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## CONTENTS

• ROLE OF ICTS IN RURAL DEVELOPMENT	Archana. G. Gulati	3
• ICT : A CATALYTIC INTERVENTION FOR EMPOWERING RURAL INDIA	Anupam Hazra	9
• RURAL TELEPHONY FOR RURAL DEVELOPMENT	Dr. P. Kameswari	12
• HARNESSING POTENTIAL OF COMMUNITY RADIO FOR RURAL ADVANCEMENT	Ms. Arpita Sharma	19
• COMMUNITY RADIO MATTOLI ; VOICE OF VOICELESS	Sudha S. Namboothiry	24
• DEVELOPMENT COMMUNICATION: INTENSIFYING RURAL DEVELOPMENT IN INDIA	Subhashree Sanyal	27
• ICT FOR RURAL DEVELOPMENT : A VIEW	A. Abdul Raheem	31
• OPEN LEARNING AS A TOOL TO PROMOTE GENDER EQUALITY IN RURAL INDIA	Dr. Raju Narayana Swamy	34
• RIGHT TO SHELTER, AN URGENT NEED	Ranbir Singh Ajay Kumar	42
• FENUGREEK, A SPICY MEDICINE	Dr. Ramesh Chandra Parida Dr. Pranab Kumar Ghosh	46

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# INSIDE

Information and Communication technologies (ICT) are transforming all human activities, including agriculture which is the mainstay of rural India.

One of the main reasons for the inequitable distribution of economic gains between the haves and have-not's is the gap in access to information. ICT plays an important role in bridging this gap and eventually will help in poverty alleviation. Farmers can get access to knowledge to improve their production and even get better price for their produce through variety of ICT systems.

The advancements in ICT can be utilized for providing accurate, timely, relevant information and services to the farmers, thereby facilitating an environment for more remunerative agriculture.

ICT is a powerful and productive system which can accelerate economic and social development in rural areas. We discuss in this issue, how this new age technology is helping rural India live a better life.

One of the most effective tools of ICT is the internet, which has seen a remarkable growth in our country in the last one decade. In this issue specialists on the subject discuss the growth of internet in rural India and how it is actually working on the ground. However, despite the thunderous growth in ICT technology one of the main problems in adoption of ICT in rural segments are ICT illiteracy, availability of relevant and localized contents in their own languages, easy and affordable accessibility. Community radio is another technology which is being used by the rural people in their local language. In this issue we discuss about the Community radio as well.

The country is going through an ICT revolution and this has become an enabling force for the farmers and those living in rural India to become active participants in the growth of the country.



## Role of ICTs in Rural Development

Archana. G. Gulati

Importance of ICTs for Rural Development given the importance of Information and Communication Technologies (ICTs) in national development, countries across the globe have put in place mechanisms such as Universal Service Funds and other forms of Government intervention to achieve Universal Access to ICTs. These focus inter alia on bridging the digital divide between urban areas/populations and rural areas/populations.

The significance of bridging this divide in developing countries stems mainly from the fact that rural areas often lack or lag behind urban areas in terms of essential infrastructure and services such as transportation, health, education and government services. This creates a politically and ethically unacceptable inequality of services and opportunities for rural populations and prevents them from participating

appropriately and fully in socio-economic and political life of the nation. Rural isolation and deprivation can negatively impact growth and certainly growth cannot be sustainable unless it is inclusive. This is especially true of a nation like India where more than 70% of population resides in rural areas and is largely engaged in low productivity agriculture and allied activities. ICTs can overcome many infrastructural constraints. Through ICTs people in rural areas can connect with the local, regional and national economy and access markets, banking/financial services and employment opportunities. ICTs also serve as a instrument of awareness creation and feedback giving rural people a voice in the nation's socio-political life. ICTs can act as a channel of delivery of e-Government services including health and education. Thus bridging the digital divide



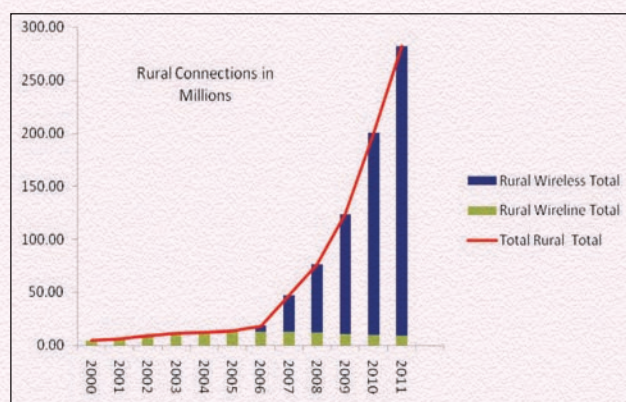


also bridges the overall infrastructural gap and addresses other constraints faced by rural areas. ICTs can help mainstream rural populations.

## Growth in Rural Telecommunications

In the past decade, India has seen a veritable telecommunications revolution which is the result of effective regulatory and policy environment coupled with an enterprising telecommunications sector made of both public and private service providers. The growth of rural Teledensity is remarkable as it has risen to 36% as on 30<sup>th</sup> August 2011 from a mere 1.7% in 2004. In fact, today rural teledensity is growing at a much faster rate than urban teledensity. At the beginning of 2011, there were 282.29 million rural connections (most of which are wireless), as compared to a mere 4.84 million (only landline) phones in the year 2000. Practically all growth has come from mobile telephony and the private sector has played a huge role in this expansion. With an average family size of five, it may be assumed that almost every rural household owns a mobile phone. If not, then there are Public Calling Offices and Universal Service Obligation Fund sponsored Village Public Telephones in almost every inhabited census village in the country.

Rural India is certainly well connected through telephones though not to such an extent by the internet. Yet, even in small towns and villages a good percentage, of Indians do access the internet regularly in shared spaces (public kiosks, offices, educational institutions etc). The smart phone is the leading mode for individual internet access



*Growth of Rural Connections*

suggesting a good market potential for wireless broadband services. Certainly the growth of rural telephony, especially mobile telephony has brought about improved connectivity. However, much more needs to be done if the benefits of telecommunications connectivity are to translate into overall rural development. Improving broadband penetration is one key focus area and this is being addressed actively by the Department of Telecommunications. Thus the Universal Service Obligation Fund has launched a Wire line Broadband scheme in 2009 and is at an advanced stage of formulation of a rural Wireless Broadband scheme. It is also to fund the National Optic Fibre Network (NOFN) which shall connect 2,50,000 village panchayats and co-located Bharat Nirman Kendras (erstwhile Common Service Centres (CSCs)) with Optic Fibre thereby providing high speed broadband facilities. Bandwidth from NOFN will also be available to all licensed telecom service providers to provide broadband services in rural areas.

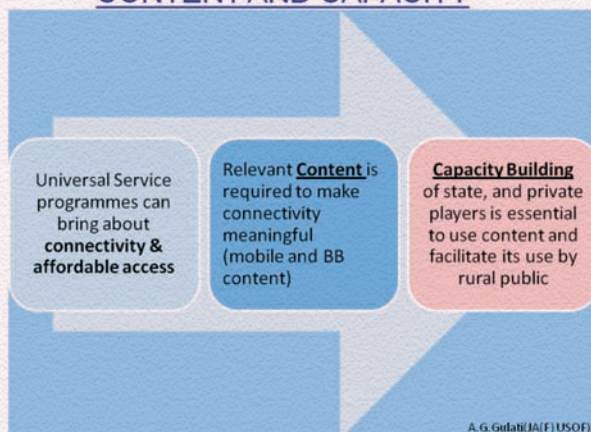
## Why is Mere Connectivity not Enough:

It is increasingly being realized and articulated that Universal Telecommunications Access/Service or connectivity is a necessary but not sufficient condition for bringing about positive outcomes such as improved socio-economic status and greater political participation. (These are the beneficial results traditionally associated with ICTs.) To achieve these ultimate objectives, ICTs should not only be available and affordable, but must also deliver relevant and usable content and the target beneficiaries. The latter must in turn able to access, assimilate and make meaningful use the services and content delivered through ICTs. Both content and capacity building are essential if ICTs are to achieve their promised impact on rural development.

There would be a relatively small percentage of rural population who would benefit from connectivity without much else being done. These are the literate, employed/self employed persons who can understand and benefit from the available English language content. However



## CONNECTIVITY MUST BE SUPPORTED BY CONTENT AND CAPACITY



### To Achieve Desired Outcomes, Connectivity must be supplemented by Content and Capacity

for the vast majority in rural India, language if not literacy would be a major barrier. At present, the overall literacy rate in India is 75% and rural literacy stands at 68.9%. Even if literacy is not an issue, relevant content would need to be available in regional languages. Most rural Indians who are as it is struggling to eke a living in agriculture or allied activities would have no use for broadband beyond mere entertainment and it is debatable whether they would use it at all, even if it were available and affordable. Improving the status of access for women and the disabled would raise even more difficult challenges in terms of relevant and accessible technologies and content. This raises the question of 'How then would broadband availability in rural areas translate into rural development'? Even in countries like Malaysia with much higher rural literacy rates of almost 89% and broadband coverage of more than 50% of population, the Government has to make active efforts to popularize the use of subsidized rural Community Broadband Centres (CBC). They run customized training courses on broadband usage tailored to the needs and interests of various age groups of rural society. They integrate its use in school curriculums and encourage children to learn online games and crafts and to use Facebook at special training classes held in the CBC. The franchisees running the CBC are specially trained and may even go door to door to promote broadband usage. We would need

similar efforts to popularize broadband usage in rural India.

Relevant applications and content would draw people to broadband usage as rural Indians would easily recognize their potential to augment incomes and access useful e-services. Such a 'pull' would result for example when National Rural Employment Guarantee Schemes (NREGS) wages, Government pensions, subsidy for food and fertilizers etc are delivered through mobile/broadband enabled bank accounts facilitated by trained Rural Business Correspondents and supported by online bio-metric authentication enabled by Aadhaar. Similar results would flow from wider availability of services such as Department of Agriculture's *Kisan* call Centres where farmers would obtain crop/weather/market advice and information through mobiles/broadband. An SMS/online feedback and grievance redress system for all government services on the lines of NREGS would encourage rural Indians to contact the Government through ICTs. This would empower them while also generating a much needed transparency and accountability in Government service delivery.

In this regard it is heartening to note that the stated objectives of the draft National IT policy include the goals of making at least one individual of every household e-literate and of leveraging ICTs for key social sector initiatives like education, health, rural development and financial services to promote equity and quality. Equally significant are the objectives of enabling access to content and ICT applications by differently-abled people to foster inclusive development and of encouraging use of mobile phones for value added services and transactional services such as financial services. Indeed the mobile phone can be much more than a tool of connectivity when supported by relevant content and services. The stated mission draft National Telecom Policy 2011 includes creating a knowledge based society through proliferation of broadband facilities in every part of the country. Its objectives include enabling citizens to participate in and contribute to e-governance in key sectors like health, education, banking etc to ensure equitable and inclusive growth. and to reposition the mobile



phone from a mere communication device to an instrument of empowerment that combines communication with proof of identity, fully secure financial and other transaction capability, multi-lingual services and a whole range of other capabilities that ride on them and transcend the literacy barrier. The strategies proposed to achieve this include not only recognizing telecom and broadband connectivity as a basic necessity like education and health and to work towards a right to broadband but also and importantly, developing an eco-system for broadband in close coordination with stakeholder ministries to ensure its availability along with and that of low cost customer premises equipment and an environment for vigorous development of relevant applications. The policy document also indicates that the Department of Telecommunications would work closely with Department of IT to promote content creation in vernacular languages to stimulate the demand for broadband. India could consider a model adopted by other nations such as Singapore whereby a high level nodal authority oversees the adoption of broadband including inter alia capacity building and content development

### **Integrating Content and Capacity Building into ICT Promotion Schemes**

It is clearly the content and services delivered through mobiles and broadband that have the power to transform rural India. One important step would be to provide the entire content suite at the *Bharat Nirman Kendras* (CSCs) located in the village panchayats. This would include e-government services, telemedicine facilities, distance learning facilities and ICT training facilities etc. Apart from this, commercial PCO type public access points can provide rural public with a place from which to access either general or specialized services including entertainment services. Health Centres and Schools in villages would need to be broadband enabled with relevant services and content and schools can also serve as a public access points/broadband training venues after school hours. However, a key requirement is proper training of officials/franchisees who run these services. Support from the Government by way of not only

its own e-content development but also funding for private entrepreneurs engaged in rural-centric content development and training facilities is a must.

There are excellent existing examples of mobile based value added services being provided to rural population. Celebrated examples such as ITC's e-Choupal and Kerala Government's *Akshaya* project show us the way. As mentioned earlier, certain groups of society such as women and the disabled face unique challenges and need special efforts to make available ICTs accessible and meaningful. The Department of Telecommunication's Universal Service Obligation Fund has recently launched *Sanchar Shakti* a scheme aimed at ICTs for rural women's Self Help groups (SHGs) which includes projects to provide pertinent information to rural women in local language through their mobile phones.

Nine projects have been initiated which provide mobile value added services (information on education, health, financial literacy, government schemes, social issues, vocational training, input and output prices and other market related information) specifically tailored to the entrepreneurial activities being carried out by these women (bee keeping, livestock rearing, agriculture, textile work etc). The projects would cover about 20,000 rural women in nine states of India. The unique feature of this project is the multi-stakeholder approach which makes it a path breaking effort to ensure success of the project by focusing not only on technology but also content and capacity building. In these projects, the Telecom Service Provider (TSP) who has the overall responsibility for the project must ensure that it partners with an NGO which will help identify the SHGs' livelihood related content needs. (A Content Developer/Provider partner would develop content for the project.) The NGO will also assist the TSP to train the SHG members in use of mobile phone so as to enable them to access the content (delivered through SMS and Integrated Voice Response Systems (IVRS)), assimilate it through group discussions and training sessions and to utilize it to improve their awareness and independence levels. As the Proof of Concept stage of this programme is being



implemented it has become apparent that the local government bodies and district administrations would constitute another important stakeholder whose involvement will ensure delivery of relevant information and services to the rural SHGs without the content provider TSP having to search for it.

USOF's programme for the persons with disabilities (PwDs) in rural India similarly lays stress on multi-stakeholder participation and partnerships as an essential elements. This programme invites TSPs to apply for subsidy for Rural ICT centres equipped with Assistive Technologies (ATs) and relevant content and to provide rural PwDs with AT enabled mobile phones with/without access to specialized content. Here again, specific role and responsibilities have been assigned to each

stakeholder including related Ministries and Departments (Human Resources, Social Justice and Empowerment etc) so as to ensure programme success. Most of all it has been stressed by PwDs during the consultation process that there should be 'nothing about us without us' implying thereby the active involvement of the target beneficiaries and their representatives in programme evolution and implementation. This aspect should be quite obvious but is actually often overlooked in the design of Government schemes.

