CONVERGENCE FOR SUSTAINABLE DEVELOPMENT IN MGNREGA:
EVOLVING ROLE OF ICT

Dr. OM PRAKASH GUSAI *

MGNAREGA ,the visionary revolution to provide the social security net in rural India is now on way to get Tech Savvy. Courtesy the use of ICT (Information and Communication Technology) tools to ensure that the benefit reaches out to the needy and the poor in rural areas. This will require strong systems for the effective management and implementation of the schemes. The contemplated outlays are on an unprecedented scale and therefore transparency and accountability are the key issues. For successful implementation, potential beneficiaries need to be aware of their work entitlements and the essential elements of the Schemes. Besides their roles and responsibilities the implementing agencies also need to be aware of the legal implications, as employment has been guaranteed as a right. Productive assets have to be created so that the livelihood base of rural communities is built up to ensure long-term sustainability. The process of National consultation with different stakeholders has gathered momentum and the deliberations with Planning Commission, Universal Identification Authority of India (UIADAI) and National Knowledge Commission have provided a fillip to the move. In order to enforce transparency at the grass root level, the Ministry of Rural Development integrates the use ICT devices, especially Biometrics and integration with UIADAI to introduce biometric attendance on site and to improve the overall delivery system in the implementation of MGNREGA by capturing all the processes right from registration, demand of work, issue of dated receipt, allocation of work, attendance at worksite with GPS coordinates, measurement of work and wage payments.
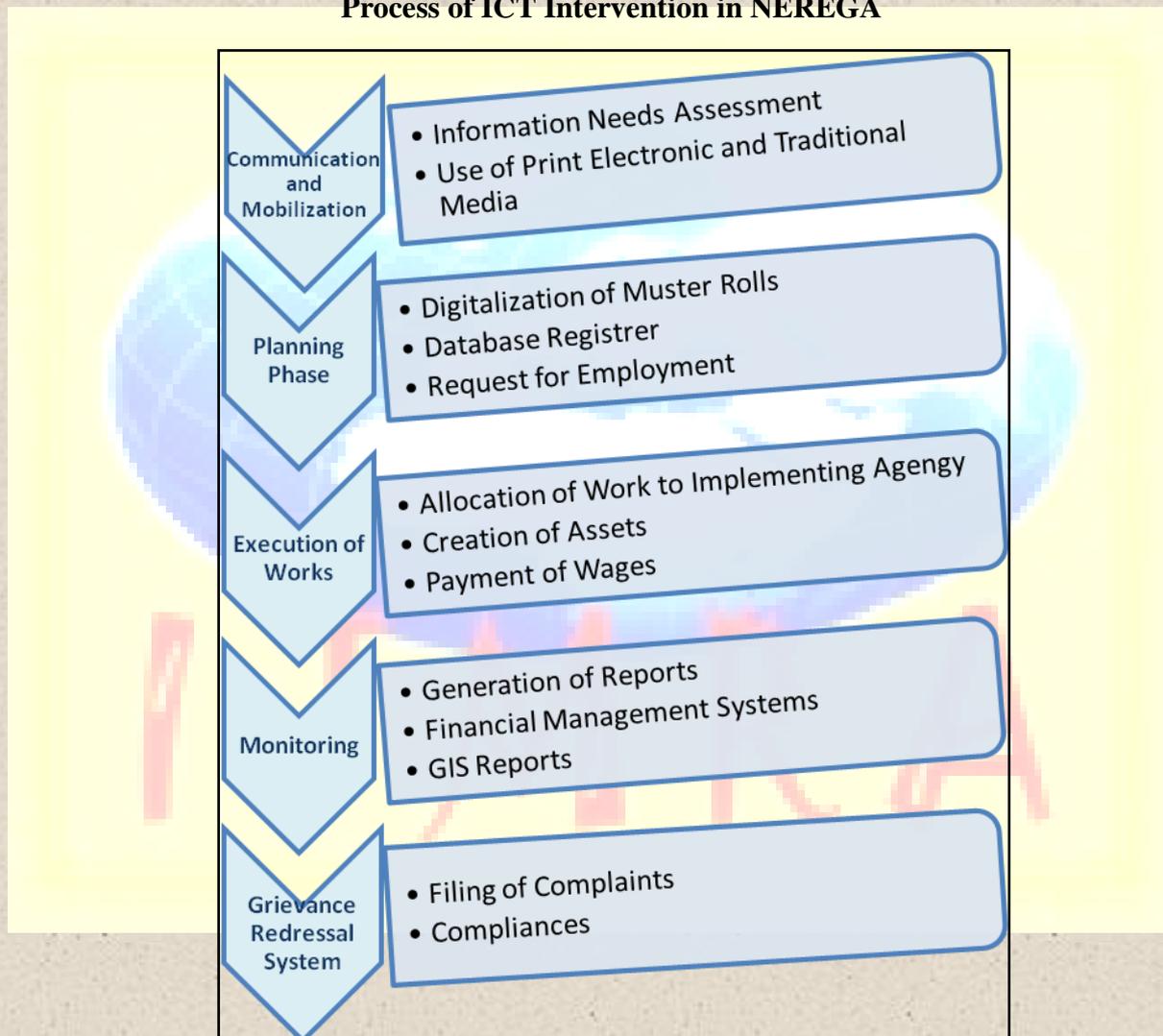
Areas of ICT Intervention : The Primary objective is to ensure through use of biometric and GPS enabled ICT devices on work sites, biometric attendance to eliminate ghost workers and the problem of the local leadership appropriating the job cards. In the long term integrating MIS with the bio-metric data will create an integrated process of capturing demand in real time, generating date receipt, allocation of work and reducing delays in measurement and payments. This would require the Collection of Biometric data (UID

