-Readiness Index ,critically analyze the e –Governance implementation scenario and help identify it's scope of improvement in popularizing it.

Key words: ICT,e –Governance,Sustainable Development

Introduction

India Today stands at the cusp of development. The progress in and application of Information and Communication Technologies (ICT) and their related infrastructure apparatus on governance have transformed the life of citizens in modern society. Though India ranks 87th in UN's e readiness index, India like other forward looking and developed economies has travelled critical distance in the field of planning and implementation of e-Governance in government-people interface process.

e-Governance refers to the application of Information Technologies by government agencies to enable improved governance relations with citizens, business and administrators of the government. This would indirectly lead to improved public administration with greater transparency and convenience and easy access to economic and social opportunities, revenue growth with less corruption.

The efforts of National Informatics Centres (NIC) to connect all district headquarters is considered very significant in development of e-Governance in India. The national e-Governance plan (NeGP) is the lead nodal agency for implementing e-Governance in India. The prime objective of NeGP of Government of India is to make all Government services easily available and accessible through common service delivery outlets to the common man in his locality through and ensure efficient, transparent and reliable services at affordable costs to meet the basic needs of the common man. The NeGP through its three tier functional model clearly delineated into three Mission Mode Projects (MMP's) viz. Central Mission Mode, State MMP's and integrated MMP's to ensure successful implementations and monitoring of e-Governance projects. The NeGP has formulated 27 MMP's and the projects are clearly defined with measurable outcomes and service levels and cover almost all areas of administrations and departments of governance.

Among the Indian States, South Indian States lead top position in e-readiness index of e-Governance in India and practice highly developed e-Governance applications, like e-SEVA and SMART projects in Andhra Pradesh, BHOOMI projects in Karnataka and SARI Projects in Tamil Nadu. Among the North Indian States, Delhi stands in the first position followed by Gujarat. West Bengal is no exception and it too witnesses several e –Governance initiatives undertaken. Several departments of Information Technologies and Electronics, the State e-Governance missions team (SeMT), National Informatics centre, (NIC), West Bengal State Wide Area Network (WBSWAN), state data centres (WEBEL), Common Service Centres (CSC) or Tathya Mitra Kendra's and kiosks set up by West Bengal government to spear head the incorporation of e-Governance in every nook and corner of the state.

Aim of the Study

To study e-Governance in rural West Bengal and explore its immense potential in contributing to sustainable development of the state.

Objective of the Study

The major objectives of my the study will be –

1. To analyze West Bengal's e-Readiness Index for sustainable development in West Bengal

2. To study e-Governance initiatives in the state of West Bengal.
3. To understand the major advantages of application of e-Governance initiatives.
4. To critically analyze the e-Governance implementation scenario and help identify the scope of improvement.
5. To study and suggest recommendations for greater incorporation of e-Governance initiatives for social inclusion to help people enhance their lives in West Bengal.

Literature Review:

The present study scans the available literature and previous research work conducted by different researchers on e-Governance. The literature on e-Governance in West Bengal' is however scanty.

Singla, M.L. **"Who needs e-Governance? India or Bharat?"** Business Rural India, Issue : 2, Volume 1, April, 2005 promotes e-Commerce and ensure transparency leading to overall development of the economy by bridging the gap between rural and urban masses. Ghosh, A.; and Arora, N. (2005), **"Role of e-Governance Effective Frameworks Implementation"**, Proceedings of the International Conference on e-Governance Lahore University of Management Science, Lahore, Pakistan, brought out that e-Governance has been implemented in isolation by different states and there is a need of nationalized level framework which would rather help to increase effectiveness of different isolated efforts made by individual states. Ghosh A. and Banerjee G. (2006), **"Study of e-Governance in rural India"**, International Conference on e-Governance (ICEG -2006), December, 2006, IIT Delhi carried out their study on e-Governance in rural India constituting majority (70%) of the Indian population. He emphasized the benefits that farmers can draw out of e-Governance projects through which they can come to know of current crop price, get help to prevent crop from diseases and through internet services sell products directly, eliminate the cost incurred by the middlemen. In this study he rightly pointed out the lack of citizen participation in e-Governance projects and policies owing to failure of security measures to check disclosure of personal information. Sudalaimuthu, S.; and Sivakumar, B. (2006), **"E-Filing of Income Tax in India"**, Gumbad Business Review, Vol. 2, No. 2, elaborated the concept of e-filing of income tax returns through internet and rightly pointed out certain limitations such as slow processing of speed. Chaudhri, N.; and Dash, S.S. (2006), **"Community Information Centres"**, Sage Governance Publications, discussed how Community Information Centres, an e-Governance initiative of eight north-eastern remote states of India have benefited through services like internet browsing, word processing and training provided through Community Information Centres (CICs). Guo et al, S (2007), **"Very**