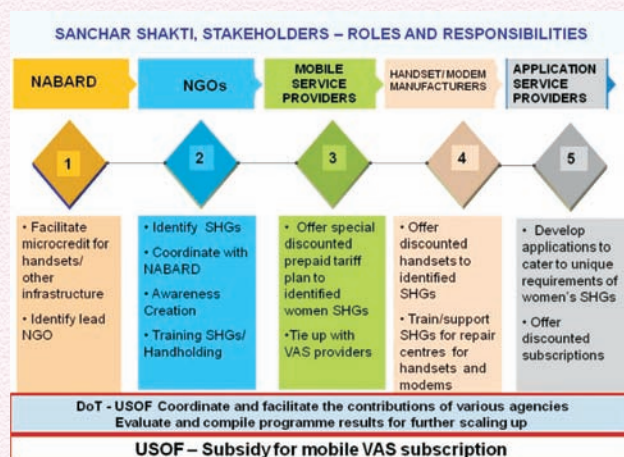
## Going Forward:

India has achieved tremendous increase in rural tele-density and the Government's focus is now squarely on rural broadband. Going ahead, apart from ubiquitous and affordable access to ICTs, greater emphasis must be placed on the availability and relevance of services and content in local language or multi-media/accessible format as per needs of target beneficiaries. Also, capacity building of various stakeholders to use ICTs is essential for the goal of ICT enabled rural development to be achieved. This requires a shift in focus away from purely technology related issues to the evolution of policies, strategies and schemes that ensure cross-sectoral and multi-stakeholder involvement and engagement including most of all the local communities and target beneficiaries themselves. The draft National ICT and Telecom Policies of the Indian Government and the recent Special Initiatives of the USOF are steps in the right direction.

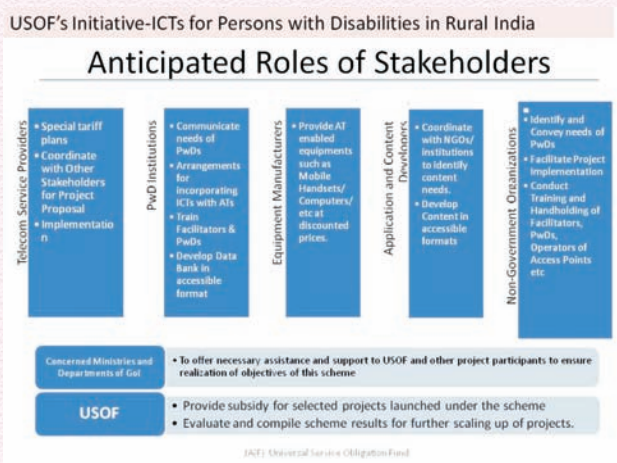
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### USOF's Sanchar Shakti Programme: Stakeholder Partners and Responsibilities



### USOF's Programme for UCTs for Rural PwDs: Stakeholder Partners and Responsibilities



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# ICT : A Catalytic Intervention for Empowering Rural India

Anupam Hazra

India still breathes in villages and this becomes obvious when the fact is taken into consideration that more than 700 million of its population reside in about 636 thousand villages of this country; but even after sixty years of independence, rural India is characterised by severe poverty, illiteracy, lack of health services, lack of employment opportunities and over all backwardness. Rural areas are often regarded as information-poor and information provision has always been a central component of rural development initiatives. Keeping in view these predominant features of rural India – Information and Communication Technology (ICT) has earned its reputation to be the key to information-flow for intensifying the development efforts in rural India and is being considered as an imperative strategy for achieving the goal of sustainable rural development. To empower the rural communities

with a sustainable approach, ICT has been one of the most effective instruments and the following table provides a better insight to this fact.

## ICT and Sustainable Rural Growth

- **Strengthening Rural Governance:** Introduction of ICTs in rural India is expected to bring in changes in the whole process of rural governance by improving transparency, accountability and administrative efficiency of rural institutions, promoting participation of the poor in decision-making processes and improving the efficiency and responsiveness of rural service delivery. It can facilitate speedy, transparent, accountable, efficient and effective interaction between rural citizens - this not only promotes better administration but also saves time





and transactions costs of government operations. At the same time, ICT improves interaction with and within civil society and encourages civil society participation in the rural governing process.

- **Encouraging social transformation:** Access to information is of fundamental importance to any development process. The recent development of ICT is greatly facilitating the flow of information and knowledge, beyond the border of social and economic status. In this context, ICTs are now widely recognized as a critical tool to tackle development issues in developing countries which ultimately lead to social transformation.
- **Ensuring A Better Quality of Life:** Application of ICT has the potential to improve living standards of people in remote and rural areas by providing important commercial, social and educational benefits. By expanding the use of government services – ICT strengthens the livelihood opportunities for rural India. ICT can ensure a better quality of life for the rural poor with an improved access to markets, health, and education – which pushes rural India towards economic development, job-creation and poverty-alleviation.
- **Strengthening the Information-base of rural communities:** ICT initiatives may be designed to provide support to local governance as well as to react to the queries generated by local needs of the rural communities. As rural poor are often unaware of their rights, entitlements and the availability of various government schemes and extension services, ICT can also improve their access to the information they need. It has the potential to ensure improved provision of short-term information required by the rural poor for effective livelihood strategies.
- **Intensifying Effort towards implementation of the rural development initiatives:** For ensuring effective implementation of the rural development programmes - ICT plays a crucial role through demand-

driven information and communication services. It has the potential to increase the benefits and reduce the opportunity costs of people's participation in the process of rural development. The potential of using ICT to promote rural development lies in addressing the information gaps and blockages by strengthening the decision-making capacity of the rural poor as well as the resource institutions of every rural community.

- **Enhancing people's participation in nation-building process:** The importance of communication in mobilizing people and seeking their willing participation in the development process of a country is well recognized. In India, this concern about reaching people, communicating with them and equipping them with new skills have been emphasized over and again in successive five year plans which provide the blue print of the country's planned development. In a developing country like India – ICT is regarded as one of the key elements in modernizing agriculture, in producing healthy, literate and trained workers for industry and for bringing about effective participation in nation building activity. All these together contribute immensely for making rural development a reality.

In India, around 70% of its total population lives in the rural areas, they all have the right to acquire information; but it is almost impossible to expect that people at grass root level, living in rural areas, and those who have only elementary education, to participate actively in the world of information and communication which is solely based on computers and the Internet. Rural information systems have traditionally focused on supplying information to the rural poor and supplying information about rural areas to policy makers, but it is now recognised that past systems have been largely ineffective in addressing the needs of the rural poor. The extension of agricultural information in particular is evolving beyond merely transmitting messages. It is becoming more open, more participatory and more



demand-driven, involving interactivity, negotiation and two-way information exchanges. There is a new emphasis on the acquisition of information and enabling the rural poor to request information specific to their particular livelihood needs. Communication specialists increasingly recognise the enormous potential of ICT to support and enhance these changes. On the other hand, social scientist observed that access to required information is rightly proportionate with the rate of any integrated development, like rural development and ICT has been one of the major components and driving force for rural development.

The power of knowledge for development can be greatly enhanced by ICTs if they are harnessed to improve access and breakdown barriers to knowledge because while education develops cognitive skills, information gives content to knowledge. In this sense the use of ICTs is integral to realising the potential of collective knowledge as the technologies themselves represent tools for achieving development and not merely the rewards of it. ICT can be considered as a fundamental element of any rural development activity as it addresses the design, delivery and utilisation of community information systems which eventually guarantee empowerment of rural communities through addressing the following issues and agendas by:

- familiarising communities with their existing use and sources of information as well as with the gaps that exist between existing and desired information resources
- defining community information requirements based on needs and priorities that have been expressed by the communities themselves
- alerting communities to the potential application of information to their problem-solving efforts and to their development aspirations
- igniting community aspirations and empowering communities with appropriate skills for fostering local development that is information-based
- expanding a community's social capital through enhanced access to communication facilities and information resources

- extending and intensifying existing development programmes that carry a significant potential for additional community benefit from enhanced information management capabilities that are based on ICT
- propelling communities towards the acquisition of the new knowledge they will require in order to exploit the power of ICT
- embedding community based ICT services within existing economic, governance and social structures

So, nowadays it has become imperative to use the print and broadcast media effectively in order not only to communicate messages of relevance and importance in the context of rural development but also to motivate and encourage the people of rural India to participate in the development process. Thus, in the current context of sustainable rural development, ICT has been recognized as a catalytic intervention in respect of transforming the lives and livelihoods of rural India.

The development of a society largely depends on the access to information and so far in rural India - ICT has greatly facilitated the flow of information and knowledge offering the socially-marginalised and unaware community unprecedented opportunities to attain their own entitlements. On the other hand, to break the vicious circle of rural poverty and to bridge the digital divide and empower the rural communities - ICT-intervention has proved its effectiveness in the sphere of capacity-building of rural communities for breaking these barriers. So, the government, technology industry and society should work together to deploy ICT to accelerate economic and social development in rural areas. Hence it may be concluded that an integrated framework for ICT interventions in rural areas will unquestionably pave the way towards sustainable rural growth.

*(The author is Assistant Professor in Department of Social Work at Assam (Central) University; Silchar – 788011; Assam, e-mail: anupam688@yahoo.co.in)*



# Rural Telephony for Rural Development

Dr. P. Kameswari

Information is critical to the social & economic activities that comprise the development process. Telecommunications, as a means of sharing information, is not simply a connection between people, but a link in the chain of the development process itself.” [Hudson 1995]

India achieved substantial socio-economic development since independence. Unfortunately this development has not been shared equitably by all. Some sections of the society have been left out and some areas, like rural, tribal and remote areas, could not keep pace with urban areas in development. If vast sections of society and areas are left out, it breeds unrest and is not conducive to a sustainable development of the country.

The Government has initiated several schemes to correct these anomalies: to restore equitability by reducing the rural-urban divide, to eradicate poverty and hunger from the rural landscape, to assure basic needs for the villagers, to improve

their gainful employment, to improve the socio-economic infrastructure in the rural areas and to safeguard and improve the fertility of land and other natural resources. Improvement of the socio-economic infrastructure in the rural areas



Fig-1: Rural Connectivity despite Remoteness





for ensuring integrated development includes attention to roads, irrigation, housing, water supply, electricity, sanitation, natural resources development and Information and Communication Technology (I.C.T.).

Indian telecom sector is more than 165 years old. The entire evolution of the telecom industry can be classified into three distinct phases.

- Phase I- Pre-Liberalization Era (1980-89)
- Phase II- Post Liberalization Era (1990-99)
- Phase III- Post 2000

Telecommunications in Phase-I was a heavily government-controlled and small-sized market. As a result of the Government policies in Phase-II, the Indian telecom market has become one of the most liberalized in the world with private participation in almost all of its segments. The New Telecom Policy, 1999 (NTP-99) has played a pivotal role in the growth of this industry.

### Benefits of Rural Telephony

Rural connectivity holds key to rural development through strategies, like:

- Distributing locally relevant information
- Targeting disadvantaged & marginalized groups
- Promoting local entrepreneurship
- Improving poor people's health
- Strengthening education
- Promoting trade and e-commerce
- Supporting good governance



*Fig-II: Timely information flow on Agricultural & Market Trends*

- Building capacity and capability
- Enriching culture
- Supporting agriculture
- Creating employment opportunities
- Reinforcing social mobilization

### Efforts for Improvement of Rural Telephony

Telecom connectivity constitutes an important part of the effort to upgrade the rural infrastructure. Under the Bharat Nirman Programme (BNP), Rural Teledensity (Table-I) of at least 40% by 2014, Broadband Coverage (Table-II) of all 2,50,000 village panchayats and setting up Common Service Centers at panchayat level by 2012 are proposed to be achieved.

**Table-I: Rural Teledensity for February 2011 under Bharat Nirman II**

S. No.	Circle/State	Percentage of Rural Teledensity (as on 31-03-2009)	Percentage of Rural Teledensity (as on 28-02-2011)
1	ANDAMAN & NICOBAR	16.57	31.75
2	ANDHRA PRADESH	15.22	33.19
3	ASSAM	9.36	23.36
4	BIHAR	9.17	26.41
5	CHHATTISGARH	1.81	2.77
6	GUJARAT	25.21	45.81
7	HARYANA	28.10	51.36
8	HIMACHAL PRADESH	40.47	68.68
9	JAMMU & KASHMIR	16.72	29.13
10	JHARKHAND	1.44	2.35
11	KARNATAKA	14.36	34.26
12	KERALA	35.43	52.65
13	MADHYA PRADESH	11.07	28.95
14	MAHARASHTRA (including Goa)	21.70	45.25
15	NORTH-EAST- I (comprising Meghalaya, Mizoram & Tripura)	14.67	50.34
16	NORTH-EAST- II (comprising Arunachal Pradesh, Manipur & Nagaland)	3.69	7.78
17	ORISSA	12.55	28.07



18	PUNJAB	33.11	55.45
19	RAJASTHAN	16.71	38.14
20	TAMIL NADU	25.62	47.53
21	UTTARAKHAND	6.04	9.46
22	UTTAR PRADESH - [East]	10.24	26.47
23	UTTAR PRADESH - [West]		
24	WEST BENGAL (including Sikkim)	13.50	35.22
25	KOLKATA	-	-
26	CHENNAI	-	-
27	DELHI	-	-
28	MUMBAI	-	-
	ALL INDIA	15.11	32.99

### Main Objectives of the National Telecom Policy, 1999 (NTP-99) include:

- Access to telecommunications (at the core of its vision and goal);
- Balance between the provision of universal service to all and the provision of high-level services capable of meeting the needs of the country's economy;
- Encourage development of telecom facilities in remote, hilly and tribal areas;
- A greater competitive environment in both urban and rural areas of Telecom Sector providing equal opportunities and level playing field for all players;

### Recent Policy Initiatives in Telecom Sector:

- All villages shall receive telecom facilities.
- National Long Distance Service (NLD): open for unrestricted entry.
- The International Long Distance Services (ILDS): open to competition.
- The basic services: open to competition.
- 4th cellular operator (over existing 3, 1 each in 4 metros & 13 circles) permitted.
- Policies allowing private participation in several new services: Global Mobile Personal Communication by Satellite (GMPCS), digital Public Mobile Radio Trunked Service (PMRTS) and Voice Mail/Audiotext/Unified Messaging.

