RURAL RADIO IN AGRICULTURAL AND RURAL DEVELOPMENT

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Guglielmo Marconi demonstrated the communication potential of radio technology, a hundred years ago. Until Marconi's January 1901 transmission of the news of Queen Victoria's death from the Isle of Wight to Cornwall, a distance of 300 kilometres, it was believed that radio waves could not follow the curvature of the earth and that broadcasts were therefore limited to a maximum of about 100 kilometres. Marconi's experiment not only proved this wrong, but also set the stage for his first transatlantic wireless transmission, between Cornwall and Canada, in the same year.

One hundred years later, the *digital divide* occupies an important place on the agenda of governments, international agencies and civil society organisations throughout the world. Over the past few years there have been countless seminars, studies and statements about the digital divide, the knowledge gap, and the role of knowledge in sustainable development.

Information Technology has been the object of hyperbolic predictions regarding its distributional effects. Some enthusiastically claim that IT has the capacity to bring knowledge and hence prosperity to isolated and marginalized individuals and nations. Others fear that those individuals and nations that are already most privileged, will be ones who will benefit from IT, leaving others to fall even further. Nowhere is the debate between optimists and pessimists more relevant than in India, where new centers of IT are creating wealth and integrating some sectors into the global economy, while millions remain marginalized and deprived of the most basic human needs. No developing country has benefited more from the digital revolution than India, and in no country is the digital divide wider and deeper. The G-8 summit in Okinawa in 2000 focused on the issue of digital divide and the Human Development Report (2001) of UNDP has its theme "making new technology work for human development". Whatever may be the case it is unambiguously clear that the digital divide is a real issue to contend with, and one must begin by trying to conceptualise its dimensions. While the numbers vary according to who is counting, the trends behind the access side of the digital divide debate are well known.

If rural India is to harness knowledge for development, it will have to do so with new strategies and different technologies, and by building on strengths it already

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has. Even if we were able to address the *digital divide* in terms of infrastructure roll-out, providing rural India with access to the Internet, this would not solve the problem. The information and communication possibilities offered by the Internet represent a necessary but not sufficient contribution to the problem of harnessing knowledge for rural development. As the debate is better understood, it is becoming clear that the essence of what is required is not technology, but relevant and meaningful content, digital or not. Escaping from poverty requires knowledge, and knowledge is transported in content. It is also becoming clear that the distribution systems for that content are most effective when building on the local information systems currently in use. While the Internet is one way knowledge can be accessed, it is not the only way. It is here that radio has shown strength in the past and, with the right strategies and policies, may play an essential role for the future.

Rural Radio

Rural Radio signifies a two-way process, which entails the exchange of views from various sources and the adaptation of media for use by the communities. It allows members of a community to gain access to information, education and entertainment and offers an opportunity for the community to participate actively in the media as planners, producers and performers. It is the means of expression of the community rather than for the community. It is different from urban radio in that it is directed specifically to rural people and to their information needs.

Community participation is a fundamental characteristic of rural radio - live public shows, village debates and participation in the actual management of the radio station are just a few examples. This approach empowers rural people to participate in the dialogue and decision - making processes essential for them to control their own economic, social and cultural environment and play an active part in development activities".

Apart from India's own experiences in rural broadcasting, many of these could also serve as models for similar initiatives in India outside the state framework, where they have been operated. The Supreme Court's reaffirmation in 1995 that the airwaves are public property has re-energized the movement towards a media based on community participation in a non-profit mode.

The Bangalore Declaration on Radio of September, 1996 has stressed how community radio would: "besides educating and entertaining people, connect people with people through participatory or circular communication, connect with organizations and communities, and finally, connect people with government and public service agencies".

The recent decision of the Government of India to auction FM radio frequencies in different parts of the country to the private sector has opened up the

available media space, but it does not address the issue of offering licenses to non-governmental, non-corporate community radio stations.

Various forms of Rural Radio

Before going into the details of various initiatives in India and what rural radio can offer for rural development, it would be appropriate to discuss various forms of rural radio. Rural radio may have many forms. It may be a radio station targeting a particular community operating in that community and managed by that community. It may be a radio broadcast specially made for a particular group of people, owned and controlled by them or a cassette based broadcast operated in a radio listener group.