Low-Cost Internet Access Using Kiosk Net", ACM Sigcomm Computer Communication Review, Vol. 37, No. 5, October in his research publication helped disclose the scope and provision of low cost internet access to rural areas through kiosks. Gessi, T. (2007), **"Effective Implementation of e-Governance in Technical Institutions in India using ICT to Make them World Class"** , An International Journal of Engineering Sciences , Vol. 4, September, introduced e-Governance framework after reviewing and analyzing the ICT case studies. Shingare, S. (2008), **"e-Governance at Village Level Administration (In Rural India)"**, World Conference on Agricultural Information and IT, explored the role of e-Governance in development of rural India. He opined that e-Governance could contribute immensely in the overall growth of the nation's development by ensuring development of the gram panchayat that constitute the units of governance. He supported his statements by providing examples such as case studies where e-Governance played an important role in competitive and fast-paced development in village by providing a platform of information exchange reliability at village level. Singh, S. (2010), **"Promoting e-Governance through Right to Information: A Case-Study of India"**, International Journal of Scientific & Engineering Research (IJSER), Vol. 1, No. 2, November advocates e-Governance in India through Right to Information ensuring improved interaction between citizens and the government. Dwivedi, S.K.; and Bharti, A.K. (2010), **"e-Governance in India – Problems and Acceptability"**, Journal of Theoretical and Applied Information Technology identified the major reasons for ineffective governance as poverty, technical illiteracy, unawareness, shortage of infrastructure and language dominance through the study of certain e-Governance initiatives in Karnataka viz. CARD, Gyandoot, Bhoomi and Vahan and Sarathi. Ghosh, A. (2011), **"Initiatives in ICT for Rural Development: An Indian Perspective"**, Global Media Journal, Vol. 2, No. 2, December emphasized the importance of information kiosks and the vital role of ICT played in rural information dissemination. Salkute, V.R.; and Kolhe, S.R. (2011), **"e-Government Milestone in Rural India: e-Agro Aspects"**, International Journal of Enterprise Computing and Business Systems, Vol. 1, No. 2, July in their work elaborates the scope of e-Governance in rural India and highlights the advantages of "e-Choupal" initiative in India. Singh, V.; and Chander, S. (2012), **"On the Role of e-Governance in Economic Development (An Impact Study of Rural and Semi-Urban Punjab)"**, International Journal of Computing and Business Research (IJCBR), Vol. 3, No. 1, January in their research paper elaborated how e-Governance can be used for socio economic development of an agricultural based state like that of Punjab.

Research Methodology:

To facilitate the study of e-Governance in rural West Bengal and explore its immense potential in contributing to sustainable development of the state, an exploratory research method was adopted. Data for the study were collected from 150 respondents and beneficiaries of civil society from block offices of West Bengal in the form of a cross

sectional survey through a random ,non-probability snowball and convenience sampling technique. Kolkata representing the urban section was kept out of study. The sample selection was based to ensure holistic study and fair representation of all age groups, gender bias, reserved and minority communities of scheduled castes, scheduled tribes and the muslims, educational background, work status and income level of civil society across all districts of the State. Focus group conducted with e –Governance administrators helped in better understanding of the problems in implementation and thereby contributed to recommending good suggestions in enhancing better incorporation of e-Governance in the state facilitating enhanced quality of life and sustainable development.

Major Findings and Observations:

a. e –Readiness Index for e –Governance in West Bengal :

e- Governance adopted by the panchayats in West Bengal through various incorporation of several ICT applications marks the onset of the next phase of democratization and decentralization in Bengal. It is only with e-Governance that local governance is now an experienced reality with far reaching potential for delivery of social services of government administration .