- WLL for telephone connections in urban, semi-urban and rural areas.
- Disinvestment of 2 public sector telecom undertakings, VSNL and HTL.
- Steps to fulfill Universal Service Obligation (USO) funding and administration.
- A decision to permit Community Phone Service for each panchayat.
- Multiple Fixed Service Providers (FSPs) licensing guidelines announced.
- Internet Service Providers (ISPs) allowed to set up International Internet Gateways & both satellite & landing stations for submarine optical fiber cables.
- Two categories of infrastructure providers have been allowed to provide end-to-end bandwidth and dark fiber, right of way, towers and duct space.
- Guidelines by the Govt. to open up Internet Telephony (IP).

### Telecom Service Providers

#### 1. Public Sector:

- A.) Mahanagar Telephone Nigam Limited (M.T.N.L.) for cities of Bombay & Delhi B.) Bharat Sanchar Nigam Limited (B.S.N.L.) for the rest of India: BSNL has managed to honor its rural roll-out obligation by providing connectivity to 90% of the rural population (15 mn phones in 5.2 lakh villages) as it already has established networks in rural areas. It is also planning to provide connectivity to 66,000 additional villages, which is a part of the government's ambitious B.N.P.

#### 2. Private Operators:

- A) Bharti Airtel: It is the largest operator and would extend its coverage to more than 4,000 towns and adjoining villages. Its Global System of Mobile (GSM) communication cover is currently available in over 4,000 cities and towns and nearly one lakh villages.
- B) Reliance Communications: It currently provides services in 4,300 towns and claims to have connected all the adjoining villages in these towns. Under the USO fund, it is



supposed to connect 203 Short Distance Charging Areas (SDCAs), the process of which is going on. It claims to have around one million subscribers in semi-urban and rural areas.

- C) Tata Tele Services Limited (TTSL): It has covered over 40 Secondary Switching Areas (SSA) which translates to over 200 (SDCA), and covers a rural customer base of over 4.5 crore. It currently claims to have over 8% of the rural customer base. Provides Tata Indicom, Tata DoCoMo, Virgin (GSM) & Virgin (CDMA)
- D) Idea Cellular
- E) Vodafone Essar
- F) Aircel
- G) Uninor
- H) HFCL Infotel and others like Spice Telecom, Videocon Mobile Service, MTS India, Loop Mobile (BPL formerly), Ping Mobile, S Tel and Etisalat DB.

## Growth & Revenue

The recent growth of Indian telecom has become a benchmark for other infrastructure sectors in India. Government of India has initiated a flag ship programme, B.N.P., that has a component of Rural Telephony. It has the potential to transform rural India. The main aim is to bridge the rural-urban divide and vitalize the rural economy of India to participate in transforming its own future. The current extent and pattern of diffusion of telecommunication technology in India aims to perpetuate the top-down approach to development, keeping the disadvantaged out of the process.

India had the second largest network with 562.15 million telephone connections at the end of December 2009. It has grown very rapidly in the range of 40 per cent per annum, permitting the addition of nearly 300 million connections in the first 2 ½ years of the Eleventh Five Year Plan. It aims at bridging the digital divide between urban and rural areas and extending broadband connectivity as an integral part of the U.S.O. Policy executed through the USO Fund. Gross Budgetary Support (GBS) for the 11th Plan for Department

of Telecommunications (DoT) was fixed at Rs 1,752 crore with an Internal and Extra-Budgetary Resources (IEBR) component of Rs 89,582 crore. The growth of telephony in India is led primarily by the wireless segment with over 10–12 million connections, on average, being added every month.

Rural areas in the country have experienced rapid growth in telecom services and the tele-density increased from 5.9 per cent in March 2009 to 21.16 per cent in December 2009. The total number of rural communications at the end of December 2009 was 174.53 million, compared to 47 million at the start of the 11th Plan. In November 2004, an agreement was signed with BSNL to provide public telephones under the B.N.P. to 66,822 uncovered villages, the roll-out period initially prescribed as 20, 30, and 40 % respectively over a 3 years ending at November 2007. This period has since been extended. As on December 2009, 61,186 village public telephones (98 per cent) had been provided. However, BSNL has informed DoT that 4,520 villages could not be provided public telephones due to various reasons, like extremist threats, some villages de-populated, not traceable or submerged.

According to the TRAI, the total gross revenue of the Indian telecom services industry was Rs 1,524 bn in FY09 up from Rs 1,291 bn in FY08 registering a growth of 18.03% over FY08 and its subscriber base grew by 43% over FY08 to touch 429.70 mn subscribers in FY09.

Chart 1.1: Telecom Services Sector - Revenues (Rs bn)

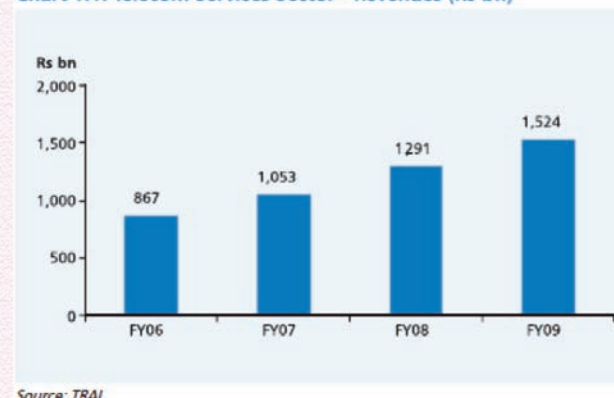


Chart-I: Telecom Sector Revenues from FY06 to FY09



The prominence of the telecom industry in India has increased due to its own growth and also that of the Information Technology (IT) and IT enabled Services (ITeS) sectors. Telecom has emerged as a key infrastructure because of its multiplier effect from benefits to trade in other industries. Its to Gross Domestic Produce (GDP) has been increasing gradually ( has more than doubled to 2.83% in FY07 from 1.0% in FY92).

### Reality Check

Ever since the government has opened the telecom market for private players, rural India has been on the private operators' radars. Most private telecom operators claim that they are providing rural connectivity at its best, but they have not done enough. Service providers, though claiming to provide rural telephony in adjoining villages, have installed towers on highways and only those villages that come in the periphery are connected. That's the definition of rural telephony for private operators. But, they cannot alone be blamed. After paying huge license fees, it does not make sense for all operators to invest in areas where return on investment (RoI) would be minimal. Private operators are paying around Rs 5,000 crore per year as Access Deficit Charges (ADC) to Bharat Sanchar Nigam Limited (B.S.N.L.) on per call basis. Also, 5% of their annual growth rate (AGR) goes in the USO Fund that the government had created in 2002 to subsidize calls in rural areas. Since BSNL is the only operator in rural areas, it is the biggest beneficiary

In the villages, it's the village public telephones (VPT) that address the basic requirements of the villagers. At least one VPT is required in every village. This was a mandatory requirement to be fulfilled by all the basic service operators as part of the license condition before Unified Licensing came into existence. BSNL is withdrawing from the USO fund kitty for extending support for operation and maintenance of VPTs, for replacement of Multi Access Rural Radio system (MARR) equipment, for providing Rural Community Phones (RCP) and for providing rural households direct exchange lines.

Also, since the Annual Revenue Per Unit (ARPU) of the rural masses is substantially lower

compared to the urban customers, any private telecom operator choosing to enter this segment has to be very cautious because of huge investments to cover rural terrestrial spread for small yield per customer-a major chunk of which would come from the voice business as data business is anyway in a nascent stage even in the urban areas.

Though the rural operations are currently unviable for any operator, subsidies, waiver of wireless charges, sharing of infrastructure and growing affluence of rural India could change this equation dramatically. Now, as the urban market is reaching saturation and ARPU therein is declining further, cellular service providers will have to move towards rural India. It's the government's turn to take the plunge and make rural telephony happen with the participation of private players.

### Technology for the Rural Sector

The Telecom Research Centre (TRC) has suggested various techno-economic products for the rural sector:

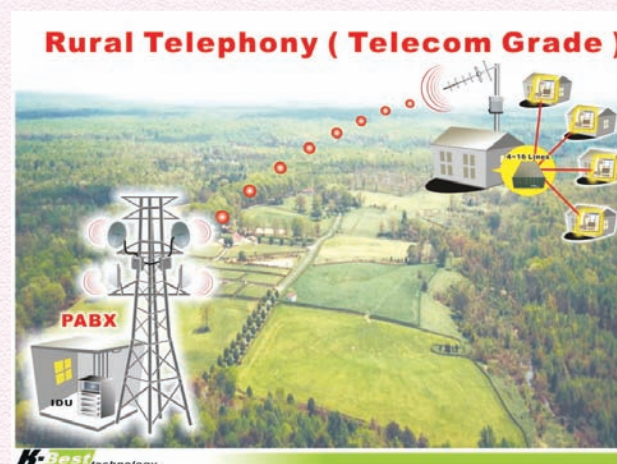


Fig-III: Technological Solutions for Rural Telephony

- 1) **Optical Fibers:** Can be of use to rural communications wherein one can connect an intermediate station to the main highway by branch routes by drop and insert systems.
- 2) **Rural Cordless Telephone (RCT):** A simple and inexpensive equipment that can be put to use in some areas where the villages are very much dispersed and the terrain is difficult. One cordless telephone in each village will suffice



and an appropriate number of trans-receivers should be provided at the base station (the telephone exchange).

- 3) **Radio Sharing System (RSS):** This is a radio frequency sharing system with two frequency pairs serving 15 V.Ts. The ratio of VT to Radio Channels is 7.5 (with built-in expandability to 16). All VTs connected to the RSS have individual line terminations in the telephone exchange.
- 4) **Line Sharing System (LSS):** A metallic pair passing through a number of villages can be used on "line sharing" basis, providing teleconnections to every village en route.

**Multi Access Radio Relay (MARR):** One of the main technologies for the rural sector because of the ease of maintenance, installation and future expansion possibilities. The Wireless in Local Loop (WLL) technology will assist in more rapid installation of the network and is ideal for both urban and rural areas.

Very Small Aperture Terminal (VSAT) satellite systems and Low Earth Orbiting Systems (LEOs) are also being touted as technological solutions for rural ICT, but no single technology will satisfy the diverse needs. It is most likely that a mix of these technologies will provide the ultimate solution for each area.

### Rural Connectivity Challenge

The targets put forward in the Policy Draft of the Government can not be achieved without the participation of the rural masses and the private operators. It is imperative for the government to come out with regulatory reforms that can make connectivity affordable in rural areas where majority of customers belong to the 'poor' community. It's clear that rural teledensity cannot be achieved without wireless roll out and the government needs to promote wireless technologies for rural areas at subsidized rates. The government should offer end terminal subsidy to telecom operators for rural customers. And once demand in the rural areas reaches its peak, it would be self sustaining and the subsidy could be withdrawn thereafter.

As the mobile phones have outnumbered the fixed-line connections in the country, the bias towards fixed line telephony should end and ADC and USO funds should be made open for all operators in a planned manner. And considering the fact that all fixed line phones are not wire line phones, subsidies should be extended to fixed wireless terminals (FWT). FWTs, handy & rolled out quickly, could trigger the growth of rural telephony.

For VPTs the government should take into account Telecom Regulatory Authority of India (TRAI) recommendation wherein it has asked for subsidy provisioning away from VPT and individual phones to the creation of infrastructure. Once this infrastructure is created, all new and existing infrastructures would be mandated to be shared on reasonable terms, with adequate incentives for sharing put in place. This will ensure that no single operator, as owner of a large network, can exploit his monopoly position.

**The Service Providers:** The urban mass market can not boost the cellular operators' bottom-line any longer. Various initiatives like free incoming calls, massive cuts in long distance rates, declining voice revenues and value-added services have been tried to boost the flagging ARPU from this saturated mass market. The rural market is a good business proposition for cellular operators and handset manufacturers as mobile phone penetration is still very low in this area. Also, the entry cost of going mobile has dropped considerably. The added charm is their lowest churn rate. Their only cause of concern are the massive investment required and RoI.

**USO Fund Utilization:** USO fund shall hereafter be credited into a separate fund instead of a consolidated Government fund, as was done earlier. It would now be used to induct new technologies to speed up rural connectivity through various info-communication services. Subsidy out of the fund has been paid out on the basis of competitive bids from telecom service providers. The cost of infrastructure and the cost of last mile access have to be considered by the licensed operators before bidding. BSNL with its existing rural infrastructure built out of public funds has an advantage over the others. Sharing of passive infrastructure will



reduce the cost of network for private operators. The incumbent operators would hereafter be asked to share the infrastructure. To meet the target for rural teledensity it is inevitable that the government also offer terminal subsidy for rural customers, who currently can't afford to buy high priced handsets and terminals. All operators should be persuaded to bid for difficult and non-remunerative rural areas too, as otherwise there will be a tendency to operate only in remunerative areas. To fulfill the real objectives of the USO it should be enforced on the operators to make plans for covering all the states, provide services to any person desiring it throughout the country and not to choose subscribers only as per present plans. The USO fund plans to support the setting up of High-speed Public Telecom and Information Centers (HPTICs) in selected areas on a pilot project basis. These centers will have a 256 kbps broadband connectivity and will provide certain e-governance services to people in rural areas. Also, the USO fund would support setting-up of shared infrastructure for extending cellular services to rural areas. The support from USO funds needs to be continued for individual connections as well as operation and maintenance of wired line networks, due to the inherent high cost for operation and maintenance. The merger of USO fund with ADC also makes sense as both are essentially serving the same objective of providing affordable services in rural areas. As the gross revenues of the telecom sector have been rising at a Consolidated Annual Growth Rate (CAGR) of 30%, the percentage share contributed by the private sector service providers to the USO fund should be lowered in a proportionate manner. As far as infrastructure deployment is concerned, the current operating cost structure for serving rural customers is exorbitantly high, given the Wireless Planning and Coordination (WPC) - spectrum and backhaul charges. The Government should offer a moratorium to telecom players by virtue of a waiver of all these charges for some period; thereafter, these could be levied as in urban areas. The biggest handicap in spread of rural telephony is the non-availability of power in rural pockets. The passive infrastructure should include power back up (rectifiers and battery) and the Diesel Power Generation sets. The need of the hour is extensive telecom infrastructure creation in these areas to tap the vast rural market potential. It would be better if all operators join hands and either create

and share, or the Government should persuade BSNL to share its infrastructure. The government should allow every operator to bid for the rural territories for passive infrastructure. Infrastructure sharing should be made mandatory for any operator who is the first to enter this territory. The backbone infrastructure sharing should be made mandatory for all operators to backhaul traffic and ensure that BSNL provides the SDCA level interconnection to any operator who plans to serve villagers in that area. Rural mobile infrastructure should be funded by the USO. Those who access the fund, as a condition, should then share their infrastructure with anyone who wants it. The Government should offer subsidy for end terminals to telecom operators for a certain period of time, till demand becomes self-sustaining.