Rural Radio in Agriculture and Rural Development

Rural development is clearly designed to increase production and raise productivity. Rural development recognises, however that improved food supply and nutrition together with basic services such as health and education can not only directly improve the physical well-being and quality of life of the rural poor, but also directly enhance their productivity and their ability to contribute to the national economy.

Rural development is participation of people in a mutual learning experience involving themselves, their local resources, external change agents and outside resources. People cannot be developed; they can only develop themselves by participation in decisions and cooperative activities, which affect their well-being. People are not being developed when they are herded like animals into new ventures.

It is evident that development implies change, and the first change that takes place is the attitude of the people who will be directly affected by the development i.e., the farmers and rural communities. In order to achieve this goal, there must be a fundamental change in the way farmers approach agriculture and the rate at which they adapt new technologies, husbandry and farming practices.

In order to achieve this change farmers and rural communities need to be informed on the importance of adapting these new practices. Attempts by extension workers through demonstration farms and working with communities have not been sufficient to bring about change in attitudes. Radio has often been used to complement the efforts of the extension workers. However the use of radio as a mass media has its limitations such as poor signals, limited reach in certain areas, top-down approach, limited airtime and inappropriate programming. This calls for a shift in the use of radio from mass media to community centred.

Rural radio encourages villagers to take an active part in the development

process or even better to take their own initiative to improve the living conditions in their communities. Since most farmers are illiterates, rural radio acts as a substitute for formal education. Rural radio enables communities to articulate their experiences and to critically examine issues and policies affecting their lives. For example a community can use the radio to highlight new agricultural policies which can be debated upon and discussed using the radio and immediate feedback can be given for relevant authorities to take action.

In cases where extension workers may not be able to reach, rural radio takes on that role. Here a community can be given a recording on cassette to substitute the extension worker who has not been able to reach that community.

Vital information for agricultural development can be passed on through the use of radio for example information on better farming methods, improved seeds, timely planting, agro-forestry, better harvesting methods, soil conservation, marketing, post harvest handling and diversification. Since rural radio targets a specific community, geographical area or interest, the language of choice can be used to ensure that the message is clearly understood. Therefore rural radio gives one the option of using the prevalent language.

Rural radio gives farmers an opportunity to interact with each other and other relevant authorities e.g. extension workers, crop and animal experts through formats like live talk shows; phone-in programmes and on location broadcasts.

Radio demystifies the scientific jargon. It is able to explain the research in simpler and ordinary language that people understand. Since rural radio is community based, it can be used to mobilise people towards community development work e.g. construction of valley dams, protected wells and immunisation of animals.

All the above can be arranged at the convenience of the farmer because he is involved in the planning and implementation of the radio programmes. The participatory nature of rural radio makes the community feels part and parcel of the programmes and first hand knowledge can be obtained from the community because of the proximity of the programs broadcast. The community easily identifies with the people in the programmes and is more likely to listen to them rather that to a distant broadcaster somewhere in the city who is not in close touch with them.

Rural Radio in Dissemination of Agricultural Research

There exists a gap between the agricultural researchers and the farm users. Farmers do not use a lot of findings from the research institutions and laboratories. Research information on improved seed varieties, better farming techniques, post-harvest handling and marketing are not used by farmers either because the

information did not reach them, or because the implementation of the received information is not clear. The gap between the researcher and the farmer is even wider in the rural areas; large distances separate researchers from rural farmers. Other barriers like language and diversity of cultures also come into play making it even more difficult for the research information to reach the intended audience.

Rural radio can be used to disseminate agricultural research in the following ways.

1. Research findings can be broadcast through radio to; Non-governmental organisations (NGOs) dealing in agriculture, Academic Institutions, Extension workers and Farmers.

2. Rural radio can make the link between researchers and extension workers by offering information on: where research can be obtained and used, how to pass it on to users etc.

3. Rural radio can be used to collect feedback from Communities. Farmers can give their responses to research through programmes and share their experiences on use of research .

4. Rural radio can air out farmers' views/recommendations on how to improve the research.

5. Communities can provide alternatives depending on their experiences.

6. Radio can also be used to announce processes of research and extension work: give venues for meetings with extension workers, advise on where to get inputs/services, advise on where to get technical support etc.

