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## **SUCCESS STORIES OF RURAL ICTs IN A DEVELOPING COUNTRY**

Report of the PANAsia Telecenter Learning & Evaluation Group's Mission to India,  
involving visits to the Foundation of Occupational Development and the  
M.S. Swaminathan Research Foundation  
November 1999

### **EXECUTIVE SUMMARY**

This report presents the findings of the PANAsia Telecenter Learning & Evaluation Group's Mission to India during November 1999. The purpose of the mission was to perform a comparison and evaluation of the projects being undertaken by each member of the group in respect of the installation and operation of rural telecentres. Given the differing stages of implementation of each project being undertaken by each member of the group as well as the more advanced stage of the two sites visited in India, the mission took the form of a learning evaluation of the Indian sites.

Prior to the mission, it was decided that the group would focus on stories from the telecentre users and operators. Stories, whilst anecdotal, offer a rich picture of the impact of ICT interventions in local, complex and dynamic social settings. They are accessible and verifiable during short visits and they acknowledge the often indirect influence that development interventions have on the behaviour of their beneficiaries. Moreover, stories as evaluation concede that the benefits of telecentre activities are often detectable only after they have been installed, contrary to traditional approaches to information systems, in which expected benefits are usually specified before the technology is installed.

During visits to five village telecentres, one of which acts as an information hub for others, plus one other centre of operations, over a period of 4 days, the mission identified 24 separate success stories. Each story is specific to and reflective of the needs at a particular time of the community in which it was discovered. Each owes its outcome to the sensitive and timely delivery of useful information that contributed to local knowledge which facilitated something desirable for the recipient. The information became available as a direct result of the telecentre. The report describes each story and concludes with some observations regarding the applicability of telecentres to the problems of rural development, the conditions under which desirable consequences can be experienced, and some implications for future research and development. The report concludes with some lessons learned by the Group regarding telecentres for rural development, telecentre evaluation, research conduct, replicability of successes and future studies.

### **INTRODUCTION**

The PANAsia Telecentre Learning and Evaluation Group (PANTLEG) came together at a Telecentre Evaluation Workshop organised by the IDRC in September 1999 in Val Morin, Quebec, Canada. At the meeting, it was agreed that the group would conduct a learning and evaluation mission to study the two Indian IDRC projects with the purpose of:

- Implementing the lessons learned from the Telecentre Evaluation Workshop held in Val Morin.
- Critically comparing the design, implementation, operation and results of each other's telecentre projects.
- Sharing the results of the mission for the team's mutual benefit.
- Preparing a submission to the Global Knowledge II conference in Kuala Lumpur, Malaysia in March 2000.

Representing the PANAsian IDRC-supported projects that involve the establishment and operation of telecentres, the group consists of:

Renald LaFonde	IDRC, Canada
Bo Goransson	IDRC, Canada
Merlita Opena	Philippine Council for Health Research and Development
Narangerel Dander	DataCom, Mongolia.
V. Balaji	MS Swaminathan Research Centre, Madras (MSSRF)
Loyola Joseph	Foundation of Occupational Development, Madras (FOOD)
Roger Harris	Universiti Malaysia Sarawak

Prior to embarking on the mission, the group agreed on a modus operandi for performing its task. Given the limited time available for the study, which ruled out extensive gathering of data, the group agreed to focus attention on two aspects of telecentre evaluation. Firstly, the group interviewed users of the telecentres in order to discover a range of typical stories that described instances of telecentre use which were perceived by the users to have led to successful outcomes. Secondly, the group interviewed the telecentre operators in order to discover any success stories concerning operational problems, and the means that were used to overcome them. A debriefing session at the end of the mission summarised the group's experiences. This report briefly describes the organisations visited and their activities and describes each of the success stories discovered by the group. The report concludes with some reflections on the value of the mission and the lessons learned by the group. It offers some observations with regard to the conduct of research into rural ICTs and it presents some suggestions for extending the deliberations of the group for further studies in support of the PANAsia telecentre projects.

The Group assembled in Madras, India on November 24<sup>th</sup> 1999, and followed the following programme:

November 25 <sup>th</sup>	Tour of MSSRF	Madras
	Visit and discussions at FOOD	Madras
	Visit Thandarai – FOOD	Madras
November 26 <sup>th</sup>	Visit Villianur Telecentre – MSSRF	Pondicherry
	Visit Veerampattinam Telecentre – MSSRF	Pondicherry
November 27 <sup>th</sup>	Visit Kizhur Telecentre – MSSRF	Pondicherry
	Visit Embalam Telecentre – MSSRF	Pondicherry
November 28 <sup>th</sup>	Debriefing – success stories and lessons.	Pondicherry

### **MS Swaminathan Research Foundation (MSSRF)**

MSSRF was established in 1988 as a non-profit trust committed to harnessing science and technology for environmentally sustainable and socially equitable development. With more than 150 full-time scientific and support staff, the Centre has implemented a variety of programmes in coastal systems, biodiversity and biotechnology, ecotechnology and sustainable agriculture, education, communication, training and capacity building. The Centre has implemented a project involving a number of telecentres in rural Pondicherry in order to establish the impact of information technology in rural areas. The project has the following objectives:

- To set up six Village Information Shops that will enable rural families to access a basket of information using modern communication technologies.
- To train educated youth, especially women, in rural areas to operate Information Shops.
- To train rural youth to organise and maintain a system that generates locally relevant information from generic information
- To maintain, update and disseminate information on entitlements to rural families using an appropriate blend of channels.

At the time of the PANTLEG mission, MSSRF was operating four Village Information Shops and one Value Addition Centre, which acts as a hub for the others. The Value Addition Centre has dial-up accounts to two Internet Service Providers (ISPs); the Village Information Shops have off-line wireless access to e-mail and the World Wide Web, via the Value Addition Centre. Population figures for the locations visited are as follows:

<b>Village</b>	<b>Population</b>	
Kizhur	125	
Veerampattinam	706	
Embalam	395	
Villanur	18074	(The Value Addition Centre)

During 1999, usage of the village telecentres was as follows:

<b>Type of use</b>	<b>%</b>
Agricultural and fisheries	5
Educational	12
Employment and training	7
Health	3
Government and entitlements	45
Personal telephone calls	25
Programme related telephone calls	3
	100

From data maintained by the operators, the information shops averaged around 150 visits from users per month. Around 16% of these were women and nearly 3% were illiterate, whilst 18% were from families classed as asset-less and 7% were children below age 14. Users are charged one rupee if their enquiry involves a local call. If their enquiry only involves an access to locally held information, they are not charged anything.

#### **Foundation of Occupational Development (FOOD)**

FOOD is an NGO that has evolved over 20 years, creating opportunities for employment and enterprise development. Over the past four years, FOOD has taken on the role of a value-added ISP by establishing electronic networks in remote sites to enable other NGOs and community-based organisations working in remote, rural and tribal areas to network with like minded organisations within the region and with national and international NGOs and partner organisations. The objectives of the networking project are:

- Networking of development agencies in remote areas with limited or no access to electronic

communications, thus facilitating communities to improve their quality of life for equitable and sustainable development.

- To promote collaboration in research and development through information access.
- To facilitate use and exchange of information through electronic communications and access to databases and databanks to enable NGOs and institutions to share knowledge.
- To offer e-mail, bulletin board and conferencing facilities.
- To concentrate on networking content for sharing and providing support for regional internet information hosting in support of distribution and utilisation of information arising from research carried out in the region.
- To involve experimentation, pilot studies and other practical networking activities using wireless technology that could create replicable results and have useful application throughout the region.

FOOD operates a 64kbps host connection to India's primary ISP, VSNL. Fourteen sub-hosts have been connected to the FOOD host and these are provided with technical and content support by FOOD's 7 staff. Each sub-host has between 100 and 300 users, which are mostly NGOs. Eleven individual telecentres have been created within this network. FOOD provides the sub hosts computers and communications equipment until they become self-supporting, which requires around 100 users, and it trains the sub host staff as well as promoting the use of networks in the sub host's region and providing day-to-day support for the operations.

## **SUCCESS STORIES**

### **IndiaShop**

FOOD has established an on-line supermarket that specialises in the sale of local products made by village crafts people. The FOOD staff advise producers on marketing, pricing and packaging and, so far, around 100 cottage industries are preparing to participate in this electronic market. The organisation is also experimenting with the concept of tele-marketing using the internet to bring IndiaShop to the notice of potential customers. Purchases are transacted through major credit card companies. A novel means of rewarding tele-marketeers that is being tested is to share with them the commission that the credit card companies charge. Tele-marketeers can operate from their own computers, and in their own time. The ordering system tracks the source of the order so that commissions are correctly assigned. Shortly after launching the service one village producer in a village called Kancheepuram sold a hand-embroidered silk sari which she had spent 60 days working on for US\$1,100, far more than she would have earned by selling it to a shop in Madras. IndiaShop offers market outlets for indigenous craftspeople as well as marketing opportunities for marketeers who can work from any networked computer.

### **Education Software**

FOOD has developed software for use by a teacher of a class of students learning the English language. The software teaches pronunciation by depicting letters of the alphabet whilst simultaneously playing back its correct pronunciation recorded by a native English speaker. English, which is highly regarded for job advancement, is rarely learned from a native speaker in India, leading to poor pronunciation. The software does not assume an individual user, but supports the teacher in class mode, enabling large numbers of students to benefit in a single sitting. It lessens the tedium for the teacher in the repetitive coaching necessary for correct pronunciation, whilst increasing the quality of the learning experience. The application has potential anywhere English is taught and where there is access to a multimedia computer.

### **Internet Kiosk**

The Internet Kiosk concept is brokered by FOOD as a means of making e-mail available to anyone. Any individual can visit a kiosk, which is fitted with a telephone, and dictate an e-mail message and the address over the phone to the nearest telecentre. In some cases, voice mail is used by the telecentre in order to provide a 24-hour service. The kiosk operator charges a fee, usually around one rupee, and makes a profit

on each message. The telecentre charges the kiosk and also dictates incoming e-mail messages back to the kiosk operator, who, in some cases, writes it out and delivers it to the receiver. E-mail is therefore available to anyone with access to an internet kiosk, and small operators can enter the telecentre business with a minimum investment. When the scheme began, around 50 telephone booth operators enrolled in it. However, the end-users seemed to find it difficult to adapt to voicing an e-mail message on a telephone. Many operators perceived that the users felt that it was not e-mail if there was no computer visible to them in the process. Consequently, traffic volumes did not achieve expectations, and of the 50 original subscribers, around 10 remain in the scheme, servicing only a handful of messages weekly. Despite these difficulties, the scheme is included here as a partial success with the apparent lesson that human factors play a critical role in technology adoption. The approach to diffusing access to ICTs still seems to carry potential if these factors can be successfully addressed.

### **Herb Gathering and Cultivation**

The village of Thandarai in the Union Territory of Pondicherry formerly earned a living from the collection of snakes in the surrounding bush country and the sale of their skins. Environmentalists were alerted to the possible extinction of the local snake species. A UK NGO, Womankind Worldwide, discovered that the village inhabitants had considerable knowledge of the local herbs; one shepherd youngster could identify 360 separate species of herbs and knew how to use them to treat the sheep for a variety of ailments. The village established a telecentre and, with connectivity support from FOOD, used it to learn how to package and market the herbs that they found in the surrounding countryside. The village now has several buildings that contain the telecentre with a prodigious library on herbs and a burgeoning herbal processing centre. Around 300 women from the surrounding district are engaged in the herb preparation process, and there is a concerted effort under way to record the local knowledge about herbs, from which a book is being planned. The telecentre service was instrumental in sensitising the villagers to the value of their knowledge and in stimulating them towards using it as a means of obtaining their livelihood.

### **Value Addition Services**

Both FOOD and MSSRF acknowledge that the mere provision of connectivity is insufficient in delivering informational benefits to their rural clients. Both organisations have instituted formal mechanisms for adding value to the connectivity they provide for pro-actively searching for useful information and delivering it to users in a useable format. FOOD's IndiaShop and Internet kiosks are examples where the connectivity provider has developed content. The provision of operator training and technical support also adds value to the connectivity. At MSSRF, one of the telecentres, at Villianur, acts as a Value Addition Centre. In this capacity, it serves as the informational hub for, currently, four other telecentres. In this way, costs were reduced by avoiding the provision of full Internet access to all the centres. Information needs are identified at each centre and transmitted to Villianur via e-mail across the wireless network. The staff at the Villianur centre then track down the required information and transmit it back to the centres by e-mail and e-mail attachments, which are sometimes in the form of digitised audio voice messages. Standard information requirements are despatched in the form of a newsletter or as voice messages that are compiled and transmitted daily. Results of requests for information from one centre are often propagated to useful effect back to all the centres. The "hub-and-spoke" mode of operation for the MSSRF centres provides mutual support and learning opportunities as well as fostering partnerships with information brokers, both researchers and project staff, who act in a creative and pro-active manner in developing information channels that can deliver benefits to their rural clients.

### **Local Language**

A major contributory factor to all operations at the MSSRF telecentres is the use of Tamil language and Tamil script in the computers. Despite their being no standard for the representation of Tamil in software, the project staff have been able to develop the use of standard Microsoft Office applications in Tamil script. Moreover, the applications are operated in Tamil using a western, Roman script QWERTY

keyboard. The operators have learned the appropriate keyboard codes for the Tamil characters and are quite proficient at data entry. Beyond the entry of data, it cannot be underestimated the extent to which the use of Tamil language has promoted the use of the telecentres and fostered interactivity and engagement between the various information systems that are available and their intended beneficiaries.

### **Sea Conditions**

The MSSRF Value Addition Centre at Villianur delivers daily images obtained from a web site run by the US Navy of the predicted wave conditions in the Bay of Bengal to the centre at Veerampattinam. The villagers there are fisher folk, and the sea conditions are of crucial interest for their safety. The information is so critical that it is transmitted verbally across a public address system from loud speakers on the roof of the centre to the fishermen as they are preparing their boats in the early morning. "It saves lives" said one respondent when asked about its usefulness.

### **Fish Finding**

Similar to the sea conditions, the fishermen at Veerampattinam have been able to locate a source of information that informs them of the whereabouts of the shoals of fish that they seek. The information is fresh enough to be useful to help them in their daily fishing expeditions.

### **Fishermen's Housing Loans**

One of the tasks of the MSSRF Value Addition Centre is to seek out and publicise the various entitlements for which community members may be qualified to obtain. Over 100 such entitlements have been identified so far and it has become a highly complex task for individual families to understand what they entitled to and how to go about obtaining the benefit. One such entitlement of particular interest to the villagers at Veerampattinam is the Fishermen's Housing Loan, a government-subsidised scheme for providing low cost loans to fishermen for the purpose of buying or constructing a home. Prior to the advent of the telecentre, nobody in the village had any knowledge that the scheme existed. Now, nearly every fisherman in the village has benefited from the scheme.

### **Notebook Charity Scheme**

The school at Veerampattinam was able to make contact with a charity scheme whereby 180 notebooks were provided free to students.

### **Bus Trip Planning**

A regular source of useful information is the schedules of the many bus services that operate in the districts in and around Madras and Pondicherry. Village travellers find that they are able to plan their journeys, often involving several connections with overnight stays, so that they are able to reduce the time spent waiting to catch connecting services. It is the nature of low-income rural households that time lost usually equates with lost income, or the accumulation of duties that have to be performed at a later stage. As for any busy working person, saving time represents a real benefit.

### **Cataract Operation**

The MSSRF telecentre at Kizhur discovered a health camp, a scheme for free medical treatment, at a hospital more than 400 kilometres distant. The camp was offering, for a limited period, free cataract operations. Several people in the villages with telecentres applied and were given operations.

### **Incense Manufacture**

A group of ladies in Kizhur village decided they wanted to start a small business enterprise manufacturing incense sticks. They began as sub-contractors but their confidence and enterprise grew as a result of utilising the telecentre. As a result of some searches by the telecentre operators, they were able to develop the necessary skills for packaging and marketing their own brand name incense. The ladies were quickly able to develop local outlets for their products and they are confidently using the telecentre to seek out more distant customers. The telecentre facilitates small entrepreneurial activity and mobilises latent

productive capacity among women who live in a culture that has traditionally tended to marginalise them.

### **School Exam Results**

The schools in and around Pondicherry release their exam results shortly after they become available, but it takes the local newspapers up to two weeks to publish them. The Value Added Centre has been able to obtain the results and it transmits them to the village telecentres within 24-hours of release. Parents and pupils queue for several hours at the telecentres to receive the results, something they are prepared to do in preference to waiting for the newspapers. This type of social benefit would probably not register in most contemporary designs of benefit measure, focussing as they do on economic returns, yet the willingness to queue for the results testifies to its desirability.

### **Procurement of Quality Seeds**

Like all farmers, the villagers served by the MSSRF telecentres require high quality seeds for the fruits of their efforts to achieve their maximum potential. The telecentre at Kizhur performs an important function in locating suitable sources of quality seeds and ensuring adequate supplies for the farmers at the time when they need them. Prior to the installation of the telecentre, securing an adequate and timely supply of quality seeds was a highly unreliable process, and it led to significant variations and uncertainties in the crop levels. The telecentre therefore contributes to food security.

### **Veterinary Services**

Access to health care works for animals as well as people. One farmer discovered late at night that his cow was seriously ill. It seemed that if the cow didn't receive treatment within a few hours, it would most probably die. The farmer was able to summon help from the telecentre staff who searched their networked information sources for a veterinary surgeon who would be close enough to apply treatment within a short time. The surgeon was contacted by telephone and he arrived in time to save the cow.

### **Grain Prices**

In the village of Embalam, local farmers are able to obtain the market prices for their produce on a daily basis from the village telecentre. There are two prices to obtain; one from the government market, which fluctuates little, and another from the private market, which tends to swing much more. Consequently, there is considerable benefit from choosing which market to deliver produce to and in monitoring the differences between the two prices on daily basis. The farmers consistently obtain the best possible price for their produce.

### **Doctor Appointments**

Visiting distant doctors for rural dwellers usually involves long journeys and long waits on arrival, with resultant loss of productive capacity. Using the services of the telecentre, villagers are now able to book appointments with doctors and therefore they can save much of this wasted time.

### **Private Tuition**

At the Embalam village telecentre, an enterprising local school teacher has started using the computer facilities to provide additional after-hours tutoring for local school children, a service for which he charges. Considering the service a community benefit, the telecentre manager initially allowed the teacher to use the computers free of charge, but seeing that the teacher was profiting from the service, whilst the children had to pay, the manager decided to start charging the teacher provided he reduced the charge to the children. Thus, both the teacher and the telecentre benefited and the children enjoyed the value of the extra tuition.

### **Insurance**

Through the information services of the telecentre, villagers discovered a national life insurance scheme



that is subsidised by the government and operated by a local insurance agent. The agent had done little to publicise the scheme and the villagers did not know whom to approach. The telecentre network was mobilised to obtain further information regarding the entitlements and the name of the agent. As a result, the villagers were able to approach him directly with sufficient confidence to enable them to make their applications and to receive their entitled insurance policies. Furthermore, the local telecentre operator devised and implemented a database that generates a premium renewal advice for every household covered by the scheme and this is used to ensure that no insurance policy lapses for the want of a late renewal payment. The policy is so advantageous to the village folk that every household in Embalam village has taken one out and they are confident that their coverage will be continuous and that premiums will be renewed in time.

### **Employment Opportunities**

An agricultural processing factory about five kilometres from Embalam was recruiting and one of the telecentre volunteers heard about it. As the factory was seeking women applicants, and the volunteer was a woman, she was keen to bring the employment opportunities to women in her village. She therefore distributed the information via the telecentre network. The factory was able to fill its vacancies much quicker than expected and henceforth, on hearing about the telecentre network, the factory has decided to use it as their channel of first choice to obtain local labour. Such a partnership represents a win-win situation with benefits accruing to both parties. The factory accesses a steady supplier of labour quickly and cheaply, and the villagers get first look-in when job vacancies arise.

### **Savings Co-operative**

Village women learned about the concept of savings co-operatives through their interactions with the telecentre information sources. In India, savings co-operatives are a popular means of obtaining loans for people who would not normally qualify for a loan from a bank. The co-operatives work by members making regular payments to the scheme, and then borrowing money from it when the need arises. Members are allowed to draw a loan that exceeds the value of their contributions, and new members can borrow even before they have commenced payments. The popularity of the scheme is derived in part by the support they receive from the government. Under certain qualifying conditions, registered savings co-operatives are entitled to receive government loans at interest rates well below prevailing market rates. Local banks are required by law to provide banking facilities to registered savings co-operatives. Having discovered the scheme through the telecentre, the village women in Embalam formed a co-operative and they use the telecentre computers to administer the accounts. One of the telecentre operators, a woman, acts as the co-operative treasurer and secretary, utilising the telecentre facilities.

### **Herbal Remedies**

Villagers in the MSSRF study area, as in most rural communities throughout the developing world, possess considerable knowledge about herbal remedies that can be derived from the herbs to which they have local access. One of the telecentre initiatives is directed towards building a database of such remedies, recording the characteristics of the plant, methods for collecting the herbs, techniques for preparing the remedy, applicability and dosages. The database, which is accessible by other villages, is seen as a valuable resource for several reasons. Firstly, it can be consulted by anyone with the need of a remedy for which a known herbal treatment is available. Secondly, it is a means for recording indigenous knowledge which is held in many cases by old people, and which can therefore be recorded before it is lost. Thirdly, recording such knowledge has been demonstrated to be an effective weapon to fight against the usurping of local knowledge by foreign interests who attempt to patent the crucial ingredients of indigenous bio-resources in their own country. In one instance, some non-resident Indian chemists in the USA attempted to patent the specific ingredients of a strain of coriander that was well known by local people living in the area from which the herb was taken. Sympathetic lawyers challenged the patent, citing the local knowledge, which had been recorded, and were successful in having it revoked. Villagers in the MSSRF study area are highly sensitised to the possibility of such plundering of local resources by foreigners, and they are highly motivated to use whatever means are available to them to protect what they

consider to be theirs.

### **Operations Staff**

The final success story relates to telecentre operations staff in the MSSRF telecentres. A variety of factors accumulate to render an impressive profile of an efficient and effective workforce. Firstly, the operators are unpaid volunteers yet they display considerable dedication, skill and enthusiasm as well as empathy with the telecentre users and objectives. Telecentre service is maintained through long hours during every working day and staff diligently keep logs of every user request and almost every other event. The educational level of the staff is generally modest, most having attained lower to middle secondary schooling. Nevertheless, it is evident that they possess considerable IT literacy, not to say information fluency, in the ease with which they are able to build web sites, manipulate e-mail and multimedia and other common software packages. An additional characteristic of the operators, which has relevance in the local context, is that they are mostly women. One of the telecentres is operated entirely by women. A secondary effect of this gender bias is that women, who are traditionally marginalised in much of Indian culture, find confidence when they need to use the telecentres by not having to work with men. This confidence factor is amplified for the operators themselves, who seem to acquire a substantial elevation in their status through their position. Yet another apparent effect is the increased number of health-related enquiries that the telecentre receives when women operate it. This observation prompted one centre to alternate women operators with men, morning and afternoon, which increased the volume of health related enquiries.

## **DISCUSSION**

The PANTLEG mission was tasked with evaluating the telecentres that it visited. As an intermediate task, it was decided that the Group should summarise its encounters with the telecentres for each of the project organisers, FOOD and MSSRF. These summaries were presented verbally to representatives of each organisation at the end of the mission, and they are outlined in the following sections.

### **FOOD**

The Group characterised the Foundation for Occupational Development as a Value-Added ISP. It sub-leases internet access to qualifying organisations and assists those organisations in making effective use of it, in ways that are consistent with FOOD's development philosophy. The concept appears as a novel form of NGO in the field of communications for development and it is differentiated from both ISPs and from cybercafes by the value-added component. The implementation of the concept is to be complimented, demonstrating as it does, considerable creativity and flare as well as managerial and technical acumen.

One aspect of merit is that FOOD's operations have built-in sustainability, due, probably to the entrepreneurial approach adopted by the organisation. The Group characterised the head of FOOD as a "venture socialist", as a way of describing the organisation's business-like approach to its mission of creating employment opportunities through the inventive deployment of contemporary ICTs among communities that possess few other technologies. It was evident to the Group that the personal relationships that had been engendered between FOOD and its clients contributed significantly to the capacity building and the sustainability of their operations. The Group felt that it had come upon a rare example of sustainable development communications that offered a model capable of being replicated in other, and wider, contexts.

As a caveat to the foregoing, the Group observed that the creative dynamism of FOOD's founder, as well as the uncommon combination of technical savvy and proactive flare in the creation of content, might generate problems of succession in FOOD itself, and that it also represented a challenge to replication efforts. Such individuals are hard to come by; presenting something of a threat to efforts aimed at promoting a wider model of implementing development communications. A final caution relates to the

coming direction of technological development, which of course undermines all ICT implementations. Much of what FOOD represents technologically and financially has been carefully crafted around a specific set of communications technologies and regulations. Significant changes to both are foreseeable, yet the direction of such change is highly uncertain. How FOOD is likely to be affected by such changes will remain unclear until they occur and the organisation remains vulnerable as a result of such uncertainty.

### **MSSRF**

In response to a direct request, the Group's evaluation addressed the section of the MSSRF project proposal that related to impact assessment. Given the genesis of the mission, this seemed wholly appropriate in order to provide a forum in which Group members could apply the learning received at the Val Morin event as well as carrying forward their combined experiences into their own projects. The first observation with regard to the MSSRF's project proposal related to the somewhat deterministic nature of the expected impact of the telecentres. This was manifested by the proposal to perform base-line surveys of key indicators and to repeat these at regular intervals during the period of telecentre operation in order to detect improvements and to attribute them to the telecentres. The Group now understands that the assessment of impacts and benefits in this field of work is not that straightforward. The focus on stories seems to have spawned a much richer picture than might be forthcoming from surveys. The Group tentatively suggests that it seems possible that many of the benefits that are depicted by the stories could be missed by the surveys that are implied by the project proposal. That is not to suggest that the surveys have no value, rather that their value may lie in other directions, for example, identifying some information needs. Whilst acknowledging the generally received wisdom of before-and-after surveys, the Group tentatively proposes augmenting them with other, less deterministic, measures of impact.

Two further observations are offered with regard to surveys. Firstly, once a base-line survey has been conducted, the Group felt that it would be worthwhile to question whether subsequent surveys would add value to the initial data in a cost-effective manner. Before-and-after surveys usually gather the same data, when used in the sense of testing the effect of an experiment, yet it seems that, as with most implementations of information systems, the system itself changes the nature of the experiment and shifts the focus of the research question. Consequently, before-and-after surveys that have a rigid design run the risk of suffering from diminishing worth as the experiment proceeds. Accordingly, it might be more productive to evaluate the impact of the telecentres by assessing the original expectations and the baseline survey data against the newer success stories outlined here, and by devising fresh enquiries to further augment the stories with new empirical data.

Such an approach seems to embody the principles of action research by acknowledging the influence that the researchers' actions have upon the original research question and by adapting the research accordingly through successive iterations of action and reflection. One line of enquiry that the Group suggested, which might enrich the assessment of the telecentres' impact, could relate to something we might label as the users' "well-being", as a distinctive construct that goes beyond most of the economic benefits that surveys tend to concentrate on. An example from the stories could be the exam results, which of themselves have little economic value, but which clearly contribute to well-being as the villagers are prepared to queue up at the telecentre in order to get them as soon as possible.

A second, less problematic, observation with regard to surveys is the implication in the MSSRF project proposal that changes in attitudes are non-quantifiable. In fact, there are many tried and tested instruments to measure attitudes and to quantify them, and it is probably feasible to apply them to the issues outlined in the proposal.

Another aspect of the project proposal that the Group was asked to address is raised by the project's expected outcome. The proposal lists a number of outcomes, such as improved expenditure of targeted public funds, increased exposure of rural youth to computers, increase in awareness among youth through

multimedia training (sic), which seem to be problematic in terms of identifying and substantiating. How, for instance, can the expenditure of public funds be shown to have improved? Improved in what sense? Moreover, these outcomes could be described as means to an end rather than as ends in themselves. For example, how will the increased awareness among youths be translated into more tangible or more desirable benefits that contribute to well being? In one sense these predicted outcomes are too specific, in that they do not seem to focus on the ultimate objective, although they are helpful in specifying intermediate or facilitating objectives, but in another sense they are not specific enough, in that some are not easily measurable or capable of being demonstrably argued to have been achieved.

There is no criticism implied by these comments. The intention is to reshape the evaluation process so that it is capable of focusing more sharply on the valuable contributions that the telecentres are actually making to rural life. The point that possibly the Group is making is that the benefits that are emerging are not quite the same as those that were predicted, but they are nevertheless equally as desirable, perhaps, in some cases more so, than those that were. In such circumstances, it might be beneficial to acknowledge such uncertainty of outcomes at the outset and to demonstrate the capability of the project to tease out unpredictable benefits through the skilful and sensitive application of appropriate methods such as Action Research, Participatory Rural Appraisal, Rapid Rural Appraisal and Outcome Mapping.

Further comments relating to the MSSRF project relate to the need to engender sustainability of the telecentres if and when the research team pulls out, as well as the possibility of formulating a model for replications of the successes that have already been achieved. In this regard, the Group suggested that a defined strategy for disseminating the results of the research might be useful for fostering an international movement towards standards of telecentre operation that could be built upon the notion of best practices. The Group concluded that the MSSRF telecentre project has a substantial contribution to make in this respect.

## **LESSONS LEARNED**

### **FOOD**

The most significant lesson learned from the experiences with FOOD relate to the business-like approach it adopts towards its operations, which appear to have the effect of building in sustainability right from the start. The organisation's entrepreneurial approach to development has the apparent effect of incorporating sustainability as an objective from the very beginning of any initiative, in much the same way as a businessman targets profits. Given the premium on sustainability in development, and the urgent need to mobilise mechanisms that are capable of sustaining the beneficial impacts of ICTs in development, FOOD seems to have a valuable lesson here for the entire telecentre movement.

### **MSSRF**

The Group's overriding impression of the MSSRF telecentre initiative is that of an exemplar for most of the aspects of ICT-led development in rural locales. From the creative, sometimes ingenious, use of technology, to its relationships with the target communities, the Foundation demonstrates an admirable record of accomplishments. A further lesson for the benefit of the telecentre community at large might be for the Foundation to publicise more widely what it has achieved and for it to adopt more of a leadership role in the international telecentre community.

### **Telecentres for Rural Development**

The success stories indicate in the depth and breadth of impact that ICTs have had within the target communities, that telecentres have the potential for contributing significantly to rural development. The challenges, as with all applications of ICTs, lie in understanding and sensitivity towards their contexts. In both projects, this has obtained through dedication and close engagement with the recipient communities, and this should come as no surprise to either development or IT practitioners. The lessons to be learned appear to relate to the combination of skills and capabilities that has been bought to bear in each instance.

Successful telecentres need a combination of technical expertise and social awareness, probably in equal measure. Whilst the corporate world has come to understand this, creating new professions which merge business subjects with IT in their quest for profits, perhaps the development world now needs to embrace IT in a closer relationship so that the benefits we have encountered in this mission can be propagated to a wider audience.

A further lesson from the success stories relates to their unpredictability. In many cases during the mission, the pattern of the emergence of benefits seemed to follow a "build-it-and-they-will-come" model, in that, whilst some of the benefits were predicted prior to implementing the telecentre, many were not. There is an important lesson here for IT professionals, and for their development clients, who are probably more accustomed to being required to define the outcome benefits of a system implementation in great detail before receiving authorisation to proceed with the investment or the work. Usually, the benefits will be known before the technology is installed. In the examples we have described here, the reverse seems to have been the case. The question arises then, is our ability to predict outcomes deficient in some way or is it more in the nature of the creativity and resourcefulness of individuals who have been empowered with access to information that we should not be expected to predict how they will conduct themselves with such new found capacities? Given the complexity of local contexts and the infinite potential for the value of information, the Group suggests that the latter is a more fitting interpretation, so that telecentre implementations should focus on empowerment as a target benefit of itself, on the basis that "when the water rises, all boats rise."

### **Telecentre evaluation**

The Group's approach to evaluating the telecentres it visited was born out of necessity, given the limited time available for observing the operations of each and for interacting with their users. Nevertheless, the Group believes that it has learned the value of stories in particular and of qualitative data in general, in obtaining a reliable representation of the impact of telecentres. The context of the evaluation supported the approach, by allowing individuals to express themselves freely and by focussing special attention during each session on the women beneficiaries. The Group had every reason to believe that the stories they heard were genuine and were faithfully transmitted through the translation process. However, we acknowledge that the evaluation, depending on its purpose, could in some ways be described as superficial. Evaluations, too, have their contexts, and for the purposes of this mission, the Group considers that the story approach was perfectly adequate. Evaluations that are required for other purposes could very well take another form. It would seem that the purpose of an evaluation might determine the balance of its mix between qualitative and/or quantitative methods.

### **Research Conduct**

Some remarks are offered here which attempt to define some lessons learned regarding the research component of the mission, of the projects of each of the Group's members and of the objectives of the IDRC. It would seem from the experiences of the mission that telecentre research lends itself to methods that are both participatory and action-oriented. The requirements for close engagement with local communities as well as the unpredictable nature of the outcome benefits seem to dictate this. Accordingly, all the projects in the PANTLEG would benefit from an understanding of the philosophy and principals of participatory action research (PAR) which are adequately described in a number of sources. The IDRC is well positioned to further PAR as a research technique in telecentre-related research. Each of the PANTLEG projects offers a platform for the useful application of PAR and the reporting of intermediary outcomes as projects proceed through successive iterative cycles of action and reflection, followed by more action, and so on. Consequently, new knowledge can be reported before projects end so that the research community gains access to it earlier.

### **Replicability**

The emergence of the question of replicability forms the final lesson that is still to be learned. The PANTLEG projects display a variety of differences along a number of diverse dimensions. They vary, of

course, in their nationalities as well as in their motivation, structure, scope, methodologies and management. Yet they all share the common goal of rural development through ICTs. The outstanding lesson seems to lie in how each can replicate any successes that they achieve. Telecentre research can be characterised as a grass-roots movement, involving mainly NGOs working within specific locales. A challenge appears to be emerging for organisations wishing to influence governments as probably the only organisation capable of effecting widespread applications of telecentres on a national level.

## **FURTHER STUDIES**

This report suggests a new PANAsia initiative aimed at joining the PANTLEG projects in a closer partnership for mutual benefit and for enhancing the capacity of the PANAsia programme to achieve its goals. The proposal seeks to exploit the synergy generated by the members of the mission by maintaining and accelerating its momentum towards the creation of new knowledge consonant with its objectives, with the objectives of each project and with those of the overall programme.

Accordingly, the Group proposes a series of events that will address certain issues that give common cause for concern, arising from the mission, the resolution of which will benefit from a co-ordinated and focused team effort, whereby sufficient differences exist between the projects to ensure a wide perspective of each, but where the wholly Asian focus will render the deliberations relevant for each.

The issues of telecentre use and operation which the group has identified as common causes of concern include the following:

### **Standards**

The pioneering telecentre experiments are now emerging into an era of consolidation during which the process of translating best practices into common standards can begin. Consequently, the group wishes to participate in standard-setting consultations, both as contributors as well as learners. Standards relating to telecentre operation will usefully emerge in a range of diverse fields; language, technology, operational practices, evaluation, design, training, policy, etc.

### **Policy Environments**

Successful telecentre pilots have emerged against widely differing policy environments. The relationship between government policy and telecentre success is not at all clear. The policy environments of Asian countries differ markedly with regard to ICTs, yet they all stand to gain from programmes for telecentre deployment. Telecentres offer an ideal platform for cross-disciplinary, cross-sectoral, multi-agency, co-operation. Accordingly, they provide a suitable vehicle for mobilising public resources towards the formulation of national policies for rural IT and telecommunications. The diversity of the PANTLEG's projects can usefully contribute to the debate of how governments should respond to the telecentre phenomenon within the contexts of their own economies, cultures and demographics.

### **Cultural Contexts**

Even within adjacent geographical areas, cultural variations between communities infringe upon success formulae that have been externally derived. Methodologies, techniques and personal skills are required that will tease out relevant cultural factors and render them capable of being parameterised in such a way that exponents are appropriately sensitised to their existence and to the potency of their influence.

### **Sharing**

Despite the networked nature of telecentres, members of PANTLEG feel isolated from each other and they feel this isolation to be detrimental to the impact that their individual projects can achieve. The sharing experience of the India mission accelerated the learning of each in a short and concentrated period of time during which a number of valuable ideas, experiences and speculations were exchanged. Each

member saw the India mission as the beginning of something rather than the end and they are each anxious to maintain the learning achieved and to extend it into the forthcoming phases of their own, and each others' projects.

### **Extending Capabilities**

PANTLEG considers it has sufficient combined capability to usefully extend its operations to new clients, especially to NGOs. Such extensions are seen to be wholly compatible with PANAsia's objectives and could be operated so that they are additionally beneficial to existing projects. The Group foresees mechanisms for extending its existing client base for mutual benefit.

As a consequence of the above considerations, PANTLEG will propose a programme of joint projects, each with the following characteristics:

*Provides joint benefit* – for all participants, as well as for PANAsia.

*Contains a research component* – recognising that new knowledge is being created and that it should be disseminated.

*Includes comparative evaluations* – leveraging both the diversity and the similarities between projects as well as exploiting the combined contributions and synergies of the team.

*Exchange of participants* – to foster capacity building of the team as well as facilitating the other characteristics.

*Addresses one or more key themes –*

Sustainability

Replicability

Local language

Policy advocacy

NGO inclusion

Community identification for PANTLEG members

No budget proposals are included in this paper. That will be for the next stage of its development. The first proposed activity however is to repeat the Group's perceived success of the India mission with a similar mission to Mongolia in November 2000. In line with the India mission, this will result in a number of outcomes including a multimedia report and conference presentation as well as a publishable paper in a reputable journal.

### **CONCLUSIONS**

Members of the team consider the mission to have been successful on several counts. Firstly, the objective of implementing the lessons learned from the Val Morin Workshop was accomplished. The team is better able to evaluate telecentre operations and it feels that it has demonstrated this capability to good effect. Secondly, the team considers it has advanced the objectives of the IDRC, in a modest way, by strengthening the capability of each member towards achieving desirable outcomes in their respective projects. Finally, the team believes that it has the potential to extend its influence beyond the immediate objectives through further collaboration that will; provide mutual support and capacity building; foster accelerated knowledge creation and dissemination; generate channels for advocacy among home and regional policy bodies; consolidate diverse experiences into wider opportunities for learning; and add impetus to research efforts directed at achieving development through ICTs.

### **REFERENCES**

FOOD, <http://www.Xlweb.com.in>

Gómez, R & Hunt, P Telecentre Evaluation - A Global Perspective: Report of an International Workshop

on Telecentre Evaluation, IDRC, Far Hills Inn, Québec, Canada, September 28-30, 1999.  
<http://www.idrc.ca/pan/telecentres.html>

IndiaShop, <http://www.Xlweb.com/indiashop>

MSSRF, <http://ww2w.mssrf.org>

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## COMMENTS ON THE MSSRF PONDICHERRY VILLAGE KNOWLEDGE CENTRES PROJECT

Professor Grant Lewison

Department of Information Science, City University, London EC1V 0HB, UK

Tel: +44-(0)20-7040 0214

*g.lewison@soi.city.ac.uk*

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- 1 I had heard previously about this project as a result of attending presentations on it in the UK by Subbiah Arunachalam. However the opportunity to visit three villages (Embalam, Thirukamchipet and Veerampattinam) and see the Knowledge Centres (KCs) in operation, and the field headquarters at Villianur, on Wednesday 3 September 2003 provided a rather different perspective and stimulated some thought on how the project might develop in future.
- 2 There is much about the project that is enormously praiseworthy. It has been set up and conducted with great sensitivity to the local people's concerns and needs. There is a flexibility about its implementation in the individual locations than can cater well for different problems and opportunities. In particular, the provision of information in several media (many, but not all, computer-based) shows an awareness of the different styles of acquiring information by different groups. There is also a careful monitoring of usage of the KCs.
- 3 Clearly, the project is a considerable success within its own terms of reference – i.e., it is delivering useful information to its target audience in a timely and effective manner. My main concern is whether such a project could readily be extended to cover the whole of a district, then a whole Indian state, ultimately all of India, and, *mutatis mutandis*, other developing or low-income countries. Such an extension will depend on the project moving over the next, say, five years to an extension phase in which it will demonstrate how the triple problems of materiel, money and management can be solved on an increasing scale.
- 4 To this end, it will be necessary to draw up a **plan** and a tentative **timetable** for its execution, that will address all three issues. The problem of **materiel**, in the form of computers, will probably be the least of the three in view of the rapid rate at which businesses update and discard their old equipment. However management arrangements will still be needed to assure a collection, refurbishment and distribution system. Certain other items will also be needed, such as back-up power supplies, and telephone internet connections, which may be unavailable in some prospective villages. Moreover the KC room itself needs to be built and furnished.

5 **Money** has come so far mainly from aid and development agencies, some governmental and some private-non-profit. Although the visible success of the project probably means that some aid will continue, it cannot reasonably be assumed that it will expand linearly with the number of villages to be covered. Accordingly, new sources of finance will need to be developed. Potentially there are at least three of these:

- individuals using the KCs' services;
- agencies using the KCs in furtherance of their mission (e.g., government agencies using the fortnightly newspaper to post job application forms);
- commercial sponsors who would provide money in return for advertising and/or product or service endorsements or placements.

All three of these should be considered and the mix will need to reflect local circumstances and opinions. However the third option, commercial sponsorship, should be approached very warily because of the risk that the independence of the KCs could be compromised. In the short term, agencies of central, state and local government seem the best potential funding sources, provided that an economic case can be prepared to show them the tangible benefits accruing through the work of the KCs.

6 In particular, links with **local schools** should be actively pursued. These have many points of synergy with the KCs:

- they are located in many rural villages and may provide some existing infrastructure;
- they may be in need of the KCs to provide computer training, in both English and local languages, for the children;
- the KCs can also provide them with teaching materials (such as illustrated worksheets for use in lessons) and potentially vast educational and library resources through the Web;
- the KCs can enhance the role of the schools as centres of "life-long learning".

Consideration could be given to the enhancement of **printing capabilities** (e.g., through provision of black and white laser printers) in selected KCs in order to provide a print service to the schools. A menu of options should be prepared and discussed with some school head teachers and superintendents with a view to agreeing a work programme and payments.

7 Another prime area for consideration is in **healthcare**, especially preventive measures. Steps are already being taken to train local people as auxiliary health workers and to encourage the use of KCs as first points of contact for those with evident disease or disorder. They could have a wider role in the dissemination of health information and in the co-ordination of public health campaigns (e.g., vaccinations, family planning,

notification of deaths and their probable causes). Again, the development of a menu of potential activities for the KCs as agencies, with appropriate reimbursement of costs, seems desirable; this should encompass also the private-non-profit sector whose outreach will thereby be greatly enhanced.

- 8 The other main potential source of income is the **clients** who use the KCs' services and benefit directly therefrom. Initially it may be difficult to levy charges but financial contributions on indicative scales could well be invited, e.g., from those who obtain jobs or benefits via application forms (and perhaps help in completing them) provided through the KCs. E-mail messages sent to or from family members of villagers who have moved away, particularly to foreign countries, might be another repayment service – there is already some move towards this in the form of secretarial fees paid to the volunteers. Eventually it may be possible to develop additional fee income for other services provided to individual users.
- 9 The third scarce resource that will require attention is **management**. Currently there are some ten (?) staff at the project's headquarters in Villianur and about 12 village KCs. If the number of the latter is to expand substantially, as is envisaged, and as is necessary if the project is to meet its longer-term objectives of bringing all the villagers in an area into its embrace, it is not practical or feasible that the headquarters staff should expand *pro rata*. Costs alone would prevent this. Accordingly, plans need to be made for a progressive decentralisation, with the village volunteers being encouraged to take on a wider proselytizing, enabling and co-ordination role for KCs in several nearby villages. They will need to divide their time between serving their own village and, in slack day-time periods, visiting other villages to set up new KCs, and recruit and train additional volunteers. They will probably need to be provided with some means of transport – perhaps bicycles, or an allowance for use of their own transport – and some payment for their additional responsibilities.
- 10 Some volunteers will be keen to expand their roles in this way and to act as coordinators, first at the level of just a few villages, and perhaps later at the level of a district, with other volunteer-coordinators reporting to them. Indeed, a few may go on to work at the project headquarters where their detailed operational knowledge would be of great value in guiding the expansion of the project and the development of new information services and ways of delivering them.
- 11 The role of the headquarters staff was not presented in much detail, so I cannot comment on the work being done there. My only suggestion is that their work could include (if it doesn't already) the development of appropriate Web pages in the local languages(s), in particular in the fields of education and health, so that they can be accessed by the

village KCs and printed out as appropriate, either for public display on notice boards within the KCs, or given to individual users on request. They might also play a useful role in disseminating new teaching materials for use in local schools.

- 12 In summary, the village KCs project has demonstrated that there is indeed a role for innovative methods of information dissemination (which is very much a two-way process) even in very poor villages. The next stage is probably even more challenging and it is to demonstrate that the KCs can be self-reproducing to populate an area, and that they can be sustainable, with some modest, but finite, external support, in terms of materiel, money and management. To this end, timed and costed plans need to be developed, to which the villagers and the local volunteers will be expected to make an important contribution.







## **Rural Knowledge Centres, Pondicherry: Some Observations**

### **1. The Study**

This study has been essentially carried out to understand the ongoing activities of the Knowledge Centres in Pondicherry from an anthropological perspective. The study also aims to understand the possibilities of further improving the quality of life of the people in these villages through the Centres. The study involved fieldwork of over two weeks during April-May 2004.

The preliminary visits to the ten Centres in the Union Territory of Pondicherry were helpful in studying the functioning of the Knowledge Centres; the information and content they provided; and the information normally used or sought by the user community. An effort was made to include the volunteers managing the Centres and also the users who were present at the Centres at the time of the visits. Specific efforts were made to get the viewpoints, both of the volunteers and individuals from the community, about the usefulness and reach of the programme. This was done mainly by going around few villages like Embalam, Veerampattinam, Poornangkuppam and Periyakalpet, and talking to a few men and women of different age groups and also by visiting some houses. This was done essentially to study the impact of the Knowledge Centres on the community in general, and on women in particular.

An attempt was also made to gather the responses and reactions of the people about these Centres and the usefulness of the content - whether it met the needs and demands of the local communities. Our study also helped to get a broader idea about the kind of information sought by the men and women. The potential of the volunteers and the Centres could be gauged to a certain extent. It also brought out the limitations of the Centres and the volunteers.

Information was generated through unstructured interviews and participant observation. Case Studies were conducted with some of the volunteers and individuals (users and the beneficiaries of both sexes) from the villages.. Unstructured interviews helped to a great extent in obtaining a broader idea about the general impact of this programme on the community.

It must be mentioned here that since the study is still in the preliminary stages, the attention was more on generating qualitative information from different stakeholders. Information was gathered covering various aspects such as utility of the Knowledge Centres, perceptions of the volunteers, users/non-users from different villages where the Centres are located, etc. The purpose, as mentioned earlier, was to get an idea of the kind of impact it has made on different sections of

the villagers. This methodology was used to evolve and develop a basis for a further in-depth and detailed study.

## **2. Information Villages**

### **Genesis**

Information Village project had its genesis in an interdisciplinary dialogue held at the M.S. Swaminathan Research Foundation (MSSRF) during the year 1992, titled "Information Technology: Reaching the Unreached". One of the important conclusions of the Dialogue was that information and communication technology could have a great role to play in the developing countries, with particular reference to sustainable agriculture and rural development. It was felt that ICT has the ability to take the generic information and convert it into local specific. A small beginning was made in 1997 by MSSRF when it embarked upon a programme that would use access to information as a key to holistic rural development. Information Village Research Project was launched with financial support from International Development Research Centre, Canada, on an experimental basis, in the Union Territory of Pondicherry in South India, in January 1998. Pondicherry was formally a French colony, which came under the Indian Government in 1954. Later, in 1962, it was organised as a Union Territory.

To start with, the project set up Information Shops to link the villages. This has been done with a view to determine whether ICT can impact the rural livelihoods. It is essentially a people-oriented project. Therefore, rural people's involvement in the use of ICT was considered important, so that its benefits could reach the targeted population, i.e, the rural people, both women and men. Bottom-line grassroots approach, and gender-sensitivity are two important principles of the project. Another significant aspect of the project is that the generic information found in the networks, including the Internet, should be local specific. The Information Shops later came to be known as Rural Knowledge Centres. This was done to emphasise the need for focusing on local specific, demand-driven information, and for training local women and men for adding value to information. Since value-added information is knowledge, the Centres have thus come to be called Rural Knowledge Centres. The Tamil language, which is also the local language of this region, is used for all operations of the Rural Knowledge Centres. The script used in the computer applications is also Tamil.

Identifying villages in Pondicherry and establishing rapport with the villagers was relatively easy, although the project did encounter some difficulties in due course. It may be mentioned here that MSSRF was familiar with the Pondicherry rural areas through its earlier programme - the Bio-

Village Project, that aims at Community Asset Building based on biological technologies. The Information Village Project is expected to complement the former and derive benefits from the linkages. The project also had the support and encouragement from the government. The region had a reasonable telecommunication infrastructure, with an urban tele-density of 20.