## Conclusion

The major constraints for the low rural teledensity have been lack of investible resources, nonavailability of appropriate technology combined with difficult geographical terrain and continental size of the country. In the post-liberalization period various sectors were opened up for private competition. The public sector operators have also been corporatized in October, 2000. While these steps would encourage private investment, the social obligation of providing telecom facilities in the rural and un-economic areas requires certain incentives, like tax concessions, waiver of license fee & interconnection charges and financial support to attract private operators to the rural areas. The challenges posed by India's diversity of regions, incomes and demographic pattern are great. Optimum solutions have to be evolved with appropriate policy initiatives for funding, technologies, organizational structure and regulation. Achievement of India's rural telephony objectives needs to be approached in a holistic manner wherein not only due policy and regulatory glitches need to be ironed out, but also various procedural concerns also need to be addressed. Time has come to kick-start the initiatives as recommended by TRAI, with consensus among all operators and active participation by the rural folk.

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## Harnessing Potential of Community Radio for Rural Advancement

Ms. Arpita Sharma

**T**he concept of community radio [CR] that emerged in 1947 in Bolivia and Colombia, which successfully experimented with their Miner's Radio and Radio Sutatenza respectively, signifies that CR has the potential to catalyze the process of socio-economic development of rural population in India through [i] creating awareness among beneficiaries about Government policy and programs, [ii] facilitating them to understand the procedure to secure benefits of these programs and easy access to public services and [iii] seeking redressal of their grievances .

**Uniqueness of Community Radio:** Community Radio [CR] means radio broadcasting with the objective of serving the cause of the community in the service area by involving members of the community in the broadcast of their programs. It affords a unique advantage of receiving transmission through low cost battery operated portable receiving sets. It is confined to a small geographical area. It

is a radio station operated in the community, for the community, about the community and by the community. It can be managed by a group of people, such as farmers, fisher folk, artisans, women, youth etc. It serves a community, which uses common resources for livelihood, has common development issues and concerns, which are relatively localized, nevertheless connected to national and regional development goals.

What distinguishes CR from other media is its high level of people's participation, both in management and program production. Individual community members and local institutions provide support for its operation. CR is truly a people's Radio that perceives listeners not as receivers and consumers, but as active participants and creative producers of content. It covers all development and rights based issues and updates listeners on the latest policy and programs. It receives legislative, administrative, and financial support.





Researchers confirm that CR is a participatory medium through which information is communicated to rural communities. For its success, program must be motivating, interactive and systematically designed to meet the development needs of the participants. In different parts of the world CR is also referred to as rural radio, cooperative radio, participatory radio, alternative radio, popular radio, educational radio, community FM, association radio and bush radio. The basic characteristic of CR is that community owns it to serve the needs of the community. Most significantly, it is participatory in nature as people actively take part in formulating the station's policy, strategy and program content. CR presents opportunities to participants to share their personal experiences in relation to development policy and programs and attempts to facilitate efficient implementation of programs relating to health, nutrition, education, sanitation, women empowerment, agriculture etc.

According to UNESCO [2002] CR is a type of radio service that caters to the interest of certain area, broadcasting content that is popular to a local audience but which may often be overlooked by commercial or mass-media broadcasters. Lewis [1995] defined CR as a medium that gives voice to the voiceless that serves as the mouthpiece of the marginalized and is at the heart of communication and democratic processes within societies. It aims at improving socio-economic conditions and quality of life of the community through well conceived and designed programs for targeted community participants.

**Efforts in Other Countries:** Systematic efforts to establish CR in Asia were initiated by international agencies, such as UNESCO, which was at the center of the communication and development debate.

Servaes [1995] observed that these initiatives were mostly associated with externally aided development projects that were influenced by the discussions of participatory communication for sustainable development and understanding of communication as a two-way process rather than just communicating 'to' the listener.

Mahaweli CR was the first Asian community radio established at Girandumkotte in Sri Lanka in 1986 with objectives to cater to the needs of the newly-settled families, help them exchange their settlement experiences, learn new skills from each other, give timely information on day-to-day activities, and facilitate to catalyze development in the new communities, enable participants in the decisions-making process to solve important issues such as water distribution, marketing, health, education etc. Thambuli CR, the first truly community-owned and operated Asian community radio stations were established in Philippines with the technical and financial support from the UNESCO. Sagarmatha CR, the first independent community broadcasting station established in Nepal, which represented South Asia's first effort at "independent community radio." It was established with the financial and technical assistance provided under UNESCO's International Program for the Development of Communication with its innovative combination of programs on education, informative and entertainment. Banjade [2007] in his research to explore the nature and extent of the local residents' participation in the communication process in respect of CR in Palpa district of Western Nepal serving 800,000 potential listeners since 2000 reported that the listeners used CR for information and entertainment. Myers [2008] observed that CR is still the dominant mass medium in Africa with the widest geographical reach and the highest audiences





compared with TV, newspapers, and ICT. The author further states that CR seems to have proven itself as a development tool, particularly with the rise of community and local radios, which have facilitated a far more participatory and horizontal type of communication. CR can also help bridge the digital divide by providing a powerful tool for information dissemination and access, especially for hard-to-reach rural audiences. Roncagliolo [1995] based on his intensive research concluded that in Latin American countries, where CR came into being as an alternative to predominantly commercial oriented radio broadcast networks, the thrust of CR was to use as a medium to support education of the marginalized population. Bouhafa [1998] reported that in South Africa, CR system became a social movement after the demise of apartheid regime, which was followed by democratization, decentralization and structural adjustment elsewhere in the continent. For India it is rather a recent experiment and development that started in 1990's

**CR Initiatives in India:** Bhatnagar [2008] reported that Government of India announced its CR policy in December 2002, which was liberalized in 2006. CR gives the people a medium to express themselves, a platform to air their concerns to be heard, considered and acted upon, thus increasing their dignity and self-confidence. People generally come forward to gain skills, to be part of the community group. To share their interest in music, anchoring or to increase their social circle. A carefully planned orientation process is very important to map the potential of individuals and to filter out committed volunteers to form core team. Shively [2009] reported that for a highly populated and predominantly rural population like India the education and entertainment of the masses is essential. This can be achieved by utilizing the concept of CR more effectively. CR tells the story of the people and helps communities striving to speak out and be heard. CR has provided means of empowerment to the community. It has given children the chance to speak confidently. This objective to some an extent has been achieved in India where at following few selected community centers CRs have been established.

**Gyan Vani CR:** The Human Resources Development Ministry and the Indira Gandhi National Open University [IGNOU] with the help of Prasar Bharati launched Gyan Vani CR in 2001

operating initially through Allahabad, Bangalore, and Coimbatore FM stations of India on test transmission mode, with the network expected to expand to a total of 40 stations. It operates as 'Media Cooperative' with the day-to-day programs being contributed by various educational institutions, NGOs, Government and semi-Government organizations, UN agencies, Ministries [Agriculture, Environment, Health, Women and Child Welfare, Science & Technology], besides National level Institutions [NCERT, NOIS and State Open Universities]. It has target audience of students of open and conventional universities within a radius of 60 km covering entire city. Programs relayed during 0600 AM to 1000AM focus to enhance teaching-learning process in Hindi or English; and cover a wide range of subjects, namely creating awareness about Panchayati Raj Institutions and their functionaries; Women Empowerment; Consumer Rights; Human Rights, the Rights of the Child; Health Education; Science Education; Extension Education; Vocational Education; Teacher Education; Non-formal Education; Adult Education; Education for the handicapped; Education for the down trodden; education for the tribal community. The Gyan Darshan Educational TV Channel of IGNOU, New Delhi on its completion of a decade started catering to, through four channels, different cross section of audiences in Agra, Chandigarh, Jalandhar, Srinagar, Trichy and Thiruvananthapuram.

**Our Voice (Namma Dhwani), India** was inaugurated in **September** 2001 in Budikote village of Kolar district in Karnataka, in partnership among VOICES, MYRADA, UNESCO, and Groups of poor farmers in the Boodkote region in Kolar district. Its target audience comprises Farmers, Rural entrepreneurs, Youth and Children and programs focus development issues related to agriculture, health, education, economic development, children, youth, environment, entrepreneurship and cultural affairs of immediate concern.

**KONGU Engineering College** established CR on its campus on March 31, 2003; It has its [i] Vision: Help to create a community with equal access to Knowledge, Information, Participation and Rights. [ii] Mission: Utilize community radio to secure freedom of expression, general welfare and social uplift and [iii] Goal: Empower even the poor, illiterate, voiceless and unreached members of the community to claim and acquire legitimate freedom and entitlement



to be accomplished through designing appropriate programs and broadcasting them during 07.30 to 10.00 AM; 12.00 to 02.30 PM; 03.30 to 07.30 PM for nine hours a day in the form of Lectures, Seminars, Conferences, Skit and topics on Community Development.

**Anna University** in Chennai, Tamil Nadu established CR in 2004 covering students and dense urban population of Kannigapuram, Kotturpuram, Balajinagar, Saidapet, Little Mount, Kobalitittam, Chitra Nagar, Ventakapuram, all within a 10 km radius. Target audience comprised Students, day laborers and housewives [70 % female audience]. Women listen and also participate in the programs for 11 hours [7 am to 6 pm]. Programs focus on Women empowerment; Entrepreneurship management; Vazhkaiyin Vannangal (life style program); English Language Program; Samudaya Nerkaanal (Face-to-Face with the Community Live Phone-in Interactive Talk Show); Music Program; Science awareness; Consumer awareness; Careers guidance; Management aspects; Natchathira Nerkaanal (Interviews with lesser known stars from the community); Community matter; Programs for Visually Challenged; Arokiya Vazhvu (Health is wealth); The CR arranges invite experts, celebrities and academia to participate in events or participate in phone-in programs. Students from the Department of Media science volunteered to anchor *Samudhaya Nerkaanal*, a live phone-in community program;

**Micavaani CR** was launched on November 14, 2005 to serve rural communities within a radius of five km and broadcasting programs detailing various Government schemes for the rural population, job opportunities, best agricultural practices, alternative sources of employment through rural industries, business and service sectors, health and hygiene, the status of women, children education and programs for village children;

**Holy Cross CR** was established in the campus of Holy Cross College, Tiruchirappalli, Tamil Nadu in December 2006. Its target audience comprises students, home makers, youth and farmers and broadcast between 6.00 to 10.00 AM and 3.00 to 8.00 PM programs with focus on creating awareness about critical areas of agriculture, social welfare, education, health and environment; preserving and promoting the traditional wisdom, knowledge and skills, thereby facilitating promotion of arts, crafts,

culture and traditions of the rural population, besides enhancing participation of the local rural community in development; building capacity through education; providing opportunities to upgrade skills in the field of their interest. Its preferred formats integrate wide range of issues creatively in different formats like skit, magazine, folk songs, quiz, talk shows, discussions, phone in, interviews. Its qualified staff and volunteers helped the station to increase their broadcast hours from two hours to a nine hours a day.

**Delhi University CR** was launched at its School of Open Learning located in the North Campus of the varsity on October 2, 2007 and commenced broadcasting between 8.00 and 10.00 AM in the morning and 5.00 and 7.00 PM within a radius of 10 km a wide range of programs with focus on creating awareness on Health, Hygiene; Anti smoking; Gender sensitization; Environment and other issues related to local communities; Phone-in Programs with the experts on Health, Education, stress management, Environment, interpersonal relationship between parent and children, examination stress etc Spreading awareness among the students about various careers, career counseling and broadcasting other socially relevant programs. Broadcasting the programs of campus and colleges such as seminars, workshops, lectures, discussions, debates, cultural functions etc. for the student communities. Conducting (including academic counseling) interactive programs for the students enrolled at School of Open Learning who could not get the opportunities for face-to-face teaching learning process. Broadcasting different community based programs with the help of community members residing in the adopted slum areas and the community residing around Delhi University

**Sivanthi CR** was established in the campus of Aditanar College of Arts and Science, Tiruchendur on 14th October 2007 covering entire city in a radius of 15 km. Its target audiences comprise students, women and men and broadcast between 6.00 AM and 10.00 PM programs aimed at creating awareness among local community about health care, education, female literacy, self -employment and environment preservation.

**Sangham CR** was established on October 15, 2008 by the initiatives of the Deccan Development Society Community Media Trust in Village Machnoor of Jharasangam Mandal in Medak District, Andhra



Pradesh. Target audience is rural women from the marginalized groups in particular and rural people in general. Programs include Seed sovereignty and women; Food sovereignty and women; Women and biodiversity; Women and land; Ownership; Women and ecological agriculture; Ecological enterprises for rural women; Healthcare and plant medicines; Herbal care for animal diseases; Making children's education relevant to rural milieu; violence against women; legal education for women. Programs also embody local issues in the light of global vision and are designed at the community level; Women Speak to Women with complete focus on women's issues. Programs are being broadcast daily between 08 pm and 09.30 pm and has a plan to increase duration of broadcast upto four hours daily.

**Uttarakhand CR [Kumaon Vani]** was launched by The Energy Resource Institute on March 11, 2010 in Mukhteswar with a radius of 10 km and covering 20 villages broadcasts programs on Environment, Agriculture, culture, weather, education.

**Radio Active** was established in the campus of Mahaveer Jain college, Bangalore covering entire city. It transmits daily three to four hours programs focused on Environment, Women Empowerment, Children in Need, Animal Welfare, Disabled persons, Human Rights Persons Welfare, besides committed to educate the children of migrant construction workers, and focus on development and welfare of the laborers in general.

**People's Action for Rural Development [Vaanoli]** CR covers 60 villages with in a radius of 12 to 15 Km. It broadcasts from 03.00 PM to 07.00 PM programs relating to Education, Health, Environment and Legal awareness, Sustainable Agricultural Techniques, Information on Government Schemes and creating legal awareness among its target audience consisting of farmers, men, women, children

**'Jago Mumbai'** CR established in Andheri [Maharashtra] with a radius of 10 km covers Andheri, Juhu, Mahim, Borivli, Bandra, Versova and broadcasts program for its audience of two million in the area;

**Radio Namaskar** was launched with an objective to promote communicable link among the villages to develop an enabling environment for an "all time connection" among them that will ensure flow of information, benefits & access to all amenities and benefits for the targeted people and develop a group

of trained and organized youths including women from target group who will sustain the momentum of project. Its development objective is to ensure access to information, amenities and benefit packages provided by union and State Governments that are quite affordable for the people who are unable to avail that from private source. Besides, facilitate the beneficiaries to share & communicate their problems in a democratic manner with grievances redressal identified by the Government departments. Programs developed, broadly focusing on local governance, food security, women in front and youth for development, are broadcast relating to Local Self Governance; Human Rights; Right to Food, Information and Education; Disaster Management; Gender Equity; Societal Peace; Survival of indigenous trade & culture for its target audience comprising students, fishermen, women and farmers.