Rural Radio in Agricultural and Rural Development: Cases from India and Developing Countries

1. Community Radio – Voices

A Bangalore-based NGO, VOICES, has taken a leading role in advocating a legislation, which will pave the way for independent community broadcasting in India. These efforts received a major boost in February 1995, when the Supreme Court made a landmark judgment on broadcasting. The highest court of India declared that the airwaves should be regarded as "a public good". Thus, they should be subjected neither to a government monopoly, nor to exclusive use by commercial enterprises. The Supreme Court recommended that an independent, autonomous, public authority should be established to regulate the use of frequencies. VOICES received UNESCO support to introduce a regular community radio programme through the local AIR radio station.

2. Community Radio – Mana Radio

Mana Radio is a community radio station run by members of the women's Self Help Groups (SHG) in Orvakal village, Kurnool district, Andhra Pradesh, India. The SHG members actively involved in running the station are all from rural poor families, mostly Dalits and minorities. Many of these women have minimal education and have had no media production exposure whatsoever. They, however, are now capable of producing varied radio content. The women hope that the radio will help them better deal with the issues facing them and in spreading awareness. Realizing the role that Community Media can play in development, empowerment and the right to information, SERP (Society for Elimination of Rural Poverty) decided to setup community broadcast centers under the World Bank funded '*Velugu*' program. The women that make up the membership of Orvakal's Mandal Samakhya (MS) are very dynamic. Many of them have courageously battled their poverty situation to rise to a level of self-sustenance. They had all taken control of their lives in a less than conducive environment. Many had set the agenda for development by taking strong stands against the issues that were holding them back- viz., gender and caste discrimination, alcoholism, illiteracy, child-labour and debilitating poverty. It was only natural for them to move one step further and produce their own media rather than blindly consume everything that mainstream media pushes onto them. The programming is done in the local idiom, using local voices, artists, situations and images, making it more recognizable to the community. The local community identifies with this local flavour and is motivated to discuss the issues presented in the programs.

The topics the women plan to cover are diverse—education, gender and caste sensitization, agriculture, health, history and culture. And they plan to use various methods to convey their messages—documentaries, plays, songs, jokes, humour and interviews. Local happenings and news; localized news on health; local agricultural news and weather updates; local commodity prices; folk songs, myths, stories: commercial media broadcasters would never air this content, dealing specifically with a particular village. But all these topics would find a place on Mana Radio. The information, being region specific, would therefore be more reliable and accurate

3. Community Radio – Deccan Development Society

"Women speaking to women community radio" of Deccan Development Society (DDS) was supported with funds and technical expertise to establish a community radio station in Pashtapur, 100 kilometres south of Hyderabad. Deccan Development Society is an NGO entrusted with the implementation of the elements of UNESCO's Learning without Frontiers Programme and is expected to utilise the women managed community radio station to be a part of the LWF programme.

DDS has involved around 70 women organisations, most of which are organised by low caste *Dalit* women, in managing and production of programmes for this radio station. Currently the studio facilities are being used to produce and distribute audiocassettes on numerous issues related to women empowerment. However, the actual radio broadcasting at the station, in spite of its long time readiness to go on air has been hampered because the Central Government has not approved DDS request for a community broadcasting licence. The government is currently discussing the new broadcasting legislation under which it might be possible to issue a licence to Pashtapur Women's radio. Many global examples demonstrate the potential and viability of community radio.

The DDS project to establish a community radio is perfectly in accordance with the global recognition of the need to democratise the media of communication. The Milan Declaration on Communication and Human Rights passed at the 7th World Congress of the World Association of Community Radio Broadcasters held in Milan, Italy in 1998 called for International recognition of the community broadcasting sector as an essential form of public service broadcasting and a vital contributor to media pluralism and freedom of expression and information.

It is proposed to operationalise a low-cost radio station, subject to issuance of a license by the Government of India. The FM station is designed to work on the audiocassette technology. It has a 100 watts transmitter, which can reach a radius of 30 km. Once the station is in operation *dalit* women from 75 villages will own and operate it. They will bring their form and content into it and make it a tool for their communication with their communities as well as to reach out to the outside world. They have already recorded over 150 hours of programmes and are also editing them into one hour broadcast modules. Programming content of the station seeks to serve the information, education, and cultural needs of the region. Programmes would promote the Information specific to agricultural needs of semi-arid regions , Education and literacy – both formal and non-formal, Public health and hygiene, Environmental and ecological issues, Biodiversity and food security, Gender justice, Local/indigenous knowledge systems, Local cultures, with emphasis on the narrative traditions of song and drama etc.,

4. Community Radio – Kutch Mahila Vikas Sangathan (KMVS)

The radio serial Kunjal Paanje Kutchji (Sarus Crane of Kutch) produced by Kutch Mahila Vikas Sangathan (KMVS) has been awarded the Chameli Devi Jain Award 2000 by the Media Foundation in New Delhi on March 29, 2001.