---

* Assistant Professor, Department of Commerce, Motilal Nehru College, South Campus, University of Delhi, New Delhi

1. compliant) of all MNREGA workers and create a State Data Warehouse; Verification of real time attendance for MGNREGA workers at the work-site through hand held devices and its transmission through GPRS, CDMA, PSTN or internet connectivity whichever is available to update muster roll records and MGNREGA web based MIS; and Supporting bank's business correspondent with micro mobile ATM devices to deliver wages payments at the workers doorstep.

Figure 1

Process of ICT Intervention in NEREGA

Communication and Mobilization
- Information Needs Assessment
- Use of Print Electronic and Traditional Media

Planning Phase
- Digitalization of Muster Rolls
- Database Registrer
- Request for Employment

Execution of Works
- Allocation of Work to Implementing Agengy
- Creation of Assets
- Payment of Wages

Monitoring
- Generation of Reports
- Financial Management Systems
- GIS Reports

Grievance Redressal System
- Filing of Complaints
- Compliances

1.1 Communication and Mobilization : Some of the ICT interventions that can be possibly used for communication and mobilization include community radio, television, public address systems, panchayat websites and the Internet to publicize the NREGA. Information kiosks that have been

set up in some villages and the 100,000 Common Service Centers being implemented by the Department of Information Technology can be used as focal points to disseminate information on the scheme

1.2 Planning Phase : Creation of a database of durable, productive, labour-intensive works at Panchayat level including mapping out socially productive and durable assets/infrastructure which can be created in the respective zones/clusters. Issuing of job cards, digitization of muster rolls, persons employed, their output, wage rates, working hours etc can also be available for verification by the Panchayats, peers and the community through the use of ICTs. The use of Smart Cards/Biometric cards can be introduced to identify and track every beneficiary in the region.

1.3 Execution of Works : Works Management System with authentic records of the attendance at the worksites with simultaneous updating of the employment records is necessary. Works identified in a particular block to be taken up under the scheme must be available for viewing and measurement by all Panchayats within that block. Work Flow Automation System is required since the approval of works; allocation of works to an implementing agency; etc. must be sanctioned by the Programme Officer or such local authority (including the Panchayats at the district, intermediate or village level). Disbursement of wages and unemployment allowance is another crucial area where the advent of ICT will not only make the procedure streamlined and speedy but equally transparent and effective.