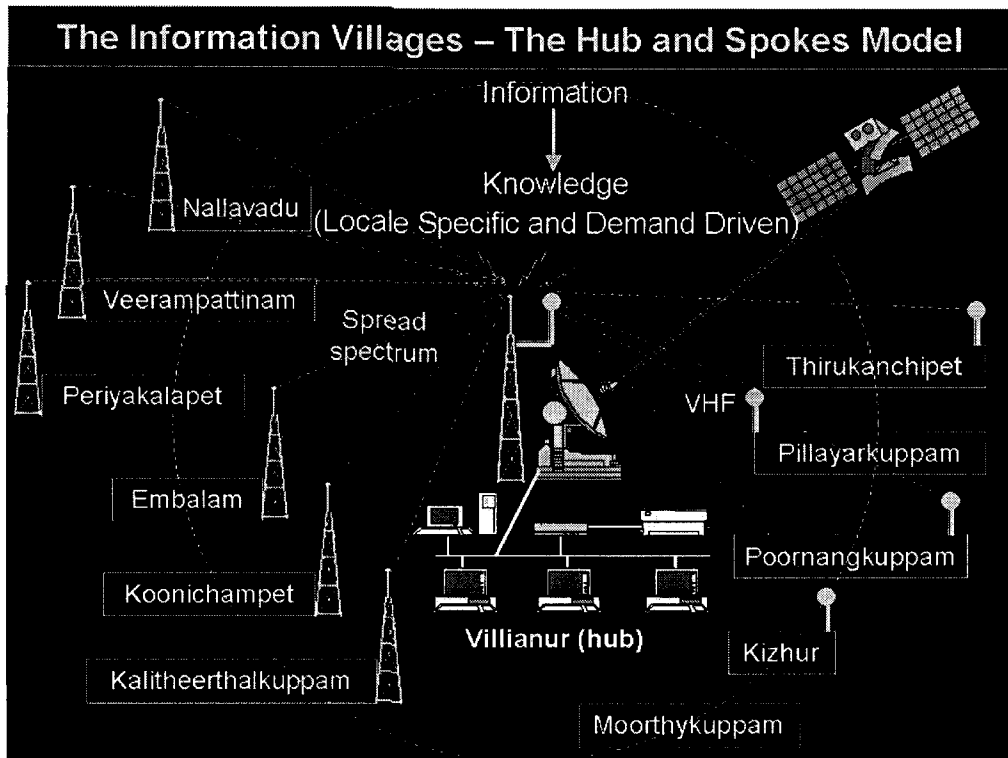
The project, which started with two Centres in the villages of Keezoor and Mangalam, now has ten Centers. The project encountered some problems during the course of its growth when it had to close down one of the initial Centres (Mangalam) that was located in a private house. Here, entry was restricted: socially underprivileged section of the population did not have access to information. The managers also misused the facilities of the Centre. Two other Centres were closed down for similar reasons. A senior staff of the project mentioned that the closing down of the Centres had a positive aspect - it helped them realise how important community ownership was for the successful functioning of the Knowledge Centers if the benefits had to reach the people.

These experiences taught the project staff to be careful in choosing a village to set up a Knowledge Centre. A participatory rural appraisal (PRA) was conducted in 13 villages. This was done to ascertain the interests of the local people, their information needs, and to find out their traditional channels of information. PRA also helped examine issues related to the logistics such as fixing a common space (rent free) to run the Centre, electricity charges, and volunteers to manage the Centre, etc. The main intention was to involve the local community in the ownership and responsibilities of running the Centre. After identifying a village, A Memorandum of Understanding is signed with the village elders to this effect, and is renewed whenever necessary. Since its inception, the project's stress has been on community ownership.

It was mentioned during a discussion with the project Associate Director that there was a demand for voice data- wireless/phone and that initially, database was not used. He said, that since there were no phone facilities in the rural areas (one phone for 500 people), there was a demand for voice data. In the beginning, the idea was to give only agriculture-related information.. It is interesting to learn how the essential role of the project as a provider of information to the rural communities, gradually took on the role of a facilitator also. As it has just been mentioned, the villagers were initially given information related to agriculture and local specific needs. Then, people began to look for Government entitlements. Subsequently, the community began to ask for linkages. For example, when information about training on animal husbandry was given to them, the people wanted to know how to approach the department and what were the formalities. The project slowly started playing multipurpose roles as facilitators, organisers , etc.

## Rural Knowledge Centres

The Rural Knowledge Centres of the Information Villages function on the 'hub and spokes' model, as depicted below:



It is a network of 10 villages with computers, printers, telephones, very high frequency (VHF) duplex radio devices and other accessories. It has e-mail connectivity through a dial-up telephone service that facilitates both voice and data transfer. Villianur is the head quarters of the project. It is also the Block Development headquarters. It is a very busy commercial area. Villianur is the 'hub' of the information network, and the sub-Centres, or the rural Knowledge Centres, are its 'spokes'. This has the necessary telephone equipments with which the staff works on the information that is uploaded in the network. It is also the Value Addition Centre from where the staff retrieve useful and relevant information from the Internet on topics such as health, agriculture, educational opportunities, Government policies/schemes, the weather and so on. Such information is disseminated to the rural people. As an example, mention may be made about a bulletin called "Farmers Diary". This Diary consists of information on agriculture and animal husbandry given by individuals, research stations, agricultural university and magazines. The staff at Villianur collect the information and send the same under the name of Farmers Diary to the sub- Centres. Other media of communication are also used - like printed information, in the form of a newsletter,

namely, *Nammavur Seidhi*, posters, and rural yellow pages in the local vernacular language. Two Knowledge Centres have been provided with a Public Address system. The staff at Villiyanur hub include two social scientists, one field person and one content manager, in charge of the OKN content. There are two persons employed on daily wages.

This project, that commenced in 1998, acts as a focal point, not only in terms of giving various knowledge content or sharing information, but it is also in the forefront in providing or organising training, services and other necessary inputs to the rural communities. There is even a plan of linking the Farm Clinics of the Department of Agriculture with the Villiyanur hub so that this information will be useful not only to the people of Pondicherry, but world over.

It is interesting to mention about a new initiative of the project, namely the Open Knowledge Network. This is done in partnership with One World International. It is still in the experimental stages. The aim of this experiment is to provide information to the poor by creating a network that would connect the poor world over. This may, in one way or the other, contribute to the integration of local/indigenous knowledge into the project.

It may be mentioned here that sub-Centres depend totally on the hub-Centre for technical input as well as for other support. Any technical default or failure, affects the sub-Centres. For any technical help and infrastructure, the sub-Centres look to the support of the Villiyanur Centre. They seek the help of the hub-Centre for any information, clarification or for any new information that is not available with the hub- Centre.

The Knowledge Centres have been set up to facilitate development of the rural communities in the Union Territory of Pondicherry. The Centres are based on the concept of community ownership. The community is responsible for finding suitable locations for the Centre and also for identifying volunteers to operate and maintain it. Even at the outset, it has been made clear that MSSRF would not take the responsibility for the above, and it would only give technology support and necessary technical and other inputs/support. The volunteers appointed by the community are responsible for the operation of the Knowledge Centres, and the community, for the overall maintenance. Knowledge Centres in the villages such as Nallavadu, Embalam and Koonichampet have come up in response to the villagers' demand. Table 1 provides details of the Knowledge Centres in 10 villages, with details such as population of the villages, number of volunteers in each centre, and the locations. The number of volunteers available to serve the people varies widely across the Centres.

**Table 1 Details of Rural Knowledge Centres Location, Year of Inauguration, Population and Number of Volunteers**

S. No	Name of the Village	Year of Inauguration	Population (Approximate)			Number of Volunteers			Population served by one volunteer 1/2
			Male	Female	Total 1	Male	Female	Total 2	
1	Kizhoor	08-09-1998	497	470	967	-	1	1	967
2	Embalam	05-01-1999	2400	1600	4000	-	10	10	400
3	Veerampattinam	04-04-1999	3190	3100	6290	5	1	6	1048
4	Poornamkuppam	06-08-2000	2516	2563	5079	1	2	3	1693
5	Pillaiyarkuppam	06-08-2000	2400	2100	4500	-	1	1	4500
6	Thirukanchipet	05-12-2000	270	277	547	3	-	3	182
7	Kalitherthankuppam	20-02-2001	3570	2490	6060	1	2	3	2020
8	Nallavadu	05-12-2001	1850	1780	3630	2	-	2	1815
9	Kunichampet	22-01-2003	2650	2350	5000	2	1	3	1666
10	Periyakalpet	04-07-2003	NA	NA	2500	2	1	3	833

NA - Data not available

The Centres are thus run and maintained by the local men and women. The identified volunteers have been trained in basic computer skills (like word processing) and maintaining the Centres. They have also been trained (in hardware) in handling basic, day-to-day technical problems. The volunteers are encouraged to use their training in computer applications to generate income for the Centres. Various training imparted to the volunteers are delineated in Table.2

**Table 2 Computer Training (Software and Hardware) imparted to Volunteers of Rural Knowledge Centres, Pondicherry**

Serial Number	Training Details
1	Windows 95/98
2	MS Word
3	MS Excel
4	MS PowerPoint
5	MS Access
6	Abode PageMaker
7	Abode Photoshop

8	Visual Basic
9	VC ++
10	HTML Coding
11	Recording Voice
12	Zip/Unzip
13	Data Transmission in Wireless

Knowledge Centres facilitate information/knowledge empowerment and technology empowerment by providing access to a variety of information, thereby enabling the community to develop in different areas like education, employment, government schemes and in developing and enhancing computer skills and so on. Use of the Tamil language in all the operations, and using Tamil script in the computer applications, serves the purpose of the Centers, i.e. promoting the use of Knowledge Centres and encouraging interactivity between different information systems and their intended beneficiaries - the rural population.

### **3. Findings of the Study**

#### **3.1 Services and Benefits**

The project aims to deliver demand-driven information, and emphasises interactivity. It is believed that providing the information needed by the community will ensure the sustainability of the Centres. Provision of information can become a potent force, which has the capacity to transform the community, both socially and economically.

Services generally provided in all the Centres include information on government schemes/training, employment opportunities, weather forecast, health, and market rates of products like paddy, vegetables; gold and silver. Information on phone numbers/addresses of essential services like fire service, hospitals/nursing-homes/clinics, veterinary hospitals/clinics, electricity and various government offices/departments, are also provided. The rural yellow pages also serve this purpose. Telephone facility is available in most of the Centres. Printed information like the Tamil bi-monthly Newsletter, *Nammavur Seidhi* (News from our village) launched in February 2002 has been used to disseminate information. Another important service available is a Tamil daily newspaper, which is most sought-after by the community. One can get an idea about the kind of services rendered by the Knowledge Centres from the pamphlet prepared by the Veerampattinam Knowledge Centre in order to raise awareness among the people. A copy of the English translation is appended at the end of the report.



The project enhances networking and sharing of information/knowledge. It provides avenues for linking with government departments, NGO, academic institutions and experts. The project has directly or indirectly contributed to skill and capacity development of rural women and men. . It may be mentioned here that the project has developed a multimedia Compact Disk (CD) on microenterprises. The villagers can start an enterprise according to their choice and get benefited.

In this context it must be mentioned that earlier, in terms of receiving and delivering information, the villagers depended on traditional communication technologies. Access to mass media was negligible among these villagers. The community depended largely on radio and television - which were and still are mostly sources of entertainment. Access to newspaper was limited. Ezhilarasi and Anitha, women volunteers from Keezoor and Poorangkuppam Knowledge Centres respectively, mentioned that only a few households in their villages could afford to purchase newspapers. Information was exchanged or shared through oral communication, which again did not have a wider reach. It is mentioned in some of the villages that the local *Panchayat* leaders or local political leaders were source of information. It was largely confined to a select few, like their close relatives, friends or neighbours. Some male members felt the government staff - like the extension staff - are not normally successful in passing the information to a larger section of the community. Hence there was a lack of scope for knowledge/information empowerment. As a result, people were not aware of government-aided programmes/schemes, market situations or rates of agricultural products and inputs, educational and employment opportunities and other important information. Earlier, most of the villages did not have even telephone connections.

It may be pointed out here that computers were unheard of among a greater part of the population in these villages, and the people had never even seen one. Thanks to the rural Knowledge Centres. There is a general feeling among the volunteers and other villagers (particularly among the users and those who have benefited) that the Knowledge Centres have been instrumental in making people not only aware of the information, but also about their rights to use the same.

Ezhilarsi, a volunteer from Keezhoor, brought to our notice that the students and others were not aware of the educational and economic opportunities. Many could not avail of the opportunities due to lack of information at the right time. She says that in her village only a few used to get newspapers, and only three houses had telephone facility.. It is also stated that the students who were seeking employment did not know where to get applications and how to fill them. By the time they could finish the process, the last date for submission of application would have been over. Now, not only do the Knowledge Centres provide this information; but they also provide the applications and assist in the process.. She says, she gets the application forms from Villiyanur, and makes copies, which are distributed to those who require them. Either she, or the applicant,

gets it typed at the Centre itself. Whoever is interested could submit the application at the right time. Similarly, for the other community members, the Centre tries to reach out whenever the government schemes/training are announced. There is a notice board outside the Centre where important announcements are displayed everyday - like important headlines from the daily newspaper, weather forecast, government schemes, employment and educational opportunities. She also conveys messages through persons who come to the Centre or visit her house. The members of self-help groups formed by her in the village are also kept informed.

#### **a. Educational Services**

School teachers and tuition teachers use the Knowledge Centres to improve arithmetic and science skills of the children by using educational software on the computers. Gnana Sekar, a volunteer in Poorangkuppam, who undertakes tuition for school children, mentioned that the children are quick to grasp the subject when explained with a computer. He says it was very effective and that the children still remember the life cycle of a butterfly, which he showed to them some months ago. School teachers use the Centres to type out question papers and some use it to improve their computer skills. Work related to the village *Panchayat* is carried out here - like the village or temple accounts, *Panchayat* letterheads and typing of letters.

#### **b. Employment and Income Generation**

Knowledge Centres have enabled many young men and a few women get employment in government and private sectors. Information regarding vacancies in a particular sector are conveyed to the community using the available infrastructure facilities of a Centre. We have already seen how the Public Address system plays a crucial role in the two fishing villages. In other Centres, the details are written on a bulletin board kept outside the Centre and sometimes it was passed on to the community through word of mouth. *Nammavur seidhi*, a local Tamil newsletter, also plays a major role in this regard. Jayanthan and Ezumalai from Veerampattinam pointed out that many young men (around 15 persons) from their village, have found employment in defense, police force and fire service. A few have got into private companies.

For income generation, the Centres take up activities like DTP and Photoshop editing. Two Centres take up CD writing. Using their skills in Pagemaker, the volunteers take up work to develop letterheads, invitations and visiting cards. Internet services are available in seven Centres. The Centres also offer training courses in basic computer applications (BCA). Another popular attraction are the video games. These are popular with children below the age of 12. During the holidays the Centres are packed with children. One middle-aged man in Kalitheerthal Kuppam commented that

the children had to be coaxed into making way for others. Such is the demand for video games. A very nominal fee is charged for them (some of the Centres like Thirukanchipet and Koonichampet do not charge). It has been of great help to Higher Secondary and Secondary school children, who use the online services to know their exam results. The Centres render service to students from other villages also. The volunteers mentioned that when the examination results are announced, the Centres are fully packed with students,. A sum of Rs 2/- (as a service charge) is taken for every result or mark list that is downloaded.. It is of great help to students staying in the villages It not only saves on travel time of going to Pondicherry, but also saves money and avoids needless anxiety.

### **c. Skill Development**

The project offers great scope for skill development in computer applications. It has enabled many rural people, especially the youth, get exposure to computer applications -about which we will be discussing briefly in the following pages under the section dealing with 'Impact'. The volunteers, mainly the women, and others who have developed their computer skills from the Knowledge Centres, mentioned that they had never even dreamed of working on computers with ease, and that they would now be teaching others. They feel they are indeed fortunate to have free access to the technology. Truly, for most of them, it would have been a distant dream. Their families cannot afford to send them to computer centres. Even if they had the facility, they would not have got the perfection and competency as they got from learning in the Knowledge Centres. Some of the women, like Danalakshmi and Paliniyamma, said that they had never seen a computer before. They had a vague idea about it. They imagined it would be like a Television. Ambica from Kalitheerthankuppam said that she had seen a computer earlier in a school. She was curious about it, but thought, "Where will I get a chance even to touch it?" But today this young woman, who is in her late 20s, is competently training school and college students in computer applications!

The Knowledge Centres have not only produced many computer literates but have also enabled them to get employment with the training they got at the Centres. It has been mentioned earlier that the Centres impart training in computer applications, but do not award certificates. It was learnt from Periyakalpet that two young women (not from that village) secured employment based on their computer skills. One of the male volunteers mentioned that these days the employers normally do not give importance to certificates,. but rely on a person's work efficiency. He said that when one of his cousins, who was trained at the Centre, applied for a job. She was given work which involved different computer applications. He said that the girl worked with such ease and confidence that she got an immediate appointment. He commented that whoever gets training at the Centre would be more efficient than the ones who get training in big computer institutes, as the Knowledge Centres provide an atmosphere conducive to learning, and sharing of knowledge/skills. Access to the

systems is not always difficult, and the trainers are very approachable; and they can also learn from friends.

#### **d. Weather**

Services related to weather forecast are of great use to the rural communities, especially to the fishing community. Significant is the information on wave heights that provides a 12-hour prediction for wave heights in the Bay of Bengal. The images are downloaded from a U.S. Navy website and the same is delivered to the Centers of Veerampattinam and Nallavadu. This helps the fishermen make appropriate decisions before venturing out into the sea for fishing. Veerampattinam Centre receives information on potential fishing zones, such as depth and water temperature, from the Indian National Centre for Ocean and Information Services (INCOIS). The general weather forecast helps the farmers in choosing their agricultural activities such as transplanting and harvesting.

#### **e. Specific Interventions - For Fishermen**

The content and other services offered at the Knowledge Centres benefit the rural people in their day-to-day lives. Extension of infrastructure such as wireless and the Public Address system are crucial in this process. The Centres with the Public Address system use it to maximise the dissemination of information. The system plays a significant role in disseminating information like government schemes, weather report, employment opportunities and so on. It is an effective tool in reaching out to the entire community. Not even a single house misses the information conveyed through this system. In Centres like Embalam, the women volunteers have taken up this responsibility willingly, and convey the messages to people living in and around their respective houses, and to whomsoever they come across in the village. In other Centres too, the enthusiastic and committed volunteers, in their own way, try to reach out the community to the extent possible.

As it has already been mentioned, the benefits of the Knowledge Centre are evident in the usage of the Public Address system available in villages like Veerampattinam and Nallavadu. In the former village, we could talk to a group of five women in order to ascertain whether they were aware of the Centre set up in their village, and their perceptions about it. As in any other village, they referred to it as the 'Computer Centre' as the school children learn to use the computer there. Then we enquired further whether it was of any use to the community in general. They immediately responded by saying, "Certainly, it is of great use to us." When asked how, they said that it keeps them informed about government schemes/plans, weather information, other important news/messages and so on. They mentioned that they find this system very useful as it benefited the community. They are able to utilise the government schemes and employment opportunities. It

was mentioned that prior to this, various government schemes did not reach the community as it does in the present times. Earlier, the communication was very poor, and only a few influential persons benefited by them. The *Panchayat* members would convey or pass on the information only to a limited section of the community, more particularly, to those who were close to them. One elderly woman namely Sarojini said that it is a great boon to their village as everyone is aware of various programmes and schemes. She said that the same message would be repeated three to four times, so that everyone would get to know of it. She and others said that even if the messages were not clear the concerned persons would go to the Centre and get clarifications. Or they would ask the volunteer in charge of the Centre when they see him in the village. They were full of praise for the volunteer, and appreciated his patience in clarifying all their doubts, and the care and interest he bestows on the Centre. They also mentioned they would ask other boys who frequently visit the Centre for details or doubts. They boys would oblige, they said. One of the women, Savithri, said that in case there was any internal fight in the village, people are warned to take precautionary measures - like staying indoors so as to not get affected by the fight. They can also avoid involvement in the police interrogations by not going to the scene of rivalry.

The fishing community in the above two villages have greatly benefited by the flashlight and siren units provided by the project. A discussion with the volunteers and the other community members, both men and women, brought out the value and importance of the new facilities. The women and men in Veerampattinam and Nallavadu said that the installation of the flashlight in their villages was a great boon. They said that it not only enabled them to find the right routes, it is also helped the fishermen in many ways - by saving time and fuel, and guiding them to take a right direction. Most importantly, it helps avoid psychological tension. Earlier, they used to lose their way in the seas during nights, particularly during rainy and cyclonic weather. In another fishing village, Periya Kalapet, young men and women said that their community benefited quite a lot when the flashlight in their village functioned well. They pointed out that they could really see the difference after the installation of the flashlight. Unfortunately, however, for three months it has not been functioning, as the unit was damaged during a thunderstorm. The people are affected by the absence of this facility..

Another communication channel that is of use to the fishing community is the siren. The *Panchayat* leader of Nallavadu said that it enables the fishermen to get up early and go fishing. It reminds the community about their work schedule. It enables them to take the bus on time. In case there is any urgent announcement to be made, the siren helps to bring the people to assemble at a particular place. In general, this facility serves the interests of all age groups starting from school going children, who either have to take a bus or attend to any work. It may be mentioned here that only few Centres like Nallavadu, Veerampattinam and Embalam have this facility.

The services of the Knowledge Centres for weather forecast are very significant. It is of great use particularly to the fishing community. They pointed out that unnecessary loss of life has been prevented because the fishermen could now avoid venturing into the sea if weather predictions are not favourable for fishing in the deep sea. Earlier, many fishermen lost their lives by venturing out in bad weather since the weather forecast and warnings from the Fishing Department reached the community too late.

#### **f. Services through Linkages/Partnerships**

Using the contacts with the intermediary information providers, it organises and conducts training programmes by inviting experts from different fields. Knowledge Centres encourage people to take advantage of various training programmes given by government departments like District Rural Development Agency (DRDA), Rajiv Gandhi Veterinary Hospital, non-governmental organisations like Sustainable Agriculture and Environmental Voluntary Action (SEVA). It also helps rural people by organising health camps with the help of JIPMER and eye camps with Aravind Eye Hospital in Pondicherry. It is learnt during the interactions with the volunteers and from few Case Studies (of women and men) that the project has facilitated some women and men at grassroots level to get training relevant to their livelihoods (like livestock management conducted by Rajiv Gandhi Veterinary Hospital) and for income generation (like rope-making by DRDA). Many have acquired training in tailoring, rope-making, and pickle preparation and in the preparations of incense sticks and phenyl and in decorative artifacts using seashells and coconut shells. They are also encouraged to take part in agricultural fairs, where they could exhibit their products for sale.

Following are a few examples of the kind of services provided to the rural communities with the help of the linkages/partners:

#### **Health Services**

It has been mentioned earlier that the project, through its various linkages/partnerships, tries to serve rural communities. With the support of Aravind Eye Hospital, Pondicherry, a movement for preventable blindness has been initiated. The Knowledge Centre volunteers, trained by the hospital staff to detect long sight, short sight and cataract, they take active part in these camps; Through this initiative, around 175 persons were prescribed spectacles and 15 underwent cataract operation. The volunteers maintain contact with the hospital and whenever a need arises they do not hesitate to approach the hospital staff for assistance. If someone approaches the volunteers for eye-related problems, they either take the concerned persons to the hospital or direct them to go

the hospital by providing necessary details, A reference from the Rural Knowledge Centre is enough to get an appointment with a doctor in the hospital, said Shakhthivel, a volunteer from Thirukanchipet. The patients are not generally made to wait, he added. It is learnt from the volunteers that the Tuberculosis Research Centre (TRC) and National Tuberculosis Control Programme (NCTP) have agreed to help create TB-free zones in the rural areas Pondicherry. Sakthivel and a few volunteers have undergone training to identify people afflicted with TB. The training was given by the TRC. It is mentioned that NCTB will provide free medicines for the patients through the Rural Knowledge Centres and send a senior medical intern to monitor the programme. However, incidences of TB seem not to be a common phenomenon in the rural areas, mentioned Sakthivel.

### **Animal Husbandry**

Animal husbandry is another area where the rural people benefited by participating in a training programme. With the help of Rajiv Gandhi Veterinary College, Pondicherry, around 300 cattle-owners were trained in managing and maintaining the livestock. It is very encouraging to note that the training they received was of great use to them. This is probably because they owned cattle as a main source of income. After the training, they could take care of their livestock in a much better manner than before. They knew about the basic health problems, and how to prevent or control diseases, and avoid infection by following hygienic practices, and so on. One of the women said that they were taught to take care of their cattle just as one would take care of their children.

### **Database on Below Poverty Line**

All Centers maintain a database on the details of Below Poverty Line (BPL) families. The Government of Pondicherry provides the information. This data is crucial to the village communities. It enables them to apply for loans, subsidies and any other special benefits/entitlements announced by the government for the people living below the poverty line. The availability of this information saves time and money. The people have easy access to the data.

Table 3 gives an idea of the network partners/linkages of the project, and the services provided/utilised.

**Table 3 Services through Network Partners/Linkages**

<b>Network Partners/Linkages</b>	<b>Type of Institution</b>	<b>Services/Training provided</b>
Rajiv Gandhi Veterinary Hospital and College, Kurumampet, Pondicherry.	Educational Institute (Government)	Livestock management through touch screen mode

Aravind Eye Hospital, Thavalakuppam, Pondicherry	Hospital (Private)	Awareness on eye health - meeting and health camps
SEVA- Sustainable Agriculture and Environment Voluntary Action	NGO	Training on herbal treatment of human and livestock diseases
Motilal Nehru Government College of Polytechnic, Lawspet, Pondicherry	Educational Institute (Government)	Free training on tailoring through social schemes
SAHODARI, Nellithoppe, Pondicherry	NGO	Hostel for neglected girl children women-awareness to the parents of such neglected children. Training on computer skills
Family Welfare Consultancy Centre, Reddiarpalayam, Pondicherry	NGO	Consultancy meetings to solve family problems
Azim Premji Foundation	NGO	Teaching through computers for children in the ten villages where Knowledge Centers are set up
Coconut Farmers Association, Ariyangkuppam, Pondicherry	NGO	Meeting on coconut cultivation
Directorate of Education for All	Educational Institute (Government)	Training to teachers on teaching with the use of computers
District Rural Development Corporation, Pondicherry	Government	Computerised Account Maintenance training to Govt sponsored SHGs
I – Tutor Organisation	Private	Computer Training (with certificate) conducted for representatives working in the Centre  Training on shell ornamentals (training given by handicapped people of Thangachhi Madam)



### **g. Nammavur Seidhi – A Tamil Newsletter**

The community felt that other knowledge-based infrastructure like local newspaper and particularly a local Newsletter – *Nammavur Seidhi* - available in the Centres, are generally put to better use. *Nammavur Seidhi* is a real hit among the villagers. It reaches a wider section of the population. It is so popular that people ask for it in case they do not get it on time. It is distributed free of cost. The demand for this newsletter is such that people often throng to the Centre to collect their copies. It covers various aspects ranging from employment opportunities, interesting local news and advertisements, traditional medicines, useful inputs related to agriculture, cooking and so on. This newsletter also gives an opportunity to enhance the capacity of the rural people to contribute or share their experiences (for example, any innovative agricultural practice, traditional method of seed treatment, herbal medicine and so on) and information. Most importantly, it has helped in increasing awareness about the Knowledge Centres, not only in the villages where they are located, but also other areas. Sumathi, one of the volunteers in Embalam Centre, said that she takes a copy of this newsletter whenever she visits her mother's village, which is near Villupuram, a town near Pondicherry. Many find it helpful to learn about local medicinal prescriptions for minor ailments, and to know the kind of welfare schemes allocated to the people of Pondicherry. It has helped raise the general awareness among her villagers, mentioned Sumathi.

### **3.2 Special Features**

The project has contributed both directly and indirectly to the opening up of new possibilities for the Centres to organise and network skills. The Centres act as the *fora* for various government departments and NGOs to make use of the volunteers in networking with local communities. The Knowledge Centre at Embalam plays a significant role in providing information about various schemes. Many volunteers in the Embalam Centre mentioned that it has given them increased access to government departments and services and in disseminating the knowledge to others in the village, particularly to those who stay close to their houses and the self- help group members. As the word spreads, the villagers, mainly women, approach them for further details. The volunteers themselves take the women to the government departments and help the eligible persons enlist for the benefits of the welfare schemes. They take extra efforts to find the eligible persons like the disabled, young widows, those who are in the below poverty line category and others. They do it with interest it is evident that they really enjoy doing this kind of work. They take pride in that. It has really enhanced their self-esteem and improved their self-confidence. The Embalam Knowledge Centre plays a significant role in providing information about various schemes and spreading awareness among the people. It brings people closer to the *bureaucracy*. The volunteers take personal interest in delivering the message and identifying the right persons to

take advantage of the schemes and benefits. This has been well documented and also confirmed by our direct interaction with various persons in the village,

It will be useful to mention how various stakeholders use the Knowledge Centres and utilize the benefits. The volunteers have become popular, particularly in the Embalam Knowledge Centre and they have become facilitators/agents to carry out government programmes - mainly by the health department and veterinary department. This base and its contacts with the local people serve as a big asset. This has an impact on the morale of the volunteers with little pecuniary benefit. During our visit to the village the volunteers were engaged in collecting details of household members affected with elephantiasis, based on age and sex. This had been carried out to adopt preventive measure and prescribe medication. In addition to this, they were also requested to collect information about other specific illness or diseases - like heart disease, hypertension and diabetes. These details were collected to facilitate proper, timely treatment to those in the household who needed the same. The women volunteers said that the health department would entrust them with the job of distributing medicines to the villagers. They mentioned that they have to be very careful while giving the same. They had to ensure that the members took the medicine for three consecutive days. Even though the work demanded a lot of time and energy, the volunteers executed it with enthusiasm. The monetary benefit for this work was not much –as they were paid Rs 75/- only. As the information was meticulously collected, they felt that it could be used by the Knowledge Centre as a data base for vital details such as total number of households, total population based on age and sex, and more importantly, health problems. They took the whole effort in the right and positive perspective. Such information could also be updated on specific aspects of any particular village.

It is also mentioned that the volunteers collect farm insurance dues from the farmers of Embalam, based on the list provided by the agricultural department concerned, and pay the same in the nearby village of Karikambalampakkam. In addition to this the volunteers have also been asked by the temple trustee to collect parking charges for vehicles that come to the temple in the evenings on Fridays. It is also said that the volunteers in charge have to deposit the same in the bank. The volunteers (two on every Friday) take turns to carry out the work. One of the volunteers mentioned that the temple trustee told them that they would be paid a total sum of Rs 500/- for their services, which was to be divided equally between them. The volunteers carry out their work with enthusiasm. Though at times they feel the increase in workload, they seldom complained. For them it is also a matter of great pride when others look up to them for advice and assistance in carrying out certain tasks.

In the Embalam Centre, the volunteers said that if any officer from the government sector or any other institutions visits the village, they would be directed to the Knowledge Centre by the community because the general impression is - "*Ange pona theriyum*" - meaning, "If you go there, you will know". Similar opinion was echoed in other Centres also.

Women volunteers said that in the beginning, when they set off for work in the Centre, people would make sarcastic comments like, "*Paiya Thookeettu Kalambittanga*"(meaning "They have set off with their bags to the Centre"). Now most of them have come to realise that these women provide valuable service to the community. Even now, sometimes they hear a few comments like, "They must be earning a lot at the Centre, and getting some benefits," and so on. But the volunteers do not pay heed to such comments. Volunteers understand that such misguided comments are only natural in the milieu of a village.

It is also mentioned by one volunteer and the local *Panchayat* leader in Nallavadu that since its inception, the Knowledge Centre has been facilitating the work of the Fisheries Department by fostering friendly relations between the department and the community. According to the *Panchayat* leader there is a close interaction between the Centre and the Fisheries Department. He and others present said that concerned people from the department would keep the Knowledge Centre informed of new schemes /subsidies and relevant community-specific information. The Centre in turn transmits the same to the people using public address system. This is true of the Veerampatinam Knowledge Centre also. Ezhil Arasi from Keezhoor said that when bank officers and other government staff visit the Centre, she makes use of the opportunity to approach them for assistance whenever. a loan has to be sanctioned without much difficulty or to send self-help group members for training in tailoring, pickle preparation and so on.

It is interesting to note that the volunteers and a few men in Koonichampet, who form a dynamic group, use the Centre as a focal point to develop and maintain linkages with different institutions. This group, which also belongs to a Youth Club, namely, *Ilam Purakkal*, established in 1998, has been involved in activities to improve their society. One of the men was instrumental in bringing the centre to this village says, the centre has strengthened not only their earlier linkages but also helped to create new linkages and network. It has given them a direction, he added. Linkages with few institutes like science and technology and Science forum have been created. It has been mentioned that a school teacher and another man working in a mill (who were primarily responsible in getting the Centre to this place) took efforts in this direction with a support of other volunteers and well-wishers. Through these networks, it was possible to increase the general awareness about the environment, and a video screening of rare planetary movements was also carried out. The volunteers said the villagers watched the video with great interest. Using the contact with the

Pondicherry Science Forum, a one-day camp was organised where the school children, both boys and girls, were shown simple scientific experiments using locally available materials. The children enjoyed participating in the camp. They have also organised an awareness programme on the importance of breast feeding, and training programmes on Human Resource development and personality development, by enlisting some experts. A one-day programme on free legal counseling was conducted in the village. Annexure 2 gives us an idea of the type of network the Knowledge Centre has built up.

There is a general feeling that the Computer Centres (as known to the people) are reliable sources of information. It must also be mentioned that the reliability or credibility of any information received from the Centre, to a certain extent also depends on the contacts that particular Centre has with the government departments.

### **3.3 The Impact**

The project has the potential to make an impact on a wider scale among the community and society. Though this is yet to happen, it has already influenced various aspects of their lives. The primary objectives of the project are rural development and strengthening of livelihoods, and bringing about food security. The perceivable impact of information and communication technology as such is seen among the younger generation. Most of them, particularly, in Veerampattinam and Periyakalapet, use information technology to explore opportunities for higher studies or to seek jobs outside their villages. The training they get at the Centre acts as a catalyst for higher education and employment. Many, particularly among the fishing community in Veerampattinam, have obtained employment using information on employment opportunities accessed through the Knowledge Centres. A few young boys from this village, and from Periyakalapet, could seek higher studies outside Pondicherry, to places like Kerala. There are individual cases of farmers being directly benefited by the Centre. At the community level, there is overall awareness of the various government schemes, their Rights and entitlements to several benefits. Another area that needs mention is the vastly improved bargaining power in the market. Farmers can now wait for better prices and thus avoid losses.

Perceivable also is the impact on the younger generation - mainly boys and young men. It has fostered greater interest and improved computer application skills. Many surpass even their seniors who taught them. It has created a healthy atmosphere of learning and sharing, where children and elders learn computer skills together. The seniors teach the juniors. The newcomers to the Centres learn by observing others working on the computer. Many of the users who were present during our visit to the Centres said that they picked up the skill merely by observing. They mentioned that they

sought help from seniors and volunteers if they had any difficulty in understanding the commands, or in handling any problem while working on the system. It has undoubtedly helped in bringing out their creativity and potential. Ezumalai, a volunteer from the Veerampattinam Centre from the time of its inception, says that many of them who were very diffident and hesitated to enter the Centre, have now become confident. He pointed out to two such boys and said that now he himself takes their help in case he gets some doubt. He said that some of the boys take up voluntary work at the Centre after school hours and teach newcomers. They also help him in conducting certificate courses, and in project work. (They refer to any dissertation or report-typing work as 'project work').

The student community, particularly, has benefited greatly through the Knowledge Centres. Their confidence and learning abilities have vastly improved. The volunteers at the Centres like Periyakalpet, Koonichampet and Veerampattinam mentioned that the exposure to computers and the guidance from MSSRF have helped them and other youngsters bring out their potential. Prabhu, a young man who has completed his schooling and now aspires to become an aircraft engineer, says that the Centre has helped many students improve their thinking and communication skills. He says that MSSRF has shown them how to apply such information and computer skills in order to serve and benefit the society.

Visible impact is seen among the youngsters who have acquired computer skills. It has motivated many youngsters. The young boys say they are much better in computers than their classmates. "They envy us when we work very fast with much ease" they remark. The teachers are also appreciative of them. The youngsters, particularly in these Centres, feel proud to talk about their computer skills. "We feel very confident of ourselves. With this we can really get into some jobs," they said. But they were quick to add that they would continue the learning and will go for higher studies - either in computers or any other subject. They said that the training they received at the Centre would be of great use in whatever subject they choose, as computer knowledge is essential in all fields. Prabhu Vani and others expressed their gratitude to MSSRF for making them competent with computers as they would never have to feel out of place or embarrassed when called upon to work with the systems.,

It is interesting to find that these young men did not stop with the basic training given to them by MSSRF; but have further strengthened their computer skills on their own. Some volunteers have not only strengthened their skills but also acquired more knowledge about computer application following basic training at the Centres. A few youngsters like Prabu, Paridhi and another student in Periyakalpet decided to take a course in computer hardware. They said it would help them attend to technical problems at the Centre and also in getting employment. They also intend teaching capable persons so that they can handle the difficulties in their absence. They mentioned that as far

as possible, they do not disturb the project staff in Villiayanur when there are any technical problems. They try to solve it themselves, or take help from a local hardware engineer.

Youngsters in Veerampattinam have been greatly enthused to develop their computer skills. They have been able to use Internet facilities very effectively. We saw a 15-year-old boy who had just finished his schooling, help two college students with their project work - one on musical instruments and the other on the city of Agra - by downloading necessary and relevant material from the Internet. When we visited the Centre, he had almost completed the search and he was organising the material. He said he culled out the information/content and relevant pictures needed for the project work. The boy, Jayanthan, said that he had never imagined that he would be doing this kind of work- that too in his own village - with free access to the infrastructure. He shook his head in disbelief at the very thought of his feat at such a young age!

Most of the volunteers (especially the women in the Embalam Centre) and the users whom the author met, mentioned that they never expected to be working with computers. Young boys and girls said they never thought they would have the facility to learn computer applications in their villages. The college students at Periyakalapet pointed out that though they had only heard about the Internet and e- mail services, but they never imagined that they would be using the same and learning other computer applications so soon - that too in their own village.

As already mentioned, one could find evidence of the changes the information and communication technology has brought upon the youngsters. Various avenues to technology empowerment have opened up - not only for men - but also for women. Major beneficiaries, though, are mainly the men. . However, some women have also benefited by the Centre in Periakalapet. Two of them have secured good jobs in a nearby industry and a hospital. (Prabhu Vani who has been a volunteer at this Centre, has a job in the hospital). A few women like Poonkuzhali, a 14-year-old from Periya Kalapet, and Jayanthi an 18-year-old from Koonichampet, have acquired computer skills. Jayanthi is now a volunteer, and Poonkuzhali has taught DOS, Power Point and other computer applications to a few of her schoolmates. Poonkuzhali wants to become a computer engineer.

At this stage it may be difficult to give exact numbers, but it appears that male members outnumber females. A quick glance at the user register, and the visits to the Centres, clearly bring out this aspect.

Some of the elders we met pointed out that these Centres are significantly changing the lives of the students and the youth - irrespective of the sex. They said that this would enable them to improve the quality of life to a greater degree than what was achieved by their parents and grandparents.

The rural youth had better opportunities to improve their abilities and scope for employment, and could act with greater confidence.

One of the frequent visitors to the Embalam Centre felt that the Knowledge Centre should not give importance to video games and that in fact it should discourage this activity. He regrets that the Knowledge Centres are either knowingly or unwittingly spoiling the young children. It has created an impression among the children that the Centre is a place for fun and play. They do not realise that it is a place for learning. He also said that the volunteers at the Centre should improve their skills in computer applications like Photoshop which will help them earn income. He also expressed concern about the sustainability of the Centre when MSSRF withdraws its support.

### **Empowerment of Women**

The project has contributed toward social and knowledge empowerment of at least the volunteers who operate the Knowledge Centres. It is yet to impact other sections of population, particularly the women. Interactions with women volunteers, particularly in the Centres at Embalam and Kalitheerthal Kuppam, clearly revealed that the project has undoubtedly helped them get over their inhibitions and improve their self-confidence. The women were no longer confined to their homes and their villages. They are moving out of their village boundaries and interact not only with women but also with government officials who are mostly men. They do not expect anyone from the household to accompany them to the nearby town or to any other place.. They take part in meetings and large gatherings, and share experiences with the audience with ease and confidence. They have become capable of obtaining benefits of government welfare schemes for their villagers and offering counseling to their friends and relatives in solving/tackling household problems. The volunteers, either directly or indirectly, are influencing other women in the villages, particularly the self-help group members. The self-help group members have attended various training programmes organised by the project with the help of other organisations and institutes. The volunteers motivate them to attend the training programmes for their benefit. This reflects a dimension of their social empowerment. Economic empowerment, though not visible among these women, seems to have gained at least a small momentum by providing services like typing applications, taking print-outs, charging for video games etc.

The volunteers themselves are able to assess their improvement in decision-making. Some of them mentioned that their ability to think and decide has improved a lot. They are able to make their own choices and decisions. Earlier they used to depend on the men even if they had to go shopping or attend a wedding. The men used to accompany them. Now they know their priorities. Not only are they in a position to do things on their own without expecting their spouses or brothers to

accompany them, they are also in a position to decide for themselves. One of the volunteers at Embalam Centre pointed that in case there is a wedding of a relative and she feels she does not have to go, since she has other important work, she would stay back and ask her husband to attend the wedding on behalf of the family. Her husband also does not object to this since he knows that she has some other work to concentrate upon. Before she was exposed to self-help group activities, she would have had no choice but to accompany her husband. But now, in case it is an important function, she would go on her own - at a time convenient to her.

Some women volunteers mentioned that the exposure and work experience in the Knowledge Centres have not only reduced their dependence on their husbands; it has also largely contributed to an increase in their self-esteem and confidence. Kasthuri from Embalam said that her daily earnings from the Knowledge Centre enabled her to buy flowers or meet any other requirements such as buying books or pencil/pen for her school going children. She does not have to wait for her husband to get them. Barring a few exceptions, the rest of the women expressed similar views.

Amirtham, mother of four daughters says, "*Ennai patthiye enakku theriyavillai*" - meaning that she was not aware of her own strength and potential. She was not confident enough to handle even the daily household accounts and this used to irritate her husband. Now she is able to maintain accounts and plan the budget. She says her husband appreciates her and encourages her in her activities as volunteer at the Knowledge Centre, and also a leader of the self-help group. She is a confident woman now, and she not only contributes to the household income by selling her home-made pickles, but is also in a position to train others in pickle-making. She prepares around 26 varieties of pickles. Her preparation of pickles varies according to the season. She sells her pickles at home and during agricultural fairs. She says that there are regular customers for her pickles. She advertised her products in the newsletter, *Nammavur Seidhi*. According to her, this newsletter gave an opportunity to convert her potentials/interests into action/performance. Seeing her advertisement, some persons who were diabetic or had other health problems, enquired whether she would be able prepare pickles according to their requirements - with reduced salt, less oil, without preservatives, and so on. At the same time they were particular that the pickles should not get spoilt. Amirtham caters to such persons' needs also. People from 5-10 kilometers distance come to her house to buy the pickles. She says proudly that those who have tasted her pickles suggested that she sell the same in Pondicherry market on Sundays. She is contemplating the idea, and looking out for suitable places.

Amirtham also helps her village people by getting financial assistance from a French welfare organisation. She came to know of this through someone who visited the Knowledge Centre for Internet browsing. Nearly 25 needy persons (like the disabled, and young widows) from her village



have benefited by this. She helps the community through other ways also, using her contacts with government departments, NGOs and so on.

Selvarani, a volunteer from Embalam, says that she and the others feel proud to be addressed as 'madam'. She says that with little educational background (middle school) when she is able to type or take printouts, she feels happy and proud. "Who would have sent me for computer course spending Rs. 3,000/- or Rs 4, 000/-?" she wonders. She said that she used to have very low self-esteem; now she is somewhat better. She says she still has to go a long way to go.

Indira Gandhi, a young woman with two children, who recently joined the Knowledge Centre as a volunteer, mentioned that as a child and teenager, she used to be very docile and timid. Her father was an important person in the village. So she and her younger sister were never allowed to interact freely with others in the village. She had studied up to the 8th standard. Today, she is totally a changed person. She is one of the self-help group leaders. She has become bold and articulate. She earns an income through tailoring, and by selling knitted tablecloth and stuffed toys. She has taken up an agency for cosmetic products by Hindustan Lever which is another source of income for her. Her husband, who works in a company, encouraged her to take up this agency, which she has been doing for the past three months. She says that the income from tailoring is sufficient to manage her day-to day household expenses. She teaches other women to knit and to make stuffed toys,

Indira is proud to say that she is no longer a submissive person. She has become aware of her rights and responsibilities. She has become so bold that she dissuaded her brother from selling their ancestral house. She was upset with her brother when he did not bother to inform her and her younger sister about his plan. She says he felt that it was not necessary to inform the sisters. When her brother wanted to go ahead with the sale, heedless of her objections, she decided to take the matter to the court. "The case is in the court now," says Indira Gandhi. Similarly, she objected to a sale of another piece of land by her brother. She intervened, and stopped the buyer from registering till she and her sister were paid their share of the sale proceeds.

She also attends to other problems and gives necessary help. She tries to extend support to her friends and relatives in the village. She says if there is any problem in a house, she helps them sort out the problem amicably. In extreme cases, she takes them to Arunodayam, a non-governmental organisation that is involved in providing family counseling services. She has also helped a man whose drinking problem caused distress in his household. She was able to take him to a de-addiction facility. Presently he is under medication, says Sumathi.

Indira Gandhi was very humble when she said, "If I have clarity in thought and actions now, it is only because of the *Seidhi Maiyam* (Knowledge Centre). She says that by merely observing at of the meetings of the self-help group members in the Centre, she changed her thinking and perceptions. She said in that during the meeting, led by one of the project staff, women's empowerment was discussed elaborately. . That one meeting was sufficient for her to come out of her protected upbringing. She says it was by chance that she got an opportunity to listen to the discussion. She had gone there to find a veterinary doctor as her cow had a health problem. She is now happy that her husband supports her in all her activities.

It has already been mentioned that the Embalam volunteers are self-help group leaders. They are a dynamic group, who inspire other volunteers in other Centres. Prabhu Vani, a volunteer from Peryakalpet, and another young woman from the village, said that they could not believe themselves when they heard volunteers from Embalam (who had been educated only up to middle school) relate very clearly, without any inhibitions, about their work during a volunteers meeting. They pointed out that even though they themselves were college-educated, they could not say a word in the meeting. "We felt ashamed of ourselves. Those women from Embalam were really a source of inspiration to others," the young women remarked.

It may not be out of context to mention about the role played by the Mangalam Society - a pioneer in forming self-help groups in Pondicherry to create awareness among women about their rights and responsibilities. The volunteers from Embalam have a base in Mangalam Society. It was revealed from a few of their case studies that this society gave them the necessary moral support besides creating awareness of their rights and responsibilities through intensive workshops,. It helped bring out their strengths and weaknesses. It gave them the opportunity to express themselves. Through these workshops, the Mangalam Society made them realise how they should let go of past unpleasant memories that would affect future performance both at home and outside. The society also arranged for family counseling sessions with another non-governmental organisation called Arunodayam. It was during one of the meetings of self-help group organised by this society that they came to know about the concept of Knowledge Centres. The volunteers pointed out that the society encouraged the self-help group members to take the responsibility for running the Centre.

Mangalam Society has played a crucial role in spreading awareness among the women. It was strengthened by MSSRF; it facilitated and enhanced the volunteers' self-confidence and motivated them to work outside the house, commented Amirtham and Danalakshmi. Amirtham mentioned that if the Mangalam Society had made them aware of their rights and responsibilities, and given them confidence, the Knowledge Centre served as a *vadikal*, providing the opportunity to relate to the

realities. Till then they were unaware of their capabilities and strengths, pointed out one of the volunteers. It is mentioned that MSSRF motivated them to come out of their house and work among the people. They are exposed to the outside world and are able to do a lot of things on their own - not only for their families, but also for the community at large. They said they are proud of their development and feel happy that they are able to serve the society. This shows their empowerment dimension, and the raising of awareness levels.

Amirtham says that through Mangalam Society and MSSRF, her standard of living has improved. Her social awareness (*samuga unarvu*) and confidence have also increased. She is able to serve the society and motivates others. With four daughters to nurture, her life would have become miserable without the support of Mangalam Society and her participation in Knowledge Centers. Today she and her husband are not worried about their four daughters. She says she has realised that one does not require college degrees to get employment. "I am very clear now. Without that (high educational qualification) one can easily earn and be economically independent. They don't have to be slaves for others. This social awareness has saved my household from societal ridicule (as she has four daughters). We withstood it. My husband has always been supportive," said Amirtham.

The volunteers at Embalam Knowledge Centre are active, not only in their own village, but also extend their services to the neighbouring villages where the Knowledge Centres are located. They have helped to form self-help groups in these villages. They also impart training to the women in pickle making, phenyl/soap oil preparation, rope-making and so on. They charge a nominal fee for the training. The volunteers make use of this time to talk about the Knowledge Centres and its services. They share useful information with them - like the latest government schemes, traditional medicine for minor ailments and such other things. The volunteers mentioned that it gives a tremendous sense of fulfillment when they teach others. It enhanced their self-esteem. The volunteers felt that they are immediately recognised whenever they go - to banks (in connection with self-help group accounts) or any to government departments. The bank officers and government officials attend to them immediately, and extend all possible assistance. It was heartening to observe Amirtham proudly explaining how well they are treated in a bank or in a government office.

The role of volunteers in Embalam and Kalitheerthal Kuppam can be seen in other spheres also, like in family counseling. They try to sort out the problems between husband and wife or between a daughter-in-law and the parents-in-law. Sometimes they take the concerned persons to Arunodayam, a voluntary organisation in which provides family counseling. It is also learnt that the Embalam volunteers have been instrumental in providing speed-breakers near a school that was

close to the village temple. Usha Rani, one of the most dynamic personalities, has helped to form a self-group in Chennai, where her younger sister resides. She says that whenever she goes to her sister's house, she would help the group members in maintaining accounts and gives guidance.

Prabhu Vani from Periyakalpet feels proud to be associated with the Knowledge Centre. She says that even though she comes from a conservative society, her role as a volunteer at the Centre is recognised by both men and women in her community. She said that she never used to talk to men, as it was the social norm in society. But things have changed for the better. The elders and neighbours approach her if they need any clarifications. They treat her with respect, she added. She also mentioned an incident where she was given an immediate appointment when she went to meet the director of a nearby hospital (to give the Rural Yellow pages book). She said she felt honoured when the director met her and showed great interest in the activities of the Knowledge Centre. Prabhu Vani mentioned that after her meeting with the hospital director, a few women have been employed there. Incidentally, Prabhu Vani also has recently got employment in the same hospital as a secretary to a senior doctor. She says her experience at the Centre helped her get the job, and the staff treat her with respect. Credit goes to MSSRF, said Prabhu Vani. She says she will continue to serve as a volunteer since she works at the hospital in shifts. She and her friends in the village want to serve their community with the Knowledge Centre as a focal point. But they do not know where and how to begin such a big task. They feel that the project could help them cross over the societal restrictions regarding female members. It appears that the prevailing social conditions in a few villages do not engender social empowerment of women.