The AJK Mass Communication Research Center of Jamia Millia Islamia University, Delhi launched Jamia CR in 2005. An NGO launched TARAGram CR on October 23, 2008 in Orchha of Bundelkhand, Madhya Pradesh. RAGHAV CR was launched in 2006 in Mansoorpur, Vaishali District of Bihar to broadcast Programs on Entertainment and Health.

Studies reveal that CRs established in college and university campuses in cities have indeed achieved their objectives to some an extent. It is high time to create significant awareness among rural population in respect of socio-economic development programs being implemented by the Government and public sector banks, namely National Rural Employment Guarantee Scheme, Swarnajayanti Gram Rozgar Yojana, National Rural Health Mission, Integrated Child and Women Development Scheme, National Livelihood Mission, Bharat Navnirman, Self-Help-Group Bank Linkage Program, Pension and Insurance schemes, proposed food security etc. It is necessary to evaluate the effectiveness of the existing operating CRs to deliver the mandated results and modify the policy to establish new CR and consider establishing at least one CR in each block or tehsil through out the country during the ensuing 12<sup>th</sup> Five Year Plan [2012-17].

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## Community Radio Mattoli ; Voice of Voiceless

Sudha S. Namboothiry

**F**or the past two and a half years most of the people of backward Wayanad in Kerala wake to the echo of their lone Community Radio-Radio Mattoli. If you are in Wayanad you can tune in to Radio Mattoli at 90.4 MHz frequency from 6 am to 10 pm. Located at Dwaraka, Mananthavady in Wayanad District, this Community Radio is administered by Wayanad Social Service Society, an NGO with 36 years of experience in development interventions in Wayanad District.

Radio Mattoli which was launched in 2009 has a saga of success and need not say Fr. Thomas Joseph Therakam, Director of the Radio has reasons to be happy. Latest survey show that number of daily listeners come to 24.05% of the population. In demographic figures of the district (as per 2011 census) it comes to 2,00,056 people.

But if weekly and occasional listeners of the Radio Mattoli are included, the figures will be 74.05% (6,10,539). Another interesting factor is 56% depends on Radio Set for listening to community radio program, whereas 40% use their mobile phones to tune into Mattoli.

According to Fr. Therakam, Community Radio is the perfect tool to provide comprehensive knowledge, technology, awareness, and empowerment etc. to a targeted audience. Radio always had upper hand over other media like newspaper and television since a literate can only read newspaper or pamphlets and viewing television means dedicating time for that and there is a need for electricity in the area too. But anyone can listen to a radio and do other work simultaneously. This is to be noted that about 30,000 families in Wayanad do not have electricity connection.





Radio Mattoli is the first Community Radio service in Kerala and the only electronic media in the State to broadcast programme in tribal dialects daily. The programme which is all comprising of education, information health etc. is daily aired at 2.30 PM and at 8.05 PM. Radio Mattoli has also launched "Namma Sasthra" – A Special Science Popularization Program supported by Kerala State Council for Science, Technology and Environment. This is broadcasted in local dialect also. Apart from this there are the regular features like reflections on Gandhian thoughts, Interaction between officials and public, programmes for women prepared by women, introducing various books and local libraries, health programmes, programmes on job oriented training, new courses etc. Well the Radio is living upto its mission of providing an avenue for the free flow of beneficial information aimed at bringing socio economic changes in the society. As the programmes aired are mostly presented by local people, listeners have an immediate emotional attachment with the presenter and the message is effectively received. The target groups consist of marginal farmers, indigenous people, dalits, agricultural labourers women and children. Hence

such an emotional bonding is much required says Fr. Therakam. These people need to have the sense of belonging in order to trust.

Radio Mattoli has even formed Mattoli clubs in schools. Out of the 288 schools in the district 91 schools have Mattoli clubs. Members of these clubs get a chance to broadcast their programmes over Mattoli. This inculcates leadership quality, creativity, presentation capability and awareness in children. They get a wonderful exposure to the world of electronic media.

Started with an initial investment of Rs. 58 lakh, which was used for infrastructure and one year functioning of Radio Mattoli, today it has the support of NABARD, Coffee Board, Kerala State Agricultural Department and the limited commercial spots permitted by the Ministry of Information & Broadcasting. Need not say Radio Mattoli is here to give voice to the voiceless and help them express themselves socially, economically, culturally and spiritually in order to make them masters of their own destinies.

*(The author is Media & Communication Officer, PIB, Cochin)*

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# Development Communication: Intensifying Rural Development in India

Subhashree Sanyal

*Development Communication is an important discovery for shaping rural change. This method can be of assistance in solving and designing projects and programmes that take into account the opinion and capacities of the beneficiaries. Many projects aiming at technological upgradation and implementation of ICT in rural areas have failed in the past because of lack of willingness among rural people to absorb such schemes.*

Development communication is an important tool which has accelerated rural development across the globe. These techniques have provided potentials for economic growth, effective governance and social empowerment. For the first time, voices of rural population have been echoed through this medium and a positive trend towards social change has been extensively noticed ever since this medium has been implemented. Putting forward the ideas of individuals, groups and community is the key idea behind development communication. This unique tool is based on the idea that successful rural development requires conscious and active participation of the beneficiaries at every stage of the development process and rural change

cannot take place without changes in attitudes and behaviour among the people concerned. It is aimed to collect and exchange information among all people who are major stakeholders in planning development projects, with the aim of reaching a consensus on the development problems being faced and the options for their solution. It aims to mobilize people for development action and to assist in solving problems and misunderstandings that may and apply communication technology to training and extension programmes, particularly at the grassroots level, in order to improve their quality and impact of policies and programmes. Development communication is an important interface for implementing Information and Communication Technology (ICT) initiatives in rural India.





### Development Communication and Rural Development: Exploring the Inter-linkages

Method of development Communication	Description of the technique of development communication	Impact on Rural Development
<b>Community Radio</b>	<p>It is collectively owned by the community, trust or foundation. It is a medium which provides voice to the rural population specially those out casted by social and political marginalization.</p> <p>Community Radio is a broadcasting system established by the efforts of a specific community, operated by the community for the purpose of the community's welfare.</p>	<p>Rural development aims at inclusive development. Sectoral focus and making the voice of the rural communities reach the government especially the socially excluded helps in formulation of plans and schemes based on feedback and problems highlighted.</p> <p>Community radio is an important tool as it helps initiate better governance and collective participation in rural India.</p>
<b>Participatory Video</b>	<p>Participatory Video (PV) is a set of technique to involve a group or community in shaping and creating their own films or documentaries. It allows participants to use video equipment to be creative and tell their own stories about different issues.</p>	<p>Success of rural development lies in its participatory effort. Participatory video is a powerful tool that can help build strong community voice on multi variate issues and can be a ready guide to different policy makers.</p>
<b>Documentaries</b>	<p>Documentaries are short films bringing out a certain theme or issue of social importance. This is usually used for showcasing a certain issue, problem or means to a solution. It is usually portrayed with the help of Civil Society Initiative and the state.</p> <p>It is spread through mass community viewing with the effort of NGOs, Community Based organizations.</p>	<p>Issues which are barriers to rural development can be highlighted. People can be enlightened about their rights and choices.</p> <p>Often documentaries can be huge source of social action and movements for bringing about development in the region. For example; a number of documentaries on development induced displacement have been a source of social revolution in Singur, West Bengal.</p>
<b>Folk Media</b>	<p>Folk media in India is used as supplement to the mass media rather than as the centre of communication efforts to reach 80% of India's total population who live in the villages.</p> <p>Folk Media involves a total art with fusion elements from music, dance, pantomime, versification, epic ballad recitation, religion and festival peasantry. It includes ceremonials, rituals, belief and social system. It projects social life, secular themes and universal values.</p>	<p>Traditional media has helped removed superstition, caste and community based barriers in different remote parts of the country.</p> <p>Through folklores, people can be attracted towards themes aimed at holistic development.</p>



<b>Grassroots Comics</b>	<p>Grassroots Comics is a representation of visual community media. It is a powerful method of communication through which grassroots voice can be reflected.</p> <p>Issues like governance, water, right to education have been successfully dealt with using this tool as a medium. Mass mobilization against female foeticide has been initiated in rural Rajasthan with the help of comics demonstration across villages.</p>	<p>The idea of grassroots comics is that anyone can create image and story on issues of social importance and demonstrate it across the village for wider action and social movement. Anyone can draw comics for voicing their message.</p> <p>It is a successful community tool for awareness generation in rural India. In states like UP, Andhra Pradesh, this method is now widely used.</p>
<b>Community Newspaper</b>	<p>Community newspaper is a powerful medium of development communication as it will reflect community voice. It is usually created by collective community effort where issues, innovations, development, problems, success stories can be shared. It is usually shared by nearby community or village.</p>	<p>Rural development efforts can be highlighted through this medium. It can be medium where new methods of agricultural development, health care, women empowerment and many more and spread in the community.</p>
<b>Street Theatre</b>	<p>Street theatre is a vocal mode of communication. It is a lively representation of action through dialogues of act where messages to the community are reached. Usually the information is staged through a storyline where dialogues and dance forms are used to represent issues.</p>	<p>Development efforts like removal of superstitious practices, benefits of sending children to school, prevention of child marriage and dowry, caste based discriminations can be initiated.</p>
<b>Puppetry</b>	<p>Puppet shows can also be used as a medium of communication. In different parts of rural India puppetry is famous and often community participation is on a huge scale.</p> <p>Puppets are also used to portray culture, events and situations bringing out social and moral messages for the rural communities.</p>	<p>Places where theatre cannot be reached, indigenous efforts through puppet shows can bring about rural change and new alternatives for rural growth. Acceptability of puppetry is higher in rural area hence messages for rural change can be spread better.</p>
<b>Bioscope</b>	<p>Bioscope is a visual development communication tool. It carries the idea of travelling cinema. In India Bioscope is a very old method of visual communication. Bioscope brings short films based on new initiatives towards rural change and welfare</p>	<p>Visual communication has the greatest impact so far change, learning, adaption and development is concerned. Bioscope can add to knowledge and capacity building in rural areas.</p>
<b>Photography</b>	<p>Community based photography can be a powerful tool for development. Demonstration in the community through photograph is a powerful tool encouraging change, voice and peoples opinion</p>	<p>Photographs are used where mediums of theatre, puppetry or bioscope is not reachable. They can represent modern efforts and new ideas for rural development thus adding to rural education in remote areas of the country.</p>



Development Communication is an important discovery for shaping rural change. This method can be of assistance in solving and designing projects and programmes that take into account the opinion and capacities of the beneficiaries. Many projects aiming at technological upgradation and implementation of ICT in rural areas have failed in the past because of lack of willingness among rural people to absorb such schemes. New irrigation programmes, initiatives for yielding new varieties of crops, use of advanced machinery in the fields have failed because of this gap in acceptance among rural people. Development communication has been a welcome method which has aided bringing about attitudinal and behavioral change among people in rural India through its simple pro-people approach and tools.

Development Communication intensifies the rural development process by mobilizing rural people for development action and ensuring an information flow among all concerned with a development initiative. If rural development projects are planned with the beneficiaries themselves, there is community ownership of the programme, for this reason there is active mobilization of different stakeholders which helps implementation effective and beneficial. Methods like documentaries, community radio, comics, and

community newspapers are useful in providing audio-visual knowledge across communities and success story of one village reaches another resulting in change. Communication method also keeps the dialogue open and often voices of beneficiaries facilitate redesigning and monitoring of government initiatives effectively. Success stories can be shared and best practices can be adopted with this powerful tool. Audio-visual media assists in easy communication and comprehension among rural population. It often facilitates live demonstration of issues for

example cropping, spraying of fertilizers and use of mechanized tools easy and uniform for farmers and other beneficiaries.

ICT and other advanced technical facilities may be the new answer to technological solutions and advancement in rural India but little can be done if there is gap in

implementing and absorbing this technology. Development communication is an effective tool which can bridge this acceptability gap and encourage accomplishment of new initiatives in rural development effectively.

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**Development Communication intensifies the rural development process by mobilizing rural people for development action and ensuring an information flow among all concerned with a development initiative.**

**Many projects aiming at technological upgradation and implementation of ICT in rural areas have failed in the past because of lack of willingness among rural people to absorb such schemes.**



# ICT for Rural Development : A View

A. Abdul Raheem

Information and Communication technologies (ICT) have a potential for economic growth and social empowerment. Direct or indirect application of ICT, in rural development sector has also been referred to as “Rural Informatics”. Rural economies can be benefited from ICT by focusing on social production, social consumption and social services in the rural areas. Sustained development using rural informatics is possible, only if ICT interventions are able to respond to the local needs and re-adjust as per the prevailing knowledge (Traditional Knowledge Systems- TKS) of the rural areas. To capture the needs and local knowledge prevalent at the grassroots, these interventions should preferably have an effective bi-directional link. The inculcation of a Citizen-to-Government (C2G) and Citizen-to-Citizen (C2C) interface would provide this link that would also lead to community participation in design and

implementation of ICT interventions. This in return could promise better economic opportunities as well as social inclusion of rural people in the processes of governance. Such attributes in the social set up are essential prerequisites for good governance and rural development.

## Rural Development & Governance

In the rural context, development involves use of physical, financial and human resources for economic growth and social development of the rural economies. The term rural development also represents improvement in quality of life of rural people in villages. Rural Development is a strategy to enable a specific group of people, poor rural women and men, to gain for themselves and their children more of what they want and need and rural Development as a process leading to sustainable improvement in the quality of life of rural people,





especially the poor. The fact of the matter is that three quarters of the world's poor, about 900 million people are in rural areas, and the Millennium poverty target set by Millenium Development Goals (MDG), cannot be met unless the world addresses rural poverty. "Sustainable Rural Development can make a powerful contribution to four critical goals of Poverty Reduction, Wider shared growth, Household, national, and global food security and Sustainable natural resource management". Hence worldwide there is a growing emphasis on development of rural economy of the countries. Any improvement, in the social or economic status of rural areas would not just directly benefit rural poor but would also bring down the migration-pressures on cities and contribute by positive ripple effect in global stride towards development.