1.4 Monitoring : ICTs provide for ensuring that the members of the designated rural household are only availing the guarantee of 100 days of employment and their wage employment rights are not being misused by others. Biometric systems like fingerprint recognition system based time and attendance system at the front-end backed by a comprehensive computerized MIS at the back-end may be able to address the issue. The NREGA makes it compulsory for the daily wages to be disbursed within a specified time limit. It therefore becomes necessary that this information is captured and available for public viewing through the MIS. Information such as data pertaining to households, number of days of employment provided, reports on the assets created, financial information like allotment of funds by Ministry of Rural Development to the States and eventually to the implementing agencies, tracking wages paid to the workers and all other aspects of implementation made available to the public at large. The use of Geographical Information System (GIS) can greatly enhance the monitoring of the NREGS. Digital maps can be made available for viewing to show the assets that have been created under the scheme and provide for the assessment of the quality of assets created.

1.5 Grievance Redressal System : Citizens can register grievances at all Panchayat Levels and in offices of the Programme Officer and the District Programme Coordinator. This information must be made available online. Citizens must be able to track their grievances online.

2. Diverse Problems in Uniform Policy Implementation

The list of issues above is indicative and not exhaustive in nature. Other issues require policy, legislative or administrative initiatives. Such as of Number of households demanding jobs are far higher than the number of households who have been issued job cards. In some cases the difference is as high as 1000 percent. For example in Araria district, Bihar, job cards have been issued to 9103 households while 92,000 household have demanded for employment. Similar is the case in Lakhisarai district of Bihar where 2630 job cards have been issued and 29285 families have demanded employment. On the other in states like Gujarat employment demanded is as low as 1 percent of the job cards issued. For example: in Banaskantha district 73,223 job cards were issued while only 729 households demanded employment. This shows that either NREGA Scheme is not popular or enough alternative employment opportunities exist. There are reports from Kandmahal district, Orissa, that Rs. 50 to Rs. 100 is charged to issue registration forms for NREGA. To avoid payment of unemployment allowance, whoever is provided a job is registered. The wage rates paid vary from State to State. This is because in Andhra Pradesh payment is based on the volume of work done while in Tamil Nadu it is a fixed rate. As a result, in Andhra Pradesh the wages can be as high as Rs. 300 to Rs. 400 while in Tamil Nadu it is fixed at Rs. 80. Providing wage employment has become the main focus rather than the creation of productive long-term assets.

3. Convergence of ICT Technologies

The large scale of operations, the limitations of outreach of various services and the need to handle large volumes of information in a transparent manner necessitated the use of ICT in program delivery. ICT facilities both to support Gram Panchayat and block office of Programme Officer (PO) as well as public access to information andonline transactions are being promoted.

➢ **MIS to support MGNREGS :** Management Information System (MIS) is a system or process that provides information needed to all stake holders to manage processes effectively and in a transparent manner. The Act prescribes proactive disclosure and making information available in public domain. Of all the measures, the most effective so far has been the web enabled MIS ("MGNREGA MIS"),

(www.nregs.nic.in), which places all relevant transaction data in the public domain. ICT has facilitated a platform for tracking processes and outcomes. It integrates a large number of field functionaries, officials, local bodies and workers via a coherent centralized workflow engine spanning the entire country. There are checks and balances to eliminate arbitrary entries. The MIS software can work off line. The software can be customized to local requirements by modifying or adding features to it. It also allows local language options. The MGNREGA MIS is a data base that records all details of employment demand, work done, amount earned, days worked for all households which have registered for the Scheme. Fund flows can be tracked from the time Centre approves the payments till the disbursement. The available balance at different levels, the break up is available on the web site. The web site architecture is based on the processes prescribed in the Act, hence it is possible to track a job card number, through the muster roll, to the bank account through which wages have been paid. The MIS is designed to provide data on defaults, aberrations, delays and breach of guarantees. For example it can provide, village wise, names of persons who have registered but not received job cards or applied for works but not received work allocations within fifteen days and have worked but not received payments within fifteen days. It also has inbuilt checks, for example, to validate whether muster roll names are of those who have job cards.