West Bengal is divided into 19 districts governed by a District Collectorate or District Magistrate and subdivided into subdivisions, 341 blocks and 3349 town municipalities or gram panchayats. The Government of West Bengal through the State e- mission team (SeMT) working in line with National e-Governance plan (NeGP) has been successful to implement several citizen friendly e-Governance projects incorporating all walks of life. The efforts of National Informatics Centres (NIC) to connect all district headquarters through NICNET and WBSWAN, is the State's Information Highway and is considered very significant e-Governance development in West Bengal. The state Portal "Banglarmukh" has been restructured and launched on April 15,2009 in new format from WBSWAN State Head quarter and is made available through url www.banglarmukh.gov.in or www.westbengal.gov.in. e-Governance Service Delivery Gateways which act as standards-based messaging switches provide seamless exchange of data across the departments between state portal and state department services help consolidate services, applications and infrastructure to provide efficient electronic delivery of G2G, G2C and G2B services through common delivery platform such as State Wide Area Network (SWAN) and Common Service Centre (CSC). Webel and the Information Technology Department acts as the state data centre and acts as the central repository of the state. The major functions would include secure storage and delivery of data and services, citizen information portal, state intranet portal, disaster recovery, service integration. In West Bengal the Common Services Centres have been named as "TathyaMitra" and 6,797 such centres are being established covering rural

areas of 18 districts. Out of 6797 Tathya Mitra centres the state government decided to have one at each of the 3,349 gram panchayats and 341 Block/Panchayat Samiti offices. Remaining 3,105 CSCs are scheduled to be set up at private locations considering 10,000 populations per CSC. The West Bengal State Rural Development Agency (WBSRDA) of the Panchayats & Rural Development Department has been selected as the State Designated Agency (SDA) and is primarily designated for implementation of the CSC scheme in the State through SREI Sahaj e –village Ltd. The Tathya Mitra Kendra's in West Bengal are usually 100 -150 sqft space with some basic infrastructure like one or two computer terminals or laptops with connectivity to internet, a printer, an inverter or a generator system.

b. The major e -Governance initiatives in West Bengal :

1. GPMS (Gram Panchayat Management System) and IFMS (Integrated Fund Management System)-

The basic objective of introducing GPMS and IFMS is to improve financial management and provide better service to the citizens of West Bengal. GPMS (Gram Panchayat Management System) is the software developed for the gram panchayats and is majorly focused on standardizing the accounting system of PRI's, management of accounts, easy uploading of the abstract of the accounts generated head wise balance of fund uploaded after each month in the website of the Panchayat and Rural Development Department www.wbprd.nic.in. GPMS not only enables easy monitoring of funds by district and block level authorities but helps in rendering several citizen centric services viz. issue of birth and death certificates, assessment of tax on land and buildings, issue of trade certificates. Similar to GPMS, IFMS (Integrated Fund Management System) is the software for maintaining accounts and treasury of the panchayat samiti and zilla parishad .

2.e-SEBA

e-SEBA is the software for provident fund management scheme for the state of West Bengal. The software deals with all kinds of the accounting job including generation of individual slips, office registers and other statements and currently handles data related to 133 lakh rural households, more than 5 lakh IAY beneficiaries, 11 lakh old age pensioners, around 3 lakh other pensioners, 9 lakh PROFLAL beneficiaries.

3. Caste certificate

The web enabled process of caste certification of the state of West Bengal aims to create a single window access to certifications by all citizens as a proof of a person's representation to certain caste.

4.e-TENDERING and e-PROCUREMENT –

e-procurement /e-tendering software of NIC is fully operationalized in procurement .The steps included in the process of e-tendering and e-procurement as designed by the Panchayat and Rural Development of West Bengal include publication of tender in the website of the department,submission of bid by contractors electronically and automatic assessment of the bid by the software for finalizing contract.The details of the contractors are uploaded and they are trained to submitting on line bid. The procurement time has been reduced by around two months per contract and improved transparency.AllZillaParishads compulsorily publish their tenders in website of the department. Digital certificates is given to relevant functionaries

5. Vahan –Sarathi (Vehicle Registration)-

VAHAN is a highly flexible and comprehensive software for vehicle registration of the Public Vehicles Department in West Bengal and it majorly caters to all transactions related to vehicle registration like that of calculation of fees and tax for private and commercial vehicles, vehicle registration for private and commercial vehicles, fitness test for commercial vehicles and other vehicle transactions such transfer, conversion, alteration, online payment of road tax etc. On the contrary SARATHI software has been implemented to issue computerized learner license, permanent driving license, conductor license and driving school license, learner license, permanent driving license, conductor license and driving school establishment license to the citizens. The software provides a nationwide search over the digitized data of registered vehicles and common citizens can view the details of their registered vehicles online based on certain parameters like registration number or chassisnumber etc.