The process of development in a country is to be aided by its governance. The goal of governance "should be to develop capacities that are needed to realise development that gives priority to the poor, ... and creates needed opportunities for employment and other livelihoods". Increased number of poor, hungry or marginalised people in a country represents decrease in its quality of governance. To promote development, various studies have proposed governance in the contextual realities of each country, including veritable participation of citizens in the governmental decision-making process. Several institutions and experts accept Governance as a reflexive process, wherein policies, institutions, outcomes and analysis interact, to maximise the process of participatory development.

### ICT & Governance

ICT is an integral part of development strategies of both developing and developed countries. It has great potential to bring in the

desired social transformations by enhancing access to people, services, information and other technologies. ICT applications can enhance poor people's opportunities by improving their access to markets, health, and education. Furthermore, ICT can empower the poor by expanding the use of government services, and reduce risks by widening access to micro finance. The uses of ICT for development are actively promoted, for economic development, job-creation, rural development and poverty-alleviation. By adopting ICT in mid 1990s, public sector underwent a major transformation. Application of ICT in processes of governance

can be considered in two categories viz. for improving government processes and secondly for building interaction with and within civil society. The examples of the former category are: dissemination of public information grievance redressal mechanisms, utility payments and billing services. This intervention of ICT in public domain, managed by Government, is referred as *e-Government*.

Secondly, ICT improves civil society participation in the governing process, which is also referred as *e-Governance*. e-Governance has a greater scope and connotation than e-Government, even though ordinarily the terms are used interchangeably. e-Governance permits new ways of participation of citizens and communities for debating. Such interactions facilitate provision of accurate information about social problems and their possible solutions. It empowers communities to determine their own future by developing self-efficacy and collective efficacy. Indeed if Good Governance leading to Development is the goal of governance, then e-Governance serves as a means to attain this goal.

### e-Governance for Rural Development

Rural e-Governance can provide timely information to the citizens and have the potential

**Sustained development using rural informatics is possible, only if ICT interventions are able to respond to the local needs and re-adjust as per the prevailing knowledge (Traditional Knowledge Systems- TKS) of the rural areas.**



to spawn innovative means of wealth generation in rural context. ICT can improve living standards in remote and rural areas by providing important commercial, social and educational benefits. Electronic service centres have a pivotal role to play, especially in reaching out to the marginalized sections living in remote areas. In a developing economy like India, ICT has development applications in education, governance, environmental monitoring, health, human rights promotion, economic growth and other areas. An earlier research confirms that transaction costs have substantially reduced by adopting automated supply chain management models for selling agriculture produce. Other studies show that e-government projects are successful in rural India as it acts as an intermediary between government and recipients, while pursuing commercially sustainable objectives.

However, given the high incidence of poverty in rural India, e-Governance implementation to cover 135 million rural poor is an increasingly complex process. The success stories of e-Governance in rural India are isolated cases, and says that “sum total of the Indian experience in terms of two important parameters viz. villages connected and lives transformed are yet too minimal”. Although there are more than fifty grassroots’ projects currently using modern ICT for development in India, since no systematic study or evaluation has been conducted on ICT based projects so “opportunities to learn the diverse creative Indian experience so far remain almost entirely wasted”. An e-Governance initiative *Gyandoot\**, shows that though it is supposedly popular, its usage is still low and that it is not effective for the poorest of poor in the rural regions. With reference to villages of south- India, how do we build effective Information Systems that are premised on emancipation in a rural setting (of southern villages of India)...” Existing e-Governance models are more technology centric, which have been aped from west and thus do not completely assure rural development in context of developing countries like India.

Such observations for ICT interventions in the rural context are generally true for other developing countries too. Emerging studies show that many of the claims that are being made about the potential of ICT for development are not supported, and point to the possible counter-productive effects of the use of ICT. In the purely technology centric approach widens the digital divide between developed and underdeveloped. The good governance initiatives for poverty alleviation have not translated into social good due to slack institutional mechanisms and to resolve the rampant “institutional disequilibria” there is a need to supply globally competitive products emerging from traditional knowledge of the region. There is several gaps associated with deployment of the information village projects where the larger goals of empowerment, dignity and “preservation of traditional technologies” are not considered. In view of such limitations, it is important to propose some alternative approaches to rural e-Governance projects.

## Conclusion

ICT initiatives in rural development emphasise adoption of a more systematic approach for integrating Traditional Knowledge Systems (TKS) and ICT inputs to ensure sustainability of rural e-governance. All the literature related to rural development and e-governance has indicated various issues impeding success of such initiatives. The main issues are lack of localisation of content for rural communities and inadequate participation of rural communities in design of rural ICT initiatives. This paper therefore viewed that the use the systems-approach to integrate the relevant TKS along with ICT initiatives in the design of e-governance systems for rural development.

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# Open Learning as A Tool to Promote Gender Equality in Rural India

Dr. Raju Narayana Swamy

**E**ducation starts with people as they are the primary and ultimate focus of all development. It empowers women and explores the causes and reasons for long denial of formal education to women. Promote Gender Equality and Empower Women, to eliminate gender disparity in primary and secondary education, and at all levels of education is necessary to reach the overall aim of universal education for girl children. In the light of this, the paper recognises that education for girl children in India is facing unique challenges, which are particularly related to low funding and in turn translated into inaccessibility of higher education to the women folk, low quality educational programmes and marginalization. In recent times, Distance Education has emerged as helpful to women of all ages to equip themselves intellectually through acquisition of knowledge, leading them to new radical methods of thinking

thus rendering them more self-directed and free thinking. It can meet the promise to deliver classes to a geographically broad and diverse population. This paper crucially examines the distance education reforms in relation to the concept of empowerment of women. Gender patterns will be assessed to sketch conclusions and make recommendations.

## Introduction

The unrelenting dilemma of girl children in India who grow up without receiving the most basic education has attracted increased civic attention. This crisis is severe in rural areas that keep larger extent of girls in India out of school. Amartya Sen argues that “the changing agency of women is one of the major mediators of economic and social change. Nothing arguably is as important today in the political economy of development as





adequate recognition of political, economic and social participation and leadership of women". The United Nations Millennium Declaration emphasise the need for promoting gender equality, empowerment of women and guaranteeing a basic education for everyone. In this instance, the place of open and distance learning methodologies in providing mass functional literacy skills becomes inevitable. The United Nations Millennium Development Goals (MDGs) which is a set of eight time-bound, concrete and specific targets are listed as follows:

Goal 1: Eradicate extreme poverty and hunger.

Goal 2: Achieve universal primary education.

Goal 3: Promote gender equality and empower women.

Goal 4: Reduce child mortality.

Goal 5: Improve maternal health.

Goal 6: Combat HIV/AIDS, malaria and other diseases.

Goal 7: Ensure environmental sustainability (Roseline, E. Tawo, Arikpo, B. Arikpr, et.al., 2010.).

### Women empowerment

Empowerment is the process of challenging existing power relations and of gaining greater control over the sources of power. The goals of women's empowerment are to challenge patriarchal ideology to transform the structures and institutions that reinforce and perpetuate (B.Suguna, 2006, p.10.). Marxists Theorists assign class differences in the world of labour. They try to establish the relationship between capitalism and patriarchy. The exploitation, subordination, and oppression exist on the part of dominant class (the men) and revolutionary trends are seen on the part of the oppressed class, the women. By empowerment women would be able to develop self-esteem, confidence, realise their potential and enhance their collective power. Gender studies in tribal societies show that it is social

conditioning, and not biology that accounts for gender differences between 'masculine' and 'feminine' (Hajira, Kumar & Jaimon, Varghese, 2005, p.24.).

Friedmann (1992) presents a model of rural women's empowerment. It explains the interrelationships between the four forms of empowerment. There is clearly many interrelationships and overlaps between them. These factors include Community empowerment, Organizational empowerment, Political empowerment and Psychological empowerment. Community empowerment refers to access to new and useful knowledge and awareness, developing new skills, abilities, confidence and competence obtaining the friendship and support of other women, participating in various activities with other women. Organizational empowerment emphasises new knowledge and awareness about new benefits of technology for rural development thorough development of agricultural cooperatives. Political empowerment influences other governmental policies and decisions that affect rural communities, changing town-based people's beliefs, and other women to discuss issues affecting rural women and rural communities. Psychological empowerment influences an increase in self-confidence and self-esteem, greater motivation, inspiration, enthusiasm and interest to develop new services for rural people.

Thus empowerment could be recognized as an ability to undertake a number of tasks either individually or in groups, so that they have further access to and control of society resources. It is recognised as an essential strategy to strengthen the well-being of individuals, families and communities, government and non-governmental agencies (Fatemeh, Allaudadi, 2011, p.40.). For Meenaz, Kassam & Femida, Handy (2004) education has been argued as one of the indicators of empowerment. Many of the variables that have traditionally been used as proxies for empowerment, such as education and employment, are better described as



“enabling factors” or “sources of empowerment”. Empowerment requires an understanding the self and the cultural and social expectations, which may be enabled by education.

## Women literacy in India

Women, mostly in rural areas represent more than two-thirds of the world’s illiterate adults. The national female literacy rate is 8.9 percent. Close to 245 million Indian women lack the basic capability to read and write. Adult female literacy rates for ages 15 and above for the year 2000 is 46.4 percent (male 69 percent)(The Status of Women: A Reality Check). The trends in total literacy rates by sex in India between the years 1981 and 2001 are as follows:

**Table1 Literacy rates by sex in India**  
(1981-2001)

Particulars	1981	1991	2001
Male	56.37	64.13	75.85
Female	29.75	39.29	54.16
Total	43.56	52.20	65.38
Divergence (Male-Female)	26.62	24.84	21.69

Source: Census of India, Various years

Gross Enrolment Ratio (GER) for girls was 24.8 percent at primary level and 4.6 percent at the upper primary level (in the 11 to 14 years age group. Girl’s enrolment at the primary stage is 46.7 percent in 2004-05. At the upper primary stage, girl’s enrolment is 44.4 percent in 2004-05. The overall enrolment clearly shows that there is gap and challenge exists at primary stage.

Enrolment of Scheduled Caste and Scheduled Tribe girls poses a greater challenge to India’s education administrators. G.E.R. for SC girls at primary level have climbed up from 64.8 percent in 1986-87 to 106.6 percent in 2004-05 while at upper primary stage, it is as low as 26.6 percent in 1986-87 and 61.5 percent in 2004-05. In the case of ST girls, the GER at primary level it is 68 percent 1986-87 to 115.5 percent by 2004-05 and

at upper primary levels it is 21.9 percent in 1986-87 to 59.5 percent in 2004-05. The number of out of school children is 32 million in 2001-02. Of the total age cohort of girls in the 6-14 years age group, 3.9 percent are reportedly out of school. In the 6-11 years age group, out of school girls are 3.34 percent and in the 11-14 years age group they are 5.3 percent. There is a strong need for the inclusion of these ‘hard to reach’ and older girls, who have remained from the education net addressed through context specific strategies and interventions presently (Sarva Shiksha Abhiyan, 2008). There is also wide disparity in the female literacy rates in rural and urban regions in India. In the year 1951, the rural female literacy was 12 percent and urban literacy 34.59 percent. Table 2 below indicates the trends in the literacy rates in India by rural and urban areas.

**Table 2 Female literacy rates in India**  
Rural/urban (1951-2001)

Year	Female literacy rate	
	Rural	Urban
1951	12.00	34.59
1961	22.46	54.43
1971	27.89	60.22
1981	36.09	67.34
1991	44.69	73.09
2001	59.40	80.30

Source: Census of India, various years

## Barriers in achieving education

Several factors influence the women literacy in India. Social and economic factors determine their education. In rural areas both men and women slot in agriculture, but women are the key producers of food for household utilization. Women’s labour produces 70-80 percent of the food crops grown in India. Increasing reliance on the labour of girls may jeopardize their education or even result in their complete withdrawal from school. Other factors that contribute to reduced enrolment rates and increased dropout rates for girls include gender sensitive teaching methods, transport, sanitation facilities etc.(Report of



the Secretary-General, United Nations General Assembly, 2005, p.9.). Sharmila and Dhas(2010) points out that infrastructural barriers are responsible for lagging of women literacy in India.

Parental and social attitudes are major demand-side sources of gender inequality in India, but other factors are also important like- the child's motivation, the household's ability to bear the costs of schooling, and the demand for the child's labour raising the opportunity cost. Household chores, particularly sibling care in poor families, area significant factor in girl's non-enrolment, frequent absence, and dropout, overt and subtle discrimination etc also have contributed to the non-enrolment and dropout of children from scheduled castes. The Scheduled Tribes, often in dispersed groupings in remote areas, the distance to school is the key supply constraint. Language adds to the problem, as the language of instruction is often not that spoken at home (Kin, Bing, Wu, and others).

A successful agenda for the empowerment of rural women requires the dismantling of values, structures and processes that maintain women's subordination and that are used to justify inequality in access to political, social and economic resources. Education plays an important role in this process. But gender inequalities in access to education are well documented in rural areas in India. This gender inequality refers to that stage of human, social development at which "the rights, responsibilities and opportunities" of individuals will not be determined by the fact of being born male or female, in other words, a stage when both men and women realize their full potential. This realization of full potential, the most fundamental prerequisite for women empowerment could be attained only through education. Amartya Sen also agrees with the above and makes a compelling case for the notion that societies need to see women less as passive recipients of help, and more as dynamic promoters of social transformation, a view strongly buttressed by a

body of evidence suggesting that the education, employment and ownership rights of women have a powerful influence on their ability to control their environment and contribute to economic development (Augusto, Lopez-Claros, 2005).