➢ **Transforming MIS into People Information System :** Efforts are on to deepen the ICT infrastructure upto the Gram Panchayat level. This penetration will trigger innovations at the grass root, helping workers to assert their rights and hold implementation agencies accountable. A good practice to facilitate transparency is to separate worker's demand process and their access to information. A local language enabled audio visual ICT kiosk model (guided by icons and audio) has been developed for workers to use the system and exercise their Rights. Workers need to authenticate their registration through a biometric process by recording their fingerprints on the biometric reader in the kiosk. The worker also records his attendance at the site in the same manner. The kiosk then provides the worker details such as work allotment, attendance, muster report, wages calculation as on date, in the local language. Workers acquire agency through simple ICT methods. This separates the agency that guarantees work, from the application receiving entity. This transforms the MIS into a "People's Information System" that is expected to enable

the use of ICT at the last mile by the target group of workers, to access information, verify its authenticity and also to directly demand services and rights guaranteed to them.

➢ **Biometric based ICT solution - Pilot projects at GPs :** The Gram Panchayat can use ICT technologies with immediate effect, thus enabling all transactions in real time for MGNREGA processes. ICT enabled solutions provide the last mile connectivity and will trigger innovations at the grass root, helping workers to assert their Rights and hold implementation agencies accountable. The latest ICT technology provides an easy and efficient way to support enabling of MGNREGA operational processes in rural areas by using Mobile Transaction Terminals (MTT). The MTT is designed in such a way that it can work in offline and online mode and update the web based MGNREGA MIS for consolidated reporting.

➢ **ATM Pilot Project :** This project has implemented low-cost ATMs with finger-print authentication and local language interface in the selected implementation areas with 'always on' internet connectivity. Each of these ATMs is linked to a partner bank (SBI). Accounts of people offered work in MGNREGS are maintained in the partner bank and the local government transferred wages electronically to the bank accounts of individuals. Payments to individuals are made through ATMs in the villages using biometrics. Ministry of Rural Development is the implementing agency for MGNREGA and is constantly looking for innovations in program delivery. It has identified ICT as a major tool to leverage the scheme for ensuring access to the target group of beneficiaries. The use of ICT devices and biometrics can strengthen MGNREGA delivery manifold. Geared towards real time capture of the processes involved in MGNREGS such as registration, demand of work, issue of dated receipt, allocation of work, attendance at worksite with GPS coordinates, measurement of work, wage payments, etc. it would be instrumental in ensuring transparency and accountability, strengthen MIS, reporting and tracking and reducing delays in measurement and payments. In addition, providing infrastructure, technical and managerial capacity at the village level through a Public private partnership model would facilitate program delivery as well as convergence with other programs of national importance such as the UIDAI for generating the UID number as well as financial inclusion with banks and post offices for micro payments and state level programs.

4. ICT Enabled MGNERA Process

a) The process will start with the capturing of onetime Biometric database of MGNREGA workers. Simultaneously, Registration of new workers along with capturing of biometric database will take place. This will be carried by the service provider.

b) Demand of work through can be made through Info Kiosks, which may be placed at the Point of Service (POS) either at Bharat Nirman Rajiv Gandhi Seva Kendra (BNRGSK) or Gram Panchayat or CSC centre. Hand held devices (HHD) will be carried by the service provider and the Gram Rojgar Sahayak may be trained to do this activity. Worker demand for work using biometric, touch screen enabled system through info-kiosk/ HDD (real time through GPRS connectivity or Offline mode) Demand for work is done through sound and icon based menus. After Bio-metric authentication of the worker the demand can be made.