The Centre for Educational Innovation, Indian Institute of Management, Ahmedabad, supported KMVS in conducting village-based surveys to assess the impact of the radio program on the ground. The first survey conducted three months after broadcast indicated

a dedicated listenership of 6%. After 10 months of broadcast, this figure had grown to 50% of surveyed Kutchis and 80% of the radio-owning population of Kutch. After completing 53 episodes in December 2000, KMVS continues its intervention in radio through a new bi-weekly 15-minute radio program called "Tu Jiyaro Ain" (Tu Zinda Hai!) in March 2001 in the aftermath of the earthquake, once again with the support of Drishti Media Collective. The program is in a magazine format, featuring a range of interviews, songs and profiles, and is conceived as a platform for the earthquake -affected to air and share their concerns about rehabilitation. For both these programs, broadcast from All India Radio-Bhuj, KMVS is financially supported by UNDP-GOI, including the cost of commercial airtime.

International Experiences and Next Generation of Radio

Pervasiveness, its local nature, the fact that it is an oral medium, and its ability to involve communities and individuals in an interactive communication process are the important characteristics contributing to radio's success as a medium for development. The Internet is also characterised by its interactivity, and, technically, its potential in this area is far greater than radio's. It is also a store of useful knowledge and among its 300 million pages there is a substantial amount of information relevant to development issues. However, in addition to the overwhelming problem of access that we have already looked at, the Internet faces hurdles related to languages, high functional illiteracy rates, lack of an interface with indigenous information systems, and a lack of local content or relevance. Over the past five years a number of experiments have initiated ways of blending independent local radio and the Internet. Many of these were presented and discussed at two seminars, one of Asian radio broadcasters held in Kuala Lumpur, Malaysia in September 1999, and the other of broadcasters from Latin America and the Caribbean, held in Florida, USA in September 2000.Similar projects have also been undertaken in Africa, North America and Europe. These experiments have taken three main forms:

1. Projects that use ICTs to support low-cost independent radio networks;
2. Projects that use radio stations as community intermediaries or gateways to the Internet;
3. Projects that use ICTs to facilitate communication between the local communities and emigrants.

There are a number of other Internet/radio networking projects in the world in different regions and with different objectives.

Kantor Berita Radio 68H

Kantor Berita Radio 68H is an Indonesian radio network that began in 1998 with the fall of the Suharto regime, which had banned independent news programs

and obliged the country's thousands of radio stations to carry an official newscast. Radio 68H uses the Internet to link radio stations scattered throughout Indonesia, a country of 200 million people living on more than 13,000 islands. The project distributes its material via email and a website. Unlike Pulsar, Radio 68H only distributes the complete audio files of its reports. The resultant file size exceeds the capacity of the Internet connections available to many stations, limiting the network's reach. To overcome this, Radio 68H is experimenting with satellite distribution of its service.

Banque de Programmes On-Line

An extension of Panos West Africa's Banque de Programmes, which distributes tapes of documentaries from West and Central Africa to one hundred stations across the continent, the Banque de Programmes On-Line (BDP On-line) exchanges programs between ten African stations via the Internet. As the programs are full audio, and thus very large files, the service has had a difficult time. However, as infrastructure and technology improve, and as a planned service becomes available on satellite, the BDP On-line will become more available to African broadcasters. The project is based at Panos West Africa office in Dakar and information is available at its website.

Inter World Radio

Started in August 2000 as a joint project of Panos (London) and One World, "the world's leading portal on global justice", InterWorld Radio commissions journalists to file reports on economics, the environment, science and technology, human rights and social change and makes them available via email or on the web. It produces both daily summaries of news stories and regular features. InterWorld Radio's programs are intended to be equally suitable for radio stations in the North and South, although unfortunately they are only available in English.