In Keezoor, a woman's activity is restricted to the Centre only. Working within the Centre, which also happens to be at her residence, she extends support and help to maximum extent possible. She says although she does not move out of the house, she has gained confidence after working as a volunteer in the Knowledge Centre. She says that the bank officers and other government officials come to the Centre. She mentioned that she feels important when they offer assistance regarding the schemes or benefits. She says it gives her confidence, and helps improve her self-esteem. It is interesting to note that she was instrumental in forming some of the self-help groups in her village. She encourages others particularly the youngsters, and the women, to get benefited by the facilities available at the Centre. She writes down any new information that is sent from the hub Centre, and also on her own, she notes down interesting or useful content. She takes help from the users who visit the Centre to pass on messages to others or to the self-help group members. She follows it up through the same persons, to find out whether they made use of the information or benefited from the government schemes. She does everything she has to do by remaining within the Centre. We must mention here that she was hesitant to go with the author also.

It is interesting to observe that the male members, like Shakthivel from Thirukanchipet, remark that the Knowledge Centre has brought about a change for the better. Shakthivel explained that prior to his joining the Centre, he was a reticent person (in spite of being an educated man) and that many people in his community did not know him. But after he started interacting with the Knowledge Centre, he has been involved in undertaking survey work (like conducting eye camps through Aravind Eye Hospital, Pondicherry), which has brought him closer to the community. Today if someone needed any information, they approach him for details.

Case studies of some of the volunteers reveal that they have proved their competence in managing the Centres and in gaining respect among the community. They have carved out a niche for themselves in the village.

### **The Volunteers: Abilities and Attitudes**

Volunteers' abilities and skills have influence the kind of information used or sought by the users. It has evoked curiosity and interest in new software technology. In Periyakalpet, the volunteers have installed new software called Wave Editor. They use sound-mixing and editing. They mix audio with songs. The young volunteers said that they learnt to operate it by themselves after they watched us use this technology in one of the Tamil serials. They requested for web camera facility for video conferencing. This would be a source of income, and at the same time it would be of great use to the community as some men from their village are employed in places like Singapore and Malaysia. The relatives can talk to each other. They take the responsibility for managing technical problems of the Centre. They seek help from the project staff only for major problems - like the one they faced recently due to a thunderstorm, when the entire electronic infrastructure was damaged,. As it has already been mentioned, a few young men are undertaking a hardware-training course in this village.

In the Centres of Veerampattinam, Koonichampet, Nallavadu, and also in some others, Photoshop program is used for photo editing. They said it helps increase or bring out one's creativity. In another Centre in Kalitheerthankuppam, a person from the same village - who works in Chennai as an assistant art director in the field of cinema - said that skill in this software can help people find jobs in advertising agencies.

The users in Periyakalpet and Veerampattinam asked for an enhanced Internet speed. They said that the capacity could be increased from 4-6 GB to 10-20 GB - as this would enable them to save important documents. They also felt that the speed of Internet could be increased. A volunteer in

Periyakalpet said the present speed is so slow that it discourages the users from making full use of this facility,

During the interactions with the volunteers, we learnt that most of them, particularly the men, are able to handle day-to-day hardware and software problems. They seek the project staff's help only when their efforts fail. It has already been mentioned that in few Centres there are young men who are undergoing hardware training, and there are also a few who are already well experienced in that line. It is also observed that women volunteers are not quite comfortable with this kind of work. They mentioned that they do not want to take any risk while working with electricity. Danalakshmi and Usha mentioned that they are afraid of electric shocks. This is a common fear among the women volunteers in almost all the Centres.

Volunteers and the users in Nallavadu and Periyakalpet expressed their desire to know the details in Tamil, regarding higher education, and employment opportunities related to fishing. In two of the Centres, the users often ask questions that lead to sharing of technical information, and seeking more information from Villayanur Centre relevant to the location and occupation. The *Panchayat* leader from Nallavadu suggested that information on fishing technologies adopted in other parts of India and the world over, would be of use to them - as it would expand their knowledge about their fellow fishermen.

Prabhu Vani, a woman volunteer from Periyakalpet, wishes that benefits of the Knowledge Centre would reach the community - especially the women - in some form or other. She has already motivated two of her friends to visit the Centre and work as a volunteer for at least 2-3 hours. But she realizes that this is an uphill task that will take time to actualise, as there are societal hurdles for women. She mentioned that the project promised to conduct an eye camp in her village, with the help of Aravind Eye Hospital, Pondicherry. She has already made a list of participants for the eye camp. For some unavoidable reasons, the camp has not yet been organised, said Prabhu Vani. She says people could be easily reached by organising such camps. This would also enhance the credibility and respectability of the Knowledge Centre, and people would eventually come to know of the other services available at the Centre.

It should be mentioned here that eye camps with the help of Aravind Eye Hospital have already been conducted in most of the other villages that have Knowledge Centres. The Periyakalpet Centre came into existence only two years ago. But the volunteers here are taking interest in helping the students and others. The young volunteers are extremely motivated; they pass on the information, particularly about employment opportunities and government schemes, to a neighbouring village. They hand over the information to the *Panchayat* leader - who puts it on the

notice board outside the village temple. People from the village have benefited through this information. Youngsters at the Center said that two persons have got employment in a private company/factory, and a few could avail of government welfare schemes. The volunteers at this Centre and in other Centres too, have greater clarity about serving the community and such a spirit has to be sustained.

Almost all volunteers were unhappy because the villagers do not effectively use the content available. They said that persons from neighboring villages request details regarding the market for paddy, pulses and input availability in the agricultural departments. It is essential to reach a wider audience in order to realise the goal of the project. The volunteers and the project staff share this view. The volunteers themselves came up with certain ideas on how one could achieve this. The communities have to be aware of the type of information/content the Centres provide, and whether they are useful information, relevant to their locality and the people. They mentioned that this could be achieved by using another communication tool - the street play - where all the aspects and activities of the Knowledge Centre could be brought out through an enacted episode. In Centres like Veerampattinam, volunteers themselves have taken efforts to spread awareness about the Knowledge Centres among the community members by distributing printed pamphlets giving details on information and services available (See Annexure 1).

From our interaction with the volunteers and the other users, it was clear that the content must be regularly updated. They also preferred to have more content and information related to the major occupation of the respective communities. In Poornagkuppam they expressed a need for more relevant and local specific information. For example, Gunasekaran, who was a full time volunteer until a few months ago, and now working in a firm in the near-by town (he still works during leisure time at the Centre), and few young men, and a frequent user of the content in the Centre - all pointed out that since their village is primarily dependent on cultivation of vegetables grown under irrigated condition for their livelihood, it would be of great use if the content is more on horticultural crops and related agricultural practices. They also expressed a need for printed information on the crops. If knowledge about latest developments in agriculture is provided and conveyed to the community it would be of great value. They said that they would like to crop new vegetables like carrot, beet, and beans in their lands. One of them had already tried carrot after getting the know-how from the Centre, and the yield was good. They were specifically interested to learn more about organic methods of cultivation. They are aware that vegetables cultivated in the organic way would not only get them more income, but also help in minimising the damage to the soil. The person who had tried carrot cultivation mentioned that through his attempt, two other farmers also cultivated the same.

The woman volunteer from Keezoor village expressed the need for alternatives for chemical fertilisers and pest/disease control methods, since a young boy, interested in agriculture, had requested the information. She also mentioned that he was wanted to know about herbal extracts in pest control. The boy, who was also present during our discussion, expressed concern about the loss of beneficial insects, birds and plants. He also mentioned that traditional knowledge related agriculture should be documented, and included in the content. It is interesting to note that though this volunteer does not normally move out of the Centre, could identify a right and eligible person, and make sure that the information reaches him/her. She also follows it up for further action.

Though some of the men volunteers have found employment elsewhere, they continue to help with the Knowledge Centre's activities. They maintain a close contact with the Centre. They are a source of great support to the present volunteers and the users. Because of their experience, if villagers approach them for details or any help regarding the information, they are willing to help. They come to the Centre during their leisure time. They teach computer applications to the new volunteers and also how to tackle any problem while working on the computer and to find any information for the villagers. The newly appointed woman volunteer in Poornagkuppam said that Gnanasekaran (who was a full time volunteer a few months ago) helps her with the computer, and to receive messages from Villiayanur. Similarly, Bhoopalan from Thirukancipet extends all possible assistance to the present volunteers and users. He evinces great interest in the development of the Centre. He feels sad that the benefits of the Centre have not been fully utilised by the community. He says that the efforts should be taken to bring the Centre and various government departments closer to each other. He gave few suggestions on how this could be achieved.

During the fieldwork, it was evident through interviews that the volunteers (also some of the regular users and village elders) are interested in running the Centres and serve their communities through its activities. A few of the volunteers have clarity and commitment about community service. It was encouraging to listen to Prabhu, a young boy of 18, who said that he and his friends (one of them is a volunteer) have a desire and motivation to equip the Centre with a self-sustaining base, and were willing to generate resources on their own, in the absence (or constraints) of MSSRF's support. This was more specifically for minor infrastructure needs that would arise. He said that the setting up of a Public Address system would be of great help to the community in his village. He mentioned that they would be grateful if a mike and an amplifier are provided by the project. They would be willing to raise local resources for other accessories like the speaker, added Prabhu. This clearly indicates their commitment to the cause.

There is a wide margin of difference between women and men using and profiting from Knowledge Centres. The volunteers feel that by taking some effective steps, this gap could be narrowed down.



In general, women's access to the Knowledge Centres is much lower than men. Even in the Centres run exclusively by women, women users are not many. This was pointed out by the volunteers themselves. In Periyakalpet it was mentioned that 99 percent of the users are only men. If women have benefited by the Centre, it is largely due to the efforts of the volunteers themselves - who take the responsibility of reaching out to the needy and eligible persons to benefit through various government schemes and training programmes.

### **3.4 Social Constraints in Access to Services and Technology**

#### **a. Gender**

Local customs and perceptions often hinder access. Access to technology/information alone does not promise participation or learning. It largely depends on the social support that promotes adoption. Lack of social support hinders development and utilising of benefits. We happened to speak to one of the leaders of a new self-help group in Periyakalpet, who pointed out that even though there were many college-educated young women in her village, they were unable to improve themselves due to family and societal restrictions. She said that the fishermen's community expects women, even the educated ones, to remain home, without any social interaction. She mentioned that the society expects young girls and women to confine their activities within the house. Society does not mind if women go for jobs outside the village. She also mentioned that their livelihood demands that women go out to other places to sell fish. This is accepted because it is taken as part of their economic activity. Only in the case of other activities like going to Knowledge Centre to learn computers, or for any other reason, particularly where men are present, the society imposes norms and rules on the freedom of young women. If they go to some other institute in a different place, society does not say anything. There is opposition when women take part freely in social or any village level activities. The families attach importance to these societal response and reactions. In order to avoid criticism and ridicule, the young women themselves implicitly follow the conditions. Internalisation has been so strong that women seldom break away from norms.

Poonkuzhali, a 10th grade student from Periya Kalapet, who is very articulate, felt sad that young girls and women have not been given enough opportunity to use the Knowledge Centre. When asked what could be done about it, she said, "Set a time slot for women," and added, "Probably a woman volunteer like Prabhu Vani (the present woman volunteer ) could encourage more persons to come and utilise the Knowledge Centre" When asked how computer education would help married women who stayed home, she spontaneously replied, "They will be a source of inspiration to their children and will give them the satisfaction of knowing something useful." She mentioned

that the society imposes restrictions on girls and women. She could learn many computer applications, as her two brothers had earlier been volunteers. Presently, her third brother is a volunteer.

It is interesting to note that a few young women graduates from Periyakalapet showed great concern for the development of their community. They also expressed their desire to improve their abilities and skills using the Knowledge Centre as a focal point. One of them mentioned that they could start a Literacy Programme. Unfortunately they are unable to translate their interests and ambition into action because they are held back by the prevailing social conditions and norms of the society. They pointed out that the society creates a block to their socio-economic development. These young women also agreed with what the self-help group leader said - that the society does not say anything if the girls went out for jobs outside the village. It may be mentioned here that two of the women are in Singapore. Presently they are under the care of their brothers and parents. The brothers feel responsible to their siblings' welfare. They do not want their sisters subjected to any criticism or ridicule. The young women and the woman volunteer suggested that MSSRF project staff from Villianur- the hub-Centre - should convene a meeting involving the self- help group members and interested women. Later, as a means of awareness creation, and to encourage women to participate in the Knowledge Centre activities, they should organise another meeting with other villagers, along with women. This shows their motivation and interest to make use of the technology for their self-development, and also of the community in general. They have the interest and the potential, but remain unable to access the technology.

There is a disadvantage when a Centre is managed mainly or only by either women or men. It prevents the opposite sex from coming to the Centre and freely participating in its activities. In Centres like Periyakalapet, Koonichampet and Nallavadu, where men volunteers dominate, it becomes a hurdle for women to access the Centre. It is mentioned by the present volunteers in the Centres of Thirukanchipet and Veerampattinam that at least some women used to drop in and ask for some information when Paliniamma, Malarvizhi and Shanthi (in Thiuknchipet) and Lakshmi (Veerampattinam) were around. Shanthi and Lakshmi said that quite a few women used to come to the Centres (where they worked earlier for sometime) to get information about health, market rates for vegetables and training details given by government departments like District Industrial Corporation (DIC). Since the Centres no longer have any women, hardly any woman comes to the there. Only girl children - below the age of 12 - visit the Centres. Whereas, in the Embalam Centre, which is entirely run by the women, it appears that elderly men do not like to visit. Sunder, a schoolteacher who makes best use of the Centre to teach the children, said that men hesitate to come to the Centre to ask for information from women. Sunder added that the men often request him to get the required and necessary information for them.

Problems also appear in the Kalitherthal Kuppam Knowledge Centre, which has two female and one male volunteer. Here the problem expressed by the volunteers is different from the reasons given above. It is also of social nature, but slightly different from the earlier ones. Here, the village women hesitate to visit the Centre if they see the village elders or other men near the Knowledge Centre. Ambica mentioned that out of great respect for the village elders - who are also often temple trustees, women do not go in front of them or talk in their presence. She says that even after being exposed to many meetings conducted by MSSRF and organising self-help groups, she herself does not feel comfortable in the presence of village elders. She says it is all due to the upbringing and cultural norms in the villages. In order to facilitate women to use the Knowledge Centre, it has been decided that a particular time would be allotted exclusively for women users. Ambica said that this would be implemented after the school vacation because the women would not be able to come when children are at home. Moreover, during the holidays, the Centres would be besieged by the Children!!

#### **b. Caste**

Another social dimension that restricts participation of the community is the caste factor. This emerged very clearly during the visits to Embalam and Koonichampet Knowledge Centres. The Centre at Embalam is situated in the main village, which is inhabited by higher castes people. The Centre is adjacent to the main temple. The Dalits - who normally live on the periphery of the main village - do not seem to make use of the Centre. Informal discussions with the users and volunteers revealed this. (The volunteers mentioned that due to its distance, the people from the other end of the village hardly come to the Centre) In Embalam, the caste differences are not quite obvious. But in Koonichampet, the social distinction between 'high' and 'low' caste seems dominant. Since the Centre is situated in the Dalit area, people from the main village do not wish to come here, mentioned Chandra sekar and others. But they said that the youngsters would come. They pointed out that the Tamil newsletter, *Nammavur Seidhi*, is given at the Milk Co-operative Society for distribution in the main village. Some tension seems to be there between these two sections of the community ever since the Centre came up, because the *Panchayat* people of the main village wanted the Centre in their locality; but could not be obliged. It may be mentioned here that the visit to the Centre was for a very brief period. Therefore further details are not available.

It is relevant to find out how to create an enabling environment for women and others to make use of the Centre - so that they would profit from the options and potentials of the Centre.

As suggested by few women in Periyakalpet, two or three meetings involving only women (like self-help group members and educated women) and the village elders, could be convened. This may help in enhancing the participation of more members - particularly the women. Relevance and practical advantages of technology and the knowledge need to be discussed in the meetings. Efforts need to be taken to overcome the barriers for women, mainly those who show interest and have potential to improve themselves socially and economically. In order to help women to use and benefit from computer applications and using the content, they need to be given more encouragement.

It came out clearly during the informal interviews with young women in Periyakalpet that they feel isolated in the use of Knowledge Centre. This reveals their interest and motivation for participation.

### **3.5 Economic Constraints**

As we have already mentioned, it offers several avenues of empowerment to both men and women. It is interesting to note that in Centres like Thirukanchipet, it is not the social conditions that prevent women to work in the Centre as volunteers. Their prevailing economic situation does not allow them to serve the Centre. The inclination and interest are there, but the Centre does not assure regular and sufficient income. As caretakers of the household, the women have to provide food and take care of other home needs like children's education. Paliniyamma, who did not even go to school, worked as a volunteer for nearly six months. She learnt to switch-on and shut down the systems. She used to help the children with video games and painting. She also enjoyed working in the Centre, but due to economic compulsion, she had to withdraw herself from the Knowledge Centre. She owned cattle, but there was nobody at home to take them for grazing. . Also, her son is studying in a school. She began to work for daily wages in order to earn money to meet her son's educational expenses and other household needs. Another person had to leave the Centre because this was affecting business in the vegetable shop which she manages when her husband is busy with other activities. Her presence is crucial for the household to earn money. According to Shanthi, from the same village, the lack of economic benefit was also a reason - in addition to the workload at home – for her discontinuing her service at the Centre.

### **3.6 Priorities of men and women volunteers**

During the informal interaction with the volunteers and users, and some of the villagers, there appeared to be a difference in their priorities. For instance, men volunteers in Veerampattinam, Periyakalpet, Koonichampet and Poornagkuppam, showed interest in strengthening the existing infrastructure and getting new ones. Apart from improving themselves with technical knowledge,

they want to use the technology for the benefit of their community. This could be due to their college education and also due to their association with others in their village who are studying or working. Men also wanted education-related CDs. They wanted the speed of Internet to be increased. They also mentioned that a scanner facility would help to serve the community and also generate income for the Centre. Now they have to either go to the Villayanur Centre or a nearby town for this facility. It delays the work, they mentioned. The men's interest is largely related to occupation and livelihood. The woman volunteer from Embalam felt that Internet services in Tamil would be very useful. She mentioned that since her village is primarily dependent on agriculture, the latest information - locally specific information /content - would benefit the community. Content should be updated, she added. Interestingly, women's priority was more on health and nutrition related information. Ambica, from Kalitheerthal Kuppam, expressed a need for information on childcare and how to handle them at different stages of childhood. Women volunteers in most of the Centres showed interest in starting micro-enterprises. At Embalam, two volunteers wanted computers with larger memory space - at least for the system used for Open Knowledge Network.

### **3.7 Sustainability**

Our discussions with the volunteers and few of the villagers revealed that they have a few plans to expand the scope of the Knowledge Centres, both from the point of view of providing information, and to earn income by running the Centre, in case MSSRF withdraws. At least six Centres are confident that they would continue to serve the community. From the sustainability point of view, the attitude of some of the volunteers - like the one in Periyakalpet - reflects positivity and goes to prove that local ownership will ultimately lead to sustainability. In Poornangkuppam, one of the men volunteers and few college students mentioned that in future the Centre would definitely function and render necessary service to the community. But they added that few more years of MSSRF's support would be of great help for them to establish a firm foundation. (The other Centres also shared this view). One of them mentioned that they would like to set up a screen-printing unit in association with the Nallavadu Knowledge Centre. The youngsters felt that the income it generated would enable the Centre to run smoothly. It is still in the planning stage. They are not sure whether it would work out. They felt that project guidance and input would be of great help in this regard.

It may be pointed out here that volunteers at the Embalam Centre seem to be reluctant to accept any withdrawal strategy from MSSRF, and they want to retain the support from MSSRF in some form or the other on a sustained basis. Such possibilities need to be explored. In Keezoor and Thirukanchipet, the volunteers felt that the village community, particularly the *Panchayat* leaders, and other elders, do not show any interest in the functioning of the Knowledge Centre. They need

to be involved since their participation is of utmost importance if the Centres have to function on a sustained basis.

An important observation made during the study is that there is no regular income for the volunteers. Though some of the Centers are confident of financing themselves, a regular and sufficient income for the volunteers would certainly contribute to the sustainability of the Centers. It has been mentioned earlier that economic constraints have compelled a few women and men volunteers to withdraw their services as volunteers.

Every Knowledge Centre has developed a niche in the community, and this should be allowed to continue. (Literacy, educational priorities - Periyakalpet. The college students look for new books. Koonichampet has developed good networking. There is a systematic documentation of all their activities carried out through various networks).

The volunteers and a few elders whom we met during our visit felt that long term commitment on the part of MSSRF would ensure proper functioning and sustainability of the Centres. Everyone was greatly appreciative of the efforts and initiatives taken by the MSSRF. It is a promising initiative as far as they are concerned. They never imagined that their children would be exposed to computer skills. It has given them some confidence, and it has really improved their self-esteem. In general, there is a feeling that these Computer Centres are a reliable source of information. Reliability or creditability of any information received from the Centre depends to a certain extent on the contacts the Centre has with government departments. The volunteers felt that the full potential of these Knowledge Centres is not realised by a larger section of the population.

It offers a lot of scope to the villagers both the young and the old. It is found that not many use agricultural information available with the Centres. There are individual cases of those who have benefited, and continue to make use of the opportunity given to them. It is hoped that these people will influence others in this regard. Their application of the knowledge may motivate others. The volunteers and others who benefited from the communication technology would be good resource persons. They can also be a great source of inspiration and moral support. The change, which has started with the volunteers, has a scope to spread to the community in general. In fact, at least some, like in Embalam Centre, Periyakalpet, Veerampattinam and Koonichampet, are already playing a significant role in this regard. It would be of great use to the community - particularly the women - if the existing communication technology is put to use for the people with low-level of functional literacy.

### 3.8 Limitations and Challenges

There are many gains to the community. It cannot be denied that the rural community has benefited both directly and indirectly through the Knowledge Centres. Many have become computer literate. It has brought many government departments closer and many have secured employment (including a few women) either through the information they got or due to the training they had in computer applications. Many of the women and men have benefited through various government schemes and training. It has provided opportunities for technical empowerment of the volunteers and a few others in the community - particularly the male members. More importantly, it has enhanced the self-esteem and confidence of the women volunteers. They have become socially and economically empowered. They have gained the respect of the society. The Knowledge Centres have not confined themselves to the community where they are located. Its benefits have also gone far beyond the village boundaries. It has been brought to our attention that people from neighbouring villages also make use of the Centre. School teachers and bank employees have utilised these Centres to learn to use computers. However, there are areas that need attention and improvement.

One should be careful about the replicability of the success stories. Sustainability of the Centres is a major aspect that needs attention. The main question is how to make them self-sustained. Apart from the cooperation and support of the community, the financial sustainability is a major issue that needs to be given serious thought. One should be cautiously optimistic, as there are barriers and challenges.

Due to some socio-economic reasons, the project objectives or mandates regarding gender equality in the management of the Centre could not be achieved so far. The low level of literacy among women - when compared to men - seems to be another cause for the low level of participation. As we have seen, Embalam Centre is managed fully by women volunteers who are all self-help group members. We have seen that in Centres like Periyakalpet, although there are women graduates, the social attitudes inhibit or curb their progress. In Keezoor, there is just one woman volunteer who takes care of the Centre. She has been the only person managing it ever since the Centre started. It could be due to the reason that the Centre functions in the volunteer's residence itself.

In Centres where women like Lakshmi, in Veerampattinam, and Paliniamma and Shanthi in Thirukanchipet, worked as volunteers and were of great help - particularly in attracting more women users, they could not continue working because their services were needed at home. We have seen that Paliniyamma has been forced to work for daily wages; she needs to provide for the family

and her son's educational expenses. It has also been mentioned that she does not have any other source of income to run the family.

A few men volunteers also find it difficult to render their services on full time basis, as the income from the Centre is not sufficient to maintain the family. Bhoopalan from Thirukanchipet, who was instrumental in bringing the Centre to the village, is unable to offer his services to the Centre after his marriage, because his family members urged him to find a job that would assure a steady income. He says that now that he is married, he has to listen to the elders in the family. But he says he would continue to offer help in running the Centre, though he might not be able to participate in the meetings and other activities.

Generally there are very few Internet users, except in some Centres. But, the volunteers mentioned that the Internet could be put to better use if there is locally relevant Internet content. Language barrier is a major cause of under-utilisation by villagers. The volunteers in one of the Centres mentioned that the lack of English knowledge is a major obstacle to Internet usage at the Centre. The volunteers at Embalam Centre feel that familiarity with the English language is important. Lack of it hinders accessibility to the information. Though the younger generation is more familiar with the English language, they would feel comfortable if the information is available in Tamil.

The volunteers and other frequent users regret that there is not much awareness about the Knowledge Centre, like why it has been set up here, what can be benefited from here or how it can be used, and so on. Everyone was concerned about the fact that the Centre was not used by a major section of the community. They said they would like to ensure maximum utilisation by maximum number of people. For this they felt the need for input and support from MSSRF. Awareness about the Centres needs to be promoted, felt the volunteers. They had some suggestions to enhance the usage of the knowledge and the information in a better way.

There is a general feeling among the volunteers and those who visit the Centres often, like Sundar in Embalam, Chandrasekar from Koonichampet, Gnanasekar from Poorangkuppam and Sudha ,Prabhu Vani and Prabu from Periyakalpet, that there is a lack of awareness of the content available. Utility of these contents should be promoted in the community. It needs to be communicated to all sections of the community, they added. Although people are somewhat aware of the Centre and the fact that some villagers use the services, most of them do not know for what purpose it is used or can be used. There is a common misconception that the Centre is meant only for school children or 'educated' persons. According to one middle-aged woman from Keezoor, "Padikkara pullainga povudhu,"- meaning that normally only the students go to the Centre. As already mentioned, a glance at the users' register confirms this view.



The content should be more demand-driven and user-friendly. The Centres do play a significant role in the villages where they are located. Many have benefited in different ways and there is the potential to continue the same for the communities/different stakeholders - the student community, unemployed persons, agriculturalists, fishermen and the general public. They could be effective in networking with various government departments, NGOs and private institutions like the Arvind Eye Hospital.

How are we going to reach to a larger portion of the community for providing knowledge and skill empowerment, and also enhance their social and economic empowerment, particularly of women? It is important to consolidate the gains of the Knowledge Centres and at the same time it is important that the Centres are updated with more relevant information for the local community. With some direction and technical support, the Centres can develop further and make more headway in the community.

Technology is used, but by which section of the population? This question needs to be studied in depth. It is necessary to look into the details to know the extent to which the people have understood the objective/purpose of the Centres, or what they think about them and how they make use of the content and other communication infrastructure of the Knowledge Centres. All this needs to be explored further in order to assess the impact and the usefulness of the technologies for livelihoods of the rural communities.

The Knowledge Centres by themselves may not be able to initiate and implement changes. But it would be useful to try and know how these Knowledge Centres could be put to better use to improve or enhance lives of the communities. Or in other words, in what way these Centres could help the communities improve the lifestyle under the existing socio-economic conditions. It would be interesting and useful to explore the untapped potentials of these Centres and how it really could help the underprivileged sections of the society, particularly the women.

It would be useful to look into the existing and ongoing activities, and how these activities and initiatives can be strengthened, and reach out to a larger audience in the rural areas. It has surely created an impact on the people and many individuals have benefited by it. As we have seen, the community in general has been benefiting either directly or indirectly. The benefits need not always be tangible. One cannot afford to ignore the intangible benefits because they are also significant.

In order to reach a wider population and urge them to make use of the Knowledge Centres, the volunteers and the other users, or the ones who have benefited by the Centre in one form or the

other, could document their experiences, and the same can be published in *Nammavur Seidhi*, as this newsletter has a wide coverage and people read it and share the information among themselves. Maybe, in this way, one could explain the advantages, opportunities available, and the utility value of the content and other communication infrastructure available at the Centre for overall improvement of the community. Frequent feedback from the volunteers and users can help in the learning and growth process of the project. It helps to strengthen the working or functioning of the Centres.

Social barriers restrict women's access and participation. One needs to pay attention to social aspects. They need to be understood in order to facilitate their participation. The social constraints, and in some cases, the low self-esteem of the women, circumscribe their ability to function.

Phones are disconnected in some of the Centres, as they could not pay the bills. The volunteers mentioned that they are not able to be strict about the time limits and also in expecting charges for the calls made. Few Centres do collect a standard rate but one could not be strict with the time limits. In this context, they said that the main reason for this is that, in the beginning, an impression was created among the people that all the services available in the Centre, are for free. Ezhil Arasi mentioned that non-availability of phone connection is felt only when there is any emergency after 5 p.m. in the evening. During the day, she could manage by using the wireless phone in the Centre. If there is anything important she could contact Villiyannur hub-Centre through the wireless. She mentioned an incident when a fire broke out at night in a sugarcane field in her village. Through the phone she could contact the nearby fire service station. She says that the telephone will be of great help to the villagers. But she also realises the Centre's inability to pay the bills.

One has to be cautious about the content created by the volunteers for the Open Knowledge Network. No doubt this is a good initiative. One must be careful about the information shared through the Open Knowledge Network. Before it is being linked with other Centers, one has to verify the authenticity of the information - like details regarding the source, whether any practice mentioned is still used or not, the details of the herbs, availability and other relevant information. The local volunteers, in their excitement, should not collect information from various magazines, books and random bits of paper. They should be clearly instructed and guided properly. They must be told of the purpose for which it is collected. They may be made aware of the value of the indigenous knowledge, which may ensure collecting local facts/content.

Another area, which needs mention here is the Potential Fishing Zone (PFZ) electronic bulletin board, provided by the Indian National Centre for Ocean Information Services. It was given to the Rural Knowledge Centres recently – in January 2004. Fishermen feel that the data provided herein

does not seem to prove right. Ezhumalai of Veerampattinam feels that research can be carried out, based on the information provided by the electronic bulletin, which displays the information on potential zones of fish aggregation, including latitude, longitude, depth, direction and distance from the landing centres/lighthouses.

It may be pointed out here that minor technical difficulties are handled without much delay, though there is only one person who has to go round all the Centres to attend to electronic problems. Sometimes these problems are handled by giving instructions through the phone or wireless also. The cause for concern is the major technical difficulties affecting the electronic infrastructure - like the one that happened in Koonichampet where the tower was damaged due to lightning. The worst hit was the Periyakalpet tower antenna, when the entire electronic infrastructure was damaged. Replacement of the tower antenna and wireless radio takes a lot time. It is mentioned that they are quite expensive and spare parts have to come from outside. This affects the performance of the Centre. Care may be taken to avoid such things in future by ensuring precautionary measures.

There are disparities in access and usage of the Knowledge Centres by various sections of the rural population. But it has made it possible for a change in the transmission of information and knowledge to a wider section of the community. It has facilitated the social and economic empowerment of both men and women. Skill development and empowerment (in computer applications) have taken place among the younger generation. Today, as compared to the earlier times, more people in general are aware about various schemes and training meant for the underprivileged and others. Credit largely goes to the Knowledge Centres, which have definitely brought a change in the transmission of information and knowledge. It could be reasonably assessed only after a detailed and in-depth study covering a wider section of the population.

The benefits of knowledge, information and communication may not have been equally distributed. It is also too ambitious to expect all the sections of the population to be able to access the information. These Knowledge Centres do help in disseminating knowledge and thereby enable many to make use of information and avail of the benefits in different ways - like finding employment, to ascertain examination results, market rates of farm products, learning computer skills and so on. The question whether the Knowledge Centres have facilitated in improving the livelihood of the rural people cannot be assessed in a short time. It may be premature to conclude at this stage of the study, since most Centres need to be given some more time to bring about an overall change and overall development. Any development activity has its own strengths and limitations. Definitely it plays a significant role in helping the community in one way or the other. Once the study is completed, we will be able to give more concrete evidence to show the impact.

#### 4. Conclusion

It is interesting to see that these villages are presently undergoing or witnessing a knowledge/information revolution. It may be mentioned here that, barring Embalam, and to a certain extent, Kalithererthankuppam, the self-help groups can be potential collaborators in the spread and usage of information by way of their outreach. The feedback mechanism is very weak and in many ways this inhibits the potential contribution from the volunteers of the respective Centres. Overall system management (rectifying technical problems and replacing the infrastructure) is essential. From the point of view of sustainability, the positive attitude of the volunteers and the people go to prove that local ownership of the efforts will ultimately lead to sustainability. MSSRF can show the lead in such aspects to enable a greater reach over a larger section of the population.

An overall assessment of the Knowledge Centers - both in terms of its strengths and areas that need improvement - are given in a tabular form below.

#### Strengths of the Knowledge Centres and Areas Requiring Improvement

Name of the KLC	Strengths	Areas to be Improved
Kizhoor (Predominantly agricultural based village)	Disseminating information of government schemes, taking personal interest to motivate the youngsters and college students to improve their computer skills, to practice or workout their college/school work related to computer programming by installing the related software, encouraging and motivating the self-help group members to make use of the information available and to participate in training programmes conducted through the project and other institutions. Tries to cater to individual's specific need /information if it is not available at the Centre, by contacting the hub-Centre. <b>Considering that there is</b>	The Centre <b><i>depends on one woman volunteer.</i></b> Social constraints and inhibitions of the woman volunteer restrict her interactions with the wider section of the population. Since the Centre is located in a private house (of the volunteer) it <b><i>inhibits the villagers, particularly men, from accessing the information.</i></b> Also, due to personal and social reasons, some do not come to the Centre. In general, there is no sense of belonging (of the Centre) among the villagers. Phone facility is disconnected, as the bills could not be paid. <b><i>Sustainability aspect has not been thought about so far.</i></b>

	<p><b>only one volunteer, this Centre tries to cater to different sections of the society.</b> Neighbouring villages – particularly the student communities - benefit from this Centre.</p>	
<p>Embalam (Agricultural village)</p>	<p>Has a dynamic group of women volunteers who have a strong base in Mangalam Society, a pioneer in self-help group (SHG). They are a source of inspiration to others (women volunteers in other Knowledge Centres, and other women).</p> <p><b>All the volunteers are leaders of different SHGs.</b></p> <p><b>Knowledge Centre acts as a focal point for various government departments and non-governmental organisations.</b> The volunteers are involved in the delivery of services, especially in association with the health department in administration of polio drop programme, enumeration of house list with members affected with Filariasis, collecting and depositing of farm insurance dues of the farmers through the nearby agricultural department.</p> <p><b>Using their contacts effectively in bringing the benefits of government schemes closer to their community.</b> Able to create and maintain contacts with important persons like a specialist in Dermatology, a Dentist and so on -</p>	<p><b>No male volunteers.</b> Men are not comfortable to use the centre.</p> <p>Underprivileged section of the population also does not make use of the centre.</p> <p>Video games seem to be major activity of the children and youngsters.</p> <p>Volunteers need to strengthen their skills in computer application to use the existing infrastructure facilities.</p> <p>Lack the motivation to use them</p> <p><b>Averse to handle any technical problems.</b> Fear electrical shocks.</p> <p>Not confident to run the centre in MSSRF's absence. Need some kind of long time support/ association.</p> <p>Show a lot of interest in preparation of OKN content. Use indiscriminately the available information without verifying the authenticity.</p>

	<p>and also persons like cloth merchants.</p> <p>Offer family counseling or take the concerned persons to the family-counseling centre.</p> <p>Have utilised the training(arranged by the project) in pickle preparation, phenyl/soap oil preparation, rope-making for income generation, and are also in a confident position to impart training for the same to women in other villages.</p>	
<p>Veerampattinam (Fishing village)</p>	<p><b>Availability of Public Address System, focus light.</b> The former facility is of great significance and use to the community as it enables the entire community to be aware of the various government schemes, employment opportunities and daily weather forecast. Many have availed of the benefits of the schemes and got employment and sought higher education.</p> <p><b>Volunteers evince interest in proper functioning of the Centre to serve the community better.</b></p> <p>They have become competent to use the software and also to a certain extent in handling hardware also. <b>They are persistent in their efforts to get any facility or service or to rectify some problem from the project or from the hub- Centre.</b></p> <p>Use the Internet facility for research work. Use Photoshop software</p>	<p><b>Social customs and traditions restrict women's participation.</b></p> <p>Presence of a woman volunteer would help to promote their involvement.</p> <p>Self-help groups are recently formed. They need to be strengthened and linked to the knowledge centre.</p>

	<p>efficiently.</p> <p>Helps women cooperative society in typing and accounting work. The Centre is instrumental in setting up the society in the village. Offers services like Life Insurance Corporation Policies to the community.</p> <p><b>Has Village Panchayat support</b> and recognises the role of Knowledge Centres in improving the lives of the fishing community.</p>	
Pooramkuppam (Agriculture/ mainly horticultural village)	<p><b>Committed volunteers.</b> Want to serve the community by up dating local-specific information (on horticulture) and share it with others. The exposure to the Centre's activities has encouraged the volunteers to go to the agricultural department to download information on horticulture and organic farming.</p> <p><b>Discontinued video games as they felt most of children were occupied only with that.</b> Want to replace with educational CDs. They are confident they would run the Centre. They are of the view that their village elders would help in that endeavour. They <b>felt periodical meetings among the elders, volunteers and the project staff would strengthen the interest and commitment on the part of the villagers in maintaining and extending support to run the Centre.</b> The village Panchayat provides encouragement for this.</p>	<p><b>The centre is situated at the outskirts</b> of the village. So many do not seem to know what is happening at the centre(admits the volunteers).</p> <p><b>Space is a problem.</b></p> <p><b>No Internet facility.</b> They expressed a need for it.</p> <p><b>The volunteers have interest and commitment but lack direction.</b> The project could help them in this. Since it is quite a big village provision of public address system would help the people to avail the benefits and become aware of many government programmes and employment opportunities.</p> <p>Project staff interactions with the village Panchayat and the community may be improved</p>

	<p>The newly joined volunteer shows a lot of interest in improving the functioning of the Centre. She is willing to work with the male volunteers. Her husband encourages her. Another female volunteer is young and dynamic.</p> <p><b><i>There is understanding and cooperation between male and female volunteers.</i></b></p>	
Pillayarkuppam	Could not be assessed	<p><b><i>Situated away from the village. Occasionally people come to use the Centre.</i></b></p>
Thirukanchipet (A majority in the community are agricultural wage labourers)	Could not be assessed	<p><b><i>No coordination between the Centre and village Panchayat. Economic factor prevents interested women and men from offering their services as volunteers.</i></b> No contacts with the government departments.</p>
Kalitherthankuppam (Predominantly Agriculture based village)	<p><b><i>Village elders (temple trustee) are supportive.</i></b> Volunteers take interest in disseminating the information and content. Women volunteers are self-help group members. They actively participate in activities conducted either by NGOs or government departments. <b><i>They are confident and recognised by the village elders.</i></b></p> <p><b><i>People benefit from welfare schemes. Men use the services related to their occupation-agriculture.</i></b></p>	<p>Too many activities for women volunteers. At times feel the pressure of it (Though do not grudge about it). Playing video games is a major activity of the children.</p> <p><b><i>Existing software like Photoshop could be used productively.</i></b> The users (mainly the youngsters) use it as pass time entertainment. <b><i>Potential economic benefit of it (if learnt to use by perfecting the skill) is not largely realised even by the volunteers, particularly women.</i></b></p>
Nallavadu (Fishing village)	<p>Presence of encouraging community Panchayat.</p> <p><b><i>Services of the Centre reach the</i></b></p>	<p><b><i>No woman volunteer at the Centre.</i></b> Society does not encourage women to participate in the Centre's</p>



	<p><i>people through the Public Address System, siren and focus light.</i></p> <p><i>Centre has good contact with the Fisheries department.</i> Volunteers and few men show keen interest in serving the community particularly the youth. <i>School makes use of the Centre to teach children</i></p>	<p>activities. <i>Need to strengthen existing women self-help groups.</i></p>
<p>Kunichampet (A majority in the village are agricultural wage labourers)</p>	<p>Volunteers are active and have keen interest in the development of the centre. <i>The Youth organisation is a motivating factor in encouraging the activities of the Centre. Has developed networks with institutions and organisations.</i> Uses the Centre as a basis for the overall development of the community.</p>	<p>There is some tension between two sections of population. <i>The higher caste people mainly the elders do not wish to use the centre as it is set up in the Dalit area.</i> Women self-help groups are not functioning effectively.</p>
<p>Periyakalpet (Fishing village)</p>	<p>The <i>volunteers are dynamic, confident and committed to their work.</i></p> <p><i>Willing to find resources from different means to meet part of the expenses for infrastructure facilities</i> such as Public Address System.</p> <p>Show keen interest in the community development. <i>Wish to encourage participation of women in the Centre's activities.</i></p> <p><i>Though recently established centre is doing quite well in helping the community and also to the neighbouring by providing useful information.</i> They disseminate information on</p>	<p>Strengths of the volunteers should be channeled properly by the project. <i>Social constrains restrict even interested educated women to use the centre.</i></p> <p>Self-help groups are recently formed. Their numbers could be increased and linked to the Knowledge Centre. <i>Delay in rectifying/replacing some of the infrastructure facilities dampen the spirits of the community.</i></p> <p>Certificate course could not be conducted during summer holidays. <i>Internet facility could not be used due to technical difficulties.</i></p> <p>Repairing of focus light has not been carried out.</p>

	government schemes, employment opportunities and such other important details like details regarding higher studies and distributing the Tamil newsletter <i>Nammavur seidhi</i> .	
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## Annexure I

**VKC INFOTECH**  
**VEERAMPATTINAM VILLAGE INFORMATION CENTRE**  
(Supported by M.S. Swaminathan Research Foundation)

Dear Friends,

Greetings.

We are happy to list out the services rendered by Village Information Centre. The sharing of knowledge/information and the marketing of products by our self-help groups have been invaluable. Please find below the list of services available in our centre:

### A. INFORMATION:

S.No	
1	Weather forecasting
2	Wave height (twice a day)
3	Price of vegetables
4	Gold / silver – prices
5	Employment opportunities
6	Govt. related schemes
7	Fisheries / Aquaculture
8	Medicine
9	Herbal medicinal treatment
10	Eye treatment / testing (with the help of Aravind Eye Hospital)
11	Small scale industries- training
12	Address of Medicinal Practitioners
13	List of people below poverty line
14	Education
15	Phone numbers / contact numbers of Govt. offices and emergency

**B. SERVICES:**

1	Computer printout
2	Computer training
3	CD- writing
4	Laser printing
5	Screen printing
6	Internet browsing
7	Photo editing & scanning
8	Job work / project work
9	Internet to phone / local phone
10	Passport-size photo printing
11	Greeting cards (all varieties)
12	LIC – service ----- Police
13	Account of self – help group maintenance (computerised)

**B. SALES:**

1	Decorative items made from seashells
2	Different varieties of pickles
3	Rural Yellow Pages book
4	Devotional songs – (Audio cassettes / CD)
5	Phenyle / soap oil
6	Incense sticks (aromatics)

**Contact Address:**

Veerampattinam Village Knowledge Centre  
Temple Street (Panchayat Office Building)  
Veerampattinam, Pondicherry - 7  
Tel: 2601573, 9443374194

## Annexure II

### Details of Networking of Koonichampet Knowledge Centre with Some of the Institutions/Organisations and Activities Covered

Serial Number	Institutions/Organisations	Activities Covered
1	Rotary Club, Pondicherry and Koonichampet Rotary Village Federation.	<p>10 houses were built for the villagers.in 2001.</p> <p>480 children were given vaccination for jaundice at concessional rate and a polio camp was conducted in the nearby town, Thirukanoor.</p> <p>Conducted a common medical camp - 480 persons benefited.</p> <p>250 tree saplings were planted through Rotary Social Forestry Scheme in public places.</p> <p>Conducted eye camp in collaboration with a private eye hospital in Pondicherry.in 2003 for children of Koonichampet Government School</p>
2	Pondicherry Science Forum	<p>A film on Mars - latest research on the planet was screened and explained in details to the villagers.</p> <p>A CD showing five planets coming on a same line was screened.</p> <p>Conducted a children's Science Mela. The major themes covered: how to learn science easily, scientific experiments, evolution of living organisms and so on.</p>
3	Anthcom Network	A drama troupe was formed in the village. Training was given to village children in singing, dancing, doll-making, painting, acting, etc.,
4	Nehru Yuva Kendra	<p>Through self-employment training camp a one-day training was given to village women on preparation of food items.</p> <p>With the help of Rotary Federation and Nehru Yuva Kendra, 30 women were given training in tailoring.</p> <p>A seminar to help and 10<sup>th</sup> standard students appearing for common examination.</p>
5	Rajiv Gandhi Veterinery Medical	Organised a one-day training camp for livestock

	College, Pondicherry	management - particularly for intestinal worm treatment. Also gave medical prescriptions for common health problems affecting cattle.
6	Pondicherry Government Mahatma Gandhi Dental Clinic.	During one-day dental health camp, 50 persons from this village benefited.
7	Sastha Blood Testing Lab (a private lab in Villiayanur)	Blood testing for the villagers. Persons with hypertension were diagnosed.
8	Department of Agriculture, Pondicherry	Under Tree Planting Scheme per house fruit tree saplings were provided to the houses in the village.









## Chapter 6 First-hand evaluation of the 'Pondicherry Framework'

While the evaluation team led by the team leader, Mr G. Jayakrishnan carried out the first of the three questionnaire surveys, the team leader himself carried the second. The researcher carried out the third survey among the project staff.

### 6.1.1 Questionnaire survey among the beneficiaries

As discussed in section 2.4.3, fourteen project volunteers who formed a part of the evaluation team of this study carried out a questionnaire survey among the beneficiaries. A total number of 125 people were interviewed from the seven project villages. They included 36 women. The volunteers interviewed all age groups and all occupational groups. As shown in the Table 6.1, more than half of the people interviewed were between the ages of 16 and 35 while only 3 each below the age of 15 and above 65 years were interviewed. Of the 36 women who participated in the questionnaire survey, only 16 use the Rural Knowledge Centres while the rest 20 do not. Among the 89 male participants, 68 used the centre accounting for 81% of the users interviewed while 21 did not use the centre, thus, accounting for 51% of non-users interviewed.

Age group of the participants	Number of participants
0-15	3
16-25	33
26-35	33
36-45	22
46-55	15
56-65	6
65+	3

Table 6.1: Age composition of the participants

The majority of the participants of the survey in Kizhoor village were farmers while in Nallavadu and Veerampattinam, the majority of the users were fishermen. As shown in Figure 6.2, housewives were interviewed in almost all the villages. Students, teachers, skilled workers and small traders were also interviewed. The survey sought the views of both the employed and the unemployed people in order to understand their perceptions of social well-being and the role played by the Rural Knowledge Centre project in transforming their lives.

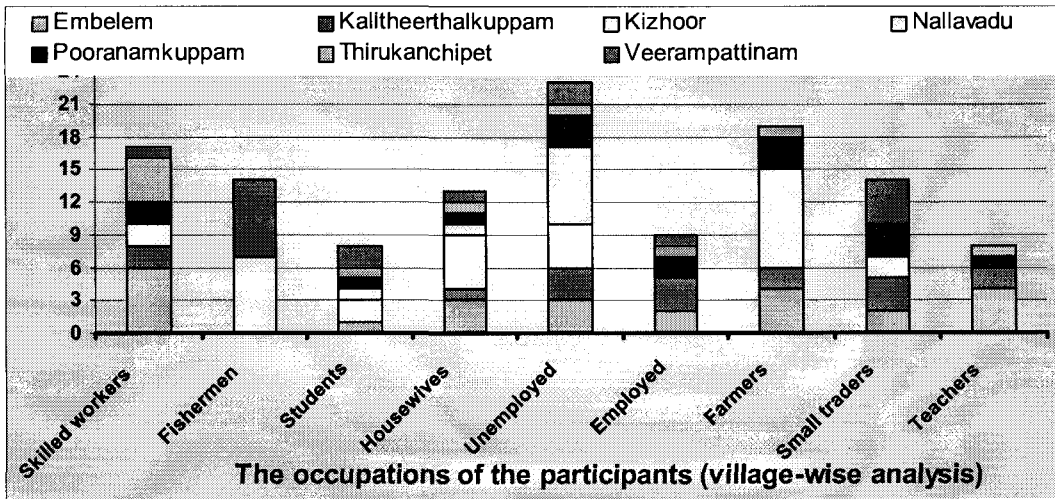
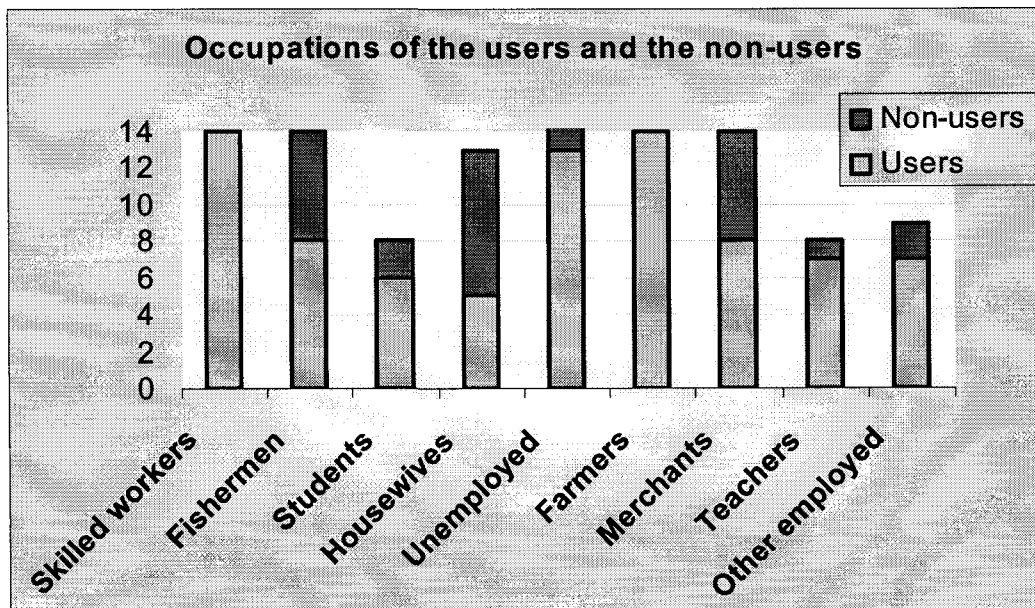


Figure 6.2: The occupations of the participants  
 Figure 6.3: Occupations of the users and the non-users



The samples were chosen so as to provide the right mix of diversity of views from the different occupational groups. They included both users and non-users. While 8 out of the 13 housewives interviewed did not benefit from the centre, this unemployed group formed a major share of the non-users' group. While the farmers and skilled workers used the centre much more than any other group, it is evident from Figure 6.3 that 40% of the fishermen and the small traders did not use the centre. Students and teachers, understandably, used the centre well.