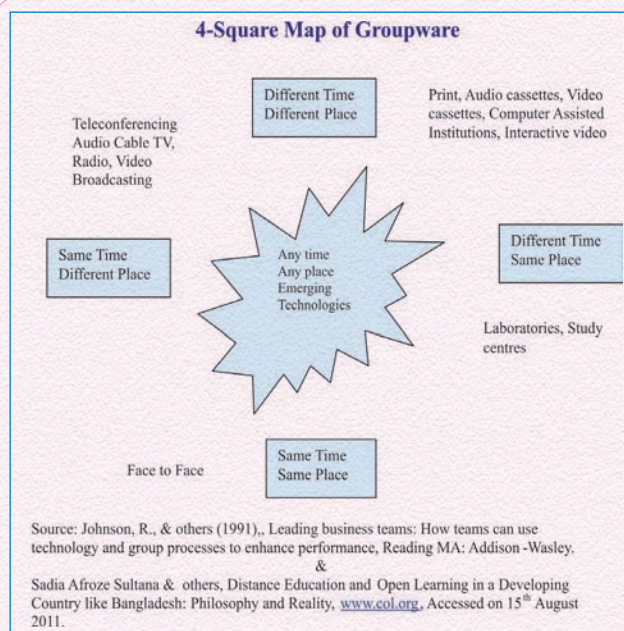
Improving overall educational provisions accessible to poor women involves reprioritising expenditure patterns in the education sector. This can be made possible by increased allocations to basic education through non-formal adult education and literacy programmes. Spending at higher levels should be earmarked for encouraging greater female enrolment. From a poverty perspective, strategies which reduce the direct and opportunity costs of girls' schooling are most relevant. Strategies to increase female education by reducing opportunity costs may particularly benefit girls from poor households (Zoe, Oxaal, 1997, p.18.). Introducing non-formal education provision is one way of reducing the opportunity cost of girls schooling by enabling them to combine work in the household with schooling.

Education for rural women and girls has a leveraging effect on social and economic development and democratization. It requires a holistic approach that recognizes the close interdependence of education and other livelihood factors. It is important to adopt a flexible approach which builds on their needs and given due attention to the intersection of gender, poverty and economic well being.

## Distance Education

The term Distance Education has been applied to a tremendous variety of programmes serving numerous audiences via a wide variety of media. American Council of Education (ACE) defines Distance Education as a system and a process of connecting learners with distributed learning resources<sup>1</sup>. Distance learners enjoy flexibility in terms of choosing the place and time of study. However, the degree of flexibility the students





are able to enjoy depends on the availability of the media and learner's access to them (Sadia, Afroze, Sultana & others). The Distance Education is different from traditional on-campus education system. This can be explained with the help of the following 4-square map of Groupware Options.

In India Open and Distance Learning has proved to be an effective tool to impact education for disadvantaged groups, to the neo-literate class of society, to people living in remote or rural areas, and to section of society which could not avail themselves of conventional education. The ODL system succeeded through building a wide network of students support services and flexible admission criteria (Sunil Kumar & others, 2008).

### Distance Education in the rural context

In rural areas elementary education is available but this cannot be said of higher level of education. Moreover India has poor secondary education infrastructure facilities. This is particularly one reason for low literacy rates among women in rural areas. In this context government of India have emphasized the open learning system and in particular, the distance education provided by the National Open School. Government of India has taken special initiatives to enhance access and equity in higher education through distance learning mode particularly

to persons from disadvantaged groups and those living in remote areas. The Indira Gandhi National Open University determines standards for open learning and distance education, and provides innovative and need-based general and continuing education through an integrated strategy consisting of print material, audio-video programmes, teleconferencing and personal counselling (Mala, Dutt, 2010). The Central Board of Secondary Education by targeting working adults, women and disadvantaged groups stated distance education at the secondary level in 1970s. In 2005-06 there were 267000 enrolments in the Open School.

The Open School Project and National Policy on Education were culminated to establish National Open School (NOS). It was established in 1989 under the Central Board of Secondary Education. The major objective has been to provide secondary and senior secondary education mainly to the dropouts. The courses offered and profile of the students enrolled in this are as follows:

- It is reaching all corners of the country including very remote areas through its almost 800 study centres.
- The enrolment has been increasing steadily with an annual growth rate of about 20 % in the last two years.
- It remains to be predominantly urban with Delhi accounting for about one third of the enrolment.
- The enrolment of women and girls (about 32 %), from socially weaker sections, disabled and those from geographically weaker sections of the community are to be considerably improved.

The NOS experience clearly shows that distance education is one of the most cost-effective models for providing access to secondary education in rural and sparsely populated areas. NOS is increasingly targeting its efforts on learning in rural areas and the proportion of rural students has increased to 60 percent of the total enrolment. The proportion of girls in NOS enrolment is, on average, 35 percent (Michael, Ward). The details are given in the table 3 below:



**Table 3 Gender-wise Enrolment in Nos.****(2001-05)**

Year	Male	Female	Total
2001-02	152286	62296	214582
2002-03	164550	113684	278234
2003-04	220103	100907	321010
2004-05	162351	75718	238069
2005-06	182440	84586	267026

Source: NIOS, 2005

IGNOU has a cumulative enrolment of about 15 lakhs. It has a network of 53 regional centres and 1400 study centres with 25000 counsellors. The Distance Education Council an authority of IGNOU is coordinating the activities of 13 State Open Universities (SOUs) and 119 Institutes of Correspondence Courses in the conventional Universities (Report of the 11<sup>th</sup> Five Year Plan, Government of India). At present IGNOU have downlink facilities of video programmes. Hundred and forty centres at IGNOU Regional Centre and Study Centres and 151 under women empowerment scheme in the country. The main purpose of the Women Empowerment Project of IGNOU is to organize women into effective Self Help Groups through the medium of training Certificate Programme "Empowering Women through Self Help Groups". Regular face-to-face counselling is also provided at the programme centres. The learners can also benefit from the other educational programmes telecast regularly over "Gyan Darshan" which is a 24 hours channel. Details of all these programmes are sent to all IGNOU learners every month in the form of a booklet called "Gyan Darshan". The objectives of certificate programme include:

2. To strengthen ongoing efforts to train facilitators/master trainers of SHGs.
3. To evolve an effective and sustainable training network and resource of such trainers.
4. Empower the change agents to function more effectively as trainers and community organizers in helping set up SHGs and to address gender issues.

5. Provide guidelines for the establishment of micro-enterprises.
6. Provide basic legal literacy (IGNOU: The People's University).

The Tamil Nadu Open University (TNOU) established by Act 27 of 2002 has benefited those who have been deprived of access to higher education, especially women and those who have dropped out for various reasons. The competency and skills of women learners after completion of TNOU programmes has increased as per the feedback given by the women learners. The study of Thyagarajan (2009) points out that ninety percent of women learners have benefited and their status in the family and society got improved by their involvement with Distance Education. Dr. B.R. Ambedkar Open University (BRAOU) formerly known as Andhra Pradesh Open University was established in August 1982 by the state legislature of Andhra Pradesh. It is expected to play a 'complimentary role' in democratising higher education in the state by providing educational opportunities to the hitherto neglected sections. Yashwantrao Chavan Maharashtra Open University (YCMOU) was established in July 1989 to serve the state of Maharashtra in the Union of India. It is to promote the Open University and distance education systems to achieve decentralization and reorganization of university education in the state (Kulandai, Swamy, V.C., 1995). It is worth mentioning that collaborating locally has greater chances of success. As a case one may mention South Asian Association for Regional Cooperation (SAARC) as a collaborative forum for South Asia where possibilities for cooperation abound. Cultures, technological development, geographical conditions are not very different in this region and joint efforts in curriculum design can bring favourable results. Such area specific collaboration in Asian region may also succeed in finding large learner segments (Chandra Bhushan Sharma, 2001, p.313.).

India has one of the largest Open Learning and Distance Education systems at tertiary education



level in the world including one of the world's ten mega universities. However, their efforts have to be more open and flexible in this functioning. The courses offered and designing of materials should make a difference in learning for the students. The education offered should have the potential and provide possibilities for creating certain levels of empowerment.

### Distance Education and gender goals

The challenge of women empowerment potential of ODL clearly lies on its structure base on flexibility, learner-centeredness open ended strategies for utility and quality of education. ODL's empowering potentials are not above what the conventional systems do. But it is definitely supplementary or complementary to it. ODL has its own meaning and persona largely emanating from a list of missions which it can only perform-the positive ground of self-evaluation. Flexibility, learner-centeredness, open alliance strategies to improve utility of education in terms of its spread effects and response quality may take ODL to unimagined heights. Less engagement with national social missions can make it complacent and force it in a direction of gloss, easy money and sporadic fame(Pandev, Nayak, 2001, p.281-82).

Distance education is more accessible for rural women. Women can study what they want and also from where they want. Moreover distance Education is advantageous because it is flexible. Women can study when they want, completing course work on their schedule, rather than that of college. Participation of women in Distance Learning is directly related to political and social changes in women's position within the family and society, technological changes in the work place, and the economic necessity of participation, and the job market and new job opportunities (Anie, Paula, Kamara).

Chandra, Bhushan, Sharma(2001) points out that in some places universities and institutions of higher learning have not developed academic programs in certain areas of studies. Students wishing to take such courses have to travel abroad, often after quitting jobs. Such ventures cost high in

terms of 'opportunity cost' and family dislocations. Such courses if made available through Distance Learning can help women, especially from rural areas satisfactory results. Distance Learning also has the potential to alleviate or remove some of the barriers or constraints that prevents women and girls from accessing educational opportunities such as illiteracy, poverty, time scarcity, socio cultural factors, mobility and relevancy. This can help in leading to women empowerment and gender equality. Easy access to learning can end the inferior position of women in society. It can also help in promoting improved health and employment opportunity. ODL provides various types and levels of education to be acquired by the women. Flexibility of access and study times and the potential to reach women in rural areas or women facing social barriers that limit their access to schools, make distance learning a promising educational approach for women (Farha, Mazhar, 2011).

### Concluding remarks

In rural situations where attending traditional schools is difficult or almost impossible, ODL can be used to bring education to the doorsteps. ODL if used in the right format will surely help in overcoming poverty and making the women financially independent. A lacunae in this field leading to lack of participation of women are the restricted access to the technology, basically lack of skills in using computers and lack of information. Hence more efforts are required to promote distance education using ICT, particularly to cover remote rural areas. Initiatives also have to be designed specifically for women and awareness needs to be generated among women on the advantages of ODL and their potential to address specific problems faced by them. Choices of the courses made by the institutions must be an informed one. It should be guided by an understanding of women's issues and the needs of women in that region.

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## Legal Aid Clinics Scheme

K.K.Pant

As India lives in its villages, it is imperative that the villagers be provided an effective legal assistance in their village itself. As of now it is also a fact that most of the legal services institutions are located in urban and semi-urban areas which position puts the villagers at a disadvantage. To overcome this hurdle a Scheme of Legal Aid Clinics has been prepared to provide legal relief easily to the indigent and backward sections of our society. The Scheme, adopted in December last year under the National Plan of Action of the National Legal Services Authority (NALSA), is being implemented through the legal services institutions (i.e., the Taluk/Sub-divisional/Mandal Legal Services Committees, District Legal Services Authorities, High Court Legal Services Committees, State Legal Services Authorities and Supreme Court Legal Services Committee established under the Legal Services Authorities Act, 1987) spread throughout the nation. NALSA plans to set up Legal Aid Clinics in all villages throughout the country. Legal Aid Clinic is one of the thrust areas envisioned in the NALSA's *Quinquennial vision & strategy document*.

Legal Aid Clinics on the lines of primary health centres where a doctor and other auxiliary medical staff provide basic health care to the people situated in village areas affected with poverty and social squalor. Like the doctors rendering health services to the people of the locality in the primary health centre, a lawyer manning the legal aid clinic provides legal services to the people. The basic objective of the Scheme is to provide legal services to the poor, marginalized and weaker sections of the society as categorized in Section 12 of the Legal Services Authorities Act 1987, especially to the people living in faraway places including the places with geographical barriers, away from the seats of justice and the offices of the legal services institutions. The aim of the Scheme is to provide an inexpensive local machinery for rendering legal services of basic nature like legal advice, drafting of petitions, notices, replies, applications and other documents of legal importance and also for resolving the disputes of the local people by making the parties to see reason and thereby preventing the disputes reaching courts. In cases where legal services of a higher level are

required, the matter can be referred to the legal services institutions established under the Legal Services Authorities Act, 1987.

Legal Aid Clinics are manned by *paralegal volunteers* (selected and trained by the Legal Services Authorities) and lawyers with a sense of commitment, sensibility and sensitiveness to the problems of common people. The paralegal volunteer is available during the working hours of the Legal Aid Clinics.

The Legal Aid Clinics are located at a place which is easily accessible to the local people. A room within the office building of the local body institutions like village *panchayat* is considered ideal.

The local Legal Services Authorities are persuading the local body institutions like village *panchayat*, *mandal* / block *panchayat*, municipality and corporation etc, to provide a room for the functioning of legal aid clinic. Since the legal aid clinic is for the benefit of the people in the locality, the local body institutions is impressed upon the need to co-operate with the functioning of the legal aid clinics and to realise that the legal aid clinic is aimed at promoting peace and welfare of the people in the locality.

Legal Aid Clinics are under the direct administrative control of the nearest legal services institution having territorial jurisdiction. The District Legal Services Authority has the supervisory and advisory powers on all Legal Aid Clinics functioning within the district. The State Legal Services Authority has the power to issue guidelines on the working of these Clinics.

The State Legal Services Authorities issue directions from time to time for improving the services in the Legal Aid Clinics to ensure that members of the weaker sections of the society are provided legal services in an efficient manner. The State Legal Services Authorities are required to send quarterly reports about the functioning of the Legal Aid Clinics within their jurisdiction to National Legal Services Authority.

**The author is Dy. Director (M&C), P.I.B., with inputs from the National Legal Services Authority.**



## Right to Shelter, An Urgent Need

Ranbir Singh & Ajay Kumar

**T**he Right to Shelter or the Right to Housing has been universally recognised as one of the basic Human Rights. Shelter or Housing is a necessary requirement for the life of every human being. That is why it has been accepted as an inherent part of the Right to Life which is a part of the Chapter on Fundamental Rights enshrined in the Indian Constitution. The historic decision of the Ministry of Rural Development, Government of India, for designing a Road Map on 'House for All by 2017' and the organisation of Workshop on 'State Action Plans for Eradication of Shelterlessness' by it on 29<sup>th</sup> and 30<sup>th</sup> September, 2010 at National Institute of Rural Development, Hyderabad, has to be seen in this perspective.

It is pertinent to mention that the emphasis on the Right to Shelter by the Ministry of Rural Development has to be perceived in the perspective of the UPA Government in the Centre for improving the lot of the Aam Admi. It is a continuation of the process that had been initiated by the National Rural Employment Guarantee Act (2006), now the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), which aims at providing the Right to Work, the Right to Education

Act (2009) which provides for education for all, and the proposed Food Security Bill that seeks to ensure the Right to Food. It goes without saying that the agenda of the Right to Life would remain incomplete without the Right to Shelter.