6. Employment Exchange –

Through its online presence,Employment Exchange acts as a web based interactive central digital platform and transparent window to the recruitment of government official in West Bengal.It provides an online interactive central digital platform for interface of employers with prospective job seekers and primarily aims at enhancement of placement opportunities of job seekers and secondarily at removing the gap that exists in skill mismatch.The portal provides online registrationrenewal and updation for job seekers,online data bank of prospective employees,skill development training programmes,vocational courses,mock tests and special coaching for various competitive examinations and promote entrepreneur programmes.

7.Commercial Taxes ad Treasuries –

The electronic filing of the value added tax across West Bengal marks the onset of new web enabled era and includes e –ventures and invoice details,e–declarations for movement of goods through States commercial tax check posts,e -filling of VAT returns,CSTReturns,SST returns,e-payment through bank portal,e-registration and DEMAT RC, de materialized waybill for registered dealers and un registered persons, e-submission of declaration for deemed assessment,e-refund and payment through ECS, dematerialized CST Forms(C&F),dematerialized transit declaration, e-application and submission of CST forms,e-application for industrial promotion assistance scheme,e-Submission of Form 16,e-grievance,e-filing of entry tax return, e-registration of digital signature certificate collection of sales taxes,exciseduties,motor vehicle tax

7.AGRISNET(AGRICULTURAL INFORMATION SYSYTEMS NETWORK) –

is an online integrated, market driven multi nodal delivery of agricultural information system in West Bengal aiming to enhance agricultural information flow.The project envisages creation of a sustainable data bank of all agricultural inputs like market demands, prices,good agricultural practices facilitating farmers and other stakeholders through agri–business centres to interact with agricultural service providers in the governmental sectors.The major applications of Agrisnet include fertilizer control and management system ,seed management information system ,soil survey soil and water conservation and management system, soil test based fertilizer recommendation system ,issuance of soil health card ,weather watch information system, information system on pesticide availability, management and pesticide testing.

9.Bhumi / Bhuchitra/ LAIS(Land Acquisition Information System) –

Bhumi was the first version of the land records computerization software developed by NIC, West Bengal. The software has been installed in all the Land and Land Reforms Offices in 341 blocks and majorly concentrates on due validation and checking of database of khatians and plots. Citizens are provided with computerized records of Rights (RoR), paper based mouza volumes after digital correction, certified copy and plot information within 15 minutes. **Bhuchitra** is an upgraded version of Bhumi with integration of digitized mouza map.**LIAS** software helps store data relating to project details,plotdetails,owner details and primarily aims at quick disposal of all land acquisition cases.Reports relating to notification,declaration,landschedule,estimate,calculationsheets,awardpreparation,payment notices,C.C vouchers and many other required reports and queries are available in the software.

10.Store Management Information System and Hospital Management Information System:

The Health Statistics Information Portal of West Bengal facilitates the flow of physical and financial performance from the district level to the state headquarters and the center using a web based Health Management Information System (HMIS) interface. The portal aims to provide periodic reports on the status of the health sector in the state. While Hospital Management Information System (HMIS) is used for online tracking of outdoor and indoor ticketing, Store Management Information system (SMIS) is the software used for medicine procurement in all hospitals in West Bengal. SMS and telecommunication technologies are used for OPD tracking system and the Mother and Child tracking system is used for sick and new born health care centres. Two telemedicine projects have already been implemented by Webel ECS Ltd in collaboration with IIT, Kharagpur at various government hospitals of the states of West Bengal whereby the medical history of the patient is sent to the higher centres via internet facility.

11. e –DISTRICT PROJECT–

The e-District project endeavors to create an integrated IT platform for district administration and its subordinate offices through Common Service Centres (CSC). An approach based on Service Oriented Architecture (SoA) it makes it easy for the district administrative officials to discharge their functions efficiently. Pilot projects of e –Governance are being implemented in Jalpaiguri, Bankura and Burdwan Districts. After successful rollout of the pilot project, the remaining districts of West Bengal would be covered under the project. Price Waterhouse Coopers (PWC) has prepared the functional requirement specifications while TCS is the identified development agency for the e-District project in the state. Implementation of the pilot started from October'09.