**The main challenges faced by the volunteers during the questionnaire survey**

The interviewers faced many challenges while conducting the survey. They found it quite difficult to establish a rapport with the respondents in the beginning. Although, the interviewers were aware of the purpose of the interview, they were unsure if they would be able to act upon the findings immediately. The sequence of questioning was important in the survey. They chose to begin with factual questions that required elaborate answers, and posed the objective-type questions later. While interviewing the elderly, they had to phrase the questions carefully to elicit detailed information. They also had to avoid technical jargon that they had picked up on-the-job. Quite often, the interviewers found that the respondents were susceptible to the interviewer's bias. They felt that they needed training on probing techniques in order to bring out the genuine answers from the respondents.

Another main challenge faced by the interviewers was their inability to listen sympathetically and maintain a neutral attitude towards certain respondents who were known to pass negative opinions. A few of the questions, the interviewers felt posed some translation difficulties. Taking adequate notes while interviewing was also a difficult task, that too when the interviews took place in the evenings and in the fields. Most often, the interviewers found it extremely difficult to immediately record all that the respondents had said. This may have resulted in the loss of valuable data.

#### **6.1.2 Questionnaire survey among the project volunteers**

The lead volunteer carried out the interview among the rest thirteen project volunteers using a questionnaire specially designed for this purpose. He himself filled out a questionnaire to make the total number of respondents of this survey 14. The questionnaire as shown in Appendix 5 contained the following major sections:

- Personal details of the volunteers;
- Family details of the volunteers;
- The main reasons and the motivational factors behind volunteering;
- The perceptions of the volunteers on the benefits of the centre to the users, the community, the natural and physical environment of the village and finally, for the economic well-being of the village;
- The challenges faced by the volunteers in their work and the activities they would undertake to improve the performance of the centre; and,
- Their training needs to fulfil their tasks fruitfully.

Through the face-to-face interviewing method, the lead volunteer spent more than 30 minutes to record the answers in each questionnaire. This gave the lead evaluator a better understanding of the perceptions of his fellow volunteers and their training needs. An equal

number of men and women were interviewed to make the total number to 14. They came from seven villages, 3 each from Embelem and Nallavadu, 2 each from Pooranamkuppam, Kalitheethalkuppam and Kizhoor and one each from Veerampattinam and Thirukanchipet. While half of the volunteers have less than a year's experience, a majority of them earned a poor honorarium for their contribution of working hours. It was interesting to note that those who worked less earned more honorariums as compared to those who worked more number of hours.

### **6.1.3 Questionnaire survey among the project staff**

Finally, a questionnaire designed by the researcher to gain a better understanding of the perceptions of the project staff was used. Four staff members filled out the questionnaire while the researcher interviewed the other six staff members who took turns to answer these questions from their busy day-to-day work. The questionnaire as shown in Appendix 6 sought to find answers to the following:

- The main activities carried out by the staff for the project
- The details and the perceptions of the project target groups
- A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of the project
- Details of the contributions made by the project to individual users, the community, to the natural environment of the village, to the physical infrastructure of the village and finally, for the economic wellbeing of the village
- The major achievements and the shortcomings of the project
- The empowerment and social inclusiveness issues around the project
- Finally, the technological aspects of the project and the future plans envisaged by the staff themselves for the project

The full analyses of the survey can be found in Section 6.7 of this chapter.

### **6.2 . Observational walks**

The researcher undertook a number of observational walks in all the seven project village sites of Pondicherry. A project volunteer from each village accompanied the researcher in these observational walks usually undertaken in the afternoon hours when the participants were available at homes, common places and in tea shops. The researcher had to undertake various steps as suggested by the USAID (1996c) while undertaking these walks, such as, deciding on the focus and the recording methods, and selecting the site and the timing. The main purpose was to independently understand the way, in which the people lived, get an impression of the quality of the village life, and to assess the natural and physical assets of the village (Barton *et al.*, 1997).

The researcher visited the villages of Embelem, Kalitheerthalkuppam and Veerampattinam three times, the villages of Thirukanchipet and Nallavadu twice and the villages of Pooranamkuppam and Kizhoor only once. Otherwise, for the purpose of the study, the researcher visited these villages almost everyday for a period of one month.

An observation form was used for recording specific details to find answers to the livelihoods issues explored in the questionnaire surveys among the project beneficiaries and the volunteers. Although the researcher tried recording the observations like an ethnographer while investigating the information systems aspects as suggested by Myers (1997), it must be admitted that the insights gained were more geared towards the holistic framework designed for the purpose of this study.

In addition to these walks, the researcher was present at a community meeting organised by the local government for initiating a partnership between the MSSRF and the villager from Chinnakaraiyanputtur village. This village has lost its income from the sale of illicit liquor due to strict police vigil and is now on the brink of abject poverty as the villagers know no other skills apart from producing and selling illicit liquor to the neighbouring state of Tamil Nadu. The state government has proposed to set up an information centre under the auspices of the MSSRF for enabling the villagers to find new opportunities. The researcher found this meeting to be of high importance to his research programme.

### **6.3 . On-the-spot interviews**

A number of on-the spot interviews were carried out by the researcher at the village homes and among the users who visited the centres when the researcher was present there. This technique was very helpful as a number of women who visited the Embelem centre were interviewed. Otherwise, it would have been very difficult for the researcher to meet up with these users. The researcher interviewed a number of elderly people in the street corners and in the fields. In addition to these interviews, the researcher visited the district rural development agency of the government and the social welfare departments to interview officials at their offices. During this exercise, the researcher realised that the interviewer's attributes had an impact on the replies of the respondents. It was not possible to determine the extent to which the ethnicity of the researcher had attracted some attention as indicated by Bryman (2001) as an important factor in social research. However, tendency of some people to agree or disagree, what is known as the acquiescence in social studies, was observed during the interviews. While discussing these issues with the government officials, the researcher came to know that this was a common phenomenon among the rural population.

#### **6.4 . De-briefing**

A de-briefing session was organised at the end of the data-collection phase to discuss the further steps of the research study. This meeting took place while the evaluation team was travelling to the MSSRF office in Chennai to attend a meeting with the Chairperson of the Ford Foundation. The team shared their difficulties in administering the data-collection exercise while exchanging their views about the entire exercise. They were appreciative of the fact that for the first time in their lives, they were seen as evaluators rather than as mere subjects. They also felt that they learnt a lot in the process, improvising their own interviewing skills with each person they interviewed. They felt that their knowledge of the local environment, culture and resources had been very useful while interviewing.

Quite often, when outsiders went into their villages interviewing the people, the volunteers felt that the outsiders were quite ignorant of the 'realities' of their day-to-day life. At the same time, they were appreciative of the fact that as local people working with the researcher in the present study, they were able to enhance their views about the problems, resources and opportunities of the villagers. Most of all, they felt that they were aware of the possibilities of improving their own performance as the project volunteers to provide more focussed and demand-driven information to the people they served. The interviewers felt the need for local partnerships with other actors such as the cable television operators, local schools, local councils, adult education centres, health centres and the rural development agencies.

The researcher felt that the local people had not only learnt a lot about the ICT intervention and the possible improvements that they could suggest, but also brought a lot of their own perspectives to the evaluation. They could inform the project about the factors that played key roles in their day-to-day lives. The volunteers were able to assess the expectation level of the people about the ICT intervention and felt the need to educate their users about the limitations of the intervention. The need for marketing the various services offered by the centre among the local people was strongly felt right across all the villages.

#### **6.4.1 Evaluation of the MSSRF Rural Knowledge Centre project using the 'Pondicherry Framework'**

Most of the data were analysed by the researcher back at Loughborough University using both qualitative and quantitative data analyses techniques. It took more than 20 days to complete the data-entry and an equal number of days to analyse, clean and interpret the data. The initial data-analysis work was carried out in Loughborough. However, the results were discussed and debated upon at a meeting in May 2002 in Chennai, India with the project staff and volunteers. The selection of data results are presented below:

#### **6.4.2 People's participation in the project**

The document analysis revealed that the project had involved people right from the beginning. The Memorandum of Understanding (MoU) signed for executing the project was in fact a bilateral agreement between the MSSRF and the people's representatives of the villages. Interviews among the project implementers re-confirmed this stand. But to the question regarding the extent to which the people were involved in the project in designing and delivering the information products and services, the project volunteers in one of the focus group meetings answered on a highly satisfied note. They felt that their role in gaining the feedback from the people was key to the success of the project. Being local people themselves, they felt that the project had benefited a lot by appointing them as the ICT centre operators. It was possible for the MSSRF to have appointed well educated, IT literate personnel from other parts of the region. Instead, the project had decided to appoint local volunteers and train them to fulfil the project objectives, which seemed to be the best way to achieve people's participation in the project. However, the questionnaire survey revealed the following facts:

- Among the 125 people interviewed, only 84 of them ever used the ICT centre, making it a usage rate of 67%;
- But, among the 41 non-users, 19 of them confirmed that their family members visited the centre quite often. This effectively brought down the non-usage rate tremendously;
- Less than 2% of the non-users felt that they had no idea of what the centre was involved in. On the contrary, more than 9% of the non-users felt that the centre was highly useful to the village; and,
- The sense of participation of people in the development of the centre was more among the literate as compared to the illiterate.

Among the 14 volunteers interviewed, it was found out that five of them were not paid any money for their services, six other were paid less than Rupees 300 (£4) a month for their



service. A woman volunteer who gave 22 hours of her time weekly earned the highest income of Rupees 1000 (£13.33) a month while two men who gave 44 hours of their time every week were able to earn between Rupees 500 and 600 (£6.7 and £8) a month. Nine volunteers interviewed were not married at the time of the interview while the others were female volunteers who were married to earning husbands. All but one volunteer hailed from the same village in which they volunteered. The volunteers' participation was very crucial to the project and each of the volunteers prided themselves in associating themselves with the project. Each one of them had a sense of ownership to the activities of the centre and felt so happy over contributing to their own village.

During the observational walks and the face-to-face spontaneous interviewing, it was evident that in some villages certain people did not think that the centre was useful to them, hence did not feel like participating in its affairs. But, such expression was made mainly by the people above the poverty line, and those who belonged to the high strata of society. Some of them were of the view that the project was pro-poor and pro-dalit and they had a very little role to play. This was not surprising, as the project's objectives were to uplift the poor in the society.

The project organises a monthly meeting on the last working day of the month which enables all the volunteers to get together and discuss problems and possible solutions to the problems with the project implementers. This gives them a tremendous sense of ownership and participation in the project.

#### **Participation by the project staff**

While four staff members were based in Pondicherry, six others were based in Chennai. The main activities of the Chennai staff included maintaining the computer network, web services, communication equipment and the hardware used at the centres. Two staff based in Chennai were responsible for training and content development activities. The staff members based in Pondicherry were mainly social scientists and project managers responsible for the day-to-day functioning of the project and the identification and fulfilment of the needs of the users. With a mix of skills, all these staff members worked as a team in order to achieve total effectiveness of the project. They provided all necessary support to the project volunteers based in the villages.

While six staff have worked for the project for the past four years, four others joined the programme within the last two years. The main activities of the staff included information gathering, processing and dissemination; content editing and web development; hardware and network maintenance; adult education; networking of people; training; centre administration; liaison with information producers and government authorities; and project

management. Most of the staff were responsible for carrying out multiple tasks indicated in the list of activities above.

### **Skills contributed to the project by the staff**

The skills brought to the project by the staff varied. However, when considered together, they possessed all the necessary skills required for the project. Their skills included the following:

- Community development,
- Knowledge Management for community programmes,
- Adult learning and multimedia skills,
- Web programming and GUI script-writing,
- Anthropological and people networking skills,
- Social research skills, and,
- Information management skills.

Further, each one felt that they had something to learn from the others in the project as well as from the people. In addition to this, they all valued their association with Professor M S Swaminathan, the Founding Chairman of the organisation and his associates such as Geeta Mehta<sup>1</sup> and others. They all felt that they had an opportunity to learn from them and to emulate their qualities.

### **6.4.3 Social factors that influence people's access to ICTs**

A number of social factors can be identified for the purpose of evaluating the role of ICTs in the lives of the poor. Quite often, many of the factors that disable or enable people's access to the ICTs are social in nature rather than technological. The present research focussed on only a few of the potential factors that affect the people's ability to access the ICTs.

#### **a) Literacy rate**

Literacy rate plays a key role in enabling people's access to ICTs and the information supplied by the ICT centre.

Level of education	Users		Non users	
	No. of users	% of users	No. of non-users	% of non-users
<b>Illiterate</b>	7	8%	12	29%
<b>Middle school</b>	16	19%	9	21%

<sup>1</sup> A philanthropist based in Japan who supports the MSSRF

<b>Secondary school</b>	36	43%	8	20%
<b>Graduate</b>	19	23%	4	10%
<b>Technical education</b>	5	6%	2	5%

**Table 6.2: Literacy level of the participants**

From the figure above, it is evident that 29% of the non-users are illiterates, and their participation in the project increases with their literacy level upto the secondary school level. Only 8% of the users are illiterates while more than 70% of the users attended secondary school and above. This clearly shows that the usage will increase in accordance with their education. Even among those interviewed by the researcher, the majority feeling among the illiterate population of the project villages was that the centre was useful mainly to the students and the educated. All the project volunteers were educated upto the secondary school level.

#### **b) Age factor**

Age is clearly an important factor that influences the people's access to ICTs. All the volunteers were below 35 years and the entire team's average age was less than 30. The user registers revealed that young people and those who in immediate need of information visited the centres very frequently. From Table 6.3, it is evident that children below 10 years of age do not use the centre. Those in the 10-15 age group who visit the centre tend to draw pictures using MS-Power Point or MS-Word applications.

<b>Age group</b>	<b>User</b>		<b>Non-user</b>	
	<b>No. of users</b>	<b>% of users</b>	<b>No. of non-users</b>	<b>% of non-users</b>
<b>0-10</b>	0	0%	0	0%
<b>11-20</b>	13	15%	4	10%
<b>21-35</b>	40	48%	15	37%
<b>36-50</b>	20	24%	12	29%
<b>51-65</b>	7	8%	3	7%
<b>65+</b>	2	2%	1	2%

**Table 6.3: The age-wise distribution of the participants**

It is interesting to note that the majority of the users and the non-users belong to the age group 21-35 followed by the age group 36-50. It is apparent from the table below that the age level does not dominate the usage or non-usage of the centres although a greater number of users are above 21 and below 50 years.

From Table 6.4, it is evident that seven people visited the centre more than 20 times a month and they were from the age group between 21 and 35. 7 out of 24 users who belonged to the

age group 36-50 visited the centre almost every day. This age group dominates the user group at all levels accounting for almost 375 visits a month as compared to those between 11 and 20 who account for about 50 visits a month and the 65+ age category who pay less than 40 visits a month. A total number of 16 out of 84 users visited the centre more than 20 times, a majority of these users were between 21 and 50 years of age.

Age group	1-5 times	6-10 times	11-20 times	20+ times
11-20	2	2	0	1
21-35	11	5	6	7
36-50	8	4	7	5
51-65	0	2	2	2
65+	1	1	0	1

Table 6.4: Number of visits made by different age groups

c) Social capital issues

As shown in Figure 6.4, while 23 people at some point in their social life occupied a public position, the social integration of these villages for joint group work was seen to be very low. Only less than half the population interviewed ever participated in any type of group work. Only 27 people even shared domestic responsibilities at home. The men expected the women to shoulder a number of responsibilities such as cooking, washing, cleaning, taking care of children, etc., while they considered earning money as their prime responsibility. However, more women were engaged in self-employment and small trading activities than their counterparts. The participants possessed a number of skills other than the one they practised for earning their living. Based on these skills, they stood good chances to compete for employment opportunities that arose from time to time.

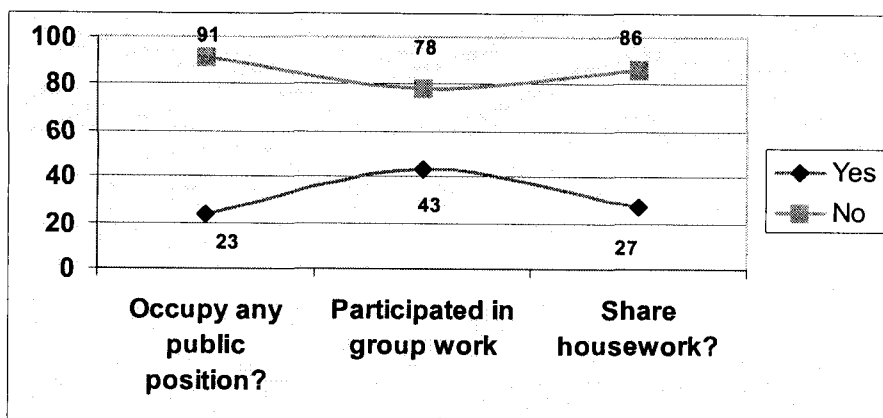


Figure 6.4: Social capital issues

The ICT centre is actively involved in disseminating employment information to the users. It may be quite helpful to keep these skills in mind while pro-actively harvesting information on employment opportunities. As shown in Table 6.5, while 67 of those interviewed declared that they did not possess any additional skills, 26 of them although not engaged in farming activities, possessed additional skills. Five of them were skilled in driving heavy vehicles, while three each were skilled in tailoring, embroidery work and book-binding. At least two people possessed one or more of the following skills: photography, electrical work, construction work, cycle repair, teaching other languages, homeopathy, transportation work, blood testing and painting. Among the people interviewed, at least 35 of them possessed small business skills, but only 14 of them were engaged in self-employment or enterprise activities.

Number of people	Skills known
67	No skills known
26	Farming, dairy farming
5	Driving
3 each	Tailoring, embroidery, Binding, Small trade,
2 each	Photography, electrical work, construction work, masonry
1 each	Cycle repair, homeopathy, timber trade, painting, ironing, leather work, gardening, teaching other languages, blood testing, coaching for sports, mechanic, computer training, transportation

**Table 6.5: Additional skills possessed by the participants**

#### **d) Group work**

As shown in Figure 6.4 above, only 43 of the 125 people interviewed participated in group work, one way or the other. Interviews with the key people within the project villages revealed that these group efforts were often undertaken only for cultural and religious events. Sometimes, these group initiatives cause division within the society. The researcher's observational walk revealed that a number of challenges the people could solve themselves if they had the habit of indulging in group efforts. These would include, cleaning the village pond, removing the plants on the roadside, cleaning the temples, planting trees on the roadside and so on. But, there is no evidence to prove this asset in any of the villages visited by the researcher. This may be one of the reasons that the people see the ICT centre and the government departments as the answer for most of the problems faced.

#### **e) Participatory nature of the community**

Although these villages have not proven enough their ability to carry out group work, their participatory nature should not be underestimated. The visit to a village, Chinnakaraiyanputtur where the local people were requesting the MSSRF to open a centre,

proved helpful to understand the participatory nature of the community. For the meeting organised by the MSSRF, the entire village turned out with women outnumbering men. In one voice they requested for the centre and were willing to participate in the governance of the centre. Many households came forward to provide space, free electricity, volunteers and financial support for the ICT centre. From the observational walks, the researcher could see the sense of participation while writing petitions against the government and demanding their rights. However, from the questionnaire survey, it was evident that even within their own households more than 70% did not share their domestic work. Women had to carry out all the housework while their responsibility was no less in income generating activities.

#### **f) Democratic issues**

None of the project villages had any elected local representatives, however each village had some form of local democratic institution. The local leaders quite often were seen as the opinion leaders, respected by the entire village. At the time of the field study, one village was affected by local violence as one group within the village decided to field a candidate rather than agreeing for a consensus candidate. The poor and the disadvantaged enjoyed no or very little voice in local decision-making processes. Not many women enjoyed any public position within these villages.

The centre does not at present perform any e-Democracy-related activity, but has the scope to initiate a dialogue between the government and the citizens, thus enabling people's participation in the government's planning processes. A face-to-face interview with the project director revealed that the project would consider this activity in the future.

#### **g) Power-relations**

Power relations within households were very difficult to capture although the project volunteers did generalise the fact that the earning members enjoyed a special status. Men shouldered the responsibility of generating income for the household while women carried out the domestic tasks. But, it was evident that within the community the power relations were of varying nature. The political parties and their local leaders did influence the decisions taken by the community to a large extent. People who held public positions within the community were not necessarily financially powerful, rather, they were in the social strata of the community. Certain groups felt highly marginalised in accessing their benefits and rights, and even in accessing the ICT centres. Although in one of the face-to-face interviews carried out by the researcher, a person belonging to the scheduled caste (dalit) expressed reservations about entering the ICT centre which was located next to the local temple, the documents at the centre revealed that the centre was visited by all. In general, the social factors did not influence the way in which the people accessed the ICT centres. However, it can be stated

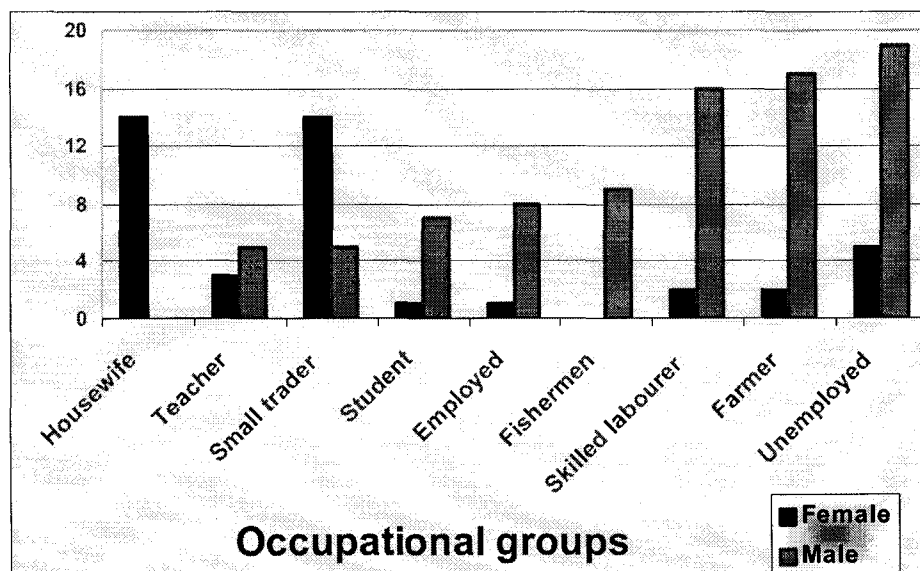
that the power relations within the households of the project volunteers have changed over the past years. The female volunteers of the Embelem centre enjoy a new identity within their households, as their spouses do not operate computers. They are able to participate in self-help groups and earn respect among the community members, much more than before.

To the question as to what motivated the volunteers to give their time to the ICT centre, many women volunteers responded that their social status had increased due to their association with the centre. Some of them went on to say that the status of the women who visited the centre increased as they too were now informed as much their spouses, in some cases, more than their spouses. The ICT centres have brought in a new power-relationship within the community, and have empowered the marginalised, especially the women.

#### h) Gender issues

The gender-wise analysis of the participants shows (Figure 6.5) that the occupation the women preferred due to lack of choice was limited to small businesses. This is a good indicator if a project would wish to uplift the status of the women. The women were mostly expected to stay at home otherwise, performing the domestic duties. Men on the contrary were engaged in skilled work and in fishing, farming and similar occupations. A large number of the men who were interviewed came from the unemployed group.

Figure 6.5: Gender-wise occupation



Invariably in all the villages, the households preferred boys to girls. Only 20 households preferred to have the second girl child as compared to 44 who preferred to have the second

boy child. Only 4 out of 125 households had three or more girls while 23 had three or more boys. The boy-girl ratio stood at 100:80 for the households interviewed.

As shown in Table 6.6, access to money among women was quite limited. While 49% of women earned less than Rupees 500 (£6.66) a month, none of their male counterparts earned less than Rupees 500 a month. However, almost half of the men earned less than Rupees 1000 (£13.33) a month. While none among the women but for two earned more than Rupees 2000 (£26.66) a month, more than 20 men did earn that kind of income.

Earning capacity In Indian Rupees	Female		Male	
	No. of people	%	No. of people	%
Less than 500	17	49%	0	0%
500-1000	15	43%	40	49%
1000-2000	1	3%	21	26%
2000-3000	0	0%	7	9%
3000-5000	0	0%	8	10%
More than 5000	2	6%	5	6%

Table 6.6: Gender-wise income level

#### i) Division of labour

Division of labour within the community could not be well understood from the questionnaire survey, however, the children of the fishermen as well as the farmers evidently wanted to change their profession. Most of them were interested in finding government jobs. Among the fishing community, while men went into the sea to fish, their spouses chose to sell the catch. Among the farming community, women also joined their spouses as agricultural labourers. Within the households, the majority of them depended upon the women to perform the domestic duties. Women did not enjoy the status of serving as members of the local governing councils.

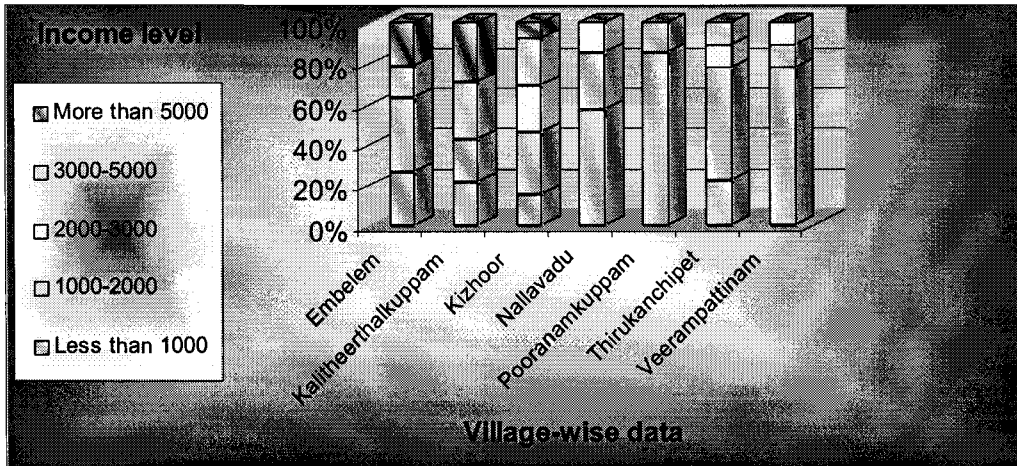
#### j) Role of key informants

Although the questionnaire survey did not explore the role of the key informants within the society, through the focussed interviews, it was found out that the project villages did not have very many opinion leaders or key informants. But, the project volunteers had enjoyed that status ever since they had started serving at the ICT centres. The people consulted the volunteers more than before and the more the information they provided in a pro-active manner, the more they were consulted. This gives a new dimension to the role of an ICT project, in most cases a very powerful one.



**k) Income disparity**

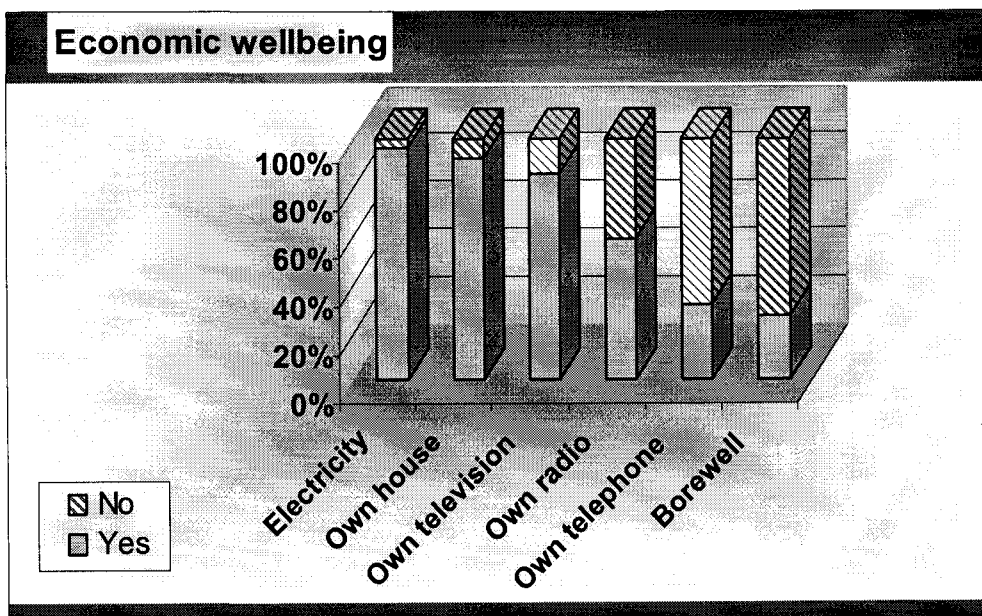
Of the seven villages, as shown in Figure 6.6, only Embelem and Kalitheethalkuppam seemed affluent while Pooranamkuppam and Veerampattinam had many people earning less than Rupees1000 (£13.33) a month. The majority of the participants earned around Rupees 1000 to 2000 (£13.33-26.66) a month, which marked them below the poverty line.



**Figure 6.6: Village-wise income level**

As shown in Figure 6.7, the villagers, by and large, enjoyed the basic needs although a majority of them were poor. 116 out of 125 households interviewed had electricity while 115 of them owned a house of their own although most of these houses were huts, low in standards. 104 households had television sets while 70 of them owned a radio. The penetration of the telephone was however low.

**Figure 6.7: Economic wellbeing**



Of the farming households, almost half of them had borewells as the means of water supply to the crops. These factors are important, as people prefer receiving information on their television sets.

**l) People's wellbeing and their perceptions**

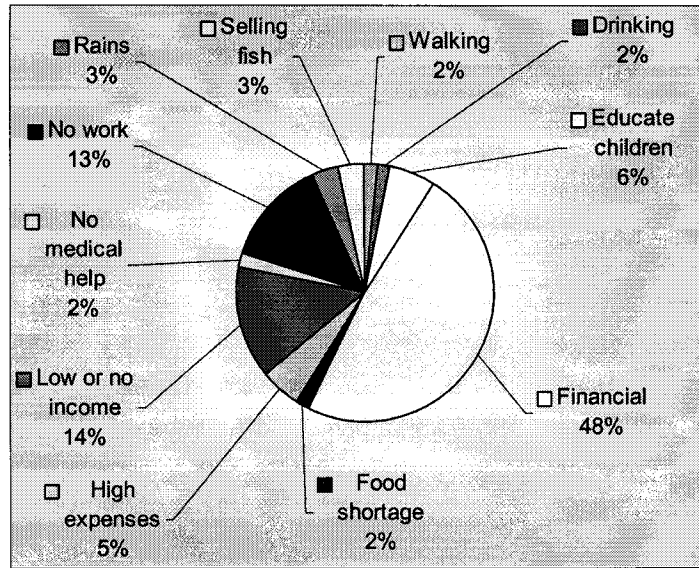
The majority of the households felt a strong need for having more boys than girls and they preferred not to have more than one girl child. As shown in Table 6.7, 20 of the households interviewed had a second girl child as opposed to the 44 households that enjoyed having their second boy. Some households even had four boys while the maximum number of girls in a single household was limited to three. The boy-girl ratio of these villages stood at 56:44. But, an analysis of the user register revealed that both girls and boys used the ICT centre in an equal manner. The study did not explore the gender- relations issue in-depth, but it would be possible to do so in the future.

Composition of children No. of children	Number of households	
	Boys	Girls
1	37	59
2	44	20
3	16	4
4	6	0
5	1	0
<b>Total</b>	104	83

**Table 6.7: The number of boys and girls in the households**

As shown in Figure 6.8, 57% of those interviewed mentioned that the main difficulty faced by their households was the lack of access to finance to enhance their livelihood standards, while 14% felt the earnings were not good enough. 13% faced unemployment difficulties while some 6% found it difficult to educate their children.

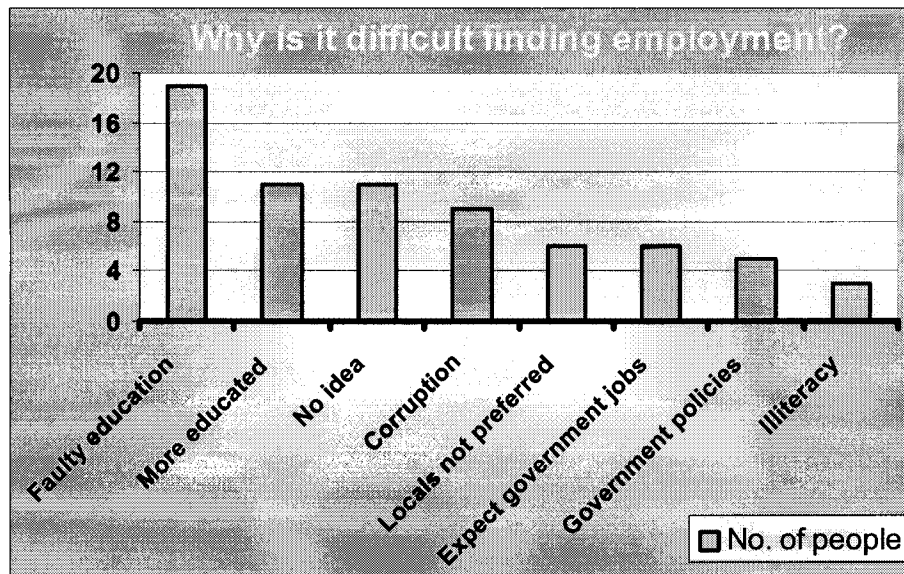
Figure 6.8: Difficulties faced



There were other problems such as drinking, lack of medical care and long distances for walking, which were expressed by the participants. But, the majority of the problems faced by the people were around economic issues. The people's wellbeing as they perceive, is that they can have a good life only if they have access to economic benefits. These factors are to be seen as highly important as the ICT centres disseminate information pertaining to the needs of the people.

Most of those interviewed felt that excessive population caused unemployment problems, but when they were asked to be specific, 19 of them thought that the education system was not oriented towards finding employment as shown in Figure 6.9. Corruption seemed to be one of the main problems in preventing the poor from finding employment. The industries in these villages that were set up by the people from other states did not prefer to employ the local people for fear of labour union activities. Some people preferred finding only government jobs which gave them job security for their life times, but some others felt that the policies of the government were not aimed at the poor finding living opportunities.

Figure 6.9: Reasons for unemployment



To the questions posed by the interviewers relating to the people's wellbeing, there were contrasting views. Women were more honest than men when it came to answering questions relating to fighting and stealing. But, when it came to finding out if people had drinking habits, only 16% of the women answered in the affirmative while more than 24% of the men said that they drank. This may be due to the fact that women perceive drinking to be a social evil as compared to men.

#### 6.4.4 Technological factors that influence people's access to ICTs

##### a) Language issues

Interviews with the project volunteers and users revealed the fact that the users preferred accessing information in local languages. Although a few volunteers spoke and understood English, their ability to access and disseminate information in the English language was not very good. Efforts are being undertaken to translate all the information into Tamil language for the benefit of the communities. This proves to be very cost-intensive, however with the help of the MSSRF staff who translate content, the project volunteers are able to develop web pages in Tamil. Sometimes information sought after is available only in English which makes it challenging for the project volunteers to meet the need. Their association with the staff of the MSSRF proves to be very helpful in such circumstances.

##### b) Information in databases

As mentioned above, the ICT centre is now engaged in developing a number of databases in Tamil for the benefit of their users. The study found the authorities interested in seeking the

help of the project volunteers in developing the local databases. At present, the following databases are available for free access:

- Household entitlements database;
- Database on elimination of malnutrition;
- Hidden hunger elimination database;
- Plugging the leaky pot database;
- Eco-jobs database; and,
- Women and children database.

Based on the popular and local demands, efforts are continually made to develop further databases in the local language.

#### **c) Ease of use**

Although the ICT centre operators were able to use the information systems with great ease, the users quite often did not find it comfortable to access the computer-based information databases. They depended upon the volunteers for accessing information. Touch screens are only now being introduced in the centres, but mainly for adult education purposes. The web cameras in use make it interesting for the users. Efforts are also being undertaken to use the web cam facilities to interface government officials and human service providers with the citizens. An attempt to bring a gynaecologist online was very successful. However, at present, this service is often used for communication purposes between the centres. Nevertheless, the project volunteers and the users find this technology to be very effective if used for meeting the user needs.

#### **d) Access to information on computers**

To the question as to how many beneficiaries accessed information or preferred accessing information online, 74 out of 125 mentioned that they accessed computer-based information as compared to the 40 people who chose not to do that. However, about 70% of the users preferred reading the blackboard outside the ICT centre. Access to information on computers was dependent upon educational level of the people. While the illiterate people did not enter into the centres, the young and the educated did get in to access information held in the databases.

When the participants were asked if they would prefer receiving daily news from the centre, 118 of them expressed their interest while only 7 did not feel the need. But, it was interesting to note that most of them preferred receiving the news in the age-old print medium followed by a television-based news service (Figure 6.10). Although the Public Address (PA) system

was quite popular in one village, only 2 participants suggested the use of the PA system for announcing the daily news.

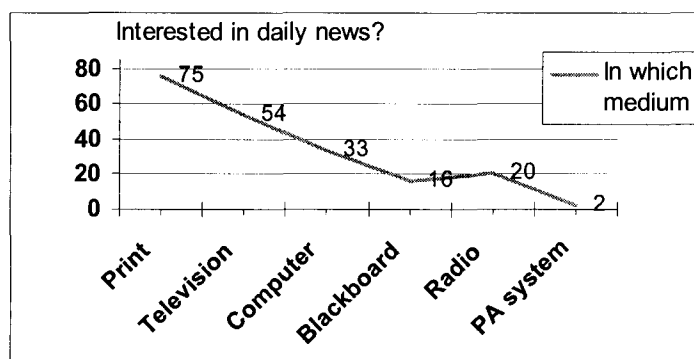


Figure 6.10: Preferred medium for a daily news service

#### e) Reliability factor

Since the technology was dependent on both the local authorities' supply of electricity and solar power for running the computers and the networking switches, the performance of the ICT centres suffered at times. Only four out of seven centres had direct access to the Internet. Dial-up Internet connectivity is not quite stable at times. Hence, the centres depended upon offline databases held in their local machines. Communication between the centres and the hub was very stable as the volunteers used both telephones as well as computer-based fax services to send and receive information. From two centres, it is possible for the project volunteers to directly access the server located in the hub through Space Spectrum Technology using radio towers. This technology proves to be very stable for communication links between the remote centres and the hub within a radius of 25kms.

The MSSRF used VHF 2-band radio wireless technology introduced by Motorola for data transmission to the knowledge centres from the hub, which took a lot of time. This caused a lot of problems in transmitting the daily news before 12 noon. Therefore, the MSSRF has now selected another technology called, Spread Spectrum Technology through which data can be sent at a speed of 11MB per second to the knowledge centres where the same technology is used. After addressing the above problem, the centres are now facing no problems other than the ones caused by the rats. Rats often bit the computer cables, and at times, even the use of traps was not very effective.

#### f) Training issues

Both the users and the project volunteers found the centre to be highly useful for their training needs. The volunteers who have been trained as trainers comfortably train the users in a few computer applications such as MS-Word, Windows, MS-Excel, MS-Powerpoint and Paint.

There was a lot of demand for training among the beneficiaries, and at times, greater than the demand for information. Even, the project volunteers expressed their strong interest to get trained on using many more computer applications so that they could train their users. Almost all the volunteers identified the opportunity to get trained as one of the motivating factors in their work. In focus group meetings also, this expressed need surfaced occasionally.

#### **6.4.5 Analysis of the ICT pillars**

When the people were asked about the usefulness of the Rural Knowledge Centres, most of them felt that the centres were highly useful to the villages. Even the non-users who knew something about the centres shared this perception. A handful thought that the standard of living had increased in the villages ever since the Rural Knowledge Centres had started operating. They did not have any evidences to prove this claim, but strongly upheld the perception. A substantial number of people considered the centres to be highly useful to their children in their education while some others thought that the centres were very useful to farmers and fishermen and to some poor segments of the population. But, it was interesting to note that 35% of the participants knew nothing about the centre and wished that the staff of the centres would let them know about the benefits of using the centres. 20% of the participants despite knowing about the centres and their usefulness never found time to visit the centres.

79 people believed that there were no other centres such as the MSSRF centres within or outside their village, while the rest saw the public library and the various government departments to be providing a large part of such information. But, none of the other centres had comprehensive information similar to that held in the Rural Knowledge Centres.

##### **a) Access issues**

It is evident that the centres perform in the central locations of the village as more than 95% of those interviewed lived within half a kilometre of the centres. Most of the people walked to use the centres while only a few had to cycle to visit the centres. The centres were accessible to everyone without discrimination of any kind. All age groups visited the centres, ranging in age from 11 to 70 years. A number of school-going children visited the centres on a regular basis. While 7 out of the 19 illiterates used the centres regularly, the usage level increased with the people's educational background. The usage was less among the less educated as is evident from Figure 6.11. The majority of the users studied only upto the school level while it was interesting to note that at least 4 among the sample who did not use the centres possessed university degrees.

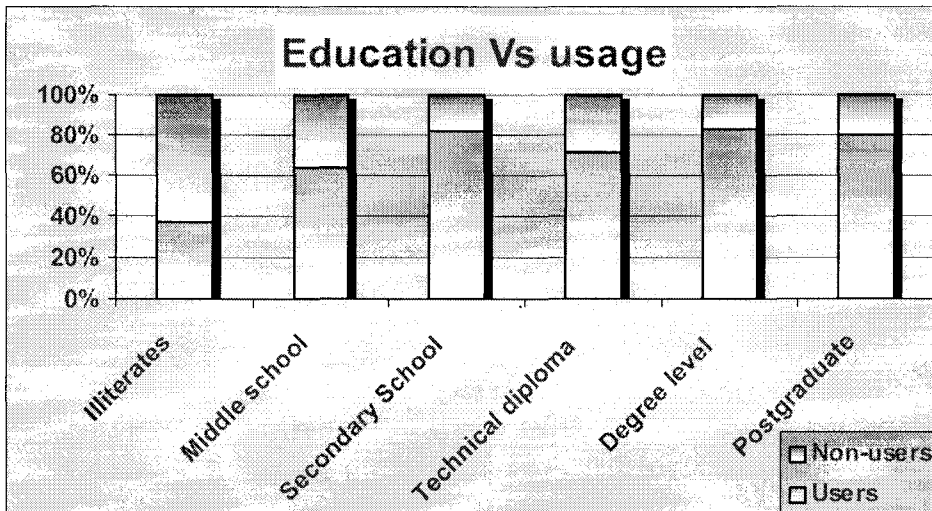


Figure 6.11: Education Vs usage

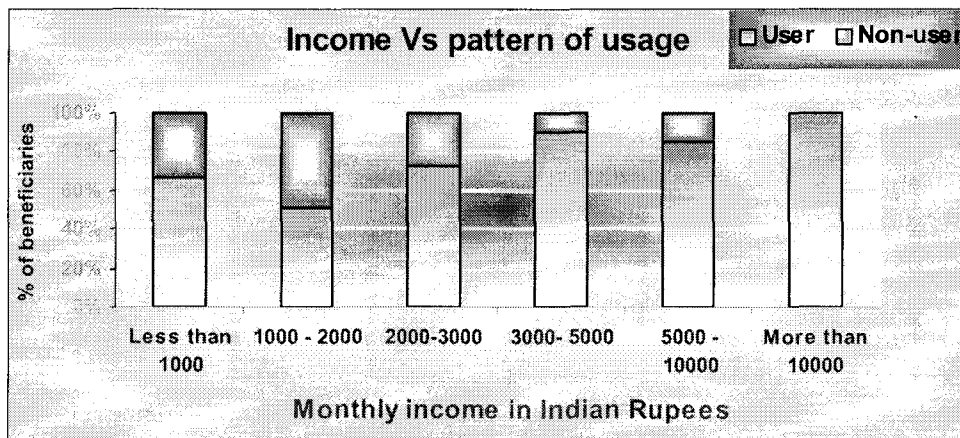


Figure 6.12: Income Vs Usage

As shown in Figure 6.12, the same pattern as above was reflected in the income level of the users. The percentage of users was more in number when they earned more money while the low-income group visited the centres less frequently. But, it was interesting to note that among those who earned less than Rupees 1000 a month, 65% used the centres. The average monthly income of the villages was about Rupees 3500 (£46.66) a month. Calculations show that in reality, more than 80% of the households earned less than Rupees 2500 (£33.33) a month. Half of the earning capacity was found to be with 15% of the households. As mentioned earlier, the usage level of women was not very encouraging as about 60% of the women interviewed never used the centres.



With mobility, the usage level increased. As shown in Table 6.8, the households and individuals who travelled to the city more frequently visited the centres also frequently. Among the non-users, a majority of them visited the city less than 5 times a month.

No. of trips to City	Users	Non-users
Don't go at all	3	3
0-5 times	22	15
5-10 times	10	4
10-15 times	13	5
15-20 times	15	8
20-25 times	11	3
more than 25 times	10	2

Table 6.8: Usage Vs mobility

As indicated in Table 6.9, among those who used the centres, 68% of them visited them more than 5 times a month. While 20% of the users visited the centres more than 20 times a month, which amounts to almost once a day, the majority of the users visited the centres 5 to 15 times a month. A majority of the family members of the non-users did not visit the centres even once while 6 households of the non-users visited the centres less than 5 times a month. Members other than the users belonging to 32 families did not visit the centres, while the family members of 12 users interviewed visited the centres more than 20 times a month.

In reply to the question of whether or not the centres should function in the evenings, 71 users and 25 non-users said yes, while 72 users and 27 non-users thought that the centres should function on holidays too.

Number of visits a month	How often do you visit		How often do your family members visit	
	Users	Non-users	Users	Non-users
0	0	34	32	21
1-5	27	5	16	6
5-10	19	0	13	1
11-15	10	0	3	4
16-20	12	0	4	4
21-25	15	0	9	3
25+	2	0	3	1

Table 6.9: Number of visits made to the ICT centres each month

When the interviewers asked how the participants accessed information provided by the centres on a day-to-day basis, 81 of them mentioned that they stopped by and read the news on the blackboard outside the centres each day. Out of these, 46 of them walked into the centres to read the daily news on computer screens. More than 40 people interviewed never read the news either on the blackboard or the computer screen.

## **b) Content issues**

The people perceived the centres to possess all the useful information for their day-to-day lives. While some were of the view that instant information was made available to all, some others felt that the content offered by the centres was oriented towards the farmers, the fishermen and the students. It was very evident that the elderly felt that they did not have much to do with the centres for it was for those who were younger and/or the educated youth. A number of farmers expressed their interest to obtain scientific information on farming tools and techniques, while most of the unemployed thought that the centres were providing enough employment information to them. Although many people felt that health information was available, the overall perception did not prove this fact.

Many felt that the availability of information on market prices was quite helpful, so also the weather reports broadcast by the centres every day. Some poor students benefited the most from these centres, as the cost of learning basic computer skills from the commercial centres was very high. Some fishermen felt that wave height information was lifesaving and that such information should be made available to all the fishing villages. Many preferred to receive this information over loud speakers.

A small segment of the participants were, however, of the opinion that the centres should function better by providing more timely information. They felt that the centres should be proactive in marketing the contents held in the computers. Many felt the need for entertainment and sports information to be made available through the centres. But, by and large, the perceptions of the users and the non-users about the content held in the centres was positive, although, the percentage of people who had such perceptions was only about 75%.

### **Needs Vs. expectations**

When a single question regarding information needs was asked twice in order to double check the extent to which people indeed expected certain types of information as opposed to their needs, there were some differences between the people's wants and needs. The needs of the users and the non-users did not differ dramatically while the same was true for user expectations and non-user expectations. It was astonishing to note that although one of the prime activities of the knowledge centres was processing of daily market information for the benefit of the users, not many needed this information. Although information for fishermen at sea through wireless radio was not a great need among the fishermen, a majority of them expected the knowledge centres to provide such services.

