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TOWARDS A COOPERATIVE RURAL DEVELOPMENT INFORMATION NETWORK (COORDINET) IN INDIA

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ABSTRACT

The paper takes cognisance of the attempts made by the National Institute of Rural Development (NIRD), the apex research and training institution in rural development in India, to conceive a Cooperative Rural Development Information Network (COORDINET). The functions of the Network and how it can help in strengthening the development of skills, the design of appropriate of information products, exchange of information and document supply is described.

Keywords: Research institute; India; Information networks; Agricultural services; Library cooperation

INTRODUCTION

The Indian society is predominantly a rural society. Out of a total population of one billion, nearly 75% live in 567,000 villages. Again, 73% out of this rural population live in villages with a population of less than 1,000. The rural areas are characterised by limited land, poor infrastructure, such as irrigation, roads, communication systems, inadequate health, sanitation, drinking water facilities, high rate of illiteracy, and poverty. The government of India is spending enormous amounts through its Five-year plans on developmental activities. However, the 'India Rural Development Report of 1999', published by the National Institute of Rural Development, Hyderabad, India, (NIRD), indicated that 30 to 38% of the rural people (over 300 million) live below the poverty line.

As noted by Zijp (1994), economic poverty stems partly from information poverty, since development requires strengthening the infrastructure for harnessing physical resources, cultivating intellectual and creative resources like those that build human capital. The impact of inadequate information affects the entire rural development sector. Government agencies lack

information needed for the efficient distribution of agricultural products, for ensuring food security, for providing warning and protection against natural calamities such as flood and famine, and for managing natural resources. The World Bank (1996) defines information as an important production factor, and categorised with land, labour, capital and energy. Economic development is about information and knowledge, how to organise society to perform productive activities, and how to create a economic environment that is friendly to investment. Timely access to information is a crucial ingredient for the success of any development effort. Thus, economic development has to be a knowledge-based process.

DEVELOPMENT INFORMATION AGENCIES AND SYSTEM

Development literature encompasses several basic disciplines such as agriculture, education, public administration, economic development, sociology, health, and also several other inter-disciplinary subjects such as industry, employment, social welfare and communication. In order to have a documentation systems to control the literature that is emanating in the development science, it is essential to know the generators and development methods for re-processing and re-packing for effective dissemination. Development community (IDRC, 1975) consisting of planners, policy makers, researchers, trainers, functionaries, voluntary agencies and individuals are engaged in one or the other aspects of rural development in India. They either implement the programmes, monitor or study the viability of the projects or engage in a whole new kind of developmental strategy. The activities at various levels generate the data, which need systematic organisation to facilitate further development.

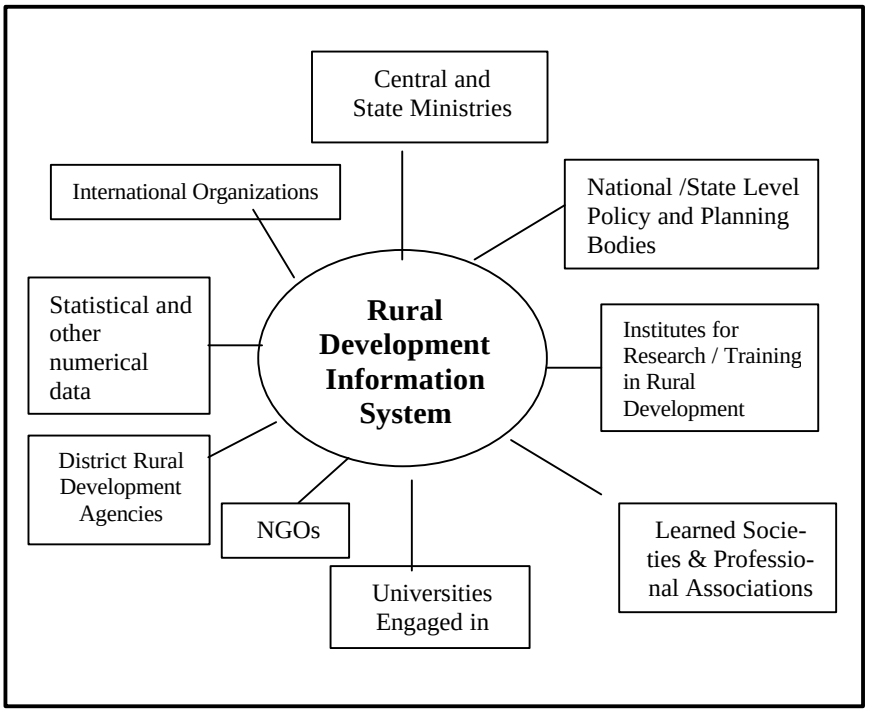
In the field of rural development, a number of institutions and organisations are trying to grapple with development oriented projects. It is necessary to pool together the nation-wide information resources to improve access and utilisation of available information at various levels. Figure 1 shows the existing information system and the types of organisations involved.