Technically, Inter World Radio tries to provide something for everyone. If you have a bad Internet connection, you can get daily text summaries of its programs by email. If you have a highspeed connection, you can download broadcast quality versions in either MP3 or RealAudio format, and if you just want to listen online, lower quality streaming audio is available, also in either MP3 or RealAudio format. With digital technology, offering a variety of formats takes very little time and effort and helps ensure a wider audience for the material.

Gateways

In the same way as a single cybercafe or telecentre with a few computers can be an efficient way of increasing the number of people connected, giving access to hundreds of people with only a few computers, a radio station with thousands of

listeners that makes active use of the Internet can address the problem of the digital divide with a tactic of digital multiplication, multiplying the impact of its Internet connection. The UNESCO-supported Kotmale Internet Project in Sri Lanka is one of the best-known examples of a radio station adopting the role of a gateway or community intermediary between its listeners and the Internet. The Internet Project has two main components: a community telecentre, using a dedicated line provided by the telecommunications regulatory body, and Radio Browsing, a daily two-hour radio program in which journalists take the Internet to the community by surfing the web in search of answers to listener queries. Sifting through the Internet's terabytes of data, Radio Browsing finds information that is useful to the communities and then interprets it - making useful information meaningful. It plays a role that is part search-engine, part librarian, part journalist and part translator (English is the language of the Internet, but not of most Sri Lankans). Another example of a station playing a gateway role is Radio Yungas, a rural station in Bolivia. The station has a daily program in which listeners send in their questions. The answers used to come from the 15 year-old encyclopaedias in the town library, but now they come from the Internet.

A Peruvian experiment is trying to do something similar in conditions where the stations do not have any access to the Internet or even to a telephone. The project is being coordinated by the Intermediate Technology Development Group (ITDG-Peru). Their local radio stations to ITDG's office in the provincial capital of Cajamarca via shortwave radio transceivers will relay questions from three communities. ITDG staff will provide the answers, using whatever sources they have available, including not only the Internet but also indigenous expertise and experience available in the communities. The answers will be sent back to the station and included in a database which will be regularly updated, and made available on the WWW and on CD Rom to the radio stations and other information centres in the communities that are equipped with computers. In this way the database will not only be a record of the questions and answers most sought out in the communities, but also a tool for collecting, ordering and sharing local knowledge. In March 2000 the Global Knowledge Partnership agreed to an "action agenda" which included a component linking radio and ICTs. Groups involved in this initiative include the UN system agencies (Economic Commission for Africa, International Telecommunications Union, UNDP, UNFPA and the World Bank), bilateral agencies (CIDA, IICD and IDRC) and international NGOs (AMARC, APC, Oneworld, ORBICOM and VITA). The FAO is also a member of this group and this International Farm Radio Workshop provides us with an excellent opportunity to move forward with this action agenda item. UNESCO was designated the "champion" agency for the GKP initiative and has begun working to promote community multimedia telecentres, along the models described above.

Constraints

Rural radio is expensive to manage. One must have enough finances to run this kind of community-based broadcasting because it involves dealing with people who may not have communication skills.

Another issue is the availability of radio sets. These may not be readily available to communities because of affordability. Translating messages into various languages is not an easy task. One needs to have people who are well versed in the language. Lack of collaboration between researchers, extension staff and communicators may hinder the smooth operation of rural radios.

The scientific jargon is sometimes very difficult to interpret. Most of the rural radio work done in the developing world is donor funded. So when the donor pulls out, there is a problem of sustaining the programme. It is time consuming especially when people who are working on the programme have no training in communication. A lot of training has to be undertaken especially for the radio listener ship clubs and this requires financial facilitation.

Conclusion

In the Indian context there have been a very limited number of initiatives to harness the potential of rural radio and to readily incorporate Information and Communication technologies in the Rural Radio system, as tried out by other countries. There may be several factors responsible for this. In this context, the Agricultural Extension system of the country needs to take stock of various international initiatives in this regard and should try to develop ways and means of harnessing Community based Rural Radio for sustainable agricultural development. Even if the policies of the government may not be congenial at the moment, the situation may be favourable in the near future, for the establishment of the local radio stations and the free broadcasting of farm related location specific information to the farming community. By that time, the Agricultural Extension system should develop an extension strategy to make use of the true potential of the Rural Farm Radios.

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