Figure 6.13: The needs and the expectations of the non-users

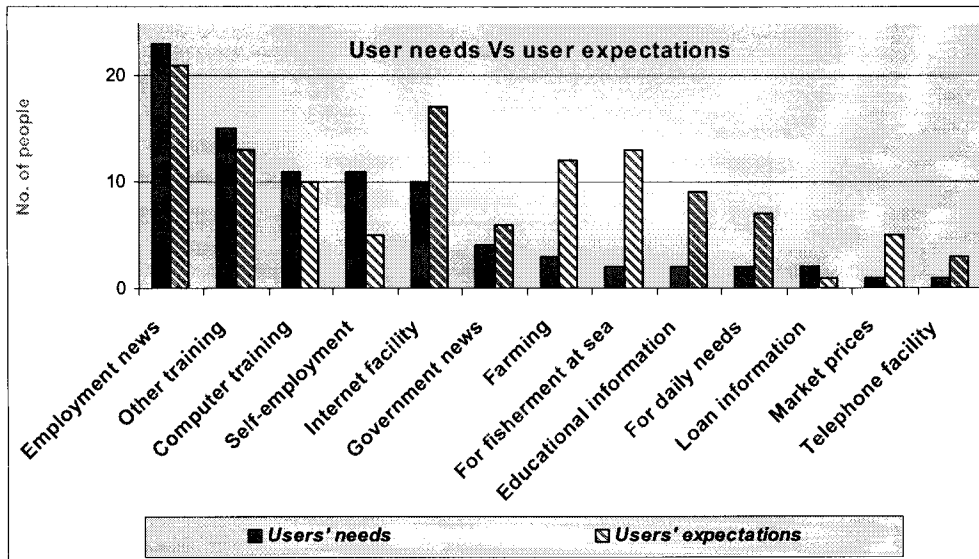
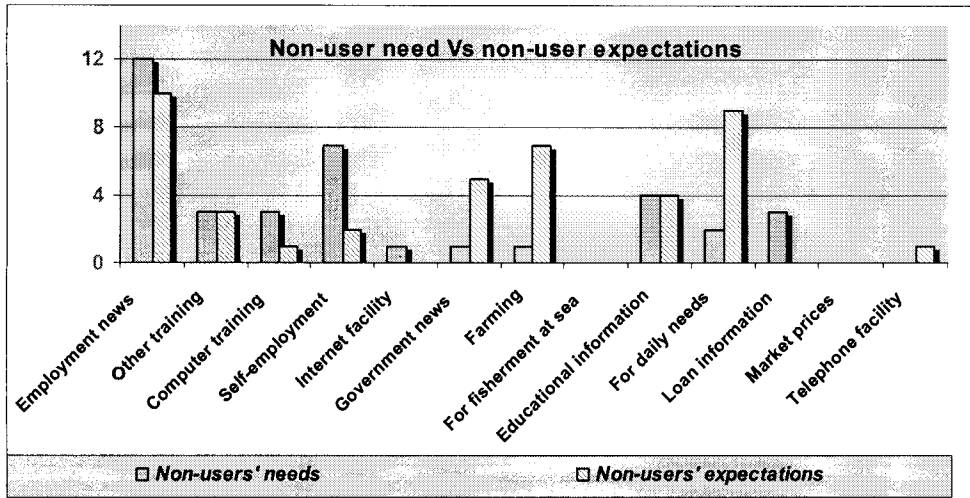


Figure 6.14: The needs and expectations of the users

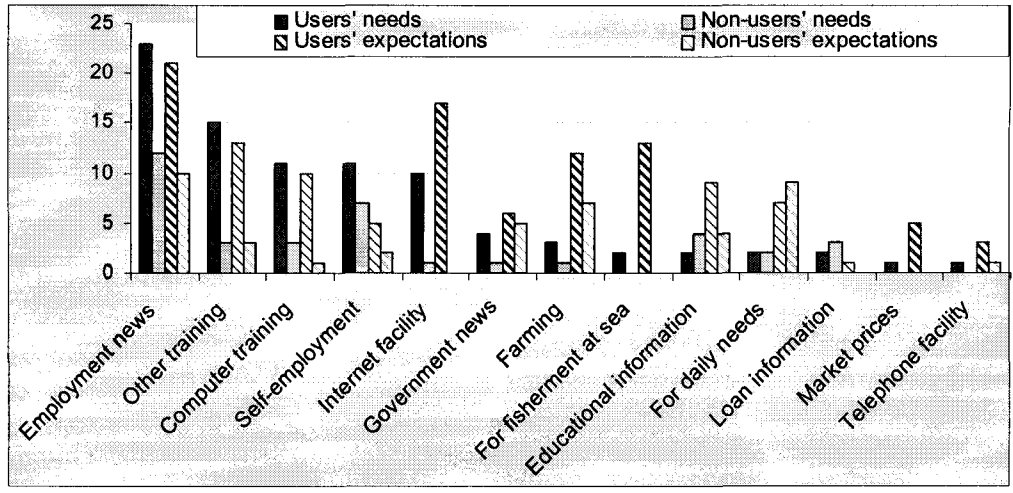
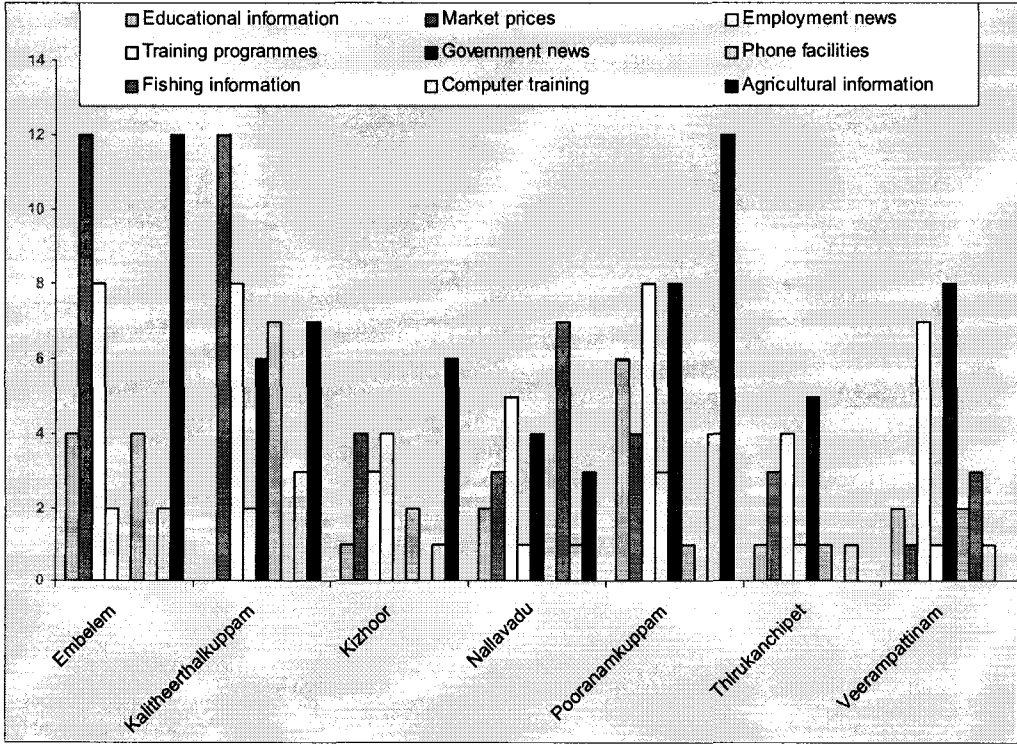


Figure 6.15: The needs and expectations of the beneficiaries (users & non-users)

Figure 6.16: Information obtained



While the knowledge centres consider the telephone facility as one of their services to the beneficiaries, not many seemed to need or expect such a facility. On the contrary, many felt the need for Internet facilities and expected the centres to extend that facility to them. Many sought for self-employment information, although they did not immediately expect the centres to provide such information. There was a great demand for both employment information and dissemination of all sorts of news items to the communities. It is evident from the Figure 6.16 that certain traditional services and information offered at the centre did not seem to be popular any more. However, only agricultural information seemed to be still popular as many users and non-users expected the centres to continue to provide such information.

### **Information obtained**

It was interesting to note that employment information was quite popular in all the villages, while only Embelem and Kalitheethalkuppam opted for obtaining market prices much more than other types of information. Agricultural information seemed to be very popular in all the villages other than the fishing villages of Nallavadu and Veerampattinam, where fishing information seemed very popular. Surprisingly, in Embelem and Kizhoor villages no one seemed to have obtained any information about government-related issues from the centres while at Kalitheethalkuppam, none of those interviewed obtained any educational information. The participants from Poornamkuppam village seem to have obtained every kind of information other than fishing-related information as shown in the Figure 6.16, while the participants from Veerampattinam village seemed to have obtained all but farming information from the centres. In all the villages, there was some demand for computer training as well as for training for job-related skills.

### **The daily newspaper and its usefulness**

In answering the question regarding the kind of information, the participants found to be most useful, as shown in Table 6.10, significantly 23 of them identified the contact addresses of government officials provided in the newspaper. While 32 of those interviewed were not aware of the purpose of the newspaper, 26 others found everything in the newspaper to be of value. Although anecdotal evidences suggested that a number of people benefited from the advertisements that appeared in the newspaper, only 9 participants acknowledged this fact during the survey.

What do you find useful in the newspaper	Number of people
Health information	18
Advertisements	9
Contact addresses and phone numbers	23
Employment news	7
Agricultural news	11
All news	26
No idea	32

Table 6.10: Useful information in the newspaper circulated by the centres

### c) Partnerships issues

The participants expected the centres to provide certain types of information that were possible only when the centres entered into partnership agreements with a number of other agencies, including the government. A majority of the participants wanted to lodge their public grievances with the centres so that the centres would pass these complaints to the right authorities within the state and the local governments. More than 75% of the participants felt that the centres provided government-related information, and that they should continue to provide the same for the benefit of the communities. While answering employment-related questions, many felt that the centres should enter into partnerships with the local industries for announcing the job vacancies and for recruiting personnel for them.

When the participants were asked to suggest any improvements that they might like to see regarding the functioning of the centres, many responded with a number of suggestions. Some of those included partnership issues, that were crucial for strengthening the activities of the centres. The suggestions made by the participants are listed in Table 6.11.

The knowledge centres should function independent of the village panchayats and not in partnership with the local panchayat boards
The centres should function as employment centres in partnership with the local employment bureaux
The centres should develop partnerships with remote sensing agencies to help the fishermen at sea to navigate their way back safely and to locate fish density
The centres should work in partnership with the local television cable providers for disseminating information
The centres could enter into partnership with computer training institutions for providing free computer education to the communities
Self-employment training for women should be provided
The centres should facilitate the initiation of co-operative schemes for starting small industries
Training on small-scale industry and business skills must be provided to those interested

The centres should be expanded with the help of the local communities
Some arrangement must be made to reduce computer downtime
The centres should announce local news on the radio
The centres should facilitate business and industrial opportunities for the development of the villages
Daily schemes from the government should be broadcast immediately to reach even the illiterates
The centres should announce exam results in co-operation with all the local schools and the governing boards for the schools
The centres should encourage the planting of trees, the cleanliness of the villages and the development of proper waste management systems
Old age homes must be constructed
The local temples must be renovated
The centres should enable the widows to start an association
The centres should provide health care and sanitation training and awareness
With the help of the government, the centres should help the communities to avail of small business loans, and train individuals in small business skills
The centres should create awareness about a number of issues including, communicable diseases, environmental hazards and safety methods, modern techniques in farming, cultivation techniques, educational counselling, animal husbandry and so on.

**Table 6.11: The key suggestions offered by the participants**

The above suggestions from the villagers themselves were indicative of the fact that the ICT centres had already been dealing with some of these issues in partnership with a number of other stakeholders. However, the people did see greater networking opportunities through the centres.

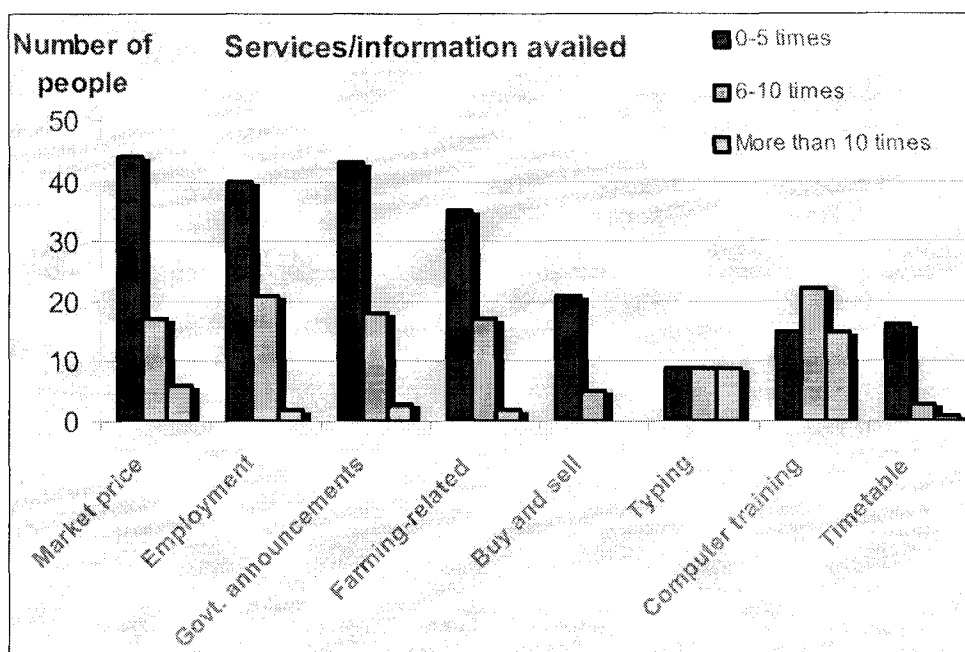
#### **e) Sustainability issues**

The answers to a number of questions indirectly touched upon sustainability issues that influence the efficient functioning of an ICT initiative such as the MSSRF project. The centres have provided computer-training skills to a number of people such that the participants felt highly confident of handling the tool. This showed that the centres were expected to continue to provide training programmes. This would in turn help the centres to sustain their role in building new skills among the citizens they serve.

From Figure 6.17, it is evident that a number of services were well sought after by the community. Calculations based on the obtained data show that more than 500 visits were undertaken to the Rural Knowledge Centres by the individuals each month to learn computers while the number was even higher for employment information and for obtaining market prices. For availing computer training, 15 people visited the centres more than 10 times a month. The less sought-after types of services could be easily singled out here, for example,

the timetable information services. The demand for information services had grown over the past few months, which added to the sustainability factor of the centres.

Another indicator to the sustainability factor was the retention of the staff members. Most of the staff members had stayed on since joining the centres. The interest of the communities in the information products and services of the centres had also gone up. This was evident from the fact that more than 70 people were willing to share their knowledge at the centres for the benefit of others. They saw a new relationship with the centres as information providers rather than as mere seekers. When asked if the participants would advertise in the information products of the centres for a fee, 51 of them answered in the affirmative.



**Figure 6.17: Service-information availed of by the users (monthly figure)**

In the descriptive answers, the participants raised a number of sustainability-related issues. These are listed in Table 6.12 below:

Link up the centres with the fishermen at sea through a communication network so that the fishermen could communicate with the shore while facing problems at sea
Sustain the training activities of the centres by introducing a number of awareness raising programmes
Attach the Rural Knowledge Centres with a commercial entity such as a tea stall or a grocery shop so that the centres are subsidised through the income generated from the commercial entities
Raise revenue from advertisements to support new services



Use the Web cam facility for question and answer sessions with doctors, government officials and local authorities so that the centres become a focal point for all developmental activities
Reach employment news to homes for a small fee
The centres should act as the focal point for joint efforts by the villagers such as starting a co-operative or a small scale industry
Integrate all the ICT centres together for joint initiatives

**Table 6.12: Suggestions offered by the users to sustain the activities of the centres**

It was clearly determined from the present investigation that the dependency of the communities on the knowledge centres had been increasing which placed the centres as important entities in the society. This fact was further strengthened with the government entering into new partnerships with the centres to sort out specific community problems. The centres had thus retained their position as key actors in the society, which gave them a better chance to sustain their existence.

#### **6.4.6 The role played by the transforming structures**

##### **a) The NGO**

Evidently, as the dominant local NGO, the MSSRF has played a key role in implementing the ICT projects in all the project villages investigated in this study. Their ability to work with the village-level self-help groups, the temple administration, the influential families, the local entrepreneurs, the women's' co-operatives and the panchayat boards was witnessed throughout the study. The MSSRF provides a number of services to the community at large.

By partnering with local groups, the MSSRF has constantly been investigating the need for the ICT intervention. With the help of local groups, the NGO has designed, developed and implemented the intervention. In addition, the MSSRF has provided free technical infrastructure including computers, desks, network switches, communication links, telephone and Internet facilities to the local groups.

On the content side, the project staff of the MSSRF have been engaged in gathering and disseminating information to all the villages from the information hub located in Villianur. Linking up the villagers with research institutions around the world, the MSSRF is constantly endeavouring to enhance the agricultural and rural industrial productivity and development of its project villages.

The MSSRF have been offering a number of training and networking activities to the village community. These include: training programmes for the local volunteers to manage the centres; training for the trainers programme aimed at the project volunteers; c) social

enterpreuershship training for the local people and the volunteers; and, programmes to network the rural knowledge workers with their counterparts in other villages.

In addition to the above, the MSSRF has been exercising the sense of inclusiveness, human rights and sustainable development principles among the beneficiaries of its projects. By obtaining periodic feedback, the NGO aims at providing high quality information services. These are carried out through periodic meetings with the community throughout the year that enables the MSSRF to enhance the services and the facilities of the ICT intervention.

#### **b) Local, state and central government departments**

Although each social, human and development services department of the government has one extension officer whose prime job is to consult the people for implementing the government services, not many of them visit the villages. The government's lethargic attitude is very evident in the fact that the villagers are quite ignorant of this service offered by the government. An estimated 30 extension workers are designated to visit the seven project villages on a daily basis. Lack of co-ordination among the various government departments has led to the lack of transparency and accountability in delivering government's services to the citizens. However, ever since the ICT intervention has come into play, these departments, one by one, have started approaching the ICT centres and the MSSRF if they would find it fit to advertise the government's services and provide information about the various government schemes and employment opportunities to the people. Thus, the government has been participating in the ICT interventions in the project villages in many ways.

By offering most of the government's non-classified information to the citizens through the ICT centres, the government has been participating in the project for some time now. The government's services, developmental schemes and employment announcements are being advertised in the daily newspaper brought out by the centre on a regular basis. The Science and Technology department of the central government has adopted four ICT centres by meeting more than 40% of the maintenance cost. The staff members of the above department have occasionally been attending the periodic meetings organised by the MSSRF in their hub in Villianur. In addition to the four centres, the S&T department has been considering to sponsor more ICT centres in poor villages as an alternative income generation activity for the villagers. The district rural development agency of the government has recognised the self-help groups that run the ICT centres in some villages as being eligible to receive government subsidies. The government has been encouraging the local groups that run the ICT centre to link up with banks and co-operative institutions.

In addition to the above, the MSSRF has been exploring the possibilities of using their centres to run adult education programmes in the evenings. The government is considering the possibilities of using the ICT centre operators for collecting valuable local data required by the government. The MSSRF has taken steps to link up the Villainur hub with the central government scientific labs such as the National Remote Sensing Agency for obtaining valuable data. The government's fisheries department is now considering the possibility of offering the navigational maps, sea to shore link and wireless equipment for the fishermen at sea.

The above are a few of the many services offered by various departments within the government ever since the ICT centres started functioning. The performance of the ICT centres has been an eye-opener for the government in many ways so that they have now found a new way of delivering their messages, services and facilities to the people through these centres. In doing so, the government departments have not only achieved greater transparency and efficiency in delivering their services, but are also being impartial and responsible to meet the needs of all sections of the society, including the disadvantaged and the vulnerable.

#### **c) Private sector entities**

The ICT intervention has become a test bed for many of the private sector entities for trying out their products aimed at the rural market. The solar batteries, the telecom equipment, the radio towers and the communication links used in these centres are pilot products meant to test the effectiveness and the market acceptability among the rural poor communities. In this way, the ICT centre has led to many pioneering innovations in rural ICTs. However, some of the beneficiaries and the project staff see this as an effort by the private sector to expand their market. However, some others felt that due to a lack of capacity among the civil society and the government to make the required financial investments, it was crucial that the private sector be sensitised to make such investments. The MSSRF and similar experiments in other parts of the country and also in other developing nations, have led to rural telephony, and a series of other technologies aimed at the rural market. Largely, the project staff insisted that this trend should continue to result in an effective public-private partnership and also that it should extend to other services for the rural community.

#### **d) Local schools, hospitals, industries, co-operatives and the local Panchayat**

In the observational walks and face-to-face interviews the researcher found out that the local institutions such as the schools, the primary health centres, the co-operatives and others were not integrated into the scope of the project as of now. These institutions were very keen to participate in the project and to optimise the benefits offered by the centre. It was therefore

felt that the project has to learn from these partnerships and show its willingness to expand its role from that of a mere information provider to that of a human-service provider. Partnerships with the local cable operators will be highly effective in disseminating information held in the centres. The project has been very effective in partnering with the local Panchayats and the governing councils in its implementation.

#### **e) Inclusiveness of the transforming structures**

All the above transforming structures have demonstrated their ability to be inclusive in their service delivery to the citizens. The people as well as the project volunteers felt that there was a shift in the government's attitude ever since the ICT centres started to operate. Not only have the people themselves now come to realise their benefits and entitlements, but the government was also pro-active and responsive in meeting the people's demands. The poor and the vulnerable, who had been excluded in the past, felt very much included now. The project staff argue that the ICT centres have been pivotal in effecting the change.

By and large, the staff did not distinguish the target groups based on their social class, age or occupation. Instead, they saw the main targets for the project to be the people below the poverty line. However, they admitted that the benefits of the project went to those above the poverty line as well.

#### **6.4.7 The ICT learning curve**

The questionnaire design, predominantly carried out by the evaluation team, did not carefully consider the factors identified in Michel Menou's ICT impact assessment continuum (Figure 4.4). According to Menou, at the lower end of the spectrum, the number of individuals or organisations that have access to the Internet and other ICTs can be measured, based on which the penetration of the ICTs can be assessed. Mere access to technology cannot determine the access level, but even a single transaction made on the net can take the learning curve a step forward. When these transactions result in citizen to government, government to citizen, government to private, citizen to private, and so on, there are ample opportunities to see a number of internet-based applications come into play. Obviously, this would result in certain outcomes, benefits and losses to those who transact on the net. These outcomes will see transformations in societies in both positive and negative senses. But, Menou (1999) argues that these are all effects more than impacts of the Internet. The impact will be sensed only when it is equated to learning. By this argument, Menou concludes that impact assessment is in fact a learning curve in due course maturing from mere penetration to learning at the other end of the spectrum.

However, a number of questions asked by the project volunteers in the present study and the answers obtained are sufficient to draw preliminary conclusions on the factors identified by Menou in Figure 4.4. These issues are described below in the light of the present study.

#### **a) Penetration**

A survey carried out by the MSSRF prior to the intervention showed that the project villages had an average of one telephone per village. Only the Kizhoor village enjoyed five telephone connections, of which only 2 were public lines for a population of 400 households. From the questionnaire survey and the subsequent interviews, it is evident that most of these families have made telephone calls using the phone at the ICT centre. But, the demand for telephones is diminishing as more households have obtained connections by now. Only 68 of the 125 participants had used the telephones in the ICT centre in March 2002. However, the ICT centre has been a catalyst in helping the people to see the need for owning telephones. The penetration rate has grown from 1 private telephone per 400 households in 1998 to 39 for the 125 interviewed in 2002. With no computers in 1998, each of these villages now has 2-5 personal computers. The people's access to computers is often free, while a nominal fee is charged for attending computer-training programmes.

In addition to computers and telephones, at least three of the seven project villages use radio towers to communicate with the hub in Villianur. They are able to access the Internet and the databases held in the file server at Villianur. Through the web cam facility these villages are able to communicate with the government officials in remote locations.

The interviews with the users revealed that they saw no difference between the people living in cities and themselves when it came to accessing the ICTs.

#### **b) Transactions**

The ICT centre offers access to the Internet and an enormous amount of information held in several databases. Of 84 users, 44 of them availed of the market prices held in the ICT centre at least once in a month, while 17 others obtained the same more than five times and six others accessed this type of information more than 10 times. The survey revealed that even among the non-users (41 of them in the study), the family members of 17 of them regularly used the centre. More than 80% of the beneficiaries do have transactions with the ICT centre at least once each month. More than 17 people access market prices, employment news, and government announcements and farming information more than 5 times each month. The number of transactions carried out by each of the centres is more than 500 per month. This is phenomenal considering the fact that each of these centres offers its services to a population of less than 2000 people.

### **c) Applications**

There was no evidence of any citizen to government, or private to citizen application in place, however, the beneficiaries were interested in using the ICT centre to lodge their complaints and grievances. There is a good opportunity for these centres to thus act as lobbyists on behalf of the beneficiaries regarding their access to various public services. E-Government applications have not penetrated a number of cities and towns in India. It may hence be sometime before these ICT centres would start using any of these applications.

### **d) Outcomes**

From the interviews and the questionnaire survey, it was found out that a number of transactions between the government and the citizens have taken place. Most of these transactions have resulted in some action, for example, seven people found employment in the fire services and some women's groups could avail a number of loans. The ICT centres have been instrumental in more than 20 women availing the government benefits due to them. The project volunteers shared a number of anecdotal evidences in the story-telling session while the beneficiaries interviewed by the researcher confirmed this. The user registers at each of the ICT centres contain a number of these facts.

### **e) Benefits/losses**

#### **Benefits offered by the ICT centre (according to the beneficiaries)**

Many people have benefited by using the centre while in the questionnaire survey no attempt was made to assess the losses suffered by the stakeholders on account of the centres. It was interesting to note that 14 out of the 84 users mentioned that the centres did not offer any benefit to them, yet they wanted the centres to continue to operate. While 29 of the users confirmed that they learnt computer packages at the centres, 20 of them regularly used the telephone.

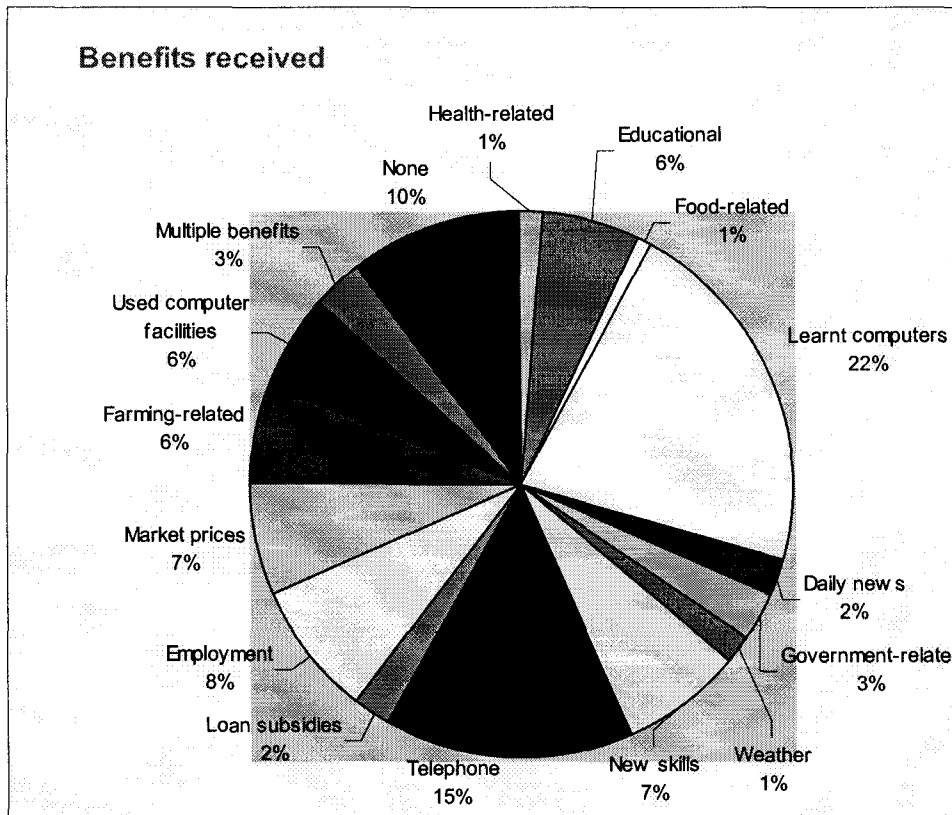
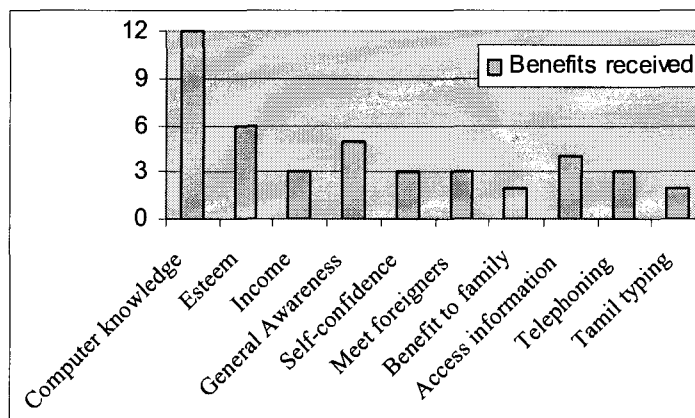
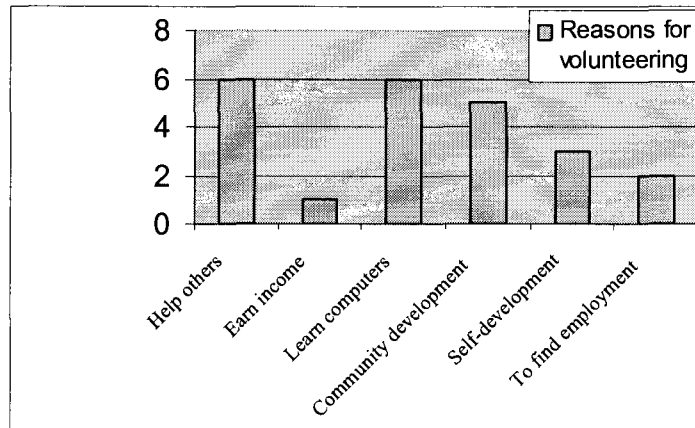


Figure 6.18: Benefits offered by the ICT centre (according to the beneficiaries)

The benefits received by the users as shown in Figure 6.18, are multiple. However, an in-depth analysis proves that the benefits availed vary from centre to centre, although the age group between 25 and 50 were the main beneficiaries. While 22% of the participants benefited by learning computers, only 1% of them have benefited from health-related information offered by the centre. 8% of those answered the questionnaire found employment through the centre.

#### Benefits offered by the ICT centre (according to the project volunteers)

The questionnaire survey among the project volunteers revealed a number of key points relating to the benefits offered by the centre. Some of the findings are summarised below. It was not surprising to note that the main reason as well as the benefit for the volunteers volunteering at the centres was not income generation, but the development of skills. From Figure 6.19 below, it is evident that many of them wanted to gain confidence in using computers and they have indeed achieved that objective.



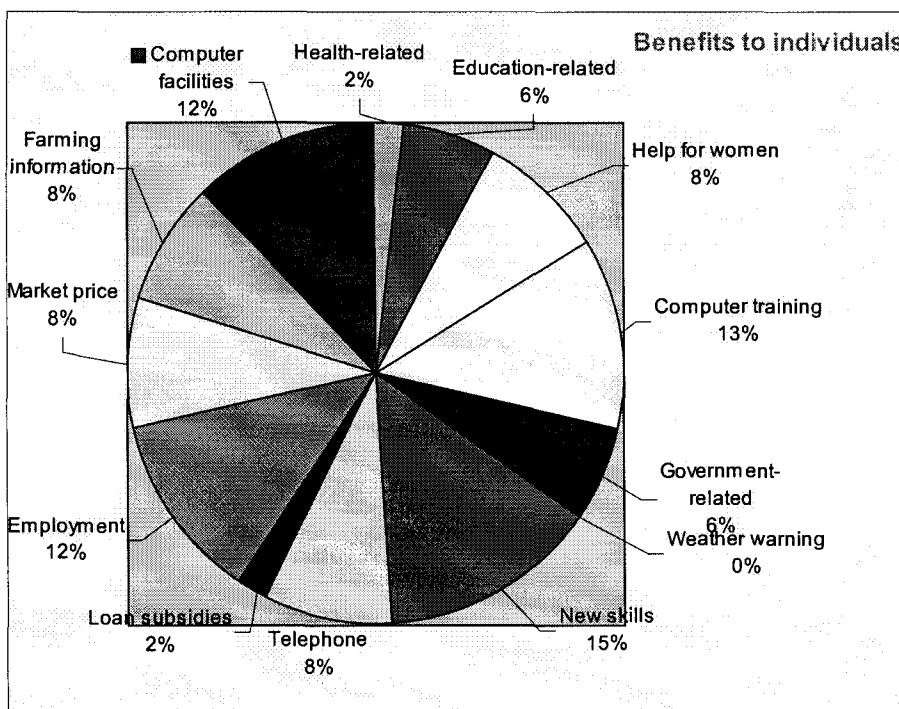
**Figure 6.19: Reasons for volunteering and the benefits received by the volunteers**

While the majority of the volunteers joined the centre to help others and render community work, it appears from the figure above that they have also gained a lot personally by volunteering. The benefits range from gaining knowledge of computers to raising their general awareness about issues and their increased self-confidence. Some of them considered meeting foreign dignitaries who visit the centre to be one of the benefits while others felt that they have gained self-respect and self-esteem within the village ever since they started occupying the role.

Most of the volunteers felt that the main benefit offered to the individuals was offering advice and information about employment opportunities and skills-development such as computer training. The role played by the centre in enabling people to find employment opportunities and employment-related training was perceived as the major contribution made to the whole community's economic wellbeing. According to the volunteers, the main benefits for the community were services such as typing petitions for approaching the government officials and providing information about the government schemes.



Figure 6.20: The benefits offered by the ICT centre (according to the volunteers)



It was interesting to note that the information offered to the widows and the deserted women was not considered as a benefit to the community at large, rather, it was perceived as a benefit to the individual women affected. Similar views were expressed regarding farming information offered to both the community as well as the individual farmers. The availability of telephones, again, is seen as a benefit offered to the individuals rather than the community at large. Health information available at the centre was not found to be a priority for the community as well as for individuals.

The volunteers felt that the centre offered the following benefits to the community in terms of maintaining their natural environment:

- The information supplied by the centre created awareness among the local people as well as the local industries which resulted in less pollution in the area;
- Public toilet facilities that prevent the spread of epidemics such as cholera, dysentery, and so on. The people were earlier using open spaces for easing themselves;
- The people have submitted petitions to the local panchayat authorities for cleaning up the village and have succeeded. Similar petitions have been handed over to the authorities for a proper drainage system, uninterrupted supply of electricity, supply of water and some other facilities;
- Mosquito repellents are sprayed throughout the village periodically

- The people benefited by the construction of a proper drainage system in the village of Nallavadu;
- School students are also engaged in cleaning the village periodically;
- The government's department of science and technology is planning to distribute refuse tips to the villages; and,
- Due to the general awareness created by the centre, the people have planted a number of trees at the roadside.

The volunteers mentioned the centre has significantly contributed to the physical infrastructure of the villages. In one of the project villages, problems such as lack of library facilities and a shortage of teachers in the schools have been addressed. Water tanks and paddy storage facilities were constructed after the centre came into being in another village. The government's commitment to construction work such as boundary walls, drainage systems, fences to the graveyard and the community water tanks have taken place in the past year.

#### **Benefits offered by the ICT centre (according to the project staff)**

The project staff perceived that a real social change was already taking place in the project villages. They felt that the change was being reflected by the communities' awareness of their rights and entitlements. Since more than 99% of the 660,000 villages in India do not have the privilege of using ICTs, the staff members felt that their project villages were one of the first few villages to benefit. However, the handholding nature of the project that limits the project staff to withdraw immediately from the villages. The staff felt that their mere presence was valuable to the communities. Among the very many challenges, the staff felt that they had to find solutions for sustainability. The challenge for transmitting data before 12'o clock in the afternoon has always been a problem which the project staff thought was one of the priorities which should be addressed in the future. In addition, they felt that the project should concentrate on enabling the people to generate some income through the information supplied to them.

The project staff confirmed that the centre was offering many benefits to the individuals who use the centre. According to them the individuals were able to save time and money as they accessed information at their convenience right in their village itself. Otherwise people had to travel long distances and to various corners to obtain information. Quite often, an individual on his own was unsuccessful in obtaining the required information. The access to information at the centres offered opportunities for people to enhance their skills, knowledge and general awareness. Individuals were able to apply for a number of jobs they never were able to before. This was due to the fact that they were quite often unaware of those opportunities. Now with the information supplied by the centre, hundreds of people have attended interviews

of whom a good number got selected for skilled jobs. Further, the project staff stated that through the ICT centres the people were able to access a number of government schemes offered to the poor below the poverty line. There were anecdotal evidences to prove that individuals who accessed information at the centre have gained credibility due to their association with the MSSRF.

In addition to the benefits passed on to the individuals, the project staff were of the opinion that the ICT centres were passing on a number of benefits to the community at large. They felt that the communities were united in the villages where the centres were functioning. People seemed to have overcome the barriers of position, caste and economic status. All the people were the beneficiaries of government schemes, not just a preferred group of individuals or a community based on caste or creed.

In some villages, the staff at the centre announce the time at regular intervals using the loud speakers provided by the centre. This, the staff say, enables the community to plan their day-to-day tasks, both domestic as well as professional and the employees of the village are able to reach their work places on time. In a fishing village, the centre has provided the community with a focus light which enables the fishermen to safely return to their village at night after fishing without problems of any kind.

Exposure to computers and education through animation techniques for the children has proved to be very helpful in bringing up their educational level. The other benefits to the community included the daily weather report, information about government entitlements, exam results, and agricultural market prices.

From the following, the project staff argued that the ICT centre was offering specific benefits to the physical infrastructure of the village:

- The communities are very peaceful these days as they know that they can approach the centre for any of their social and economic problems for the right advice and support;
- The school children have now taken up the responsibility of cleaning the village periodically. They perform this role at their homes everyday;
- The centre itself is an extra infrastructure in all the project villages;
- There is enough commitment from the village leaders to develop the village with the support of the centre; and,
- The centres bring computers, telephone lines, faxes and other sophisticated gadgets such as Spread Spectrum Technology, radio towers and so on to the villages.

As for the economic wellbeing of the community, the project staff felt that the ICT centres were bring the following benefits:

- Through the newspaper supplied by the centre every fortnight, the people were able to enhance their business opportunities by advertising their products and services;
- Many people have taken medical and life insurance policies which have proven to be very helpful; and,
- Some people conducted their business activities using the phone available in the centres as there were no other phones in that particular village.

The decision by the S&T department of the government to support the ICT centres after the funding is withdrawn by the IDRC is a major step towards attaining long-term sustainability. This itself is an economic boom to those villages as the support will be on a long-term basis.

#### **Benefits offered by the ICT centre (according to the focus group members)**

Focus group meetings served to develop the questionnaires and to debate upon the researcher's models and the evaluation needs and methods. But, these meetings were also helpful in sharing of the successful and unsuccessful stories among the volunteers. A number of anecdotal evidences to the successful usage of information were shared among the group members. The women volunteers were more vocal than their male counterparts. The volunteers shared more than 15 stories that proved the usefulness of the centres. They relished sharing their contribution to the people's development. The researcher captured a number of such stories for the purpose of this research. A few such success stories are listed below as bullet points:

- Life insurance policies obtained by the citizens;
- Information obtained at the centre helped the owner of a cow to take certain measures to save the cow during the delivery of its calf;
- Widow's pension obtained by a number of women at the Embelem centre;
- Loan obtained by deserted and divorced women through a specific government scheme;
- Recognition of the Embelem self-help group that runs the centre as one of the best community-based organisations by the government authorities; and,
- Prevention of the spread of an epidemic disease by following the instructions supplied by the centre.

#### **f) Transformation**

The interviews and the questionnaire survey among the project staff revealed that the project addressed a number of vulnerability factors among which the staff felt the following could be easily identified:

- a) Eradicating poverty through knowledge empowerment and the empowerment of women;
- b) Training the community to own the telecentre so that every single person can enjoy its benefits;
- c) The promotion of open sources prevent the villagers from paying hefty prices for using licensed products such as the Microsoft packages;
- d) Information on domestic violence has reduced crimes against the women in these villages; and,
- e) The mere inclusiveness of the project has raised great awareness about women's rights and their opportunities.

**f) Learning**

The evidences to prove the role of ICTs in social empowerment and poverty alleviation are apparent in the fact that the women in these villages earn money these days. Not many were able to earn money, as they were never engaged in any economic activity other than taking care of their homes. In addition, there are a number of women-led self-help groups operating from these villages. The ICTs have empowered the people by providing them with the right information at the right time. This has been evident with the fact that a number of school children after receiving training in the use of computers, are now getting admitted in schools of high standards. A few people have found jobs due to the new skills that they have acquired. In addition, the staff pointed out that the initial fears that the people had to use the centre and the ICTs have been overcome. The people are confident of handling the ICT equipment in these villages, which is not the case even in many cities among the literate.

The people have been greatly empowered due to the information supplied to them. Many of them have approached the government to avail of a number of benefits that they were entitled to. They were kept in the dark before the centre came into being as the government's information dissemination policy had been so ineffective. The people belonging to the lower castes, the women, the disabled and the elderly have especially come to realise their rights through the information about various government schemes given by the centre.

The centre is socially inclusive to all people. This is furthered by the efforts made to enable the community to own the ICT project. The sense of ownership while running the knowledge centres has resulted in these communities enabling their people of all social status indifferent to their caste, creed, religion and other orientations to access the centre. The communities have undertaken to provide rent-free space for running the centre to bear the cost of electricity to identify their own volunteers to run the programme to pay the telephone bill and to appoint women volunteers and so on. Some women do not come to the centre because there is no monetary benefit. To overcome this, income generation activities must be initiated. The elderly think that the centres only have computers that are only for the young

people. To overcome this, touch screens, multimedia and local language applications can be put to use.

#### **6.4.8 Other findings**

On-the-spot interviews conducted by the researcher were quite helpful to double check the information provided by the staff and the volunteers, mainly to find out the reasons for the non-use by a certain group of the people. The researcher chose not to pre-select questions, but each time entered into a dialogue with the villagers to find the answers to the above question. Some 50 people were interviewed. There were a number of reasons for the people not using the centre. The major reasons can be summed as below:

- a) Some elderly people think that the centre is only for the educated and the young, hence they do not use the centre. However, when explained about the information held in the centres and the services provided, they were all willing to visit the centre;
- b) A few women do not visit the centre as they find the centres always overcrowded with men. They would prefer a separate time for their usage;
- c) Some children do not get to use the centres for there are just a few computers at these centres;
- d) Sometimes, when the people come to use the centre, they find it locked;
- e) Some people belonging to the upper class feel that the centre holds information only for the lower class and the poor, hence they do not feel like visiting the centre;
- f) Some people would prefer a centre that is run in a family home rather than a more common place, although the family encourages everyone to visit and use the centre;
- g) The people are willing to pay for the information supplied if it would indeed enhance their income generation activities;
- h) Many small traders felt that the centre should engage in marketing their produce and goods by advertising on the Internet;
- i) Many fishermen felt that the centre should provide training on the preparation of fish pickles and on the cultivation of prawns; and,
- j) The farmers although happy with the information provided would like the centre to obtain latest findings from the Agricultural University in Coimbatore, a district in Tamilnadu that is 350 kilometres away from these villages.

The researcher undertook a number of visits to the seven project villages as well as some non-project villages to study the contrasts in the way people's way of life and their day-to-day practices and routines. A volunteer of each respective village always accompanied the researcher. At the non-project villages, the lead evaluator accompanied the researcher. These walks were helpful for the researcher to develop an idea about the villages and the

common beliefs held by the people of each village. The following points could be drawn relevant to the study:

- Elderly men can be seen all the time sitting near tea stalls or at the market places;
- Very many able men loiter around as they are unemployed;
- Students are seen playing in the streets, even when the centres are open and empty;
- Some students who have a special interest to learn about computers visit the centre regularly;
- The telephone shops in most places are empty during the day, but in the evenings, most of the booths are crowded;
- The bus services are inadequate in many villages, and therefore the people prefer to walk to the nearest village where the frequency of bus services are high;
- Daily newspapers are available at the tea stalls; people visit these places to discuss politics and entertainment-related news;
- Life is very slow in most of the villages as the people are complacent about every little thing;
- Little or no efforts routinely made to undertake public works such as repairing of the roads, cleaning of the village pond, keeping the village clean, etc.;
- The social capital seems to be very low in all these villages although a good percentage of the people are literate and knowledgeable about various issues;
- All the villages face problems of shortage of rains and irrigation facilities which affects their agricultural productivity; and,
- The industries run by the people from other states are reluctant to employ the local people; this has resulted in migration of people into these villages from other places; it is obvious that only these migrant people have a stable income; the economic well-being of these villages is therefore based on the agricultural produce for the locals and the industrial activities for the non-local people

#### **SWOT analysis of the ICT intervention by the project staff**

Based on the answers provided by the staff, the following SWOT analysis shown in Table 6.13 was developed. It may not necessarily be the consensus views of all the staff, but the table provides a full list of all the points mentioned by the staff. According to the project staff, the target groups feel that they have been brought out of their ignorance, in other words, they have been empowered by the project through the information supplied to them. Many of them, the staff feel, have changed their lifestyles on the basis of the information provided to them. While students came out to acquire computer skills and obtain information related to their studies, the farmers used the centre very regularly due to the financial benefits attached to the information provided. However, the main user group comprised of the unemployed

who regularly visited the centre to obtain employment-related news and to word process and print their application forms.

<b>Strengths</b>	<b>Weaknesses</b>
People's participation Community ownership Credibility with the MSSRF approach Government support Locale-specific content Inclusiveness Commitment of the project staff and the volunteers No other similar centre in the villages Demand-driven content	Poor documentation of the project Low level of awareness about the project among the communities The static nature of some content Unable to meet the need at times Provides less employment news Unable to market the produce of the villagers No remuneration given to the volunteers
<b>Opportunities</b>	<b>• Threats</b>
To partner with the government and private sector agencies To partner with other NGOs and self-help groups Government recognition for the self-help groups To uplift the people below the poverty line To change the paradigm from the people being the mere recipients of information to the providers of information To capture the local knowledge To replicate the project in several other villages To recycle the computer equipment To partner with the international agencies and research institutions	Political interference Changing the mindset of the people at large Voluntary nature No income generation schemes for the people Poor salary structure Potential staff turn over Takes a long time to understand the nature of the project for the villagers initially Mushrooming of village knowledge centres all over India that which threatens the credibility of such institutions Commercial interests to use the people as the experimental samples Visits made to these villages by the researchers within India and abroad

**Table 6.13: SWOT analysis**

The other set of target groups, according to the project staff, were the leaders of the community who frequented the centre for preparing and printing petitions and complaints against the government authorities. Although a good percentage of the potential users do not visit the centre, the staff felt that the centres were operating very well for those used it. The need for marketing the usefulness of the centre was felt by almost all the members of the staff.



## Analysis of user registers maintained at the centres

The Veerampattinam centre was popular among the users for telephoning, while the Pooranamkuppam and Embelem centres did not use the facility very effectively. Health enquiries have been very low in all centres but for Kalitheerthalkuppam and the women-run Embelem centres. The women users make most of the enquiries.

All the centres have been organising computer training programmes for sometime now. But the people in the fishing village of Nallavadu have benefitted the most. A very poor turnout was witnessed in Pooranamkuoam. There has been a substantial demand for general news at the newly opened Thirukanchipet centre while in Kizhur the demand has been very low. Kizhur is one of the oldest centres functioning for almost four years now. It is interesting to note that at the Kalitheerthalkuppam centre, there has been a great demand for agricultural and farming information as compared to the marginal level of enquiry in Pooranamkuppam which is also a farming village. The enquiry level has diminished in Kizhur, the other village dominant with farmers.

As compared to Nallavadu, fish map, weather warning related enquiries in Veerampattinam has been marginal. This may be due to the fact that Veerampattinam has been using a public address system to announce the report several times everyday. Kalitheerthalkuppam leads in health enquiries followed by the women-run Embelem centre. The people of Veerampattinam enquire about welfare schemes much more than their counterparts in the other villages. It is interesting to note that in Pooranamkuppam, there has been a very low-level of interest in welfare news. From Table 6.14 below, it is evident that there has not been a great demand for general news, computer training, phone calls, welfare news and health information at Pooranamkuppam. The centre that receives the most enquiries is Thirukanchipet followed by Embelem, Veerampattinam and then the rest.

Service	Thiru Kanchipet	Embelem	Veeram Pattinam	Nalla Vadu	Kizhur	Kalitheerthalkuppam	Pooranamkuppam
General news	2690	1689	1073	830	824	665	419
Computer training	1030	1135	620	1348	1182	952	178
Phone calls	551	177	646	264	342	866	166
Education	342	453	168	67	152	179	61
Employment	101	81	73	56	86	42	70
Agriculture	168	277	10	137	102	604	47
Welfare news	56	71	167	0	57	131	1
Health enquiries	44	81	13	49	29	134	7
Weather warning			48	424			

Table 6.14: User statistics as per the MSSRF records

The first hand evaluation of the Pondicherry framework proved very useful in exploring the issues around the application of the framework as well as the usefulness of the framework in

evaluating an ICT intervention. On the outset, the experiment in Pondicherry among the local volunteers who acted as the main evaluators has proved that the poor people with minimal education can indeed assess an ICT intervention that is aimed at poverty alleviation. The poor do not only have the capacity to identify relevant issues, but also are able to explore and seek answers to those issues of critical importance to them.

A detailed matrix of the research analysis carried out in Pondicherry is presented in a tabular form in the following pages.

In the next chapter, the research will attempt at discussing the Pondicherry experience in the light of his own holistic framework, termed the 'Pondicherry Framework' at the end of this study drawing evidences from the published literature in the field.