Need for Integration of Efforts

National Institute of Rural Development (NIRD), Hyderabad, is the apex research and training organisation in rural development in India. Since its inception in 1985, it has been working as a think tank for the Government of India, in policy formulations, modifications, monitoring and evaluation, through its research and consultancy programmes. It has developed into a unique centre of excellence with added responsibility for strengthening and supporting the state level rural development institutions (SIRDs), and extension training centres spread all over the country. At the same time it has

its information and publication programme, which generate a large amount of published and unpublished materials directly relevant to the rural development sector for the last forty years. It has a well-equipped computerised documentation centre which has a large database of books and journal articles (Annual Report, NIRD, 1996-97).

Figure 1: Rural Development Information System in India



Realising the importance of information, NIRD is attempting to coordinate the efforts of different organisations in the country to fulfill the information needs of various participants in development, mainly researchers, trainers and policy makers and planners of rural development programmes and projects. In this context, the present paper aims at describing the efforts of these institutions, in information generation and dissemination and to cater to the information needs of the clientele groups dispersed at various levels nationally, regionally and locally. Also it may be necessary to develop the networking capability among the existing numerical data centres and their functional relationships with technologies. To this end, there is a need for a national policy and a time-bound plan for putting a rural development information system in place (Raju, 1994).

Naturally, this type of large networks calls for a wide variety of cooperation in resource sharing; upgrades of knowledge and skills; and maintenance of reliable and responsive telecommunication networks. Recent Information policies and programmes of India, constituted in 1998, which aimed towards the establishment of computer communication systems as framed by the National Task Force on Information Technology have been encouraging. According to the Information Technology Action Plan proposed by the Task Force, there is a possibility of more sectoral, as well as spatial and subject-wise networks emerging to provide access to various databases that have been developed by research and training institutions all over India. The emergence of optical character recognition (OCR) devices for the conversion of paper-on-print into digitised texts, is an important development to beam these texts to different workstations through communication lines and satellite channels to users. Thus, the stage is set for digitized information dissemination in all phases of human knowledge and endeavour.

Networking

The system of information generation, collection collation and storage, dissemination and utilization, is often disorganised at all levels. There is a need for coordination between different information service systems so that information relevant to rural development can be obtained from a wide range of disciplines. Pooling of knowledge and dissemination of existing experiences in rural development may evolve to become a resource network. Since the seventies, attempts have been made to integrate the uncoordinated and loosely-knit information institutions in the country for the pooling and sharing of knowledge. As a result, information networks have emerged with varying structural patterns, differing focus and services. These networks articulate the needs of their members with help from a variety of institutions, such as libraries, documentation centres, databanks, information analysis centres, referral centres, clearinghouses, depositories, translation centres and host of similar institutional set-ups (Rajagopalan, 1983).

Why Networking?

The main uses of computer information networks in the academic field, include electronic mail, database generation and maintenance. According to Farrington (1991), the are four important reasons for networking are:

1) Timeliness: By publishing preliminary results and news of work in progress, stimulates communication among members;
2) Access : Networking provides much needed access to information on narrow subject areas in a digestible fashion;
3) Responsiveness: Members in a network contribute material for dissemination. This ‘demand push’ is refined periodically to suit the requirements of members. However, a network is only as good as its

members make it. They have to generate a 'demand pull' to which the network coordinator can respond; and

4) Grey literature: Networks that provide wider access to reports and literature produced for limited circulation, by many agencies within and outside the government.