For providing the needed perspective to the Right to Shelter, we will have to trace, the history of housing programmes in India. The first initiative in this direction was the building of five lacs houses for the rehabilitation of the Refugees from West-Pakistan by the Ministry of Rehabilitation, Government of India in 1948. This was followed by the launching of Village Housing Scheme under Community Development Programme in 1957 under which individuals and cooperative societies were given loans upto Rs. 5000. As many as 67000 houses were built under it. After this the House Site-cum-Construction Assistance Programme was started in the Fourth Five Year Plan. Later on, the housing was made a component of National Rural Employment Programme in 1980. Subsequently, Indira Awas Yojana (IAY) was added to Rural Landless Employment Guarantee Programme in 1985. After this six percent share of Jawahar Rozgar Yojana was reserved for building houses for SC/ST Below Poverty Line (BPL) families in 1989.





Later on it was increased to 10 percent to add general category BPL families. In 1996, IAY was made an independent programme. This was followed by the adoption of National Housing and Habitat Policy in 1998, Schemes for Up-gradation of Kachha Houses & Credit and Subsidy and Samagar Awas Yojana in 1989 and by the Pradhan Mantri Gramodaya Yojana in 2000.

Among the above programmes/schemes, the IAY has been accorded the status of Flagship Programme. The first priority is to be given to freed bonded labour, the second to those SC/ST households. Among them victims of atrocities and calamities, widows and unmarried women have to be prioritized. Families and widows of defense persons killed in action are covered as general category. After this non-SC/ST BPL households, handicapped persons, ex-serviceman and displaced persons are to be considered in the above order.

Besides, there is a provision for credit-cum-subsidy scheme under IAY for rural households having annual income upto Rs. 32000/-. The subsidy ceiling under it is Rs. 12500/- and upper loan limit under Differential Rate of Interest (DRI) Scheme @ 4% is Rs. 50000/- Other essential conditions of the IAY include the allotment of house in the name of female or in joint names, payment through beneficiary bank non-frill account, ban on contractors, insistence on the use of local material and compulsion for the display of IAY Board/Logo on the houses constructed under the scheme.

Now let us deal with the funding and achievements in housing during various plans. Under the Seventh Five Year Plan (1985-90), an amount of Rs. 780.63 crores had been earmarked and 705966 houses were constructed. During two Annual Plans (1990-1992), the funds earmarked were Rs. 676.80 crores and the number of constructed houses was 389099. Under the Eighth Five Year Plan (1992-97) an amount of Rs. 3772.51 crore had been earmarked and 2625781 houses had been built. During the Ninth Five Year Plan (1997-2002) the funds allotted were 9638.36 crores and the number of houses built was 4874392. Whereas, under the Tenth Five Year Plan (2002-2007) an amount of Rs. 1468.26 crore had been earmarked and 6799137 houses had been built. Thus from the Seventh Five Year Plan to the Tenth Five Year Plan the total amount earmarked was Rs. 29351.84 crores and the number of constructed houses was 15394375. In the Eleventh Five Year Plan, an amount of Rs. 26882.21 Corore has been earmarked for construction of houses under IAY. This

is going to bring India closer to the goal of housing for all.

The year-wise progress in terms of expenditure done and the number of houses constructed during it is given in the table below:

Year	Expenditure (In crore)	No. of Houses (In lacs)
2007-08	3223.15	10.92
2008-09	8348.34	21.34
2009-10	7024.63	21.18
2010-11 upto Feb, 2011	10684.82	19.39115

Among the above programmes IAY has been declared as a Flagship Programme. Its objectives is to have construction, up-gradation of dwelling units for members of SC/ST, freed bounded labour, minorities and other Non-SC/ST rural households. The Government of India gives 75% share of the funds and the remaining 25% are to be supplemented by the State Government. In case of north-eastern states the share of the Government of India is 90% and that of states 10%. In the Union territories 100% funding is done by the Government of India.

The tangible and intangible benefits of the IAY include dignification of the poor, extension of an identity to them, stopping migration, providing privacy and protection of the family to the poor. It has also helped in hygiene maintenance and provision of basic amenities for the poor.

A Mass Awareness Campaign in mission mode too shall have to be launched by the Government of Haryana with the help of the NGO's and other agencies such as National Literacy Mission for creating awareness among the rural masses on the House for All programme.

But far more important than the above steps is the need for the convergence of IAY with other Rural Development schemes such as Total Sanitation Campaign, Rajiv Gandhi Grameen Vidyutikaran Yojna, National Rural Water Supply Programme, Janshree Bima Yojna of LIC, Aam Admi Bima Yojna of Life Insurance Corporation (LIC), Swarnajayanti Gram Swarozgar Yojana (SGSY), MGNREGA and Social Forestry.

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## Computerization of Consumer Forums in Country

**M**inistry of Consumer Affairs, Food & Public Distribution has given very high priority to the consumer protection. Accordingly, the Department of Consumer Affairs has taken up computerization and computer networking of consumer forums in country. This has enabled easy access of information and facilitate quick disposal of cases at consumer forums.

Now the consumer can obtain required information about the provisions in Consumer Protection Act, details of consumer redressal mechanism, addresses of consumer forums and the status of his case filed at the consumer forum just with the click at the website [www.confonet.nic.in](http://www.confonet.nic.in). NGOs and lawyers can also access the list of cases to be heard on particular day and judgments delivered in the past by the consumer forums at the website.

Project of Computerization and Computer Networking of Consumer Forums (CONFONET) has been implemented to strengthen the consumer protection mechanism to protect consumers from all forms of exploitation. Under the provision of Consumer Protection Act, quasi-judicial machinery, namely, Consumer Forums at the district level and Consumer Dispute Redressal Commissions at the State and national level have been setup. With the objective to make the fruits of this benevolent Act reach its wide target audience, this project has been taken up.

### Target Audience

The Confonet Project has been catering to a wide range of beneficiaries. These include:

- Consumers
- Consumer Activists and NGOs
- Members of Consumer Courts
- Bar Councils
- Advocates

### Services

Consumers and other stake holders can access following services:

- Information on Consumer Rights and Protection- Consumers, NGOs, Consumer Rights Organizations and Consumer Activists can access information related to Consumer

Rights and Consumer Protection through the Confonet Website.

- Online schedule of cases- List of cases to be heard by the courts on following day and search of date-wise list of cases has been made available on the website. Lists of National Consumer Disputes Redressal Commission (NCDRC), various State Commissions and District Forums can be easily accessed online.
- Online Judgements - Date-wise free-text search for copies of judgments uploaded by National Consumer Disputes Redressal Commission (NCDRC), State Commissions and District Forums can be accessed on the website.
- Online case status and case history - Case status and history of various consumer cases can be accessed on the website.

Two options for Case Status Search have been provided:

**Simple Search:** This option allows one to obtain the case status when exact Case Number is known

**Advanced Search:** This option allows one to search for the case status when the exact Case Number is not known. The various search criteria include complainant's name, respondent's Name, advocate's name, case type etc.

### Statistical Reports

The Members and staff of the various Consumer Commissions and Forums can access statistical reports regarding filing, disposal and pendency of cases at their respective commissions/forums. These reports are also available on the website.





# Fenugreek, A Spicy Medicine

Dr. Ramesh Chandra Parida and Dr. Pranab Kumar Ghosh

*It has a light bitter taste with a romantic flavour and is believed to be the antidote of a long list of diseases and disorders.*

With the growing awareness of the hazardous side effects of the synthetic drugs, traditional herbal medicines are attracting more and more attention from professional healers. One of the prominent among those is fenugreek, which has a long history of use as a spice as well as in Ayurvedic medicine.

Known as "Methi" in a number of Indian languages and *Trigonella foenum graecum* in science vocabulary, it has a light bitter taste with a romantic flavour and is believed to be the antidote of a long list of diseases and disorders, such as, diabetes, colic, flatulence, dysentery, diarrhoea, dyspecia, tuberculosis, digestive disorders, gastric inflammation, painful menstruation, insufficient lactation, labour pain, libido in men, hernia, premature ejaculation, weight loss, anorexia, poor appetite, back pain, bronchial complaints, gout, arthritis, ulcers, boils, eczema, various types of fever including malaria, sore throat, different kinds of skin diseases and many more. It can also reduce serum cholesterol and triglycerides and increase haemoglobin content of blood.



Fig 1. Fenugreek Plant

## Nutritional constituents :

Fenugreek seeds and leaves are very nutritive, which are rich in protein and contain less of fats

(Table-1). Besides, they contain high quantities of iron and therefore, can be useful in treating anaemia.

**Table-1 : Nutritional constituents of fenugreek (%)**

Constituent	Seeds	Leaves
Protein	26.20	*4.40
Fat	5.80	0.90
Carbohydrates	44.00	-
Fibres	7.20	5.70
Ash	3.00	1.30
Essential oil	1.50	-
Moisture	6 to 8	85 to 86
Vitamins	-	A, C, K

(\*on dry weight basis it is 18.6 to 40.9% at different stages of growth)



Fig 2. Fenugreek Seeds

## Therapeutic Properties :

Its biological as well as pharmacological actions are attributed to the varieties of its chemical constituents, including various steroids, N-compounds, polyphenolic substances, alkaloids, proteins, aminoacids, lipids and volatile constituents. It is particularly rich in the steroidal



sapogenin called diosgenin, which along with its epimers are the precursors of a number of steroids like some sex hormones and oral contraceptives. The content can be as high as 65mg percent to 75 mg percent depending upon the varieties and ecological factors. Therefore, it is used as the natural raw material for manufacture of those.

## Sterols

A number of sterols are present in all parts of the fenugreek plant, both in combined as well as in free state. These include B-Sitosterol (in leaf) and small amounts of cholesterol. Recently, six triterpenoids such as, lupeol, 3 $\beta$ -norcycloartanol, betulin, betulinic acid, soyasaponin I and soyasaponin I methyl ester have been isolated and identified from the ethanolic extract of the seeds. These are also rich in flavonoids like quercetin along with luteolin, quercetin, vitexin, vitexin-7-O-glucoside, arabinoside of orientin (or iso-vitexin), iso-orientin and vicenin-1 in substantial quantities. All these and some more have been extracted and identified in the alcoholic extracts of the stems as well as the seeds. The anti-bacterial activities of fenugreek are said to be due to these flavanoids. Those are also considered to have healthy effects on heart and have anti-cancer properties.

Different varieties of fenugreek accumulate different phytoalexins in different quantities. Those include pterocarpin (medicarpin and maackiain) and isoflavan (vestitol and sativan) derivatives. Besides, hydroxylated pterocarpin and traces of three pterocarpin precursors, namely, isoflavone, formononetin, flavanone liquiritigenin and chalcone isoliquiritigenin are also found alongwith those in a few varieties. All of those have active biological properties that cure several diseases and disorders and boost resistance against those.

The phenolic compounds present in fenugreek are scopoletin, chlorogenic, caffeic and p-coumaric acids in its root, shoot and pod, while its leaf and stem contain scopoletin and lignan  $\gamma$ -schisandrin. Similarly, hymecromone (4-methyl-7-acetoxycoumarin) has been isolated from a whole plant extract and the stems are found to have, besides hymecromone, phenolic compounds like (E)-3-(4-hydroxyphenyl)-2-propenoic acid or p-coumaric acid and trigoforin

(3,4,7-trimethyl-coumarin). Not only those ensure healthy heart and boost immunity against several infective diseases, but also, have strong anti-tumour and anti-rheumatic properties.

More than 50 volatile components have been detected in fenugreek, out of which 40 have been identified. Those include some n-alkanes, sesquiterpenes and other oxygenated compounds like n-hexanol, 2-heptanone, n-heptanone, aniline, phenol, heptanoic acid, undecane, camphor, dodecane, decanoic acid, thymol, 2-hexylfuran, tridecane etc. All these have various medicinal properties and serve as raw materials for the synthesis of several medicines.



Fig 3. Fenugreek Crop Field

The aroma of fenugreek seed is due to compounds like  $\gamma$ -nonalactone and 5-methyl- $\delta$ -caprolactone, which are present in it in small quantities, but have strong olfactory properties. Besides, some other compounds belonging to n-lactane family also contribute to its aroma, but to a very small extent.

A number of free amino acids are present in fenugreek seed, but, hydroxyl isoleucine constitutes 80% of those. One of its isomers, 4-hydroxy isoleucine (2-amino-4-hydroxy-3-methyl pentanoic acid) is an insulin stimulant. Therefore, fenugreek has been found to be useful for diabetic patients. Besides, its anti-diabetic and hypo cholesterolaemic activities have also been linked to the saponin and high



fibre content of it, which selectively reduce the LDL (low density lipids) and VLDL (very low density lipids) fractions of total cholesterol and increase the HDL (high density lipid) fraction in type-II diabetic individuals.

In a recently conducted experiment, oral administration of fenugreek seed powder (5% of the diet) has been found to have marked effects on glycolytic, gluconeogenic and NADP – linked lipogenic enzymes in alloxan induced Wistar rats. In diabetics, the activities of the glycolytic enzymes are significantly lower in the liver and higher in the kidney, while on the otherhand, the activities of gluconeogenic and lipogenic enzymes are higher and lower respectively in those organs. However, treatment with fenugreek seed powder reportedly can bring the activities of all these enzymes back to normal and can control blood sugar level in 21 days. Thus, it has established the therapeutic role of fenugreek in type I diabetes, by normalizing the activities of glucose and lipid metabolizing enzymes.



Fig 4. Fresh Methi Leaves

### Side effects :

Generally it is believed that long term consumption of fenugreek does not have any harmful side effects. Therefore, it is beneficial to consume its leaves and seeds regularly

as a measure for management, control and prevention of many kinds of diseases and health related disorders. However, recent researchers view it with caution. According to them, the scientific studies conducted to establish the health promoting effectiveness of the herb are still inadequate. On the otherhand, its chemical composition suggests that it may have a number of potential side effects such as, diarrhea, gas, bloating, indigestion, heart burn and allergy, if taken in larger quantity. Besides, it contains compounds that make blood “thin”, which may enhance proneness to internal bleeding as do some drugs like aspirin or warfarin. Similarly, it may also increase the risk of hypoglycemia, when taken in combination with diabetes medicines. Besides, there is also the possibility that it may interact with certain drugs, an aspect which has not been studied properly. Again, since fenugreek is traditionally used to stimulate labour, it should induce uterine contraction causing preterm labour and miscarriages, if taken earlier in pregnancy. Therefore, pregnant ladies must be cautious while taking it as an antidote for any diseases. These researchers also point out that the medicinal dose and longterm effects of fenugreek are yet to be established to satisfy the norms to clear it for use in modern medicine. Therefore, they suggest more scientific research on the medicinal uses of the herb should be conducted and caution people to use it only in consultation with medical practitioners.

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