Matrix of analysis

Impact Assessment of the Rural Knowledge Centre project using the 'Pondicherry Framework'

Issues	General indicators	Methodologies	Comments	Sources of data
<b>1. Poverty assessment</b>				
1.1 Poverty levels of the communities	Percent of households in the community below the government's poverty line	Household income survey; identification of government activities in the community; comparison of income levels with the national and international targets for alleviating poverty	Comparison across the country and neighbouring communities reveals that the people are poor in the region, but better than many communities in the other states of India	National household survey; Questionnaire survey specific to the research
1.2 Consumption level of communities	Consumption levels of the extreme poor	Household consumption survey, identification of the markets and the market behaviour in the community; comparison with the national figures for consumption level	Comparison across the country and in the neighbouring communities reveals that the consumption level is far superior than the country's average for the poor, but, the communities were still unable to purchase essentials such as health services, education, food, information, vehicles and so on	Pre-project statistics; Questionnaire survey on the consumption level; National consumer survey
1.3 Poverty levels of the beneficiaries	Percent of beneficiaries below the poverty line	Income survey among the beneficiaries; identification of the activities of the transforming structures; comparison with their neighbours	Comparison with their neighbouring communities reveals that the beneficiaries were poorer than their counterparts	Project documents; Questionnaire survey using sampling techniques

1.4 Poverty levels of the users	Percent of users below the poverty line	Income survey among the users, identification of project activities; analysis of poverty levels of the users as compared to the non-users	Comparison with the non-users shows that the users' wellbeing was superior than the non-users'	Questionnaire survey using sampling techniques
1.5 Distribution of resources	Percent of households with land and house ownership	Comparison with the national average of land ownership; comparison with the national average of home ownership	Comparison shows that a good percentage of the beneficiaries owned land; but due to natural calamities and the lack of rainfall, the land resources were not well exploited; house ownership was comparable with the national figure	National household survey; Questionnaire survey using sampling techniques
1.6 Institutional design of targets and performance	Use of poverty map; promotional efforts; direct access by the beneficiary groups; realistic targets; project menu	Comparison of one centre with the other; analysis of project documents and pre-project surveys undertaken by the project staff; analysis of local, national and international media including print, web and electronic	The decision to start a centre in each of the villages was based on the poverty map, but it also dependent on the people's willingness to own, manage and sustain the activity; the visibility of the project is very low among the communities as compared to its international limelight; no visible target figure seen; the project menu is demand-driven and locale-specific	Project documents; Pre-project surveys; Media coverage - local, national and international includes electronic media and the web; Questionnaire survey among the beneficiaries

1.7 Other factors affecting the target performances	Social capital of the community; willingness to own and manage the project; distance to other transforming structures; income inequality; illiteracy	Comparison of variables with the national average; project performance indicators; Project staff commitment; income survey; comparison of the literacy level with the national average and with that of other communities; identification of other interventions	The social capital of the communities has not been high; no evidences of group work seen; ownership of the project felt, though the people's involvement is limited; literacy level was higher than the national average, which reflected in the usage pattern; no other transforming structures were active in the villages; the distance from government was phenomenally high	Questionnaire survey among the beneficiaries; Questionnaire survey among the project volunteers; National literacy survey
<b>Analysis of the researcher's four CI pillars</b>				
<b>2.1 Accessibility factors</b>				
2.1.1 Equitable access by all	Access by different social and occupational groups	Comparison of access level by different groups based on age, gender, income level and the literacy level	The usage has been very high among men and the young people as compared to women and the elderly; with the literacy and the income level, the usage increases.	Questionnaire survey among the beneficiaries
2.1.2 Language factors	Availability of a technological interface in the local language	Analysis of usage level and the language of the content	The efforts are made to translate and disseminate vast amounts of information in Tamil which is the operational language for both the beneficiaries and the volunteers	Observational data; Analysis of content
2.1.3 Technological applications used	The users' ability to use the applications at the	Comparison of usage of blackboards with the information	Both blackboards as well as computers are used for disseminating and	Questionnaire survey among the beneficiaries;

	centre with ease	provided on computer screens	accessing information; the children and the young people in all the centres were comfortable accessing information via the computers	On-the sport interview results; Analysis of the observations of the researcher
2.1.4 Visits made by the community	Visits made by different user group; reasons for non-usage; the distance from the households; the working hours of the centre	Comparison of usage patterns; analysis of qualitative data on non-usage; analysis of distance Vs usage pattern; questionnaire survey to determine if the opening hours were conducive to usage	The usage pattern has been even throughout the year except for low usage the cyclone time; the distances did not alter the usage pattern, however, the people's workload was a limiting factor; the women's usage was limited as all the domestic work was left to them; many prefer using the centre in the evenings and at weekends	Questionnaire survey among the beneficiaries
<b>2.2 Usage of content</b>				
2.2.1 Quality and quantity of content	Volume of content; volume of content in the local language; content based on the popular demand	Analysis of content; comparison of expectation and usage levels; the project's response to the demand	The content has been evolving into various databases ever since the start of the project; most of the content at the centres is locale-specific and demand-driven; however, there is a feeling that the centres could be holding more content targeting the beneficiaries	Questionnaire survey among the beneficiaries; Questionnaire survey among the project staff; Questionnaire survey among the volunteers; On-the-spot interviews

2.2.2 Presentation of content	Content in multimedia; content tailor-made for groups within the communities	Comparison with the government's adult learning and non-formal education programmes	Steps are being undertaken by the centre to use more and more multimedia material aimed at the illiterate and the children	Interviews with the project staff
2.2.3 External links that support content	Content partnerships; willingness to provide content by the government; ability to capture the local knowledge	Analysis of top-down Vs bottom-up content flow; analysis of the government's involvement in the project	The evidences suggest that the government is willing to participate in content dissemination through the centres' databases and the products such as the fortnightly newspaper	Interview the project staff and various government officials
2.2.4 Cost-benefits	Tangible benefits received by the communities	Anecdotal evidences of cost benefits	A number of success stories were shared by the project volunteers and the users to prove this objective	Minutes of the focus group meetings and the user registers
2.2.5 Content for empowerment	Number of people who received benefits; number of petitions and complaints against authorities; the level of awareness	Comparison of loans and other benefits availed before and after the intervention; number of complaints lodged by the communities after realising their rights	The evidences suggest that a number of people availing various government benefits; the evidences also suggest that the authorities are responding to the people's suggestions and complaints	Questionnaire survey among the beneficiaries; Minutes of the focus group meetings; Project documents
<b>2.3 Partnership issues</b>				
2.3.1 Project partnerships	Partnerships between the project and other entities such as the local citizens,	Analysis of the partnership deals and the rationale behind each partnership	The partnership between the local citizens and the project is strong, however, the project leads in forging	Project documents



	community groups, community leaders, other non-profit groups and government agencies		these partnerships rather than the people themselves	
2.3.2 Community ownership and control	Community's ability to take decisions	Analysis of the project documents	The communities feel proud of the existence of the centre	Project documents; Interviews with the community leaders; Questionnaire survey among the beneficiaries, the volunteers and the staff
2.3.3 Partnerships with other transforming structures	Partnerships with local schools, hospitals, other NGOs and government departments	Analysis of the results of the joint efforts undertaken through these partnerships	The evidences show that such partnerships are either non-existent or for very temporal purposes	Project documents
2.3.4 Partnerships with the technology providers	New technology tried in the past; the technology providers' willingness to invest; visits made by the donors, government officials and the technology providers	Analysis of project initiatives in the South; analysis of the visits made by the technology providers	General evidences suggest that almost all the major technology players have visited the project; the project has pioneered a number of initiatives in the IT industry to provide technological solutions for pro-poor community organisations	Project documents; ICT web sites; Information about ICT projects for poverty alleviation

2.3.5 Sponsorship by the local industries	Sponsorship deals with the local industries	Analysis of project documents	Evidences suggest that there have not been any such sponsorship deals although future possibilities exist	Project documents; Interviews with the project staff
2.3.6 Content partnerships	Partnership with the content providers at the local, national and international levels	Analysis of content	The project has not networked with any content providers; opportunities exist for the project to partner with local cable TV operators for content dissemination, and with research organisations for content harvesting; People are eager to form partnerships with the government authorities for providing local data	Project documents; Available content at the centres; Interviews with the government authorities
<b>2.4 Sustainability factors</b>				
2.4.1 Sustainability of the project staff	The movement of the volunteers in the project; number of years of their service	Comparison with staff movement in other NGOs; job satisfaction level of the project volunteers	The project volunteers and the staff are happy with the project and their association; they even ask for identity cards to be issued by the project; staff movement is very low	Project documents; Questionnaire survey and interviews among the project volunteers and the staff
2.4.2 Sustainability of content flow	Content exchange between the project and other information	Assessment of the content; assess the news and the advertisements in the fortnightly	The sustenance of the content flow is seen, however, since the newspaper is a relatively new product, it has to be	Fortnightly newspaper; Project documents

	providers; the people's ability to feed content; the periodicity of the newspapers produced by the project	newspaper published by the centre	observed over a period of time; the content flow from other sources is limited due to none or a few partnerships between the project and other parties	
2.4.3 Sustainability of usage	Usage statistics; repeated enquiries; the users' satisfaction	Analysis of the usage statistics to find out how many people come back for the same information received in the past	The users are quite satisfied as they did not have any such facility in the past, however, the centre fails to find unhappy users returning	Usage statistics; Questionnaire survey among the beneficiaries
2.4.4 Sustainability of skills and training	A programme for the training of the trainers; volunteers' ability to train the local people	Assessment of the quality of the trainers' programme and its frequency; assessment of the knowledge of the volunteers in running and maintaining the centres and in training others	Although the volunteers conduct local training programmes, their knowledge is fairly limited to certain applications; they are interested in undergoing a training programme themselves; one of the volunteers has been training the rest for sometime now	The curriculum of the trainers' course; Questionnaire survey among the volunteers enquiring about their training needs and the challenges faced by them over a period of time
<b>3. Benefits</b>				
3.1 Individuals	The individual's ability to access livelihood assets; the number of children attending computer training courses; the	Analysis of the user survey; comparison with the national household survey of the pre-intervention period with the post-intervention period; analysis of	The evidences suggest that some individuals have benefited from the government's schemes and have found employment through the information supplied by the centre; a number of	Usage statistics; Employment statistics; National household survey; Questionnaire survey

	number of people employed; the benefits received by the individuals	the government's benefits received; employment statistics	children have gained the confidence to use computers although the quality of training imparted to them has never been assessed	among the beneficiaries
3.2 Communities	The communities' relationship with the government and the outside world in terms of cooperation and conflict	Analysis of questionnaire survey and a perception survey among the community members, the neighbouring villages and the government authorities	The communities seem satisfied with the project and the benefits have started to emerge although they remain only as anecdotal evidences thus far	Questionnaire survey among the beneficiaries and the volunteers; Interviews with government authorities and the non-beneficiaries
3.3 Group work	Number of group activities; enhanced capacity among the communities to address their problems, community participation in change programmes; the project's role in strengthening the community feeling	Analysis of the results of any group work carried out by the community	The community seems to have come together for writing petitions and approaching the government for benefits	Questionnaire survey among the beneficiaries and the project volunteers; Feedback from the government authorities
3.4 Economic wellbeing of the	The people's perception of their own wellbeing;	Analysis of project reports; analysis of government survey	The evidences show that the project's role in empowering the people and in	National household survey; Questionnaire

community	comparison with other programmes; the project's direct contribution to improved livelihoods outcomes, for example, food, cash, physical security, economic status, empowerment, etc.;; improved health statistics; improvement in the quality of the physical infrastructure of the villages	reports; survey of the user's perceptions of the public services; economic indicators; analysis of the survey of different facilities; analysis of health statistics	realising their rights has started to bear results positively; but, in the absence of any in-depth analysis, it is very difficult to prove the role of the project in enhancing the people's wellbeing	survey among the beneficiaries; Various government statistics
<b>4 Sustainability of benefits</b>				
4.1 Sustainability of operations	The conditions for sustainability; the commitment by the stakeholders	Assessment of the communities' ability to continue the operation complimented by the donors	With renewed funding the project is likely to continue for some more years; but no visible sustainability plan has so far been found	The Project's Memorandum of Understanding

4.2 Sustainability of maintenance	Maintenance of the infrastructure and the services over time	Comparison with other projects; analysis of the electricity and phone bills paid and the income and expenditure account; the communities' ability to remunerate the volunteers and to retain them	The records show that the communities recover the basic expenses incurred by the project. However, the main cost of maintaining the equipment is borne by the project implementers; the communities do not pay any salary to the project volunteers who are dependent on the implementers, rather than the community	The bills paid by the project centres; the project's budget documents; the project's Memorandum of Understanding
4.3 Sustainability of impact	The quality and the quantity of the services and the infrastructure over time	Comparison of the facilities and the services offered by the project from the time of its start to the present	The services offered by each centre have grown over a period of time, due to popular demand; a number of new technological tools have been added over time; yet, the demand for equipment and tools such as public address systems, fish mapping techniques, the Internet and wireless communication facilities and so on is high	The project's inventories; the project's documents

4.4 Sustainability of community efforts	The demand for more services and infrastructure by the communities; the communities' ability to lodge petitions and complaints against government departments	Comparison of the communities' awareness of their rights and entitlements before and after the ICT intervention; analysis of requests received from the community	The evidences show that the communities have realised their rights and entitlements to a large extent, which is one of the project's objectives; the communities' demand for more services was evident in the meetings with the volunteers, as well as the requests received from the communities	Minutes of the community meetings; Minutes of the volunteers' meet; Number of petitions typed at the knowledge centres
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Sciencetech Evaluation (Pty) Ltd trading as:

**:: evalnet**

Evaluation for Sustainable Development in Africa

PO Box 41829  
CRAIGHALL 2024  
Johannesburg, South Africa

Tel: +27-11-880 3790  
Fax: +27-11-880 4736

Email: [info@evalnet.co.za](mailto:info@evalnet.co.za)

[www.evalnet.co.za](http://www.evalnet.co.za)

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EVALUATING POLICY INFLUENCE OF ICTS FOR RURAL AREAS: THE  
MSSRF INFORMATION VILLAGES RESEARCH PROJECT

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**Submitted by**

Zenda Ofir

Lise Kriel

April 2004

EVALUATION networks



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## Abbreviations

ASEAN	Association of Southeast Asian Nations
AISECT	All India Society for Electronics & Computer Technology
APC	Association for Progressive Communication
BSNL	Bharat Sanchar Nigam Limited
CAN	Computer Association of Nepal
CARD	Computer Applications for Rural Development
C-DAC	Centre for Development of Advanced Computing
C-DOT	Centre for Development of Telematics
CIDA	Canadian International Development Agency
CSI	Computer Society of India
DIT	Department of Information Technology
DOT	Department of Telecommunications
DRDA	District Rural Development Agency (Pondicherry)
DRSC	Departmentally-related Standing Committee
DSTE	Department of Science, Technology and the Environment (Pondicherry)
ESC	Electronics and Computer Software Export Promotion Council
ELCOT	Electronics Corporation of Tamil Nadu Ltd
GDP	Gross Domestic Product
GIST	Graphics and Intelligence based Script Technology
IAS	Indian Administrative Service
ICEG	International Conference on E-Governance (held in 2003)
ICTs	Information and Communication Technologies
ICT4D	Information and Communications Technology for Development
IDRC	International Development Research Centre
In-GoT	Industry Group on Telecommunications
ISPs	Internet Service Providers
ISPAI	Internet Service Providers Association of India
IT	Information Technology
ITT	Indian Institute of Technology (Delhi)
IVRP	Information Villages Research Project
KC	Knowledge Centre
MAIT	Manufacturers' Association for Information Technology
MIT	Massachusetts Institute of Technology
MoCIT	Ministry of Communication and Information Technology
MSSRF	MS Swaminathan Research Foundation
MTNL	Mahanagar Telephone Nigam Limited
NASSCOM	National Association of Software and Service Companies
NDA	National Democratic Alliance
NGOs	Non-governmental Organisations
NIC	National Informatics Centre (Government of India)
NITM	National IT Mission

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OCBS	Online Community Banking System
OKN	Open Knowledge Network
PAN	Pan Asia Network Programme
PO	Programme Officer
PONLEIT	Pondicherry Cooperative Milk Producers Union Limited
R&D	Research and development
SHGs	Self-Help Groups
TeNeT	Telecommunications and Computer Networks Group
TIDCO	Tamil Nadu Industrial Development Corporation
TIFAC	Technology Information, Forecasting and Assessment Council
TRAI	Telecommunications Regulatory Authority of India
UN	United Nations
UNDP	United Nations Development Programme
VAC	Value Addition Centre
VHF	Very High Frequency
VoIP	Voice Over Internet Protocol
VSNL	Videsh Sanchar Nigam Limited
WiLL	Wireless-in-Local-Loop
WSIS	World Summit on the Information Society

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## Summary Report

The *Pan Asia Networking Programme (PAN)* is working with institutes and partner organisations in developing countries in Asia to adopt ICTs as a tool to deal with social and economic development problems. One of the PAN projects, *Impact of ICTs in Rural Areas – India (Phases I and II)*, also called the *Information Villages Research Project (IVRP)*, was one of the very first ICT for Development (ICT4D) projects in India. It was launched by the MS Swaminathan Research Foundation (MSSRF) in December 1997. An ongoing second phase commenced in February 2001. The project is based on a unique intervention design and implementation approach which was recognised in 1999 through the Motorola (Dispatch Solution) Gold Award, and in 2001 through the Stockholm Challenge Award (Global Village Category). Today it is one of only 50 ICT4D initiatives in India – a small number in a country with a population of more than a billion people.

In many cases IDRC interventions are expected to influence public policy-making at national and local levels. This is often done through synthesis of field project experiences and other strategic material in support of policy formulation and implementation. During 2002-2003 the IDRC Evaluation Unit undertook a series of case studies as part of a more concerted effort aimed at understanding to what extent the organisation is succeeding in its efforts to influence public policy<sup>1</sup>. This study to determine the influence of the IVRP on policy-making in India was commissioned to help improve PAN's capacity to support applied research. The methodology closely followed that of the IDRC Evaluation Unit's earlier study.

### The policy window

The first finding of the study team is that this is a good time to be involved in India in initiatives with the potential to inform ICT for development policies and programmes. A "policy window" has begun to open. India is now the world's second largest exporter of software, while at the same time ICTs are not accessible or affordable to the majority of the population. Even though there has as yet not been a visible "trickle down" effect where the rapid expansion in the software industry has helped to solve pressing social and economic problems, this potential exists. Although little is known about the factors that enable successful ICT projects among grassroots communities, many of these issues are now becoming the focus of discussion and scholarly articles. The Government of India is also showing an increasing interest in bridging the technological divide within India. For example, it recently announced an initiative to spend 2.7 billion dollars in the next four years for this purpose, focusing mainly on the construction of an Internet device accessible to illiterate villagers.

These are important developments which provide new opportunities. However, as few initiatives have moved beyond the pilot project stage, the lack of information analysing issues such as scalability, affordability and sustainability is a fundamental problem faced by government decision and policy makers interested in promoting ICTs for development. Concerted learning from best practices *and* failures need to inform a general theory of knowledge centre success, which in turn should enable a comprehensive understanding of the difference between pilot projects and major roll-outs. An opportunity now exists for the various groups involved in ICT4D, including the government, to share their knowledge and experience, listen to one another, form partnerships and plan together.

Organisations such as MSSRF working at the interface between communities and policy makers are therefore well positioned to play a significant role in informing relevant policies and action plans.

### The policy landscape in India

The policy landscape in which the IVRP operates is complex, with at least 18 different categories of policy role players in the country. We have attempted to describe the wider policy arena rather than focusing only on Pondicherry where the IVRP is located, but due to its scope our description has several limitations. At best it

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<sup>1</sup> For more information refer to [http://web.idrc.ca/en/ev-26606-201-1-DO\\_TOPIC.html](http://web.idrc.ca/en/ev-26606-201-1-DO_TOPIC.html).



provides scope for debate on where the real power, policy alliances and opportunities for policy influence lie. Complicating an understanding of the policy influence of development pilot projects are the multi-tiered system of policy input and design between the central government and the States/Union Territories; the limited influence of international development agencies in India compared to, say, in Africa; and the lack of organisation and a common voice between role players in the ICT for development field.

### **The policy intent of the IVRP**

Was the IVRP designed to have policy influence? Most international organisations do not have enough funding to enable roll-out of scaled up pilot projects. For this they remain dependent on the government. Policy influence therefore often has to be implicit in development efforts. During Phase I of the IVRP MSSRF did not focus *consciously* on influencing policy and first wanted to prove that they “had something to say and to demonstrate” before publicising successes.

We support this approach, as well as the increased focus on bringing the results of the work to the attention of policy makers during the second phase of the project. The interest of the IVRP funders in the use of project results helped to stimulate focus.

The intended IVRP contributions fall in the “enlightenment” and “problem-solving” models of use and are to

- improve the knowledge of policy makers by exposing them to the IVRP research results and designing new models for the application of “ICTs for development” in policy;
- broaden the policy horizons of policy makers by (i) providing them with opportunities for networking and learning; and (ii) introducing new concepts to put ideas on the government agenda;
- provide information that will help influence policy regimes in the emerging field of ICT4D.

### **The actual policy influence of the IVRP**

#### *i. Improving the (policy) knowledge of certain actors*

The IVRP has improved the knowledge and understanding of ICT4D among a wide variety of individuals and organisations through the exposure of Indian and international visitors to the project, including local and national government officials. Some of the visitors have been instrumental in bringing the experiences and lessons from the IVRP to a much broader audience, also in other countries. Furthermore, few pilot projects have had the media exposure of the IVRP. This has helped to highlight the successes of, and lessons learnt from, this project. The high media profile has been enhanced by the stature of the MSSRF leadership and advisors.

The documenting of success stories and lessons by IVRP volunteers and staff is commendable as they provide practical insights into the IVRP catalysed changes at individual and (more slowly) also at social or economic levels. On the other hand this is not sufficient; more concerted analysis and synthesis will better serve to inform policy makers. Until recently the IVRP information dissemination was not focused on analysing policy implications or addressing larger issues such as the large-scale roll-out based on pilot projects or sustainability in the longer term. As a result, some key government officials (in our view incorrectly) perceive the IVRP as an “enclave” project that cannot lead to sustainability or adaptation for other contexts – issues which are of great interest to them. Some consider it to be based on the same concept as that of the Internet kiosks – a perception which then conceals some of the unique and more attractive aspects of the project.

#### *ii. Supporting recipients to develop innovative ideas*

The IVRP has supported recipients to develop innovative ideas based on the conceptualisation of the IVRP as a model for action research. However, reports and anecdotes do not convince us that research opportunities have been maximised in terms of their design or execution. The IVRP has provided much scope for innovation – the project itself is in fact an innovation - but until the recent Policy Makers

Workshop held in Chennai in 2003 (see below) the lessons were used almost entirely to strengthen programme implementation. While this in itself is extremely useful, staff members acknowledge that MSSRF's documentation on the project has not been adequate and that lessons have not yet been translated and synthesised into a useful model or convincing, systematic policy and programme ideas for Indian decision makers. If this is to serve as one of the models for future development on a larger scale, the experiences should be well documented, analysed, understood and synthesised for use by policy makers as well as policy and programme implementers. We trust that this will be a project focus as the dialogue with policy makers increases in frequency and intensity.

iii. *Improving capabilities to communicate ideas*

In view of the closer liaison initiated by MSSRF with decision and policy makers about ICT4D, it will be necessary to determine the most effective methods for communicating with this particular group, as well as to develop the capacity of a broader contingent of its staff and interested researchers to interact with policy makers. We are not aware of any specific efforts in this regard and this could be an area of significant effort in future.

iv. *Developing new talent for research and analysis*

All four senior IVRP staff members noted the major impact of the IVRP in increasing their understanding of ICTs for rural development and the need to address the real needs of local people. The research skills of local volunteers were also developed. This capacity building in project implementation and to some extent in action research is very useful, but for the greatest impact it will be essential to do more in the field of policy research and analysis. More concerted efforts could therefore go into training researchers to analyse the policy implications of the work done in the ICT4D projects. Some students from abroad did some graduate work, but we could not find evidence of the involvement of Indian researchers from different disciplines, for example in the social or technological aspects of the project. We recognise that the project was not set up as a research effort, but well coordinated multidisciplinary research insights can contribute greatly to an understanding of the implications of context and method in ICT4D projects.

An interesting opportunity for increased policy research and analysis may reside in the linkages formed with academic and related institutions during the past few years, for example in agriculture and health. These institutions help with content development and technical advice. Some of them have policy research foci and could use the IVRP to create solid links between researchers, the government and grassroots communities while developing policy research and implementation expertise in the field of ICT for development linked to specific sectors.

v. *Providing policy makers with opportunities for networking or learning within their jurisdiction or with colleagues elsewhere*

The most direct effort thus far to inform policy makers has in providing government officials and policy makers with opportunities for networking and learning. The concept that lies at the core of the IVRP was developed in 1992 at a workshop dialogue organised by MSSRF on the use of IT for resource-poor rural communities. Several government officials referred to this meeting as their first introduction to the concept of ICT4D. A Policy Makers Workshop held in Chennai in October 2003 enabled personal interaction within a mixed group as well as opportunities for NGOs and government officials to meet, to mingle and learn to understand each other's work. This networking strengthened communication between the various government and NGO players.

This opportunity led to important results and proposals: Prof. Swaminathan agreed to devote more time to championing ICT for development. Fifteen recommendations based on discussions at the Workshop were soon to be submitted to the highest levels of the Government of India (after this study has been completed). Other outputs include a conference document and a policy brief consisting of ICT4D recommendations to policy makers gathered at World Summit on the Information Society in Geneva in December 2003. We conclude that the Policy Makers Workshop could give momentum to efforts to

ensure that the lessons learnt by the IVRP and other projects will be synthesised and integrated to assist policy makers' and implementers' deliberations on ICTs for development.

vi. *Introducing new concepts to frame debates, putting ideas on the agenda, or stimulating public debate*

We could not find clear policy influence in this category other than the introduction of the IVRP through the exposure of decision and policy makers to the project during site visits and workshops. ICT4D was highlighted at these events and progress and innovations brought to the attention of visitors and workshop participants. Personal contact of IVRP staff with officials in Pondicherry and in Tamil Nadu also helped to introduce the innovations to government officials at state level. The ideas and subsequent collaboration and exposure could well lead to a greater acceptance among key officials of models and policy inputs by MSSRF. We were also told by some informants that the example set by the IVRP has served to inform ICT4D related initiatives (not policies) in other sectors such as agriculture, health and national banking. This aspect was not investigated further, but it does raise the question of the extent to which ICT4D can be mainstreamed in other sectors. As organisation with an exceptional history in the promotion of agriculture in India, MSSRF is well positioned to encourage and develop interesting ideas and initiatives in this regard.

vii. *Educating researchers and others who take up new positions with a broader understanding of issues*

This category of policy influence has not been a priority in the context of the IVRP, but might become more important if MSSRF becomes part of a concerted drive to inform researchers and new officials about the needs, challenges and opportunities to be considered in the area of ICT4D.

viii. *Stimulating quiet dialogue among decision-makers (and among, or with, researchers)*

This category of policy influence is also not a priority in the context of the IVRP.

ix. *Fundamental re-designing programmes and policies*

Normally few instances can be found where a direct line be drawn from a policy input to a policy statement. It therefore comes as no surprise that the IVRP has not had direct, linear policy influence on policy formulation.

The IVRP might have had more success in directly influencing international programmes than efforts within India (although its influence on NGO project design in India has not been studied and a certain statement in this respect cannot be made). We were told that the IVRP ideas and lessons have informed the execution of PAN in other countries. It has also influenced the design of international programmes such as the 'Open Knowledge Network' which aims to promote the creation and exchange of local content as widely as possible across the South.

x. *Modifying existing programmes or policies*

There has been no opportunity for the IVRP to play an active role in the re-design of policies and programmes related to policy implementation in the field of ICT for development.

xi. *Creating a new policy regime in an emerging field*

A policy window in the area of ICT4D has opened, but a new policy regime has not yet been established. This might be possible in future if ICT4D policy receives more concerted attention at state and/or national level. For MSSRF to play a role in such future efforts, the momentum gained through the Policy Makers Workshop needs to be kept, partnerships formed with influential people and organisations that can assist in the development of policy input for ICT4D, and active relationships with policy makers in key positions nurtured.

## Policy influence and gender

The IVRP has involved and empowered local women in an unusually effective way. A scrutiny of policy documents indicated that many recent policies in the development and ICT fields have some reference – albeit usually very brief – to the need to support women in particular in the IT or ICT sectors. However, we could find no indication that the IVRP had any direct policy influence on gender related policies and we could find no accompanying strategies or in-depth discussion of what strategies would be needed to achieve this. We surmise that the policy influence of the IVRP with respect to gender was similar to that for the project overall, as the empowerment of women at the grassroots level is an inseparable and quite visible part of the IVRP.

(We found it interesting that in spite of the good work of the project in the empowerment of women in the rural communities, there were no women involved in project management, either in MSSRF or in Pondicherry).

### The policy influence mechanisms

- i. *Invitations and open access to the IVRP Value Addition and Knowledge Centres for visitors from many different sectors and countries.* Policy information is not provided; the visits consist of exposure to the pilot project itself.
- ii. *Frequent attendance and presentations by MSSRF staff and advisors at key conferences, planning meetings and seminars in India and abroad,* supported by systematic documentation by IVRP volunteers and staff of success stories. (Information provided often touches on policy issues, but does not give these in synthesised and integrated form for direct use by policy makers. Targeted presentations discussing key policy issues suitable to the needs of policy makers have not been a focus).
- iii. *Regular articles in specialist and general publications by MSSRF and IVRP staff and advisors, highlighting the experiences, achievements and lessons of the IVRP in India and internationally.* However few articles were targeted directly at policy makers, and although case studies and policy implications are occasionally discussed, in-depth analyses for policy use had not been made.
- iv. *Regular communication with all forms of media to enhance the public profile for the initiative.* Most of the publicity has been provided by international media, but a significant number of Indian newspapers have been reporting on the concept and achievements of the IVRP. A special video on the IVRP was produced and distributed to 5 000 potential users of the information.
- v. *Workshops and discussions with policy makers and government officials.* Several workshops have been held by MSSRF on taking ICTs to resource poor rural families. The most important of these were the “Reaching the Unreached” workshop in 1992, where the IVRP concept started to take shape, and the October 2003 Policy Makers Workshop, which is set to lead to a greater focus on policy influence and lobbying for ICT4D by MSSRF in partnership with other interested parties.
- vi. *IVRP and ICT4D champions playing an important role in creating a groundswell of interest in the field.* The MSSRF staff members involved in the IVRP have been champions of the project and of the concept of bringing ICTs to resource poor families in rural India, and have developed and maintained very good contacts with relevant government officials at state level. In order to play a role in influencing policy makers on a national basis, such champions have to be well positioned to gain the trust and the ears of people who can directly influence policy content at the national level.
- vii. *Strategic partnerships and relationships with key officials and institutions.* The IVRP has established a number of strategic partnerships and alliances with government departments and organisations, especially in Pondicherry and to a lesser extent with those in Tamil Nadu, using the powerful presence of MSSRF and its work in ICT4D. The IVRP relationship and collaboration with the Pondicherry Government provides opportunities for policy influence.

### **Contextual factors that have facilitated opportunities for policy influence**

- An opening “Policy Window”
- Increasing interest in ICT4D among government officials
- A focus on development, with increasing emphasis on ICTs for rural development in government policies and task forces
- Awareness creation through national and international events
- Increased power at local level
- Work of national ICT4D champions
- Proliferation of ICT4D projects
- Opportunities for input into consultative policy making processes

### **Project related factors that have facilitated opportunities for policy influence**

- National status of MS Swaminathan
- The profile of MSSRF
- Strategic alliances and partnerships with state (Union Territory) governments and other interested organisations
- The high public profile of the IVRP

### **Barriers to policy influence**

- There is no sign of a concerted voice among ICT4D organisations.
- The manner in which IVRP type projects are presented does not show the way forward in terms of policy related issues.
- Education, training and research in India do not focus adequately on the applications of software, ICT4D or related policy work.
- Efforts have only recently begun to target policy makers and to highlight possible policy directions based on IVRP experiences, making the timeframe for major policy influence too short.
- In this country of more than a billion people, international donor agencies and their interventions do not have the profile and influence that they have in other developing countries, for example in Africa, especially when development projects are of limited scope (as in the case of the IVRP).
- Lack of infrastructure and trained human resources, five year timeframes and other practical considerations limit the attention of policy makers and government officials to large-scale implementation of ICT4D programmes.
- Current policy implementation processes and turnover in government positions prevent government ownership of and long-term interest in development solutions.
- Government priorities often prevent serious exploration of ICT for development opportunities.
- Political and government leaders have limited understanding and thus limited capacity to promote and drive issues around ICT4D.
- The multi-tiered Indian government system and policy making processes are not necessarily conducive to policy influence, and external bodies often do not understand the pivotal mechanisms through which they can exert some influence.

### **The role of the IDRC**

We did not investigate this aspect specifically, but we believe that some observations are warranted based on several of our discussions with stakeholders. As has also been experienced in Africa, the IDRC has not pushed itself forward or acted in a prescriptive manner in the execution of this project. It has given some intellectual input to the project, but has mostly stayed in the background and has trusted MSSRF to conduct the project in an effective manner. We believe that IDRC should receive due recognition for this as well as the fact that it has pioneered the provision of funding, taking the risk to support a new and innovative project concept without any indication of its potential for success. It also mobilised other partners such as CIDA in order to increase the project resources and thus its scope.

### **In conclusion**

During the first phase of the IVRP the project implementers did not focus on public policy influence – and rightly so. Their approach was to introduce innovations and learning, improve project implementation until they felt assured that it was a success, and only then seek to transfer their lessons in a concerted manner to policy makers and those who can influence policy and implementation processes.

This does not mean that the project has not had any policy influence. We have pointed out that some of their activities have indeed affected people's thinking, approaches and programmes – more in the “enlightenment” mode of use. Some of this has happened inadvertently, but some, such as the recent Policy Makers Workshop, were targeted and with impressive follow-up activities. A momentum is thus slowly building up.

While their selected approach has delayed their potential policy influence, the moment that they have chosen to concentrate on this was at the right time, even though it was quite late into the project. A policy window has been opening and they have had many experiences and learnt many lessons that can be used to inform policy and programme planning efforts in ICT4D. Many projects rush into policy recommendations before the project has reached maturity and the implications of the work have been understood. It is commendable that this has not happened in this case.

The MSSRF/IVRP team now faces several challenges:

- (i) They need to do the synthesis and integration of these lessons at a level and in a format that will truly inform and impress policy makers and programme planners, where possible joining hands with other role players and with their partners in strategic alliances. Issues such as sustainability (financial, managerial, ownership, human resource development, etc.), implications of larger scale roll-out and model development need to be considered.
- (ii) They need to ensure a clear understanding of the policy processes and role players in the multi-tiered government system in India, and the strategic points of entry through which to achieve the most effective policy influence. This insight can direct the policy influence mechanisms and strategic plan of action towards the required results.
- (iii) They need to streamline their action research opportunities, and ensure maximal expert input (from the communities as well as from project implementers, advisors and external specialists) as well as systematic documentation of the research to ensure that the maximum benefits are gained from future work. This can then be translated into lessons as well as synthesised and integrated information for policy and programme implementation purposes.
- (iv) They need to ensure that they capitalise on their strengths and use their comparative advantages and resources to the best of their ability. In our opinion the most critical factor will be the extent to which the stature and influence of Prof. Swaminathan and MSSRF, the IVRP experiences, and the experience of other well-developed projects (whether success or failure) can be mobilised to bring the results of mature policy analysis to the attention of the most influential policy makers in the Indian ICT arena.



# 1. Background, Approach and Methodology

## 1.1. Introduction

Many IDRC programmes and projects reflect the expectation that the research supported will influence public policy at the national and local levels. During 2002-2003 a number of initiatives were undertaken by the IDRC Evaluation Unit as part of a concerted study aimed at understanding to what extent it is succeeding in this aim. Among others a series of case studies was conducted by a team of international evaluators in several developing countries in which the IDRC is active. The Acacia Programme, aimed at the development of Information and Communication Technologies (ICTs) in Africa, was a focus for these case studies in Mozambique, Senegal, South Africa and Uganda.

The *Pan Asia Networking Programme (PAN)* has also worked with institutes and partner organizations in developing countries in Asia to adopt ICTs as a tool to deal with social and economic development problems. The vision of PAN is to support the establishment of ICT-enabled environments that can provide people with new opportunities to improve their quality of life in the areas of health, education, employment and political participation. Research aimed at providing broad access to ICTs in the urban poor and rural communities is one of the focuses of this effort.

PAN has also put an effort into the promotion of various means of linking research to public policy. In its recent 2001-2005 prospectus it is noted that PAN should “support a process whereby research results can reach and influence policy-makers and be translated into socially equitable policies for ICT for development”<sup>2</sup>.

Among the research supported as part of PAN is the project *Impact of ICTs in Rural Areas – India (Phases I and II)*, implemented and managed by the MS Swaminathan Research Foundation (MSSRF). This project, also called the *Information Villages Research Project (IVRP)* aims to enhance ICT access in rural and poor communities, improving quality of rural lives and increasing the public awareness of people, organizations and decision makers at various levels in public, private and governmental sectors.

## 1.2. Purpose of the Study

The initiators of the PAN Programme wish to improve their understanding of what is meant by policy influence in their context and how this is being achieved – if at all - through their project and programme activities. They want to determine whether the research conducted as part of the regional initiatives is indeed used by policy makers. They study thus has to help determine PAN’s performance in addressing policy issues. It also has to provide an opportunity for learning that can enhance the PAN programme and project design and execution.

The IVRP in India is the case study for this purpose.

As in the case of the more extensive study recently conducted by the IDRC’s Evaluation Unit, three key questions have to be answered:

- What constitutes public policy influence in the Indian context as far as ICTs for development is concerned?

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<sup>2</sup> *Pan Asia Networking - An IDRC Program Initiative for Asia: Prospectus 2001-2005. Information and Communication Technologies for Development. December 2001. p6.*



- ❑ To what degrees, and in what ways, has this PAN supported project influenced public policy?
- ❑ What factors and conditions have facilitated or inhibited the public policy influence potential of this PAN supported research project in India?

The case study will form one important set of data in improving PAN's capacity to support applied research as well as the production and dissemination of research results which may be transformed into appropriate policies.

A comparison of the results with those found in the overall IDRC study on similar projects in Africa should enhance understanding of the contexts and processes through which development projects do, or do not, influence policy in developing countries.

### 1.3. The Consultant

Dr Zenda Ofir is an evaluation and organizational development specialist as well as Executive Director of Evalnet, an evaluation consultancy company based in Johannesburg, South Africa. She was contracted by IDRC for a period of 25 days to conduct this study. During 2002-2003 she completed similar studies for the IDRC Evaluation Unit in Mozambique, South Africa and Uganda. She also completed a comparative synthesis of the studies in these three countries and in Senegal.

Although the consultant has worked in the ICT (policy) arena in several capacities, she has had no prior contact with PAN or the IVRP.

The consultant was assisted in the desk study research and data collection in India by Lise Kriel, Evalnet Project Coordinator. Together they constituted the team for this study.

### 1.4. Approach

The Terms of Reference (Refer to extract in *Annexure 1*) required this case study to explore the work undertaken by PAN in India through a series of rich, detailed stories of possible policy influence processes, as well as an examination of the changing context in which the work was carried out and the processes that were used. Where possible, the stories had to include cases where policy outcomes could be perceived as either positive or negative, in other words where research had led to either "good" or "bad" policy making.

The case study was developed through

- i. a review of documents including project design documents, monitoring documents, technical reports, media articles, academic contributions, correspondence and evaluation reports
- ii. interviews with project leaders at various levels
- iii. interviews with project participants
- iv. interviews with some of those said to have been influenced, or who work in the relevant policy environment in India, and
- v. interviews (some electronic) with IDRC staff.

The consultant employed a similar research framework and approach as she had previously done in the case studies of the Acacia projects in the African countries noted above. The interview framework and guides were adjusted to suit the local context.

## 1.5. Methodology

### 1.5.1. Overall approach

Data were collected in four areas similar to those designed for the earlier studies by the IDRC Evaluation Unit. These were:

(i) *What led to the project?*

This clarified the role of the informant as a leader, a respondent to an issue that was raised, as someone who has seen this field for a long time, as a policy maker, researcher, funder, etc. In the case of interviewing an IDRC Programme Officer (PO), this was expressed in terms of response to a proposal, in terms of project development with regards to how policy influence may or may not have been incorporated into the proposal, in terms of their leadership in a research field. In the case of a purported beneficiary (such as a government official), their involvement usually came later in hearing the results and connecting them with an issue in their Ministry, Department or Organization.

(ii) *The project*

▪ When it was started, what did it intend to achieve?

This covered the objectives as described in documentation, but also as seen by those involved in project design and execution. This helped to identify the nature of the project as characterized by the interview, for example in terms of capacity building objectives, the policy influence objectives or the overall intent of the activity.

▪ What happened?

What was accomplished (were project objectives met, changed, completely revised, not met, but good things happened, not met but bad things happened; nothing happened, etc.). Where policy influence was identified, further probing was done to determine who was influenced and in what ways. Capacity building was included as a critical dimension of policy influence.

▪ Why did it happen?

This dealt with the relationship between the context and the project and included a focus on the type of governance regime in the country and the key influences within and external to the project which caused it to develop as it did. What were the contextual factors and what were the capacity factors within the project team? What favoured/inhibited progress? Who did what? Dissemination strategies were also explored.

(iii) *What policy influence (if any) has been achieved by the project?* This focused on what was perceived to have been influenced by the project, when the influence occurred and whether the policy change or change in mind set (if any type of change actually happened) endured. An effort was made to explore the outcomes and outputs of the project which may have appeared to have no policy linkage during the time of the project, but which may have had some later. External factors were considered: what changed, what remained constant in the political, legislative, economic, technical and social environments related to the project's work? Tracing beneficiaries was also key: What was the role of beneficiaries in sustaining the change (if any); what was their role in introducing new changes?

(iv) *Gender*

Gender was considered in the tracing of project implementation team members as well as those who could have benefited from the project: were both men and women involved in the policy influence process and in what ways? How was this perceived by policy makers and by researchers (contributing, inhibiting, neutral factor)? Was analysis gender sensitive or gender neutral at all stages of the policy influence process (problem definition; definition of goals and beneficiaries; definition of the research agenda; definition of research policy interface and linkages; formulation of policy options; choice of preferred options; and where applicable, implementation, M&E, policy revision processes)?

### 1.5.2. Desk study

Before commencing the study a series of relevant documents was received from the IDRC head office in Ottawa. These included proposals for Phases I and II of the IVRP, progress reports, and general literature related to the project and to ICT for development in India. The documents were used to inform the study design and instrument development. The rest of the documents were collected from various stakeholders and in particular from MSSRF during the visit to India. The Internet was also used extensively to provide more comprehensive information.

The desk study provided background information to help understand the ICT policy environment in India, the project context and the scope of activities. It focused the interviews and assisted with the triangulation of information from other sources.

A complete list of the desk study documents is attached as *Annexure 2*.

### 1.5.3. Data collection

#### *Visit to India*

The visit by the project team to India was necessary as the project as well as the vast majority of key informants resided in India. The visit was scheduled specifically to coincide with a Policy Makers Workshop on *Rural Knowledge Centres: Harnessing Local Knowledge via Interactive Media* held by MSSRF in Chennai on 8-9 October. The workshop was attended by more than 70 development activities, academics, policy makers, public sector officials and private sector representatives.

The purpose of the workshop was to discuss four sets of questions:

- What are the dynamics of rural knowledge centres?
- How can their scope and scale be amplified?
- What partnerships can be formed with the private sector?
- How can policy makers help enhance the ICT4D agenda?

These issues were deliberated in panel discussions spread over two days (refer to the workshop programme in *Annexure 3*), covering topics such as local needs assessment, local content, financial models, emerging and appropriate ICTs, gender challenges, government services and

grassroots, cultural and political obstacles, cross-media strategies, knowledge centre experiences, inclusion of marginalised communities and policy recommendations<sup>3</sup>.

The workshop provided the team with an opportunity to gain insights into many of the issues and debates surrounding ICT for development in India. The consultant participated as panel member in one of the sessions. Interviews with selected attendees were scheduled at convenient times during the workshop. This made it possible to talk to decision-makers and activists in the ICT arena who would otherwise have been out of reach.

The programme of the team in India is attached as *Annexure 4*.

#### *Key informant interviews*

The need for the collection of detailed information for the case study determined that the main data collection instrument had to be semi-structured, in-depth individual interviews conducted with stakeholders from the project as well as from the wider ICT arena in India. In order to obtain a good variety of perspectives and perceptions on the policy context as well as the intended and actual policy influence of the IVRP, we interviewed people intimately involved with the project as well as those somewhat removed from it. Various sectors were covered. There was a strong focus on past and current project leaders, as well as on decision-makers from local and national governments.

We identified the potential key informants from the project documentation and solicited the advice of the relevant IDRC officers in Ottawa and New Delhi, as well as from the project leaders at MSSRF in Chennai and based in Pondicherry. Snowball sampling was used to identify other potential key informants. A total of 34 key informants were interviewed in Chennai, Pondicherry and Delhi. The interviews usually lasted between 60-90 minutes; some were shorter.

In spite of this approach, the study team had limited exposure to influential players and policy makers involved in influencing or drafting policies in the ICT or rural development arena. We were initially constrained in our search for such people by a lack of relevant policy documentation or references. We could track down this information only during and after our visit to India, where we obtained a significant amount of relevant documents and references. We have tried to compensate by integrating (i) an understanding of some key elements of the policy making processes in relevant states and to some extent in India overall, (ii) a study of existing policies and (iii) perspectives from a variety of stakeholder groupings, some of which operate in the policy making arena in Pondicherry, Tamil Nadu and the Government of India.

A list of the key informants interviewed is attached as *Annexure 5*. An analysis of the “categories of informants” indicates that they roughly represent the following:

<i>Government of India</i>	Four officials, representing the Ministry of Communications and IT and the National Informatics Centre (NIC)
<i>Government of Pondicherry</i>	Six government officials, including representatives of the District Rural Development Agency (DRDA), the Department of Science, Technology and Environment (DSTE), the Directorate of Education and the Directorate of Economics and Statistic, as well as the Secretary to Government and Chief Electoral Officer.
<i>Government of Tamil Nadu</i>	The Member Secretary for the State Planning Commission The Chief Technical Advisor and General Manager of the Electronics

<sup>3</sup> MS Swaminathan Research Foundation. *Rural Knowledge Centres: Harnessing Local Knowledge via Interactive Media. Policy Makers Workshop, 8-9 October 2003. Proceedings no 50.* <http://www.mssrf.org/publications/pmw.pdf>

	Corporation of Tamil Nadu Ltd (ELCOT), an implementing agency for the Government of Tamil Nadu
<i>NGOs</i>	Two representatives from non-government organisations (NGOs) involved in projects related to Information and Communication Technologies for Development.
<i>Private Sector</i>	Two private company representatives One independent Information Technology (IT) consultant
<i>Academic Sector</i>	Two representatives from the University of Tamil Nadu
<i>Donors</i>	Two IDRC-SARO staff members Two Canadian International Development Agency (CIDA) representatives
<i>MSSRF</i>	The original manager of IVRP and former MSSRF staff member Seven current MSSRF staff members, including the chairperson, Prof MS Swaminathan Four IVRP staff members
<i>Knowledge Centre Staff</i>	Observation visits were made to the IVRP Hub at Villianur and the Knowledge Centres (KCs) at Thirukanchipet and Veerampattinam in order to gain a better understanding of the project. The team met informally and discussed their activities with IVRP volunteer KC operators in each of these centres.
<i>Other</i>	The Assistant General Manager of the Agriculture Technical Cell of the State Bank of India

Several questionnaires were developed to guide the semi-structured interviews with different stakeholder groups (refer to *Annexure 6*). These were used as guideline only, and in several cases the conversation was allowed to flow freely depending on the person's involvement in the project, or in ICT policy input or decision-making processes. While this made data analysis more challenging, we believe that it led to enriched discussions with observations that may not have emerged during a more structured interview.

#### *Additional and follow-up interviews*

As noted before, an impediment was that we did not have a list of relevant policy workers or policy makers until quite late in the project (at the end of our visit to India), when a list of those who visited the project was obtained from the project leader. The names and contact details of those visitors likely to be relevant to the study were obtained and they were contacted by email or telephone in order to determine whether they were aware of any policy influence that the project might have had in their environment. Although a limited number of responses were obtained, they provided some insight into the influence of the project outside India.

Telephonic and email interviews were also conducted in a few specific cases where informants were too far away to interview in person, for example where they were based in Ottawa or in Hyderabad.

Where additional information after the visit to India still had to be obtained, follow-up interviews were also conducted by email or by telephone with some of the key informants who had been interviewed face to face.

#### 1.5.4. Data management and analysis

Most of the interviews were tape recorded as back-up for the interview notes taken by hand. In all cases we obtained the permission of the interviewees to do so. A few interviews could not be recorded due to technical problems with the recording equipment. The interviews were not transcribed. This would have been too time consuming and expensive

Inductive analysis using information from different sources helped the team to identify patterns, interdependencies and themes relevant to the study. This approach also allowed for the emergence of new ideas, dimensions and concepts that could inform or be included in the key issues. Deductive analysis using the patterns, interdependencies and themes already identified was subsequently used to examine information that did not fit the patterns.

While the team's experience was used to interpret findings and make recommendations based on these findings, the methodology used ensured evidence-based findings derived from sound data collection, content analysis, and the interpretation of significant patterns and emerging themes across the data sources.

An emphasis on the credibility of findings meant the extensive use of triangulation. Information from different sources was tested for consistency. The perspectives and experiences of different key informants were checked and interview information tested against relevant documents and other written evidence.

#### 1.5.5. Reporting

The information collected was analysed, integrated and synthesised into a draft report which was read and commented on by parties identified by IDRC. Further comments were included in the final report.

This was the only form of reporting required by the IDRC. The report will be distributed to stakeholders by the IDRC.

### 1.6. The Concept of Policy Influence

As in the earlier study conducted by the IDRC Evaluation Unit, the types of policy influence used as basis for this study were derived from definitions developed by Lindquist<sup>4</sup>. It includes refinements based on related work by the consultant for the Acacia Programme in Africa<sup>5</sup>

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<sup>4</sup> Lindquist, Evert A. 2001. *Discerning Policy Influence: Framework for a Strategic Evaluation of IDRC-Supported Research*. [http://web.idrc.ca/uploads/user-S/105223761903-idrc\\_framework\\_fin.doc](http://web.idrc.ca/uploads/user-S/105223761903-idrc_framework_fin.doc)

<sup>5</sup> Ofir, Z. M. 2003. *Strategic Evaluation: Research Influence on Policy. Synthesis Report of Case Studies - ICTs for Development in Mozambique, Senegal, South Africa and Uganda*. Report prepared for the IDRC Evaluation Unit, March 2003.

<b>Category of Policy Influence</b>	<b>Description</b>
<i>Expanding Policy Capacities</i>	<ul style="list-style-type: none"> <li>i. Improving the knowledge or data of certain actors</li> <li>ii. Supporting recipients to develop innovative ideas</li> <li>iii. Improving capabilities to communicate ideas</li> <li>iv. Developing new talent for research and analysis</li> </ul>
<i>Broadening Policy Horizons</i>	<ul style="list-style-type: none"> <li>i. Providing policy makers with opportunities for networking or learning within their jurisdiction or with colleagues elsewhere</li> <li>ii. Introducing new concepts to frame debates, putting ideas on the agenda, or stimulating public debate</li> <li>iii. Educating researchers and others who take up new positions with broader understanding of issues</li> <li>iv. Stimulating quiet dialogue among decision-makers (and among, or with, researchers)</li> </ul>
<i>Affecting Policy Regimes</i>	<ul style="list-style-type: none"> <li>vi. Modifying existing programmes or policies</li> <li>vii. Creating a new policy regime in an emerging field</li> <li>viii. Fundamental re-designing programmes and policies.</li> </ul>

## 2. The ICT Policy Arena in India

### 2.1. India in Brief<sup>6</sup>

The Republic of India is located between Burma and Pakistan in Southern Asia, bordering the Arabian Sea and the Bay of Bengal. It covers a total land area of nearly three million square kilometres, dominating the South Asian subcontinent.