Advancements in information generation, digitization, dissemination and transmission through communication channels and networking, are yet to make a mark in the rural development sector. There are attempts for resource sharing and cooperative library activity without any formal networking. More than 50% of these activities include reciprocal borrowing, inter-library loans, preparation of union lists, photocopying and reference work. The other areas such as cooperative development of resources, cooperative cataloguing, processing, and storage, are not favoured as they come under problem areas. These problems are associated with participation and networking activities and are classified under psychological, political, legal, financial, communication and planning. For greater participation, the network should provide equal status, sense of involvement, liberal communication and decentralised planning (Roger, 1981).

Network Development Plan

The knowledge workers and professionals in the library and information science and technologies, have to work together to make it easier to develop the community, and the integration of efforts at various levels with a goal to enhance the productivity of all concerned. A phased-wise action plan could perhaps be suggested for networking these institutions specially SIRDs with NIRD, to begin with. As NIRD and SIRDs have hierarchial relationship, a star network plan is proposed with connectivity to NICNET and Internet directly. NIRD would be assisting in all professional matters, skill development, database generation, maintenance, and providing other general guidance.

COORDINET

As most of the SIRDs have not yet introduced library automation, it would be difficult to envisage a network where each library is an independent entity. Instead the Cooperative Rural Development Information Network (COORDINET) is conceived as a network comprising a Central Coordinating Node (CCN) situated at NIRD and SIRD Library Nodes (SLN) installed at all the SIRDs in a phased programme. Other independent research and training institutions, universities, NGOs and others could also be drawn into the network for a more integrated system to disseminate rural development information.

SIRD Library Nodes (SLN)

The primary purpose of SLN is to provide access to the database of CCN through an online public access catalogue (OPAC) by linking to the CCN. The SLN should also gradually automate its collection and support circulation, serials control, acquisition and cataloguing eventually.

Central Coordinating Node (CCN)

The primary role of CCN is to provide several union databases to support the resource sharing and collection development programme of libraries in the network. The CCN may have to support shared cataloguing, inter-library loans, shared collection development and management. The CCN should house the available union catalogues, directories and specialised database (CD-ROM and other forms) for general use by partners in the network.

System Architecture and Protocols

Since the NICNET connectivity is being used by the participating institutions, there may not be difficulties in the system architecture and protocols. Ideally, the database available in CCN should perhaps be mounted on NICNET for all the participating institutions to operate OPAC and E-mail for communicating, operating the inter-library loan services, document copy requests and other related matters.

Operating Principles for the Networked Libraries

The networked libraries and institutions should adhere to the following operating principles:

a) Memorandum of Understanding on the use and exchange of data/ information
b) Responsibility for maintaining / updating the assigned database in the standard formats
c) Providing information on request to members in the network
d) Sending a copy of local database for purposes of maintaining central database
e) Reasonable pricing of selected services
f) Responding to queries within a reasonable time.

Functions of the Network

Essentially, the objective of any network is to establish better ways of improving the flow of information among the member institutions. To achieve the set goals, the following actions may have to be initiated after reaching an agreement, preferably with the heads of the participating organisations. The benefits of network participation must be stated in specific

terms, not vague and vapid. There are several services that can be initiated in a networked environment once a thorough understanding is established. They can range from mundane inter-library loans to sophisticated online reference services using the Internet.

a) NIRD should assist in retrospective conversion of database of SIRDs and make them computer-readable. NIRD should also bring them on a common platform of software;
b) Preparation of directory of ongoing research and training activities, of not only of SIRDs, but also that of other institutions in the field of rural development;
c) Annual list of research publications produced by members of the network
d) Union list of current journals received in SIRDs and others in the field of rural development;
e) Roster of Experts in Rural Development available in SIRDs and other organisations;
f) List of audio-visual software available with SIRDs; and
g) Document delivery requests should be dealt with expeditiously among participants on priority basis and at a cost determined by the institute delivering the copy.