c) Worker can also access real time information on entitlements, Work demanded and allocated, wages accrued and received, register grievances this reduced dependency on the Gram panchayat office and dated receipt will act as evidence for claiming unemployment allowance if it accrues.

d) Work allocation and Preparation of e-muster roll by Panchayat is done based on the work demand of the worker, Panchayat allocates work from his/her office. They also generate e-muster roll, updates central MGNREGA MIS.

e) Attendance at Worksite Worker registers their attendance at worksite through biometric device integrated with Global Positioning System (GPS) that provides location. Real time image of worksite integrated with map to monitor the progress of work.

f) E-Measurement of Work by Gram Rojgar Sevak /JE update the work progress and measurement on e-measurement book through a hand held device. The measurement is to be recorded on the worksite with latitude and longitudes of the worksite.

g) Generation of Payment Advice on basis of attendance and the work progress registered on e-measurement book, Panchayat Office issues payment advice to bank/ Post Office / Business correspondent.

h) Payment of the Workers can be done either through the Post offices/ Banks or by the Business correspondent at the door step of workers.

The Primary objective is to ensure through use of biometric and GPS enabled ICT devices on work sites, biometric attendance to eliminate ghost workers and the problem of the local leadership appropriating the job cards. In the long term integrating MIS with the bio-metric data will create an integrated process of capturing demand in real time, generating date receipt, allocation of work and reducing delays in measurement and payments. This would require the Collection of Biometric data (UID compliant) of all MNREGA workers and create a State Data Warehouse; Verification of real time attendance for MGNREGA workers at the work-site through hand held devices and its transmission through GPRS, CDMA, PSTN or internet connectivity whichever is available to update muster roll records and MGNREGA web based MIS; and Supporting bank's business correspondent with micro mobile ATM devices to deliver wages payments at the workers doorstep.

References

1) Aiyar, Y. & S. Samji (2009), "Guaranteeing Good Governance: Understanding the Effectiveness of Accountability Mechanism in NREGA", NREGA E-Knowledge Network, UNDP, New Delhi.

2) Basu, Arnab K, Nancy H. Chau and Ravi Kanbur (2005), "The National Rural Employment Guarantee Act of India, 2005", Processed, Department of Applied Economics and Management, Cornell University, Ithaca, NY.

3) Basu, Arnab K. (2007), "Impact of Rural Employment Guarantee Schemes on Seasonal Labor Markets: Optimum Compensation and Workers' Welfare," College of William and Mary, Mimeo.

4) Chakrabarty, P (2007), "Implementation of the National Rural Employment Guarantee Act in India: Spatial Dimensions and Fiscal Implication", Working Paper No. 505, The Levy Economics Institute of Bard College, Annandale-on-Hudson, New York.

5) Dreze Jean and Khera, Reetika, (2009), "The battle for Employment Guarantee", Frontline, 26 (01), Jan. 03-16.

6) Dreze, Jean (2007), "NREGA: Dismantling the Contractor Raj", The Hindu, 20 November,

7) Dreze, Jean., (2006), "National Employment Guarantee Inaction", The Hindu, Chennai, 12, September.

8) Dutt, Ruddar (2008), "Dismal Experience of NREGA: Lessons for the Future", Mainstream, Vol. XLVI, No.17.

9) Ministry of Rural Development (MoRD) (2009), "Guidelines On Convergence With National Rural Employment Guarantee Scheme", Government of India, New Delhi.

10) Mohapatra R, Sakhuja N. (2008), "The National Rural Employment Guarantee Act (NREGA) Opportunities and Challenges Natural Resource Management and Livelihood", Centre for Science and Environment, New Delhi.

11) Rao; V.M (2007), "Making Safety Nets Effective for Hardcore poor", Economic and Political Weekly; August 18.

12) Siddhartha and Vanaik, A (2008), "CAG Report on NREGA: Fact and Fiction", Economic and Political Weekly, June 21-27 2008, vol. XLIII, no 25, p. 39-45.