<sup>6</sup> Much of the information in this section has been quoted from CIA World Fact Book 2003 at <http://www.cia.gov/cia/publications/factbook/geos/in.html>

India is after China the second most populous country in the world. It is also extremely diverse. The climate varies from tropical monsoon in the south to temperate in the north. Natural hazards include droughts, flash floods, as well as widespread and destructive flooding from monsoonal rains, severe thunderstorms and earthquakes. The people also vary widely - their looks, their clothes, their art, their culture and their way of life. The population of more than a billion people speak 18 official languages recognised by the constitution, plus another estimated 1 600 minor languages and dialects. India has many religions, mainly Hindu (81.3%), Muslim (12.0%), Christian (2.3%) and Sikh (1.9). Although Hindi is the official national language, only about 20% of the population speak it as a mother tongue, mostly in the north. In the south of the country the most popular language is Tamil. English is the most important language for national, political, and commercial communication.

By the 19th century, Britain had assumed political control of virtually all Indian lands. Non-violent resistance to British colonialism led to independence in 1947. The subcontinent was divided into the secular state of India and the smaller Muslim state of Pakistan. A third war between the two countries in 1971 resulted in East Pakistan becoming the separate nation of Bangladesh. A fundamental concern in India remains the ongoing dispute with Pakistan over Kashmir.

New Delhi administrative divisions (28 States and seven Union Territories). The legal system is based on English common law with limited judicial review of legislative acts. Parliament consists of two houses: the lower house whose 544 members are normally elected every five years in the General Election, and the upper house with 245 members who are elected or appointed in different ways. The President is the head of government and is elected by both houses and the states legislature every five years. The ruling government at the moment is the NDA (National Democratic Alliance), which is a coalition of the right wing BJP and 23 other parties. Political

India in Figures	
Labour force <sup>7</sup> (1999)	406 million people; 60% employed in agriculture
Total population <sup>8</sup> (2001)	1,027,015,247
Population in rural areas <sup>8</sup> (2001)	72%
Unemployment rate <sup>7</sup> (2002)	8.8%
Annual GDP growth rate 2002-03 <sup>9</sup>	At current prices: 7.1 %
GDP 2002-03 <sup>9</sup>	At current prices: Rs 22 42 463 crore
Per capita income 2002-03 <sup>9</sup>	At current prices: Rs 18 825
Literacy rate <sup>8</sup> (2001)	Around 55%; approx. 40% of all literate persons are female
Tele-density <sup>10</sup> (2003)	6.48 telephones per 100 population
Basic telephony service subscribers <sup>10</sup> (2003)	41.74 million
Village public telephones <sup>10</sup> (2003)	518522
Mobile telephone service subscribers <sup>10</sup> (2003)	23.03 million
Internet Service Providers <sup>11</sup> (2003)	Around 194
Internet subscribers <sup>10</sup> (2003)	3.98 million

<sup>7</sup> CIA. 2003. *The World Factbook India*. <http://www.cia.gov/cia/publications/factbook/geos/in.html>

<sup>8</sup> Census of India 2001. 2002. *Results*. <http://www.censusindia.net/results/>

<sup>9</sup> Government of India Ministry of Statistics and Programme Implementation. 2003. *PRESS NOTE: Revised Estimates of Annual National Income, 2002-03 and Quarterly Estimates of Gross Domestic Product, 2002-03*. [http://mospi.nic.in/stat\\_pr.htm](http://mospi.nic.in/stat_pr.htm)

<sup>10</sup> Telecom Regulatory Authority of India. 2003. *PRESS RELEASE No. 40 / 2003: TRAI launches Quarterly Performance Indicators of Telecom Services updated for the quarter ending September, 2003 on their website*. <http://www.trai.gov.in/press%20release-%202nd%20dec%202003.htm>

<sup>11</sup> Telecom Regulatory Authority of India. 2003. *The Indian Telecom Services Performance Indicators April – June 2003*. <http://www.trai.gov.in/report%20QE%20iun-03%20Final.htm>



pressure groups and leaders include numerous religious or militant/chauvinistic organisations and various separatist groups seeking greater communal and/or regional autonomy.

India's economy encompasses traditional village farming, modern agriculture, handicrafts, a wide range of modern industries and a multitude of support services. It has the fourth-largest coal reserves in the world, as well as many minerals and natural resources. It is also a major exporter of software services and software workers. Agricultural produce includes rice, wheat, oilseed, cotton, tea, sugarcane, cattle and water buffalo. It is also the world's largest producer of legal opium for the pharmaceutical trade.

Central planning long favoured public ownership and limited the role of the private sector, but protected agriculture, cottage industries and licensed firms through subsidies, reserved items, tariffs, and regulations<sup>12</sup>. Elements of this system encouraged inefficiencies, sub-optimal productivity and privileged access for well-connected industrialists. Since 1991 the erosion of external barriers and deregulation sparked the private sector's evolution into a dynamic force influencing India's development. Private investment grew strongly and export-oriented industries have thrived. The country has the advantage of large numbers of well-educated people skilled in English, but over-population severely hampers the economy. About a quarter of the population is too poor to afford an adequate diet. Government controls have been reduced on imports and foreign investment, and privatisation of domestic output has proceeded slowly. Concerns include extensive poverty, environmental degradation, and ethnic and religious strife, as well as a continuing public-sector budget deficit which in 1997-2002 ran at around 10% of GDP.

With devolution of power to communities and the extension of the responsibilities of the panchayati raj, the role of NGOs is likely to grow and strengthen<sup>13</sup>. There is a definite move to dispersion of power to the states, communities, the private sector and civil society. While this decentralisation to the grassroots will strengthen the voice of the poor, rural development remains hampered by weaknesses in infrastructure. The national telephone system is at best mediocre. The services are provided throughout all regions of the country, but are primarily concentrated in the urban areas. A major objective is to continue to expand and modernise the long-distance network to keep pace with the rapidly growing number of local subscriber lines. Steady improvement have been taking place with the recent admission of private and private-public investors, but with a waiting list for telephones of over two million, demand for main line telephone service will not be satisfied for a very long time. On the other hand mobile phones have been gaining ground and their greater availability, for example in the Pondicherry region, provides an important stimulus for development and opens up new communication opportunities in rural areas.

Local service is provided by microwave radio relay and coaxial cable, with open wire and obsolete electromechanical and manual switchboard systems still in use in rural areas. Long-distance traffic is carried mostly by coaxial cable and low-capacity microwave radio relay. Since 1985 significant trunk capacity has been added in the form of fibre-optic cable and a domestic satellite system with 254 earth stations. Mobile cellular service is provided in four metropolitan cities. India also has eight Intelsat satellite earth stations and one Inmarsat. It has nine operating gateway exchanges as well as four submarine cables.

<sup>12</sup> Refer to country summary prepared by CIDA, on <http://www.acdi-cida.gc.ca/CIDAWEB/webcountry.nsf/vLUDocEn/9878D483F84CD09F85256C5100649DC8?OpenDocument>

<sup>13</sup> Refer to country summary prepared by CIDA, on <http://www.acdi-cida.gc.ca/CIDAWEB/webcountry.nsf/vLUDocEn/9878D483F84CD09F85256C5100649DC8?OpenDocument>

## 2.2 The Policy Opportunity

India entered the 21<sup>st</sup> century as the world's second largest exporter of software, as the source of management and technical talent for over 40 percent of new start-ups in Silicon Valley<sup>14</sup> and as an attractive destination for major outsourcing contracts. It has many new technology driven companies, managers familiar with ICTs and government officials aware of the possibilities offered by ICT. At the same time the country suffers from the "digital divide", with ICTs not accessible or affordable to the majority of the population. In addition, it faces the frustrations of an unreliable supply of electricity, archaic, scarce and unreliable telephony and Internet connectivity, deeply ingrained social inequalities in terms of gender and the caste system, and significant deprivations in terms of basic human needs. Yet the hope remains among many leaders that the country can be part of an "information society" where ICTs help to solve problems of development such as illiteracy, disease, hunger and social inequality.

Some development experts suggest that ICT initiatives in impoverished communities are at best premature, and that the country should first develop and effectively manage its nutrition, healthcare, education, literacy, electricity, telephones, etc. Others advocate that the demand for information, and information and communication networks in rural areas will stimulate the provision of electricity, telephony and connectivity in such areas. Furthermore, rural information networks can become virtual institutions for specific services needed in rural areas, as well as conduits that allow money to flow into the village through new kinds of industries. This can eventually help communities to finance their own development. Information networks can also allow knowledge, services and certain types of products to flow more easily from node to node across long distances. A significant number of commentators believe that a system of human-mediated computer kiosks which is shared among many users in a rural community could be the most inexpensive and inclusive form of rural infrastructure.

The view is often mooted that the "trickle down" effect of India's rapid expansion in the software industry could play a critical role in solving some of the most pressing social and economic problems faced by ordinary people and especially by impoverished communities. However, this view is proving to be inadequate. During the past few years more and more voices have tried to analyse the reasons why the intellectual and human resources in the IT industry have not driven improvements in other spheres. Some of the more obvious reasons are that working for international clients is more lucrative; the low teledensity, computer usage, literacy and other infrastructural problems serve as inhibiting factors; there is inadequate standardisation in important areas; and regulatory hurdles have inhibited such ventures. Clearly, concerted action by dedicated individuals and organisations is needed in partnership with those who have benefited from the developments in the software sector, and supported and encouraged by appropriate government policies, strategies and programmes.

A major obstacle in all this is that very little is known in developing countries about the factors that enable successful ICT projects among grassroots communities. The question is not how, or even whether, to use ICTs but rather under which circumstances they will truly assist such communities to meet fundamental needs and achieve basic rights. This requires studying ongoing efforts to achieve these purposes, to see if and how they work. Specific questions need to be answered<sup>15</sup>: Can the Internet be useful for rural and remote areas of developing countries, especially the poverty-stricken regions? Can interactive technologies fit into the fabric of

<sup>14</sup> Rao, M. 2001. The Internet in India (Part-I). The hope amidst the hype. <http://www.inomy.com/topstories1.asp>

<sup>15</sup> Rao, M. 2002. *Rural Community Networks: Growing Social Capital via Interactive Technologies*. <http://www.indiainfo.com/nevi/inwi/mm63.html>

sustainable community development via social entrepreneurship? Can a virtuous cycle of appropriate technology, local knowledge capacities, and revitalisation of rural communities be stimulated? Is it possible to interleave government information distribution along with participatory local governance in an equitable manner? Are there models for leveraging localised technology platforms for preserving indigenous knowledge and harnessing social capital?

These issues have been the focus of discussion in recent forums and scholarly articles. Events which brought interested parties together for this purpose include the annual *IT 2002 Summit* of the Computer Association of Nepal (CAN), the *ITCD 2001 Conference on Information Technology, Communication and Development* hosted by the Friedrich-Ebert Foundation in Kathmandu and the *ICTs for Social Empowerment and Economic Development* in Bangalore. Numerous success stories - and failures - are emerging from a growing list of community networking initiatives for information sharing, capacity building and online marketing. Notable examples in India include TaraHaat (promoting e-marketing in rural areas), Gyandoot (a community centre network in rural Madhya Pradesh), the Warna Wired Village Project (for sugarcane farmers in Maharashtra), AkashGanga (involving dairy cooperatives in Gujarat) and the HoneyBee Network (documenting grassroots innovations for knowledge on sustainable natural resource management). E-Governance initiatives aimed at bringing useful information from the government to isolated communities are also a focus. For example, Kerala is one of the states rolling out an "e-governance grid" via a network of information kiosks providing information and documents such as sales tax forms, income certificates, ration card forms and company registration.

Estimates indicate that there are only around 50 ICT for development initiatives ongoing in India at present – a surprisingly small number in a country of great economic and social diversity and more than a billion people. More projects need to be developed. Almost all existing projects, including the IVRP, focus on the local issues and the context in the area in which the project is based. However, even at this stage concerted learning from best practices and failures from the current initiatives can inform a general theory of telecentre/knowledge centre success – as far as diverse contexts allow. Such a theory is urgently required to enable a full understanding of the difference between pilot projects and live roll-outs. In spite of this, or perhaps because of this, few initiatives have moved beyond the pilot project stage. This lack of information and understanding around issues such as scalability, affordability and sustainability is a fundamental problem faced by government decision- and policy makers interested in promoting ICTs for development.

This brings us to the policy environment and the role of the Indian government in supporting and encouraging "ICT for development" or "IT for the masses", which is often mooted in policy discussions and documents.

India's IT sector started to develop during the early 1980s with the establishment of a concentration of mainly software development companies in Bangalore, Chennai and Hyderabad. Since then this industry has grown from strength to strength. For example it is well known that India has the largest number of software professionals outside the US. Since the liberalisation of the Indian economy in the early 1990s, the Indian government has promoted information technology, and specifically software development, as one of the key drivers of the economy. Information Technology remains one of its five priority areas for economic development. This is also clear when studying related policies of the central government as well as the States and Union Territories. Nearly all of them emphasise industrial development in this sector.

Within the central government itself information technology was an initial focus as a measure of administrative reform. The Department of Administrative Reforms in the Ministry of Personnel and Administrative Reforms emphasised e-governance during the mid nineties. A separate Ministry of Information Technology was created. Some of the States also established a separate Department of Information Technology in order to give greater attention to the promotion of this field as an industry as well as its use in administration and e-governance.

An important government body supporting these developments is the National Informatics Centre (NIC), already established in 1977 by the central government to provide informatics services to government agencies. State units of the NIC are functioning in all the States and Union Territories of India and District Centres are located in the District Collectorate. All the centres are connected using NICNET, a satellite based communication network. The VSATs have been installed in more than 1 200 locations with the hub (Master Station) located in New Delhi. Since 1988 NIC has been assisting the State/District administrations in the development and implementation of systems and in training government staff. NIC's services include software design and development, networking, e-mail and Internet services through NICNET, Website design and hosting, video-conferencing and turnkey solutions with handholding support.

Despite the on-going reforms and the deregulation of India's telecommunications sector since the early nineties, its national teledensity has improved relatively slowly, from 0.06 in 1990 to around 7 today, although rural voice over Internet Protocol (VoIP), and Wireless-in-Local-Loop (WiLL or WLL) technologies are starting to offer a cheaper and lighter form of telecom infrastructure that should improve rural access exponentially. New software and dotcom start-ups have begun targeting non-English speaking users, and the idea of non-elite communities using and benefiting from ICTs has begun to take root<sup>16</sup>. Nevertheless, in his article Sood points out that the export-oriented software industry has yet to take full advantage of the opportunities presented by the newly networking home market. He furthermore postulates that a "new synergy between the IT and telecommunications sectors in India could create a profound social and economic revolution in rural communities across South Asia".

This begs the question: what has the government done to promote ICT for development, especially for the empowerment of often impoverished and isolated grassroots communities?

Andhra Pradesh's Chief Minister Chandrababu Naidu was one of the first to recognise the need for the promotion of high-tech work in parallel with rural empowerment. He designed an aggressive policy to attract IT investments, at the same time promoting the concept that this sector served the larger public interest. He installed a highly sophisticated network of communications systems in his home constituency of Kuppam as a model for other regions of the State. He was also the first Indian politician to advocate e-governance for making the state machinery more responsive to citizen needs at the district and panchayat level. Other States followed suit. Among them was Tamil Nadu, one of the first States to adopt an IT policy in 1997, and which has formulated a new policy in 2002 as part of the State's Tenth Plan document. This policy aims to bridge the digital divide, among others by introducing electronic delivery of services, and accelerating the process of computer and Internet penetration in rural areas by setting up rural internet Kiosks<sup>17</sup>.

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<sup>16</sup> Sood, A. D. 2002. *How to Wire Rural India? A Survey of the Problems and Possibilities of Digital Development*. [http://www.indiatogether.org/reports/WireRuralIndia.htm#\\_edn1](http://www.indiatogether.org/reports/WireRuralIndia.htm#_edn1)

<sup>17</sup> We are indebted to Mr Naresh Gupta, Member Secretary IAS, State Planning Commission, Government of Tamil Nadu, for his comprehensive insight into the development of IT in that State and in India.

The Government of India has continued to follow a “hands-off” policy approach with regard to the IT sector, confining itself - in its own language - to “being a facilitator and a catalyst for accelerated growth of the sector”<sup>18</sup>. In spite of this, the coupling of ICTs to development, and in particular to rural development, is currently gaining a new profile (albeit still a relatively low one) in the policy environment. There are encouraging signs. The Tenth Five Year Plan (2002-2007) states among others: “In our opinion, the rural sector holds the key to our future growth efforts” and notes that connectivity thus has to be an important focus. Detailed policy approaches for the use of ICTs for rural development are still relatively scarce. Relevant statements in the Plan refer to the better provision of information, improved governance, the more extended implementation of the Panchayat concept, the development of village industries using improved infrastructure (among others), commitments to the Universal Service Obligation Fund, and partnerships between NGOs, government and financial institutions.

Relevant policies in the ICT arena include the *New Telecoms Policy 1999*, the *Information Technology Act 2000*, the *Communication Convergence Bill 2001* and the *Freedom of Information Act*. During 1999-2001 many States and Union Territories also developed their own IT policies. Not all of these include issues such as universal access and ICTs for rural development. Instead, a scan of the policies of both the central government and of the States and Union Territories indicates a much more significant emphasis on the development of the IT industry, e-commerce and/or e-governance. At a national level the *IT Action Plan Part III – Long Term National IT Policy* has the strongest focus on the delivery of services to citizens and on the creation of (local) content. The objectives of the plan for the Information Technology sector include bridging the digital divide; promoting the development of software in Indian languages; and the use of IT in governance, which is regarded as a major initiative. Among others it aims to “take necessary steps for taking IT to the masses by making it affordable, easy to use and useful in day-to-day life”. It also emphasises the promotion of “Internet accessibility, content creation in local languages....empowerment of the masses with a special thrust on women and children, rural healthcare systems, digital library in order to preserve the county’s cultural heritage and social identity”<sup>19</sup>.

As noted above, at State and Union Territory level many policies contain references to “IT for the masses”. These are often not at a similar level of detail or thoughtfulness as in the case of other topics. Kenneth Keniston also notes in a recent analysis of these policies<sup>20</sup>:

“...But a more careful reading, to say nothing of visits to the sites themselves, indicates that in such plans, the operative verbs are not ‘is’ and ‘does’, but rather ‘will’ and ‘would’. These are plans, wishes, dreams, promises. In only a few cases do they have any on-the-ground reality....” And “Without a clear policy of affirmative action to spread the resulting wealth, the profitability of a rapidly expanding software industry will do little to alleviate the poverty of surrounding areas”.<sup>21</sup>

In 2003 experts at a conference on *Computer Applications for Rural Development (CARD)* organised by the Computer Society of India (CSI) in Lucknow warned that bridging the digital divide could remain a key concern in India for years to come, considering that 70% of the country’s population has been bypassed by the IT sector<sup>22</sup>. The conference served as a forum for

<sup>18</sup> Tenth Five Year Plan of the Government of India, Page 809

<sup>19</sup> Ibid, page 811

<sup>20</sup> Kenneth Keniston, *IT for the Common Man – Lessons from India*. [www.i4donline.net](http://www.i4donline.net), p 6. May-June 2003

<sup>21</sup> Ibid, page 7

<sup>22</sup> Frederick Noronha, *IT still not reaching 70 percent of India’s masses*. September 2003. <http://www.expresscomputeronline.com/cgi-bin/ecprint/MasterPFP.cgi?doc=>

the industry, government bodies, academia, professionals, panchayati raj institutions and students to share, interact and exchange their knowledge on how computers and IT applications can be used for rural development. Participants concurred that rural and developing communities acutely needed a model that provides access without necessarily requiring all the capacities associated with the emerging technology, and at affordable rates.

Underpinning this lack of clear policies and strategies seems to be an uncertainty about the *exact nature* of the policies and coherent strategies needed to promote ICTs for development among resource-poor rural communities. In the central government's IT Task Force as well as in its National Working Group on *Information Technology for the Masses* there is still a main focus on the IT industry. The Working Group was constituted with the purpose of formulating a set of policy initiatives to be implemented by the government, industry and entrepreneurs to achieve widespread application of IT in all possible areas in the shortest possible time. Yet from all these initiatives still no clear vision has emerged, nor an integrated approach to lead the way in showing how ICTs can empower rural communities, how partnerships with successful IT companies can help develop rural areas, how ICTs can accelerate poverty eradication or how employment can be created by integrating ICTs and IT company programmes into local level development planning.

The policy opportunity is thus clear. The policy window is now more open than only a few years ago. Recent developments have highlighted more than ever before the need to focus on ICTs for the masses. Greater awareness has been created around this issue among different sectors of society and in government. More and more ICT4D initiatives have been undertaken by State, Union Territories and the central government as well as NGOs. Recently the Indian government announced that it will spend 2.7 billion dollars in the next four years to bridge its growing technological divide, including the construction of an internet device accessible to illiterate villagers. Said Rajeeva Ratna Shah, the Indian government's secretary for industrial policy and promotion<sup>23</sup>:

"You do not want to get into a situation where ICT.... and its progress create social chasms and economic chasms between the haves and have-nots."

It now seems essential that the various groups involved in ICTs for development in India, including the government, work together to share their knowledge and wide experience, listen intensely to one another, form partnerships and plan together. This can lead to integrated, evidence-based and effective policies, strategies and action plans that are firmly rooted in a sound understanding of how an integrated approach to ICTs can enable the development of the masses, and in particular of impoverished, disempowered communities. A clear understanding also still needs to be developed of the type of policy environment that will promote and nurture the establishment and scaling up of successful ICT for development projects.

Organisations such as MSSRF working at the interface between communities and policy makers can thus play a significant and constructive role in the development of appropriate policies, strategies and action plans. They can

- design their interventions based on sound principles and theories
- do research, including action research, and learn and adapt while doing
- carefully document their experiences

<sup>23</sup> 2 November 2003. [http://quickstart.clari.net/qs\\_se/webnews/wed/db/Qindia-tech.R6ON\\_DN2.html](http://quickstart.clari.net/qs_se/webnews/wed/db/Qindia-tech.R6ON_DN2.html)

- ❑ share their approaches and experiences, successes and failures with other initiatives, and help to analyse, synthesise and integrate these experiences and lessons
- ❑ grapple with, and help resolve important issues such as scalability of pilot projects, sustainability, affordability
- ❑ share this synthesised information with policy and other decision-makers in a thoughtful and effective manner towards improved local and national policies, strategies and action plans.

## 2.3 The ICT Policy Community

In this section the ICT policy role players – those who are well positioned to grapple with issues in the ICT policy arena – are noted and mapped using a categorization by Lindquist<sup>24</sup>. However, the authors of this report did not, and could not attempt to provide a comprehensive picture with detailed analysis of the role of each grouping in the policy landscape. Nor did we attempt to identify competing alliances among these groups. For this to be done thoroughly we would have had to spend significantly more time investigating those specific aspects.

The summary below thus attempts only to provide some idea of the policy landscape in which the IVRP operates, and the key players who might be in a position to exert an influence on the policy process. We accept that our judgment at best only provides the scope for some debate on where the real power and opportunities for policy influence lie.

### 2.3.1 Government Role Players

#### **The Prime Minister and Council of Ministers**

The Prime Minister is by far the most powerful figure in the government. After being selected by the President, the Prime Minister selects the Council of Ministers from other members of Parliament who are then appointed by the President. The Council of Ministers is composed of cabinet ministers, ministers of state and deputy ministers, selected to accommodate different regional groups, castes and factions within the ruling party or coalition. Although the Council of Ministers is formally the highest policy-making body in the government, its powers have declined as influence has been increasingly centralised in the Office of the Prime Minister, which is composed of the top-ranking administrative staff.

#### **Parliament**

Parliament consists of a bicameral legislature, the Lok Sabha (House of the People - the lower house) and the Rajya Sabha (Council of States - the upper house). Parliament's principal function is to pass laws on those matters that the constitution specifies to be within its jurisdiction. The Rajya Sabha is a federal chamber representing the States and Union Territories, and enjoys certain special powers. The initiative for substantial legislation comes primarily from the prime minister, cabinet members, and high-level officials. Although all legislation except financial bills can be introduced in either house, most laws originate in the Lok Sabha. In legislative matters, Rajya Sabha enjoys almost equal powers with Lok Sabha. A Bill passed by both Houses of Parliament becomes an Act only after it has been assented to by the President.

Under the Indian constitution, the division of powers between the union government (the Government of India) and the States/Union Territories is delimited into three lists. Parliament has

<sup>24</sup> Evert A Lindquist. 2001. *Discerning Policy Influence: Framework for a Strategic Evaluation of IDRC Supported Research*. Framework prepared for the IDRC, p 7.

exclusive authority to legislate on any of the ninety-seven items on the (i) Union List, which includes banking, communications, defence, foreign affairs, interstate commerce and transportation. The (ii) State List includes sixty-seven items that are under the exclusive jurisdiction of state legislatures, including agriculture, local government, police, public health, public order, and trade and commerce within the state. The central government and state governments exercise concurrent jurisdiction over forty-four items on the (iii) Concurrent List, including criminal law and procedure, economic and social planning, electricity, price control, social security and social insurance, and trade unions. The purpose of the Concurrent List is to secure legal and administrative unity throughout the country.

During the late 1980s the Indian Parliament brought into being the Departmentally-related Standing Committee (DRSC) system. By 1993 there were already 17 DRSCs, including the *Standing Committee on Information Technology* which was related to the Ministries/Departments of Information Technology, Information and Broadcasting, and Communications on Information Technology. This committee of Parliament examines, deliberates over and reports on the Bills, Demands for Grants, annual reports and national basic long term policy documents of the related Ministries and Departments.

### **Central Government Ministries and Departments**

The *Ministry of Communication and Information Technology (MoCIT)* is the most notable central government ministry in terms of ICT. To ensure that the benefits of an IT based economy reach all people at large in every sphere of activity in the country, the MoCIT have adopted a two-fold strategy: initiating steps to ensure that Indian IT industry grows at a fast pace in line with international trends, and taking all possible measures to ensure that benefits of this technology reach the common man, even in the remotest part of the country, through various coordinated efforts like Media Lab Asia Corporation and the *Working Group on Information Technology for Masses* (see below).

The stated vision of the *Department of Information Technology (DIT)* is to make India an IT superpower by the 2008 in order to stimulate employment, create wealth and bring about IT led economic growth. The role of the department includes spreading IT to the masses and enabling rapid IT led development. DIT deals with all policy matters relating to Information Technology. Its functions include all matters concerning computer based information, technology and processing including hardware and software, standardisation of procedures and matters relevant to international bodies; and the promotion of the Internet, e-commerce, IT education and IT based education. DIT organisations are divided into three groups:

- a. Public Sector companies (e.g. Semiconductor Complex Ltd - SCL);
- b. Autonomous Societies (e.g. ERNET India, Electronics and Computer Software Export Promotion Council - ESC) and
- c. Attached Offices (e.g. National Informatics Centre - NIC).

The *Department of Telecommunications (DOT)* has been formulating developmental policies for the accelerated growth of telecommunications services. In 1989 the *Telecommunications Commission* was set up by the Government of India under DOT with administrative and financial powers to deal with various aspects of telecommunications. Together the Telecommunications Commission and the Department of Telecommunications are among others responsible for policy formulation in the sector. DOT organisations include public sector companies (e.g. Bharat Sanchar Nigam Limited - BSNL - and Mahanagar Telephone Nigam Limited - MTNL) and the R&D unit C-DOT.



Other Ministries with some involvement in ICT for development in rural areas include Science and Technology, Rural Development, Information and Broadcasting, Agriculture, and Agro and Rural Industries.

### **Central Government Committees, Task Forces and Forums**

The Government of India *Planning Commission* was established in 1950 to promote a rapid rise in the standard of living of the people. It was charged with the responsibility assessing all resources in the country, augmenting deficient resources, formulating plans for the most effective and balanced utilisation of resources, and determining priorities. In the context of the preparation of the Tenth Five Year Plan (2002-2007) a *Planning Commission Steering Committee on Communication and Information* was constituted, covering the Telecommunications, Information Technology, Information and Broadcasting, and Postal sectors to make recommendations on the various policy matters relevant to the formulation of the Tenth Five Year Plan. The Steering Committee includes representatives from the IT sector at large, including Government Ministries and Departments, telecommunications service providers, industry associations (e.g. MAIT and NASSCOM), the media and private IT companies.

The *Working Group on Information Technology for Masses* was constituted by the Government of India in 2000 with the purpose of formulating a set of policy initiatives to be implemented by the government, industry and entrepreneurs in the country to achieve widespread application of IT in all possible areas in the shortest possible time. The core group members comprised representatives from Central and State/UT Government ministries and departments, NASSCOM and the Society for Rural Industrialisation. In 2001 the *National IT Mission (NITM)*, chaired by the Secretary of the DIT, was set up to implement the Working Group recommendations. The NITM includes all groups in the DIT as well as representatives from other concerned Ministries who play a key collaborative role in achieving a wider roll-out of all ICT applications with mass relevance.

A *National Task Force on IT and Software Development* was set up by the Prime Minister's Office in 1998 under the leadership of the Deputy Chair of the Planning Commission. This task force had a mandate to draft the National Informatics Policy and make recommendations for its implementation aimed at enabling India to emerge as an IT superpower by 2008. Membership of this task force included representatives from central and state/UT government ministries, NASSCOM and private IT companies.

Similar groups exist at State and Union Territory level.

### **Central Government Units**

The *Technology Information, Forecasting and Assessment Council (TIFAC)*, an autonomous organisation under the Department of Science and Technology, aims to keep a technology watch on global trends and to formulate preferred technology options for India. Representatives of TIFAC participated in the Science and Technology Advisory Committee meetings of a number of Government Ministries and Departments. It also interacts with international organisations and agencies working for science and technology promotion such as ASEAN.

The *Electronic and Computer Software Export Promotion Council (ECS)* is an autonomous organisation under the Central Government Department of Information Technology. It is the premier nodal agency for the promotion of trade in Information Technology and Electronics between India and the rest of the world. ESC has built a strong membership base of over 2 200 manufacturers and exporters covering the entire gamut of the electronics and software industry.

The *National Informatics Centre (NIC)* is the largest IT organisation in India, and committed to providing state-of-the-art solutions for the IT needs of the Government of India at all levels. It has a nationwide presence with headquarters at New Delhi, state units in all 28 State and seven Union Territory capitals, and district centres in almost all the Districts of India.

The *Centre for Development of Advanced Computing (C-DAC)* was established in 1988 as a scientific society of the Department of Information Technology under MoCIT. It is primarily a R&D institution involved in the design, development and deployment of advanced IT based solutions. Among others C-DAC evolved the Graphics and Intelligence based Script Technology (GIST). The use of the GIST range of software and hardware products has led to the proliferation of the use of computers and their applications in all major Indian languages.

The *Centre for Development of Telematics (C-DOT)* is a telecommunications technology development centre established in 1984 by the Government of India as an autonomous body which focuses on developing state-of-the-art telecommunication technology to meet the needs of the Indian telecommunications network and build a centre for excellence in telecom technology. C-DOT technology enjoys a leadership position in the rural network comprising small exchanges.

### **Semi-government Bodies**

Established in 1997, the *Telecommunications Regulatory Authority of India (TRAI)* is an independent regulatory body responsible for all issues relating to telecommunication service providers. Their mandate includes making recommendations to the Government of India relating to the telecommunications technology and other general telecommunications industry matters.

### **State and Union Territory Government Departments**

Many central government bodies are mirrored in some or other way in the States or Union Territories. A thorough identification of the role players at this level was not possible within the available resources for this study. We therefore focused our efforts on understanding the relevant Government of India role players, as they are the source of the overarching policies and strategies governing those of the States and Union Territories. The State and Union Territory governing bodies use central government policies as a guide to formulating their own policies and action plans. They often implement central government policy with limited revision. They thus tend to be more active in policy interpretation and implementation than in policy formulation. Policy formulation linkages exist between the States/Union Territories and the central government, mainly through task forces, forums and committees initiated and managed by the central government.

## **2.3.2 The Attentive Public**

### **Academic and Research and Development Institutions**

Many academic institutions provide education and research in ICT related fields with an emphasis on the business/industrial environment. One of the most prominent is the *Indian Institute of Technology Delhi (IIT)*, one of seven Institutes of Technology created as Indian centres of excellence for higher education, research and development in science, engineering and technology. In December 2003 the Institute hosted the First International Conference on E-Governance (ICEG 2003) with the theme Information Technology for Development. It is to provide a forum for discussing research findings, strategies, policies and technologies that can enable the business of government. It also aims to determine and drive an agenda for future research and activities in ICT4D. Many international participants are expected and many sectors will be represented by researchers, students, private sector executives, government officials, policy makers, NGOs and community volunteers.

The *Telecommunications and Computer Networks Group (TeNeT)* is a team of dedicated researchers working in the front line areas of telecommunications and computer networking at the Indian Institute of Technology Madras. The guiding team is drawn from faculty of the Departments of Electrical Engineering and Computer Science and Engineering, and is supported by over a hundred researchers, engineers and other technical staff. The group was established to develop economic solutions for the emerging era, pioneer academic research in this confluent field and nurture a skilled manpower base. It collaborates with like-minded R&D organisations and works with many small and medium-size industrial units in teaching and training, product development, telecom and IT policy studies, front-line research and incubation of companies (e.g. n-Logue Communications).

In 2001 the Government of India and the Massachusetts Institute of Technology (MIT) signed an agreement to establish *Media Lab Asia*, a not-for-profit company, in Mumbai with research laboratories on the campuses of the Indian Institutes of Technology. It facilitates the invention, refinement and dissemination of innovations that benefit under-served populations. Among others it was appointed by the United Nations to serve as academic and industrial body for the UN IT Task Force in the region. It also deploys its technologies in grass-roots community programmes.

### **Public Sector Companies**

We include only some examples here. The *Tamil Nadu Industrial Development Corporation (TIDCO)* a Government of Tamil Nadu Enterprise, was set up in 1965 in order to identify and promote the establishment of large and medium scale industries within the State of Tamil Nadu in association with the private sector. Currently TIDCO focuses on infrastructure promotion through equity participation in joint ventures, identifying and promoting projects in the infrastructure, manufacturing and knowledge sectors. *Bharat Sanchar Nigam Limited (BSNL)* is the largest public sector undertaking in India. This telecommunications service provider, previously the Department of Telecom Operations in the Government of India, became a corporation in 2000 and is now the number one telecommunications company in India with a market share of 82% of the basic services subscriber base. Its responsibilities include improvement of the quality of services, expansion of the network and the introduction of new services in all villages. *Mahanagar Telephone Nigam Limited (MTNL)* was set up in 1986 by the Government of India to upgrade the quality of telecommunications services, expand the telecom network, introduce new services and to raise revenue for telecom development needs of India's key metropolitan areas of Delhi and Mumbai. MTNL has a market share of approximately 13% of the Indian telecommunication network with a customer base of over 4.74 million lines. The Government of India currently holds a 56.25% stake in the company. *Videsh Sanchar Nigam Limited (VSNL)* a partly Government owned (approximately 26%) corporation, introduced Internet services in India in 1995. The company operates a network of earth stations, switches, submarine cable systems, and value added service nodes to provide a range of basic and value added services.

### **Private Companies**

There is a very large number of private companies working in the IT field in India. We note only some that play an active role in bringing the benefits of information and communication technologies to the masses. *n-Logue Communications*, a private sector company established by the TeNeT Group was established to serve the largely unfulfilled information and communications needs of people living in small towns and rural areas. The TeNeT group holds a controlling share in n-Logue Communications, which is funded by several Indian and international financiers. The *Electronics Corporation of Tamil Nadu Limited (ELCOT)* is the IT service provider to the Government of Tamil Nadu. It is the promotional agency designated by the Government of Tamil Nadu for promoting IT industries in the state of Tamil Nadu. ELCOT provides support to IT entrepreneurs, promotes joint ventures in electronics, communication and

IT, and develops infrastructure. ELCOT is involved in various e-governance and computer education initiatives of the Government of Tamil Nadu. A current focus is to market Tamil Nadu as the 'Destination of Choice' for IT investments.

### **Industry Associations**

With a few notably influential exceptions, individual ICT related companies will not have a significant influence on ICT policy in India. More effective in this regard are bodies such the *National Association of Software and Service Companies*. NASSCOM is the face of India's software industry. In March 2002 more than 850 IT companies in India were members. The combined revenue of these NASSCOM member companies constitutes almost 95 percent of the revenue of the IT software and services industry in India. The Association's activities are centred on catalysing the growth of the Indian software industry, helping Indian software companies stay ahead in the market and maintain their edge globally. NASSCOM maintains close interaction with the Government of India in formulating national IT policies with specific focus on IT software and services. They also work actively with overseas governments and embassies and play an active role in the international software community.

The *All India Society for Electronics & Computer Technology (AISECT)* is a leading network in India with over 4 415 affiliated centres mainly engaged in training, servicing and information services in computers and electronics. The uniqueness of the organisation lies in its reach to the grassroots level, including to sub-block and panchayat levels. Its basic objective is the spreading of technical and vocational education especially in IT related areas in a manner that is easily available to all sections of society. The main motto of the organisation is 'IT for all by 2008'. During the past 18 years AISECT has been awarded training, research and materials development projects by several Government of India and State Government Departments, as well as the banking and industrial sectors.

The *Internet Service Providers Association of India (ISPAI)* was set up in 1998 with a mission to 'Promote the Internet for the benefit of all'. ISPAI originally started activities in 1994, when e-mail licensees came together with the express purpose of initiating continuous dialogues with the Department of Telecommunications. With the formal announcement of Internet privatisation in 1997, ISPAI took a leading role in monitoring the privatisation process. It has since been at the forefront of bringing about changes in the Internet policy by working closely with DOT, DIT, TRAI, the industry associations and the media. It has been represented on various government committees, among others providing inputs towards the formation of the New Telecom Policy 1999 as part of the Industry Group on Telecom (In-GoT) and assisting the IT Task Force of the Government of Delhi in preparing a comprehensive IT Policy. ISPAI continues to analyse and understand the issues and concerns of the Internet Industry and address them through sharing of information and discussion from various platforms.

Established in 1982 for the purposes of scientific, educational and IT industry promotion, the *Manufacturers' Association for Information Technology (MAIT)* is an organisation representing the hardware, training and services sectors of the Indian IT industry. MAIT membership comprises corporate and affiliate members with an overall membership strength of around 160. It is represented on many Government of India forums and also interfaces with industry associations. With the onset of liberalisation and the rapid development of the Indian IT industry, MAIT's activities have been consolidated with a special focus on export promotion and attracting foreign investment in the Indian IT industry. Various MAIT committees perform a range of studies, surveys and development work.

### **Non-Government Organisations**

India has a long history of civic engagement. Currently more than a million non-profit organisations provide social services to complement over-burdened public programs, and mobilise and support the poor and grassroots communities. They are mostly active in areas such as justice issues, gender, natural resources, education, health and environmental protection. As noted in section 2.1, there is a definite move to dispersion of power to the states, communities, the private sector and civil society. The devolution of power to communities and the extension of the responsibilities of the panchayati raj should strengthen the role of NGOs.

According to informed sources there are currently around 50 ICT for development projects and programmes in rural India. A significant number of these have been initiated and promoted by NGOs, yet the NGO voice in the policy arena is not strong. As far as we could determine they do not have a formal association or advocacy body that can promote the concept among key decision-makers in government, nor are they well (or often not at all) represented in IT/ICT related committees and task forces.

### **The Media**

By often carrying relevant news items, the Indian media assist in creating awareness around ICT for commercial (their main focus) and for development use. The establishment of *The Hindu Media Resource Centre* for Ecotechnology and Sustainable Development in conjunction with MSSRF provides a good opportunity for strengthening the links between scientists and the media. We are not aware of a similar initiative elsewhere in India (although this might exist). It provides data and information services to media practitioners with a view to obtaining more space in the mainstream media for scientific issues of public concern. As ICTs for development is now a focus of MSSRF, this could become a focus area for the Resource Centre.

### **Champions**

India has many champions in the information technology field, but their focus has been almost exclusively on promoting the high technology, commercial side. This is exemplified by the "IT 'Man' of the Year" award by Dataquest, a leading IT magazine. In 2001 this award was won by Pramod Mahajan, then (first) ICT Minister in the Indian government, while Dewang Mehta, secretary of NASSCOM was posthumously chosen for the lifetime achievement award for having spearheaded India's IT global push. There are fewer champions in the ICT for development arena, most of them found outside the ambit of government in spite of the influence of Andhra Pradesh's Chief Minister Chandrababu Naidu, who was one of the first to recognise the need for the promotion of rural empowerment in parallel with high-tech work. Most ICT4D champions are found in academic and research institutions (e.g. Ashok Jhunjhunwala of IIT), non-government organisations and grassroots oriented lobbying and advocacy groups (e.g. Santosh Choubey of AISECT).

## **2.3.3 International Interests**

### **Regional Bodies**

Even though India is not an *Association of Southeast Asian Nations (ASEAN)* member country, it is involved in political cooperation as a participant in the ASEAN Regional Forum. It is also involved in annual talks at the Foreign Ministers' level as a Dialogue Partner which includes countries and organisations outside the region.

### **Foreign Bilateral Government / Multilateral Organisations, Donors and related Agencies**

The amount of aid given to India by external government agencies and related bodies is far less significant than for example in African countries. Foreign governments and related agencies therefore do not have as much influence on policy formulation in India as in countries more

dependent on international donor funds. Both IDRC and CIDA, funders of the IVRP, fall into this category, as do a number of other agencies supporting ICT for development projects.

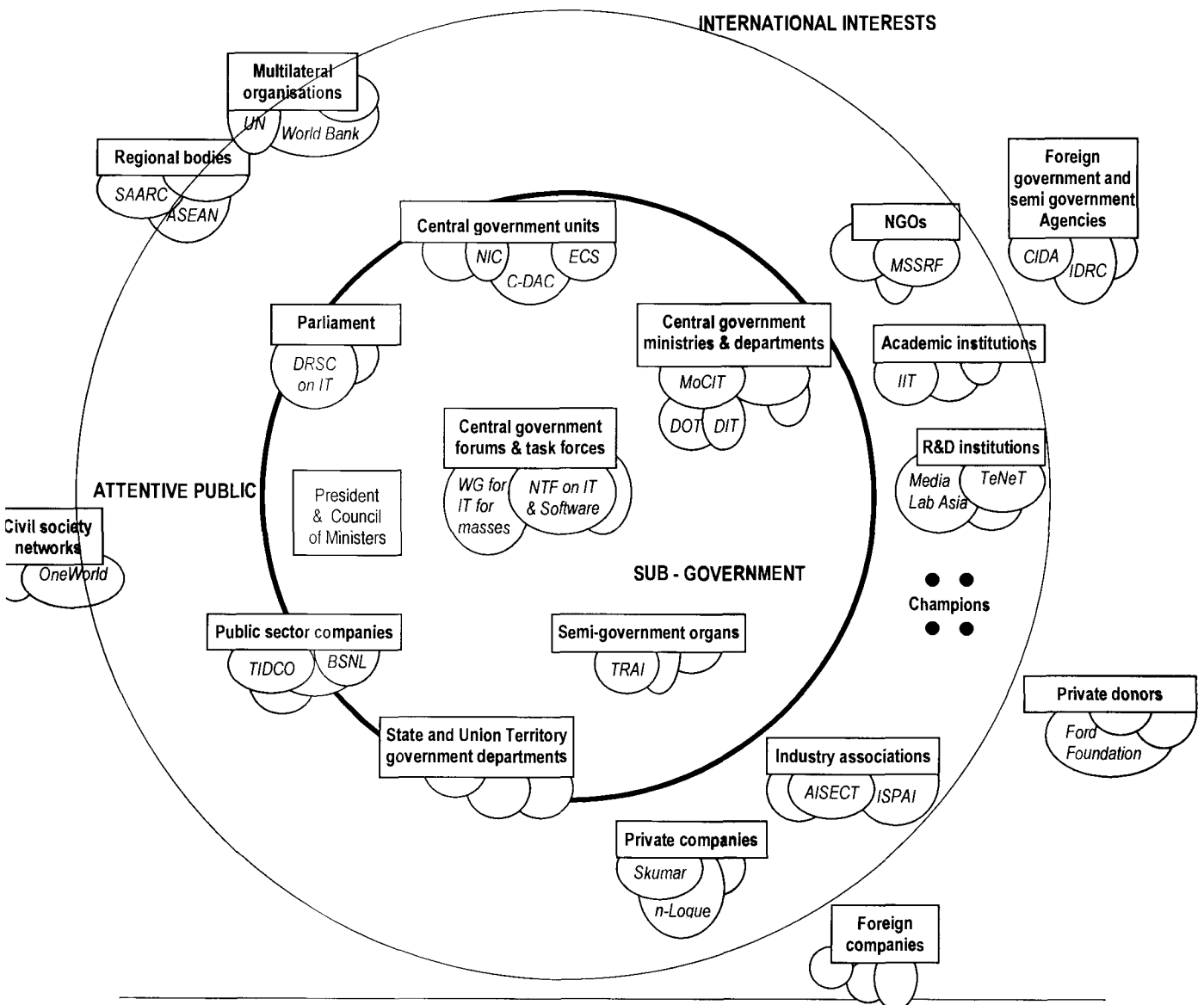
**International Civil Society Networks**

This category of organisations assists in creating a greater awareness of the utility of tools such as ICTs in developing countries. OneWorld is such an example. It is the world's fastest-growing civil society network online, supporting people's media to help build a more just global society. It consists of eleven OneWorld regional centres, including OneWorld South Asia in New Delhi. It brings together a growing international community of more than 2 000 partner organisations based in 89 countries. OneWorld has strategic alliances with *i.a.* the Association for Progressive Communication (APC), and the United Nations Development Programme (UNDP).

**Foreign Companies**

Of the groups categorised as 'International Interests' the most pertinent IT policy players are foreign companies. IT policy in India has a strong focus on attracting commercial investments from outside the country, as well as on software and skills export. The indirect influence of foreign companies in this arena is therefore noteworthy.

Figure 1: Presentation of potential policy role players within the ICT environment in India.



### 3 Introduction to the Information Villages Research Project

#### 3.1 The Pan Asia Networking Programme<sup>25</sup>

As noted in section 1.1, the Information Villages Research Project (IVRP) is part of the *Pan Asia Networking Programme* (PAN), an IDRC initiative which helps researchers and communities in Asia to find solutions to their social, economic, and environmental problems. People in Asia are increasingly aware of the critical role that information and communication technologies play in the global economy. Whereas Asian economies once depended on raw materials for industrial production and commercial exchange, innovation in the use of ICTs is now fuelling a large part of the trade and commerce in the region. This means that Asian institutions have to come to grips with the complex issues relating to the information society and their implications for people's well-being.

PAN Asia seeks to understand the positive and negative impacts of ICTs on people, culture, economy and society in order to strengthen ICT uses that promote sustainable development<sup>26</sup>. It supports policy relevant research on socially responsible uses of ICTs and on innovative applications using leading-edge ICTs for development activities. Building on IDRC's 25 years of supporting research on information sciences in the developing countries of Asia, all the PAN activities are based on the premise that ICTs can offer people living in poverty an opportunity to lead better lives.

PAN Asia's early support focused on helping organisations use ICTs for communications and networking, and on developing Web-based tools and applications. It now places greater emphasis on (i) research related to community uses of ICTs, particularly those practices that lead to more equitable access and policies to encourage private sector investment in ICT infrastructure; (ii) e-commerce. PAN programming takes into account that Asia comprises a diverse mix of economies. To concentrate its resources, PAN works in those countries and regions where its intervention can make a real difference. Support is directed mostly at the least developed countries in order to enhance their capacity to participate in the new economy. At a broader level PAN encourages inquiry and action by the growing ICT community in the region. The programme also strives to have impact at the policy level by helping its partners contribute their research results to policymaking processes.

**PAN ASIA Objectives** To pilot demonstration, proof-of-concept, experimental and applied research ICT projects in disadvantaged communities within target countries in Asia.

- To strengthen research and development capacity to apply ICTs in education, health, and employment at the community level.
- To encourage, through the promotion of collaboration and networking, advanced-technology countries in Asia to engage in capacity building and in the coaching slower adopting countries.
- To network digital pioneers in the region and foster broad research partnerships for sharing and learning from each other and for articulating regional concerns at international forums.
- To encourage governments in their ICT policy formulation and related research to give priority to enabling the spread of ICTs to remote communities.

<sup>25</sup> IDRC. 2003. *Pan Asia Networking*. [http://web.idrc.ca/ev.php?ID=4509\\_201&ID2=DO\\_TOPIC](http://web.idrc.ca/ev.php?ID=4509_201&ID2=DO_TOPIC)

<sup>26</sup> IDRC. 2001. *Pan Asia Networking. An IDRC Program Initiative for Asia. Prospectus 2001-2005*. <http://web.idrc.ca/uploads/user-S/10373064670PANASIAprospectussummary10page.pdf>

### A Selection of PAN Asia Projects

- The *Information Villages Research Project* in the rural areas of the Union Territory of Pondicherry in India is led by the MS Swaminathan Research Foundation and is the object of this study. In community “knowledge centres” villagers are learning about agricultural techniques, market prices and even local bus schedules as part of an effort to determine how the delivery of relevant, useful information through ICTs can contribute to rural development.
- In a remote highland community in Sarawak, Malaysia, residents are staying a step ahead of local intermediaries by learning the world prices for their rice. This information comes via a community telecentre that is attracting nation-wide attention as a model for the use of ICTs in rural areas.
- Pilot multi-purpose telecentres are being set up in several villages on the island of Mindanao in the Philippines to deliver Internet services for health care, education and social assistance programmes.
- An independent think tank of ICT specialists has been established in Mongolia to work to influence ICT policy-making and implementation in that country.
- Researchers, journalists, lawyers, computer resellers and travel agents were among a pioneering group of email users in Laos. Until their historic email connection, Laos was one of a handful of Asian countries without access to the Internet. From 1995 to 1999, PAN helped to start up the country’s first public Internet connection, which in turn contributed to the development of the Laos government’s telecommunications policy. PAN is now supporting the country’s first multi-purpose telecentre.
- A distance education project will offer online learning to students of the Open University of Indonesia, many of whom are widely scattered throughout the country’s poor rural areas.