Network for Rural Development

A Satellite-based communication networking for rural development operations spread across the country has been mooted in the draft report of the Information Technology Plan for the Ministry of Rural Development for the Ninth Five Year Plan (1997-2002).

In the Rural Development sector, the report indicated that there is great demand for online communications; continuous training for multiple level of target audience such as Panchayat level training of grassroots functionaries, block-level workers, district and state-level officers in order to maintain uniformity in terms of awareness, understanding and implementation of programmes. It is felt that there is a strong need for rural technology database.

The latest advances in the Information Technology such as web technology, interactive multimedia, video conferencing, information clearinghouses, could provide a complete solution for training purposes in a cost-effective manner.

The GIS (Geographhic Information System) and GPS (Global Positioning Systems) applications are emerging as major tools for regional planning. In order to derive full benefit from remote-sensing data, weather and calamity predictions, it is of utmost importance for rural development planning to

employ these technologies. In India, wasteland development, watershed management, crop planning, utility mapping are beginning to gain due importance. The GIS database for regional planning purposes could be designed and developed based on area mapping and made available for planners, implementors, executives and other users.

Rural Development Information Network is required to be developed as a computer communication network connecting all the institutes of Rural Development and others. This high speed network could be used for disseminating information regarding training schedule, and research findings on rural development. Video conferencing facility could be established in a few states for regular monitoring of progress, conducting seminars, without the need to move from the workplace. Agricultural Marketing Intelligence and Communication Network is to be developed to connect all the agricultural products' market centres.

Suggestions

In order to provide proper guidance to the network, a Steering Committee for COORDINET may have to be constituted with representatives from the Ministry of Rural Development, NIC, Planning Commission and Experts from NIRD, SIRDs, Distance Education and other rural development specialists.

For comprehensive collection of literature, especially grey literature, regional and local focal points are to be identified to make those responsible to feed the SIRD library nodes (SLNs) with nascent literature. The hardware, software needs of the focal points and SLNs are to be periodically monitored. It is also necessary to develop state-of-the-art network communication for transferring documents in virtual, digital and analogue formats.

An exclusive website for COORDINET may have to be created for web publishing and for more visibility and accessibility. Simultaneously, user interaction programmes, training in updating of skills of the staff of participating institutions are to be held regularly.

Document supply, marketing of the information products and services at all nodes, have to be given adequate attention for wider dissemination of information through the network.

It is strongly recommended that the other activities that can be taken up later can also be discussed by having a periodic consultative meeting of the network members at least once a year. This will provide an opportunity to

exchange ideas, appreciate the problems faced, if any, the solutions that can be effected with the advice of the other partners.

As a caution, it can be said that definite attention has to be given to the role of network, coupled with an overall institutional strategy. Planning for network involvement cannot be treated as a phantasmagoria about tomorrow. Network will enhance the possibility of having a secure future for one's institution and library if they are planned for in a rational, analytical manner. Thus, through systematic planning and the integration of a network's contributions towards the attainment of the library's and its institution's goals/objectives, a "win-win" situation will prevail (Riggs, 1987).

CONCLUSION

The role of information and documentation centres as a part of the total delivery system cannot be over emphasised. It is also necessary to prepare the library staff through appropriate training. The great libraries of the future will not be those with great collections but with good staff – because knowledge must be rediscovered in the library before it is used. Rediscovery may be as important as the creation of knowledge itself in view of the developments in information technologies that are taking place continuously (Lowry, 1991).

There is no alternative for the institutions that are engaged in research and training as well as generating information on rural development but to come together under a formalised network in order to develop strategies for effective communication, resource sharing and information dissemination.

Networks highlight the visibility of neglected problems and make them acutely felt, thereby, opening up options for defining, exploring new areas of knowledge. Networks demand trust, which includes ability to interact with co-members and huge information generated by others known and unknown, but mediated technologically. The network design proposed here is likely to integrate already existing linkages in a formal manner and enhance the combined effect in information sharing among the development community. It is hoped that this challenge of bringing together institutions and individuals using the information technologies be viewed as an opportunity to respond effectively to the demands of the rural development sector.

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