12. Computerization of Salary Accounts (COSA) –

COSA or Computerization of Salary Accounts is the project implemented in the Finance Department, West Bengal that ensures precision and timeliness in the generation of pay bills, schedules and other annexure required for producing salary bills of the establishments of government departments. COSA is running successfully in around two thousand DDO offices in West Bengal. COSA has bagged good e-Governance project award in the Microsoft Government Leadership Summit 2007 held in New Delhi.

13. Electoral Governance –

General Elections of 2009 and has been a landmark change in the evolution of West Bengal elections with Election Commission incorporating ICT technologies in electoral process of computerization of electoral rolls of 620 million voters incorporating their photo identity, it's constant upgradation, supervision of nomination of candidates, online supervision of nomination of candidates, registration of political parties, issuing appointment letters to

individuals, declaring results online, publishing CD's and books of individual parliamentary constituency rolls.

14. Department of Higher Education –

To ensure universal facilities and universal access to information, the Government of West Bengal in its official website of BanglarMukh(<http://wb.gov.in/>) has gone for online application, model answers, feedback and results for students enrolled for primary as well as higher education and competitive exams inclusive of West Bengal Joint Entrance and TET. Other than this there are constant on line scholarship announcements (like Swami Vivekananda West Bengal Government merit cum Means scholarship scheme), e-notice boards and e-RTI is a regular exercise with the education department of West Bengal.

c. The major advantages of e –Governance in West Bengal :

It's major benefits would encompass the following:

1. Bridging the existent digital divide in India through emerging digital techniques resulting in improved communication and access to economic and social opportunities in public administration management
2. Encourages proper and active citizen representation their participation
3. Corruption reduction, increased transparency, greater convenience, revenue growth and cost reduction.
4. Improves efficiency in processing large quantities of data.
5. Improve services through better understanding of user's requirements, thus aiming for seamless online services.
6. Help achieve specific policy outcomes by enabling stakeholders to share information and ideas.
7. Assist government's economic policy objectives by promoting productivity gains internet in ICT and e-Commerce.
8. Contribute to government reform by improving transparency, facilitating information sharing and highlighting internal inconsistencies.
9. Help in building trusts between government and the citizens and involve citizens in policy processing.
10. Cheap and enhanced accessibility of information .

11. Increased participatory approaches to Government departments and citizens

c.Recommendations for accelerating e –Governance initiatives in West Bengal :

The focus group and surveys across 150 respondents and beneficiaries helped gain better insights to e –Governance implementation scenario in West Bengal in respect to the various demographic parameters affecting e –Governance like age, gender bias, work status and monthly income and likewise help identify and recommend the areas of further enhancement for its better incorporation into our everyday life.

The survey findings helped establish a strong and direct relationship of age group with the rate of acceptance of e –Governance initiatives. The middle age group of 18 -30 and 30 -40 years showed better acceptance of e-Governance applications in comparison to age group above 60. The surveys further revealed that the male respondents with higher education exhibited a higher acceptance of e-Governance initiatives. The surveys helped conclude that e-Governance services were restricted or marginalized with an average income bracket of 1,000 -5,000. People with low income as well as with high income usually were out of the domain of e-Governance. Respondents who were earning and majorly comprising of household workers or self-employed were seen to constitute the majority of beneficiaries.

For better incorporation of the various e –Governance initiatives, the government policy towards ICT at grassroots and local level needs to be re-orientated with significant budgetary allocation for ICT infrastructure development . It should be coupled with better state administrative backup for implementation and maintenance. A dedicated e-Governance committee should be constituted for spearheading e-Governance in local bodies and effective measures incorporated to develop public trust. For this purpose strong campaigns emphasizing strong security of online data should be organized by government and local bodies. To promote ICT usage in public life, the Government of West Bengal should make it legally mandatory that all registered parties should have an active website and with proper guidelines to the daily operation of such websites. Also distribution of free laptops and mobile at various blocks of the state along with establishment and maintenance of greater number of village kiosks and CSC's as platforms for new media access to citizens residing in remote corners would be a good way to promote e –Governance in the State. Along with it accessibility to bengali software's on new media platforms would help encourage more participatory and interactive nature addressing local concerns. Consistent computer literacy programs along with attitudinal training programs aimed to skill training and capacity building should be emphasized and worked out on regular basis.

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