## 3.2 The MS Swaminathan Foundation<sup>27</sup>

“It is this genuine partnership based on mutual esteem, between those whose wisdom grows from real life experience and toil in sun and rain and those with advanced academic training, that has given MSSRF its scientific strength”.

*MS Swaminathan, August 2000*

MSSRF is a bridge connecting government to the rural villages.

*IVRP Staff Member*

The Informatics Division of the MS Swaminathan Research Foundation based in Chennai (Madras) manages the *Information Village Research Project* in the Union Territory of Pondicherry in south India. The MSSRF was registered in 1988 as a non-profit Trust with as its mandate “to impart a pro-nature, pro-poor and pro-women orientation to a job-led economic growth strategy in rural areas through harnessing science and technology for environmentally sustainable and socially equitable development”. While its base is in Tamil Nadu, it also works among others in Pondicherry, Andhra Pradesh, Orissa and West Bengal.

#### MSSRF Research Areas

- Coastal Systems Research
- Biodiversity and Biotechnology
- Ecotechnology and Sustainable Agriculture
- Reaching the Unreached
- Education, Communication, Training and Capacity Building

MSSRF focuses its strategies on the following: conservation and enhancement of natural resources, promotion of sustainable livelihoods, gender equity and voicing the voiceless as well as information and skill empowerment. It is known for its emphasis on a bottom-up participatory approach which places people before technology. During the last ten years it has focused on the

<sup>27</sup> MS Swaminathan Research Foundation. 2003. *Information Village Research Project (IVRP) Union Territory of Pondicherry*. <http://www.mssrf.org/informationvillage/infovil.html>



principle of partnership with rural and tribal women and men, working with them not as “beneficiaries” but as partners and innovators.

MSSRF also has strong linkages with a large number of national and international scientific organisations. It is recognised by several institutions as a Post-Graduate Research Centre. The establishment of *The Hindu Media Resource Centre for Ecotechnology and Sustainable Development* has strengthened the links between scientists and the media. Among others it provides data and information services to media practitioners, thus obtaining more space in the mainstream media for scientific issues of public concern.

The founder and Chairperson of the MSSRF, Prof. MS Swaminathan, has been acclaimed by TIME magazine as one of the twenty most influential Asians of the 20th century. A plant geneticist by training, Prof. Swaminathan's contributions to the agricultural renaissance of India have led to his being widely referred to as the scientific leader of the green revolution movement. His advocacy of sustainable agriculture leading to an ever-green revolution makes him an acknowledged world leader in the field of sustainable food security.

Prof. Swaminathan has won many awards, among others the Ramon Magsaysay Award for Community Leadership in 1971, the Albert Einstein World Science Award in 1986, the first World Food Prize in 1987, the Volvo Environment Prize in 1999 and the Franklin D Roosevelt Four Freedoms Award in 2000. The International Association of Women and Development conferred on him the first international award for significant contributions to promoting the knowledge, skill and technological empowerment of women in agriculture, and for his pioneering role in mainstreaming gender considerations in agriculture and rural development. He has received 43 honorary doctorate degrees from universities around the world. Recently he was elected as the President of Pugwash Conferences on Science and World Affairs.

### 3.3 The Information Villages Research Project

“There is natural diffusion – people come to the project saying: ‘We will do everything, just help us’.”

*MS Swaminathan, in conversation with the study team*

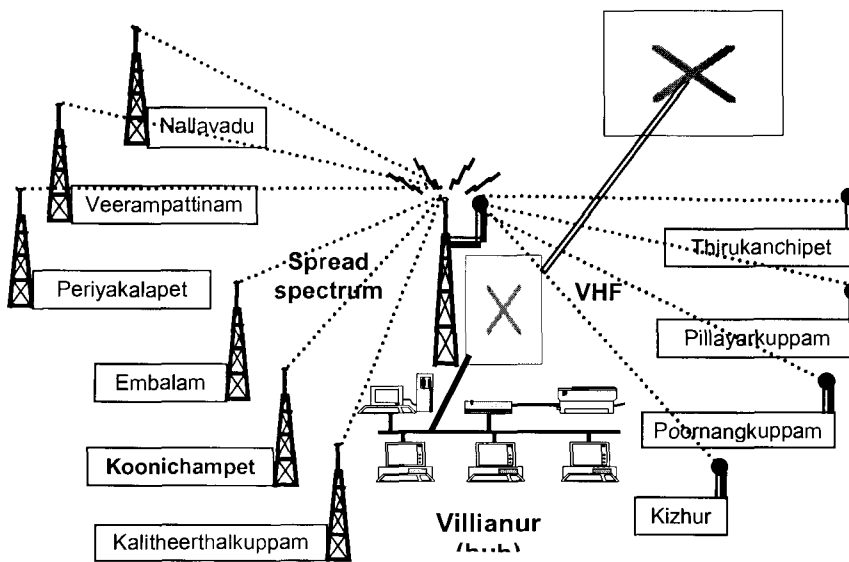
The IVRP has a long history. Already in the early nineties information technology was a prominent topic for discussion in India. In January 1992 MSSRF held an *Interdisciplinary Dialogue on Information Technology: Reaching the Unreached* as part of its series of major interdisciplinary dialogues on a topic of contemporary relevance held at the beginning of each year. The meeting brought together many eminent people in the field of information technology from Canada and India, as well as experts in agricultural extension. The concept of the ‘information village’ emerged from this meeting. The role of ICT was envisaged where the input of knowledge makes a positive difference in advancing rural livelihood security. Dialogue participants concluded that ICT would have a major role to play in promoting sustainable agriculture and rural development in the developing world. However, this would mean that generic information found in networks, including the Internet, should be rendered into locality-specific knowledge on which rural people could act.

*Phase I:* The IVRP was launched in December 1997 with IDRC support for a period of three years. At the time no similar people-driven development initiative existed in the ICT arena in India. While using a wide variety of technologies, the project was designed essentially as a people’s project - managed by social scientists. It was initiated to test whether ICT could become an ally in poverty alleviation and whether it could be used as a tool in empowering the rural poor.

Due to the keen interest of MSSRF in agriculture, the initial project focus was on farmers' needs. A key issue was the need to bridge the information gap between specialists and poor farmers, using local content and information that were priorities for that community. As fewer than 30% of the population in the project area owned land or animals, the project focus soon shifted to include a wider audience and its scope was scaled down to include only a few villages. The IVRP now consists of 11 rural villages linked through a hybrid wired and wireless network, providing information tailored to the needs of the local communities of around 50 000 people. It uses a hub and spokes model with a value addition centre (VAC) as the hub and several village information shops or Knowledge Centres (KCs) as the spokes. The VAC was established in Villianur, a small market town 20km from Pondicherry which is not only the market centre for the many surrounding hamlets, but also an administrative node and road junction.

During the first few months detailed surveys were carried out in the surrounding villages to assess the status of the communication infrastructure as well as the existing patterns and channels of communication in the project area. The surveys informed the project and at the same time the process of selecting appropriate villages for the KCs involved awareness creation and extensive consultation with the village communities. Open groups of all community members were consulted during the process and these village meetings together with the surveys and private enquiries determined whether or not people were interested and why, and if they were prepared to become involved on MSSRF's terms.

Figure 2: Schematic Presentation of the Spokes and Hub Model of the IVRP<sup>28</sup>



In each case the community was required to sign a Memorandum of Understanding between MSSRF and at least ten men and ten women representatives from the village. The communities were expected to provide free, suitable space for the equipment, free electricity and volunteers to operate the KC. Letters of support had to be provided by all key local bodies, including the village self-governments or 'panchayats'. At present all the existing KCs are being run and maintained by community volunteers and they are all located in common property buildings.

<sup>28</sup> From presentation provided together with document: *Impact of ICTs in Rural Areas (India) Phase II – Information Village Research Project Technical Report* (March 2002 – March 2003), MSSRF

The most pertinent issues during phase I were the high cost of connectivity, the need for localised content taking language barriers into account and the creation of a sense of ownership with the end users of the initiative. Many lessons were learned. The project process evolved almost organically, changing as needs arose and adapting as understanding and knowledge grew. Solutions were found as problems were encountered.

During the first phase the KCs communicated with the VAC using Very High Frequency (VHF) Full Duplex Motorola Business Radio. The VHF technology is easy to deploy and stable and can reach villages up to 25 km from the VAC. It further allows for simultaneous voice and data transmission. Disadvantages of this type of technology include the very slow line speed and restricted file size for transmitting data, and the need to send messages sequentially and not simultaneously to all the villages.

The VAC generated localised information in Tamil. A number of databases were established, most of which are constantly updated based on regular feedback from the KCs. A considerable part of the content of these databases was gathered from local sources and most of the information was presented as multimedia for the benefit of illiterate end users.

*Phase II:* The second phase of the IVRP commenced in February 2001. At this stage the project had secured additional external funding and contributors included the IDRC, CIDA, the Pondicherry Government Department of Science, Technology and Environment, the Ford Foundation and the Walcott Foundation. By January 2002 two additional KCs were inaugurated, bringing the total number of villages connected to the VAC to nine. Spread Spectrum Technology was introduced in three of the villages. Compared to the VHF technology already in use, the Spread Spectrum Technology allowed for much higher line speed and could cover areas further away (up to 80 km) from the VAC. It also allowed for villages to be connected to other villages, as opposed to exclusively to the VAC. Digital video conferencing was also introduced using web cameras. The disadvantage of this technology is that it does not permit voice transmission over IP and only allows for point-to-point transmission, as opposed to the 360 degree signal from VHF. In 2003 the project implemented KU Band Satellite Based Internet Connectivity at the VAC. This connection has been distributed to six KCs.

The project also utilises traditional means of communication to spread information to villagers. Examples of these are the use of a public address system<sup>29</sup> and the Rural Yellow Pages<sup>30</sup>. In February 2002 the first issue of a community newspaper published specifically for rural people was launched by the IVRP. The paper is published bi-monthly and is distributed free by volunteers in 31 villages. The newspaper includes contributions from community members such as advertisements, letters, recipes and health tips. The content is based almost entirely on input from the villages. It is demand-driven and the editor works from the principle that “the news should save people time and money”.

The IVRP helps in establishing Self-Help Groups (SHGs) at its project sites by identifying income-generating activities, providing the necessary logistic and management support in starting micro-enterprises and linking the SHGs with commercial banks for financial assistance under the government schemes. During Phase I, SHGs were willing to pay to use the KC computers and network to conduct financial transactions. In 2002, after detailed discussions with the various SHGs in the project area, a pilot Online Community Banking System (OCBS) was developed which is currently being tested.

<sup>29</sup> A very successful initiative is the use of a public address system, the first of which was introduced in 2000 in the fisherman's village of Veerampattinam. Information received at the KC is announced to the village using this system. This system is so effective that many of the other villages are requesting to have the same equipment connected to their KCs.

<sup>30</sup> The Rural Yellow Pages, published in 2003, is a printed directory of services in the project area with more than 3500 different addresses classified into different categories.

The IVRP is now devoting time and resources to specific local and international networking activities. Regular meetings, workshops and field visits are organised for the KC volunteers where they can exchange ideas, learn from each other and provide feedback to the project staff. By March 2003 the volunteers had formed a committee called VKC Infotech (Village Knowledge Center Infotech) through which they organise volunteers' meetings and carry out impact study surveys. They developed a common syllabus and materials for computer training courses and villagers are willing to pay for these and other services provided by the volunteers. At local level the project organised a workshop for fishermen on the eve of World Fishermen's Day in November 2002 and in March 2003 a women interaction meeting was held to coincide with international Women's Day.

The project also currently focuses on building upon its existing working relationships with various Pondicherry government departments. Apart from the DSTE's financial contribution to the second phase of the project, the IVRP receives information from the Departments of Agriculture, Education, Statistics, Police, Health and Industries as well as from the District Rural Development Agency (DRDA). The project has similar linkages with the National Bank for Agricultural and Rural Development, All India Radio, the College of Veterinary Sciences, PONLEIT (Pondicherry Cooperative Milk Producers Union Limited), the Aravind Eye Hospital and others.

Stories illustrating project impact are collected and surveys of use are conducted at the end of each project phase. These surveys continue to help spread awareness of the initiative. A second phase focus on creating more awareness of the IVRP and ICTs for development among policy makers was launched in October 2003 through a Policy Makers Workshop. This is discussed further in the next chapter of this report.

In 1999 the project won the Motorola (Dispatch Solution) Gold Award as well as the Stockholm Challenge Award under the Global Village Category in 2001.

MSSRF's involvement with the project will officially come to an end in January 2007.

### 3.3 The Policy Intent of the IVRP

Projects that want to influence policy effectively often try to do so through a series of systematic, proactive processes targeting specific interest groups. This approach requires long-term interaction and building of relationships rather than one-off events. The complexity of policy influence processes has been well documented in the literature<sup>31</sup>. Targeted strategies do not guarantee policy influence, but increase the chance of success. Yet many projects have no processes targeted at policy makers; instead they develop "organically" from general project information dissemination activities. Many remain at a pilot stage without synthesis and highlighting policy related lessons, and are thus not geared to informing policy. More often implementers lack understanding of how policy influence processes work in their specific context. A project's position in the policy influence arena is thus usually determined by the

<sup>31</sup> Stone, D., Maxwell, S. & Keating, M. 2001. Bridging Research and Policy: An International Workshop Funded by the UK Department for International Development, Radcliffe House, Warwick University, 16-17 July 2001.

<http://www.qdnet.org/pdf/Bridging.pdf>

Weiss C. Policy research as advocacy: Pro and con. Knowledge & Policy, 4 (1/2): 37-56.

Neilson S. December 2001. IDRC-Supported Research and its Influence on Public Policy: Knowledge Utilization and Public Policy Processes - A Literature Review. Evaluation Unit, IDRC.

Lindquist, Evert A. 2001. Discerning Policy Influence: Framework for a Strategic Evaluation of IDRC-Supported Research. [http://web.idrc.ca/uploads/user-S/105223761903-idrc\\_framework\\_fin.doc](http://web.idrc.ca/uploads/user-S/105223761903-idrc_framework_fin.doc)

measure to which it has incorporated intent and implemented well-planned strategies to influence policy.

When we consider the measure to which the IVRP was set up and developed for this purpose, we find that the Phase I proposal makes no mention of policy influence as a proposed project activity. However the project had a clear research orientation and had as one of its objectives the “establishment of models for information dissemination and exchange in rural areas through advanced ICTs”<sup>32</sup>. The project designers also wanted the project to do comparative studies that would help them to “arrive at (models for) an effective and viable rural ICT infrastructure in India”.

This type of development projects is seldom established only to assist the participating community. Planners approach them as pilot projects from which models can be developed that can be used for “replication” or adaptation on a more impressive scale by those with the funds to do so – usually the government, especially where economic and social development of the less privileged is a national priority. A focus on policy influence is therefore often implicit in development efforts.

This was confirmed by an early IVRP project leader. He noted that MSSRF did not have an initial focus on influencing policy, but “...first wanted to prove that we had something that could succeed; then we would think that we have something to say”. This is in line with the overall MSSRF approach which sets out to demonstrate successful approaches to improving the quality of life of the rural poor. *Then* they focus on publicising these successes.

This approach became apparent in comparing the second to the first phase of the IVRP. Among others Phase II aimed to “conduct research on formation of multi-sectoral partnerships (private-public/government-NGOs) with rural communities to form a sustainable model of ICTs for rural areas”. It furthermore aimed to use ICT-based applications for rural areas to “assess the potential to contribute to the sustenance of a rural ICT programme”<sup>33</sup>. For the first time direct reference was made in IVRP project documents to policy influence, acknowledging the importance of studying the role of policies in influencing the large-scale adoption of models of ICTs in rural development.

While the policy study component was not regarded as important during the first phase of the project, certain policy changes by the national government during the year preceding the second phase were judged to be inadequate as far as “human-centred” rural development was concerned. According to the designers of Phase II, none of these policies considered a “bottom-up process of technological empowerment.”<sup>34</sup> The Phase II proposal concludes:

“There is, thus, a need to study the evolving policies and to recommend basic models to the policy makers for propagation of a human-centred ICT programme in rural development”.

The proposal also notes as an objective the “organisation of workshops and other interactions such as on-site consultations with policy makers to sensitise them to critical issues in the use of ICTs to promote human development in rural areas”. Two such workshops were proposed for Phase II. The proposal also noted that the “on-site consultations” with policy makers during the

<sup>32</sup> Proposal submitted by MSSRF to IDRC; quoted as part of the IDRC Project Summary: Impact of Information Technology in Rural Areas – India (#03778/97-0005-01). Approved September 1997.

<sup>33</sup> Proposal submitted by MSSRF to IDRC; quoted as part of the IDRC Project Summary: Impact of ICTs in Rural Areas (India) Phase II. Approved 21 December 2000.

<sup>34</sup> Proposal submitted by MSSRF to IDRC; quoted as part of the IDRC Project Summary: Impact of ICTs in Rural Areas (India) Phase II. Approved 21 December 2000

first phase would be continued in order to keep up frequent interactions with policy makers. Other proposed dissemination methods for research results to wider audiences included the establishment of a Web site dedicated to the rapid release of results, two short videos highlighting methods, user perceptions and policy implications, and workshops and conferences to which project field staff could contribute. Young researchers from different parts of the world had already visited the project sites; it was proposed to build on this more systematically during Phase II. Concerted efforts were also to be made to track ICT-for-rural-development efforts in India to assess the lessons that can be learnt from these other experiences.

Most international organisations do not have enough funding to enable large-scale implementation of pilot projects and the uptake on a larger scale of the knowledge generated through their research. They remain dependent on the government for the use and further development of the results of their work. A factor that assured the policy influence focus of the IVRP during Phase II was the interest of two of its funders, the IDRC and CIDA, in the use of the results of their work. IDRC in particular had a focus on the use and usefulness of the projects that they were supporting - their "Closing the Loop" initiative.

Furthermore, the IDRC Pan Asia Networking Programme which includes the IVRP has as one of its objectives "to encourage governments to give priority to promoting access to ICTs in remote communities". This supports the idea that the IVRP would use its expertise and experiences to sensitise policy makers to relevant findings and lessons.

Using Lindquist's typology mentioned in section 1.6, this means that the IVRP Phase II intends to

- i. build policy capacities by improving the knowledge of policy makers through exposing them to IVRP research results and designing new models for application of ICTs for development in policy;
- ii. broaden the policy horizons of policy makers by providing them with opportunities for networking and learning with colleagues, and introducing new concepts to put ideas on the government agenda;
- iii. influence policy regimes in the emerging field of ICTs for development.

In the next chapter we investigate whether these intentions have been realised.

## 4 The Policy Influence of the IVRP

### 4.1 The Actual Policy Influence of the IVRP

“Inspiration comes from somewhere!”

*Comment by Government of India official*

We discuss whether the IVRP has had policy influence using the typology provided by Lindquist, noted in section 1.6 of this report.

#### 4.3.1 Expanding Policy Capacities

##### (i) *Improving the knowledge or data of certain actors*

One of the strengths of the IVRP has been its emphasis on the exposure of visitors to the hub and villages participating in the Programme. Hundreds of people – both Indian and from other countries around the globe - have visited and learnt more about the IVRP. In some cases visitors were targeted and invited to visit, and a visit to the IVRP was often included in a workshop or related event, but more often visits to the IVRP were requested by people who have heard about the interesting work being done by MSSRF in the field of ICT for development. These visitors include representatives from the State, Union Territories and central government in India, researchers from (mostly) countries outside the region, NGOs in India and elsewhere, international and local organisations, and the media both from inside and outside India.

A summary of visitors’ comments is given in *Annexure 7*. We also had access to email correspondence of visitors with IVRP staff. Both the email and visitors’ books comments are overwhelmingly positive and supportive. Many mention that they have learnt much from the project; that they would like to see the IVRP scaled up or implemented elsewhere; and that they will contribute to creating an awareness of the possibilities offered by this project. Some of these visitors have also been instrumental in bringing the experiences and lessons from the IVRP to a much broader audience through dissemination of the information from public or specialist platforms. Examples include Bruce Alberts, in his Presidential address to the Fellows of the US National Academy of Sciences, called the IVRP “... a wonderful example that points the way forward.” He continued:

Until I visited its project sites at Kudankulam, Pondichery and Villianur I was not aware of any team of Indian world-class professionals *actually engaged* in applying technology systematically for rural applications. MSSRF's starting point of asking people what they want and building commercially useful solutions around them, looked powerfully attractive.

*Life Member, Eye Bank Association of India,  
Eye Bank Society of Rajasthan*

“Until coming here today, I was sceptical about the usefulness of information technology to poor farmers and landless rural people. ....I am sceptical no longer. I look forward to sharing my new knowledge with others who, like I, were doubtful that access to the Internet can make a meaningful impact on rural livelihood!”

*Researcher, University of Colorado*

“I'm immensely impressed by the nature of the extent of work being done in this project. The thing that appealed to us the best is that the online project is based on needs as perceived by the beneficiaries.”

*Principal Secretary, Development and Planning Department, State Government*

“I was very impressed to see the organization and functioning of this Value Addition Center. I think there is tremendous scope for ushering a social and economic revolution in our rural areas with the use of modern scientific technology. I hope that the vision of our great agricultural scientist which created this network will spread to all parts of the country, bringing immense benefit to our Nation.”

*Governor, State in India*

“Drawing on this concept, I envision a global electronic network that connects scientists to people at all levels -- farmers' organizations and village women, for example. The network will allow them to easily

access the scientific and technical knowledge that they need to solve local problems and enhance the quality of their lives, as well as to communicate their own insights and needs back to scientists."<sup>35</sup>

Another example is the World Life Sciences Forum BioVision where the IVRP was shared with 1 000 life science experts in Lyon, France in 2003 after representatives visited the project. IVRP and MSSRF staff members have also interacted about the IVRP at important regional and global conferences and planning meetings, such as the G8 DOTForce meeting at Calgary, the MIT-Media Lab Asia meeting in New Delhi, the World Bank Development Gateway Consultation in Petersburg and the recent World Summit on the Information Society in Geneva. During the past few years the IVRP has thus been shared with audiences both on site and at many important conference and forums around the world where ICT for development has been a topic for discussion. In addition, the media have played a significant role in highlighting the successes and lessons from the IVRP to a variety of audiences. Few pilot projects have had the media exposure of the IVRP. This has been enhanced by the stature of Prof. Swaminathan and the profile as well as the public and specialist writings of among others Prof. Subbiah Arunachalam, a renowned information technology expert and Distinguished Fellow at MSSRF. These efforts at creating awareness of the IVRP experiences were enhanced by a video which was distributed to 5 000 people and organisations. The compilation of experiences, success stories and lessons by the IVRP volunteers and staff has been useful in all these efforts, as they provide practical insights into the changes at individual and more slowly also at social level that the IVRP is bringing about.

This is at present the best evidence that we have that the IVRP has been an important instrument through which a significant number of people (more than most pilot projects are ever exposed to) from various sectors inside and outside India have learnt more about the potential of ICT for development. However, as noted by Prof. Arunachalam,

“There are many steps from conference recommendations to actual policy formulation. It all depends on the inherent strength of the recommendations, the ready availability of a 'champion', and a receptive listener at the other end. This is a difficult combination.”

We found it difficult to trace direct policy influence from the IVRP visitors and the various dissemination methods mentioned above. On the other hand there is no doubt from the anecdotal evidence that people who have been exposed to the IVRP have learnt more about the principles on which successful ICT4D initiatives should be based. This is certain to have increased the awareness of possible approaches to social and economic development through ICT4D – the visitors' book and email correspondence bear this out. But until recently the IVRP information dissemination was not focused on analysing policy implications from the work, or addressing larger issues for example of scaling up or sustainability in the longer term. Instead it focused on transferring project experiences and general lessons to its audiences. The study team noticed that lack of a concerted effort to provide strategic, synthesised information has inadvertently led to some cynicism and critical attitudes among several senior government officials, some of whom regard the IVRP as an “enclave” project or similar to the many initiatives related to kiosks through which (mostly static) government information is distributed to people in isolated areas.

#### *(ii) Supporting recipients to develop innovative ideas*

The IVRP has been conceptualised in principle as a model for action research. Were the research activities developed as well as they could have been? Success stories have been recorded and lessons learned. User information is being tracked as well as the impact of training and other interventions. Local volunteers collect the data by conducting questionnaire surveys. Uncovering real needs of participants and content development in local language also provided opportunities for research. We have not had an opportunity to study this aspect fully, yet reports and anecdote do not convince us that the research

<sup>35</sup> Refer to <http://www.mssrf.org/informationvillage/infovil.html>



opportunities have been maximised either in terms of their design or execution. Clearly the IVRP has provided much scope for innovation – the project itself is after all an innovation - but until the recent Policy Makers Workshop the lessons learnt focused almost entirely on strengthening programme implementation. Staff members acknowledge that MSSRF's documentation on the project has not been adequate and that lessons have not yet been translated and synthesised into useful models or convincing, systematic policy and programme ideas for Indian decision-makers.

We do not propose a definite answer to the question posed above, but wish to draw the attention of the IVRP management to the fact that if this is to be a new model for the future, the experiences should be well documented, analysed, understood and synthesised for use by policy makers as well as policy and programme implementers. We expect that this will be a project focus in the near future as the dialogue with policy makers increases in frequency and intensity.

*(iii) Improving capabilities to communicate ideas*

Up to now MSSRF has not yet targeted appropriate communications methods and the development of the skills of its IVRP staff or interested researchers for interaction with policy makers. As its closer liaison with policy makers about ICT4D has just started in earnest, this might be a focus for the future.

*(iv) Developing new talent for research and analysis*

All four senior IVRP staff members with whom the study team had a chance to interact, noted the major impact that the IVRP has had in increasing their understanding of ICTs for rural development, and the need to address the real needs of local people. As noted before, local volunteers collect data by conducting questionnaire surveys and although we did not interview them, we would assume that this has developed a measure of research skills among them as well. Again this capacity building, although important, has not been in the field of policy research and analysis, but rather in project implementation and to some extent in action research. It could be important in future to ensure that relevant staff members develop their skills more dynamically to analyse the implications of the project for scaling up, sustainability and other policy issues.

A number of international ICT scholars and students have worked on the project. In the beginning they were freely allowed to study the project, but due to misrepresentations and poor quality of reports<sup>36</sup> this arrangement was terminated. Now all scholars are screened and have to get permission to work at, and publish about, the IVRP. The screening is done by an internal project advisory committee which meet once a month.

The fact remains that neither MSSRF nor the IVRP are actively involved in developing the action research or policy research and analytical skills of these international researchers. We would like to believe that this could be a future focus with an emphasis on Indian researchers with an interest in the field of ICTs for development.

An opportunity for increased policy research and analysis resides in the linkages formed with academic and related institutions during the past few years, for example in agriculture and health. These institutions help with content development and technical advice. Some of them have policy research foci and could use the IVRP to create solid links between researchers, the government and grassroots communities while developing policy research and implementation expertise in the field of ICT for development linked to specific sectors. We are not sure of the extent to which this has been done.

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<sup>36</sup> According to IVRP staff, one person visited the centre a couple of times over a period of a month and did not take enough time to research the project properly. This resulted in a publication which did not do justice to the project. Language barriers also cause misunderstanding.

### 4.3.2 Broadening Policy Horizons

- i. *Providing policy makers with opportunities for networking or learning within their jurisdiction or with colleagues elsewhere*

Already in 1992 Prof. Swaminathan initiated a dialogue on the use of Information Technology for the poor – Reaching the Unreached. It brought together many eminent IT people from India and Canada and a number of experts in agri extension. The proceedings were published by Macmillan in 1993 with IDRC support. The concept that lies at the core of the IVRP was developed at this meeting, although the project itself started only five years later. This meeting was ahead of its time - all other major ICT4D conferences in the region took place much later. We interviewed several government officials who referred to this meeting as their first introduction to the concept of ICT4D. At least one senior official in the Government of India noted that he had been following the initiatives of the IVRP ever since with great interest to see where they would lead and what could be learnt from these that would inform government.

As noted before, policy influence efforts to date have been mostly “spreading the news” through public relations activities (visits to the project), media and writing about the IVRP. There were relatively few initiatives since then by MSSRF to organise events that would bring policy makers together to discuss ICTs for development. The IVRP leadership and advisors noted that the project was appreciated and the project influence assimilated at international level, but felt that officials of the Government of India, the States and Union Territories were not adequately aware of the IVRP and the potential of ICTs for development. They were keen to pursue a more proactive approach.

As a result, the Policy Makers Workshop was held in Chennai in October 2003. According to the project management, holding this workshop earlier would have been too soon, as partnerships with government and other stakeholders had started only in 1999 and have now been streamlined. The Workshop provided an opportunity for personal interaction within a mixed group, and a good environment for NGOs and government officials to meet, mingle and begin to understand each other’s work. Delegates whom we interviewed felt almost without exception that this networking opportunity strengthened communication between the various government and NGO players on the role ICTs can play in development. The fact that the people who attended the Workshop funded their own travel indicates a real interest and commitment to understanding the opportunities and current initiatives in ICT4D. This observation was borne out by our interviews with a significant number of the delegates (refer to text box).

So to what extent could the Workshop be a catalyst for action? This is as yet unclear, but there were some important results and proposals: Prof. Swaminathan agreed to devote his name and time to becoming a more active champion of ICT for development. The first step was his development of 15 recommendations based on discussions at the Workshop, to be submitted to the highest levels of the Government of India. The other outputs of the workshop will also be distributed to government officials.

“It was an intense two days and it is a real challenge to get all these people with different views on the same topic talking together in a room without them getting into a brawl.”

“Can you bring this workshop to North India?”

“This type of event should be closer to Delhi and should include more government officials. Transfer of ideas will not otherwise take place. The influence should spread from the South to the rest of the country. This workshop is very good and there should be a series of them taking place over time and across the country.”

*Comments by workshop participants*

“It helped us to see for the first time the type of experiments and projects that exist.”

“We don’t always listen to NGOs, so these forums are important.”

“It helped us to realise that IT can help poverty alleviation.”

“The Workshop has been useful as it made me think about other aspects, for example how can we connect radio and information?”

“It allows government to gain more knowledge about ICT4D, and allows interaction between the relevant groups in the field and the government. We do not have enough information to inform our policy making process on ICT4D.”

“It was enlightening to see how serious people were at the Workshop.”

*Comments by senior government officials*

These include a 40 page conference document capturing the essence of the workshop proceedings, discussions and recommendations, a four page policy brief consisting of ICT4D recommendations to policy makers gathering at WSIS in Geneva in December 2003 and a four page policy brief consisting of ICT4D recommendations to policy makers in India.<sup>37</sup> Evaluative feedback from the workshop participants indicated that the workshop had met its objectives, and participants were interested in further workshops on the issue of ICT4D policy making as well as road shows of the workshop to other parts of India. Plans were ongoing to arrange an ICT4 D policy meeting late in 2003 for senior officials of the Government of India where MSSRF staff (and others) could share the ideas generated at the Policy Makers Workshop.

We have thus come to the conclusion that after the absence of a systematic policy influence focus during Phase I and most of Phase II of the IVRP, the Policy Makers Workshop provided the stimulus and momentum required to ensure that the lessons learnt by the IVRP and others will be synthesised and prepared to assist policy makers' and implementers' deliberations on ICTs for development in future.

*(vi) Introducing new concepts to frame debates, putting ideas on the agenda, or stimulating public debate*

"Micro-successes like this one must be highlighted to attract the attention of policy makers. .... The scale of a development project is critical – it must be large. Micro successes must be expanded and duplicated to have policy influence."

*Comment by Government of India official*

Publicising the IVRP through the media, conferences and specialist publications have all contributed to raising an awareness of the potential of ICTs for the development of the poor and even the poorest of the poor. As we noted before, many of these activities were taken up by, or executed among international audiences. We tried to trace the extent of the policy influence outside India by contacting by email a number of those who had visited the project (although we obtained only a limited number of contact details which limited our reach). We received a number of responses, none of which indicated a clear policy influence other than introducing new concepts through the IVRP, thus raising awareness of the potential of ICTs for development by demonstrating the IVRP innovations.

The two workshops organised by MSSRF were probably the best examples which put ICT4D on the agenda of strategic government officials and other decision-makers. This was discussed in the previous section. Personal contact with officials in Pondicherry also introduced the IVRP innovations as new concepts to government officials, who commented as follows:

"The MSSRF projects are very useful, and government is encouraging people to learn from the MSSRF IVRP and similar NGO ICT centres.....These projects may have played a role in highlighting the potential of ICT for development. .... (We believe) they have had some effect on the thinking of the Rural Development Department in Pondicherry. The government may not directly use the NGO projects, but they may be informed by their activities so that they can plan and implement their own. Using ICTs for development is still a developing concept in the Department."

"Some years ago ... the Governor of Pondicherry saw the project and said that the IVRP should be in 100 villages in the Union Territory. However this person is no longer there to promote the idea."

"MSSRF is slowly pulling government into its activities: First DSTE with the IVRP, then the Agriculture Department through the farm clinics, and now the Education Department through 'Every Child a Scientist'."

"MSSRF brings ideas to the government, and the government buys it."

"The impact the IVRP has had on the government in Pondicherry is phenomenal, for example because of the dissemination of information on government schemes, veterinary information and agriculture –

<sup>37</sup> MSSRF. *Rural Knowledge Centres: Harnessing Local Knowledge via Interactive Media*. Recommendations for Policy Makers. Chennai, India. Compiled from inputs at the Policy Makers Workshop, Chennai, 8-9 October 2003.

information valuable to the people and that the government wants to get to the people. Now the Pondicherry government feels that it needs the Knowledge Centres to get information to reach the people. It has also impacted on social (caste) systems.”

The IVRP was thus one of the projects that introduced new concepts and put ideas on the agenda of some of the Indian policy makers, especially in the Union Territory of Pondicherry and in nearby Tamil Nadu. While this was not formulated as policy input, the ideas and subsequent collaboration and exposure could well lead to a greater acceptance of models and policy inputs by MSSRF. A good rapport has been established in the relationship between MSSRF and the Pondicherry government, who uses the IVRP to disseminate government information. For example, the DSTE has been supporting and funding the IVRP for a number of years. They became involved in the project because the rural nature of Pondicherry makes the provision of information difficult. The IVRP concept triggered their interest as an innovative vehicle through which the rural communities could be introduced to science and technology.

The influence of the IVRP has also spread to other sectors, as a comment by a senior official in the national banking sector indicates:

“We saw the Knowledge Centres and thought to use ICTs for our purposes to reach the rural population.”

*(vii) Educating researchers and others who take up new positions with broader understanding of issues*

The IVRP did not focus on this aspect, other than inviting strategic people to visit the project. Researchers were not a focus and the visitors were not necessarily new incumbents.

*(viii) Stimulating quiet dialogue among decision-makers (and among, or with, researchers)*

To some extent the visits by government officials to the IVRP can fall in this category, but it must be acknowledged that not much has been done by the IVRP in this area. The best example of which we were aware was an informal meeting between MSSRF staff and a small group of key officials and decision-makers during the Policy Makers Workshop. This provided an opportunity for quiet exchange of views and recommendations on the way forward in the development of an awareness creation and lobbying strategy for ICT4D.

Another possible example which was not investigated in any depth (contact could not be made in time with participants), was the exposure and interaction of the participants during the two South-South workshops arranged by MSSRF to observe the work of the IVRP. Several officials from countries in the South were able to interact with the project volunteers, participants and staff over a period of two weeks.

### 4.3.3 Affecting Policy Regimes

There are strong indications that the IVRP has not as yet had direct or linear policy influence. No instance could be traced where exposure of a policy maker to IVRP experiences, results or lessons has led directly to the formulation or adaptation of a specific policy statement. This is not unusual, as few instances exist where such a direct line can be drawn from a policy input to a policy statement. As can be seen from sections 4.3.1-2, according to Weiss' Seven Meanings of Research Use<sup>38</sup>, the IVRP contributions to policy influence fall mainly in the “enlightenment” and “problem-solving” models of use.

*(i) Modifying existing programmes or policies*

<sup>38</sup> Neilson S. Reference to the work of Carol Weiss in *Knowledge Utilization and Public Policy Processes: A Literature Review*. IDRC Evaluation Unit, December 2001.

As has been noted before, internationally the IVRP has in all likelihood received more attention than nationally in India. A PAN official noted that they have used the ideas and lessons of the IVRP to inform the execution of PAN projects in other countries. People in Africa have expressed an interest in implementing the IVRP concept in their countries. During the past few years there has been a more perceptible groundswell of interest in ICT4D in India to which the IVRP has contributed through the activities noted in this section. As noted in section 2.2, policy statements are starting to appear around ICT for the masses and for development. However, no instance has been recorded where a line could be traced between the IVRP and modifications in existing programmes and policies.

The IVRP did influence new programmes. The best example of this is the G8 DOTforce process that identified local content as a keystone in any bridge across the digital divide. The Genoa Plan of Action subsequently called for a “national and international effort to support local content and applications creation.” A consultation was conducted under the chairmanship of OneWorld International with support from DFID. Workshops and open meetings were held in which the MSSRF participated. Building on best practice from existing initiatives in local content creation, one particular proposal called for the creation of an ‘Open Knowledge Network’ to promote both the creation and the exchange of local content as widely as possible across the South. In its advertising material the OKN acknowledges the influence of and direct connection between the MSSRF and OKN<sup>39</sup>. In 2002 the OKN approach was piloted in collaboration with the IVRP and based on and supported by the MSSRF’s existing activities and infrastructure.

*(ii) Influencing a new policy regime in an emerging field*

This has not yet been achieved, although as explained in section 2.2, a policy window has opened and ICT4D policy could receive much more concerted attention in the near future. It will require keeping the momentum gained through the Policy Makers Workshop held in October 2003, forming partnerships with those who can assist in the development of policy input into ICT4D, and ensuring active relationships with policy makers in key positions.

*(iii) Fundamental re-designing programmes and policies*

There has been no opportunity for the IVRP to play an active role in the re-design of policies and programmes related to policy implementation in the field of ICT for development.

## 4.2 Gender and Policy Influence

As we studied the possible policy influence that the IVRP could have had, we also tried to determine whether the IVRP had an influence over policies related to gender and ICTs for development, or any other gender policy. This part of the study was conducted with less attention and depth than the study of the overall policy influence, mainly as it was not officially part of our Terms of Reference. We therefore did not have adequate opportunity for triangulation and could not track many possible informants in this regard.

The general opinion of those interviewed was the IVRP has involved women in a very effective way in the project and a significant number of visitors and others exposed to the IVRP have noticed and commended this aspect as one of the best achievements of the project.

“The MSSRF made a big social difference in terms of empowerment of women and caste bias.....”

“MSSRF has a different flavour to most other projects, namely a focus on the poorest of the poor and gender issues.”

<sup>39</sup> Refer to [www.openknowledge.net](http://www.openknowledge.net)

“The dissemination of information through computer technology is the best I have seen. It is especially important for empowering women. We met many women who spoke most eloquently and asked us most challenging questions. Obviously their use of the technology has given them the knowledge and confidence to ask these questions.”

However, in spite of these positive comments we could find no indication that the IVRP had any direct policy influence on gender related policies, although a scrutiny of policy documents indicated that many recent policies in the development and ICT fields have some reference – albeit usually very brief – to the need to support women in particular in the IT or ICT sectors. We could find no accompanying strategies or in-depth discussion of what strategies would be needed to achieve this. We surmise that the policy influence of the IVRP with respect to gender was similar to that for the project overall, as the focus on the empowerment of women is an inseparable part of the IVRP. The “enlightenment” types of policy influence as described in section 4.1 is almost certainly also relevant for the gender aspect of the project.

We found it interesting that in spite of the good work of the project in the empowerment of women in the rural communities, there were no women involved in the programme management either in MSSRF or in Pondicherry.

### 4.3 Policy Influence Mechanisms

“This was the first such conference that I attended. But one has been hearing about ICT4D from existing players off and on. Being aware of what this technology has been able to offer in all spheres has made me certain it is a workable approach. I do repeat however, that many of these events centre around the few States in South India and need to be spread across the country to bring about a unified thought of action and a subsequent policy development.”

*Comment by private sector workshop participant*

“Think big, start small, scale fast!”

*Comment by government official*

The following summarises the policy influence mechanisms used by the IVRP in its attempts to influence public policy. We also refer to those aspects of the mechanisms that can be improved for greater policy impact influence:

#### *i. Visitors to the IVRP*

Invitations and open access to the IVRP Value Addition and Knowledge Centres for visitors from many different sectors and countries. The exposure visits include interaction with volunteers and participants where possible. The enthusiasm of visitors often mobilises them to further disseminate information about the IVRP to broader audiences. Policy information as such is not provided; the visits consist of exposure to the pilot project itself.

#### *ii. Presentations at conferences, planning meetings and seminars*

Frequent attendance and presentations by MSSRF staff and advisors at key conferences, planning meetings and seminars in India and abroad, can help ensure that ICT4D remains or be placed on the agenda, using the IVRP to highlight relevant experiences, achievements and lessons. Systematic documentation by IVRP volunteers and staff of success stories (and failures) assists in giving the project credibility. Information provided often touches on policy issues, but do not provide these in synthesised and integrated form for direct use by policy makers. Targeted presentations discussing key policy issues suitable to the needs of policy makers have not been a focus.

#### *iii. Specialist and general articles*

Regular articles in specialist and general publications by MSSRF and IVRP staff and advisors, highlight the experiences, achievements and lessons of the IVRP in India and internationally. These articles have also contributed to the high profile of the IVRP and they are often cited in the literature. However few of

the articles are targeted directly at policy makers, and although case studies and some policy implications are occasionally discussed, in-depth analyses of policy issues illustrated by the IVRP are not made.

*iv. Media exposure*

Regular communication with all forms of media is done in order to ensure a public profile for the initiative. A good number of visitors to the IVRP are media representatives. Most of the publicity has been given by international media, but some Indian newspapers have been reporting on the concept and achievements of the IVRP. A special video on the IVRP was also produced and distributed to 5 000 potential users of the information.

*v. Workshops and discussions with policy makers and government officials*

Several workshops have been held by MSSRF on taking ICTs to resource poor rural families. The most important of these were the "Reaching the Unreached." Workshop in 1992, where the IVRP concept started to take shape, and the October 2003 Policy Makers Workshop, which is set to lead to a greater focus on policy influence and lobbying for ICT4D by MSSRF in partnership with other interested parties, as discussed in section 4.3.2. These workshops also provided opportunities for informal interaction with key officials.

*vi. ICT4D champions*

ICT4D "champions" can play a very important role in creating a groundswell of interest in the field. The MSSRF staff members involved in the IVRP, such as Mr Rajamohan, project leader in Pondicherry, have been champions of the project and of the concept of bringing ICTs to resource poor families in rural India. Mr Rajamohan and his colleagues have been very active in promoting the IVRP and ICT for development among the Government of Pondicherry officials and he in particular is very well recognised by officials in many departments.

However, in order to play a role in influencing policy makers on a national basis, such champions have to be well positioned to gain the trust and the ears of people who can directly influence *national* policy content. Personal relationships are often a driving force for successful policy influence. Prof. Subbiah Arunachalam has been a singularly dedicated champion and influential advocate for the IVRP and the concept of ICT for development on a national and international basis. The IVRP has a great advantage and strength in the figure of Prof. Swaminathan, who is one of the most respected people worldwide and in India. He is well connected to policy makers and a member of influential boards and committees, but has been concentrating during past decades mainly on the green revolution in agriculture. While he has been advocating ICTs for the empowerment of resource-poor women and men in rural communities during the last decade, he might be fulfilling a more dynamic role as champion of this field in future.

*vii. Strategic partnerships and relationships with key officials and institutions*

The IVRP has established a number of strategic partnerships and alliances with government departments and organisations, especially in Pondicherry, to a lesser extent with those in Tamil Nadu, and through the powerful presence of MSSRF and its work in ICT4D also with important international initiatives. The IVRP relationship with the Pondicherry Government is of particular significance in terms of potential for policy influence. As noted before, the DSTE is co-funding aspects of the IVRP. Support for the project and collaboration through information provision is also provided by the Departments of Agriculture, Education, Statistics, Police, Health and Industries as well as the District Rural Development Agency (DRDA). The IVRP also has linkages with the National Bank for Agricultural and Rural Development, All India Radio, the College of Veterinary Sciences, PONLEIT and the Aravind Eye Hospital, among others. Project leaders nurture their relationships with these institutions and key individuals.

## 4.4 Factors that Facilitated Opportunities for Policy Influence

“Once policy influence is gained, it is akin to opening up a new territory! Wholly new, unprecedented things can happen.”

*Comment by key informant in email correspondence.*

The following briefly discusses the contextual and project-related factors that have facilitated the opportunities for policy influence.

### 4.4.1 Contextual factors

- i. *An open “Policy Window”*  
This is a good time to promote ICT4D policies and their implementation in India. The factors which led to the policy opportunity are discussed in section 2.2 of this report.
- ii. *Increased interest in ICT4D among government officials*  
Few of the government officials we interviewed are directly involved in policy design, but a significant number participate in processes which provide information to policy makers. We were frequently reminded by our interview informants of the increased interest over the past few years in the use of ICTs to provide information to rural communities and to facilitate the development of these rural areas. Some explained this movement away from an exclusive focus on IT for economic development as a result of the collapse of the dot com companies and the resulting disillusionment in the sector, coupled to a general belief that ICTs can help to bridge the “digital divide”. Others believe that the awareness created around ICT4D was at least in part a result of the (often technical rather than policy) events held at global, regional and national level. A number of Indian technologists, scientists, development agencies, policy makers and/or other decision makers usually attend these meetings. There also seems to be a flurry of such events taking place in India. For example, a conference has been planned for January 2004 where more than 150 models of ICT4D projects will be compared.
- iii. *A focus on development, with increasing emphasis on ICTs for rural development in government policies and task forces*  
India’s government is keen to promote economic and social development in order to unlock the potential of the country and its people. As noted in section 2.2, the Tenth Five Year Plan highlights a new awareness that rural communities are a key to India’s development. State and Union Territory policies seek ways in which this can be done effectively. As noted in section 2.2, the policy foci on the role ICTs can play are still underdeveloped – but at least they are mentioned and are becoming an issue in the thinking of the various think tanks, task groups and policy initiatives.
- iv. *Awareness creation through national and international events*  
The importance of these events has been noted in point ii above, although several policy makers bemoan the absence at these events of synthesised and integrated information directly relevant to their needs. This is expressed in the following statement by a senior Government of India official:

“These events play important role in shaping and polishing the knowledge gained from field experience and make it shareable, in generalised form, so that some lessons can be drawn by others. But a high degree of care is required by presenters and listeners while generalising or abstracting the solution. Usually the project evolved in a specific time-space continuum and community context. Any process of generalisation that would try to



standardise to make it a 'mass' effect or solution could loose the important factors or elements of the information ecology which may have made it success."

v. *Increased power at local level*

The implementation of the 73<sup>rd</sup> Constitutional Amendment Act<sup>40</sup> devolved more power to community level. Village representatives were elected to panchayats. There is now a definite move to the dispersion of power to the states, communities, the private sector and civil society. In this decentralised environment the voice of the poor is being strengthened and the role of NGOs is growing. The panchayat representatives meet with their people and solicit their views and needs. In this manner, during the past 5-6 years many demands have been generated at grassroots level, which have led to changes in established approaches.

There are significant examples of this. Among others the example is given of panchayat leaders who acquired computers and began retrieving information on available government schemes, initiatives and entitlements. In this way the panchayat leaders were exposed to new ideas. They compiled information packages and charged Rs2 to cover the publication and dissemination of information. People were willing to pay this amount as long as they could see the benefit. Eventually a computer could be installed, adding further benefit to the village initiative. This intervention influenced the ICT policy for one of the States, where until then e-governance systems were utilised only at the higher levels of government.<sup>41</sup>

According to anecdote from key informants there is an increasing demand for ICT access in areas where communities have been exposed to ICTs. This growing movement is starting to make an impact on policy processes. There is also no longer the fear of a decade ago that computers would replace humans. Instead, people at all levels of society need more knowledge and skills regarding the use of ICTs.

vi. *Work of national ICT4D champions*

The work of ICT4D champions over the past decade is recognised as having played an important role in increasing awareness at lower levels, as well as among policy and decision-makers, of the need to consider using ICTs for development. Names most frequently mentioned (of course the list is by far not exhaustive) are

- *Ashok Jhunjunwala*<sup>42</sup> who among others wanted to shift technology development to local context instead of adopting western technology, thereby keeping costs relative to income per capita.
- *Santosh Choubey*<sup>43</sup> who started rural employment centres using ICTs and who developed Multi-purpose Community Centres (MPCCs) in India. These Centres grew from four to 4 000 during recent years. (MPCCs are deemed more sustainable at sub-district level and the key difference between MPCCs and initiatives like the IVRP is that MPCCs provide more services and are based on an entrepreneurial model.)

<sup>40</sup> The 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendments (1992) made it mandatory to establish strong decentralised democratically elected local bodies for rural and urban areas to ensure "economic development and social justice". The 73<sup>rd</sup> Constitutional Amendment Act provided for grassroot level democratic decentralised institutions or Rural Local Bodies.  
<http://www.tn.gov.in/policynotes/archives/policy/locbody-e.htm>

<sup>41</sup> Anecdotal information by senior State government official

<sup>42</sup> Professor, Department of Electrical Engineering, Indian Institute of Technology, Madras (see [http://www.iitm.ac.in/cgi-bin/infofaculty.pl?name=ajj\\_ele&offset=8366](http://www.iitm.ac.in/cgi-bin/infofaculty.pl?name=ajj_ele&offset=8366))

<sup>43</sup> Director of the All India Society for Electronics and Computer Technology (AISECT) (see <http://www.aisect.org/index.html> and <http://www.issycg.net/news/news1.htm>)

- Andhra Pradesh's Chief Minister *Chandrababu Naidu*, already discussed in section 2.2, who was one of the first to recognise the need for the promotion of high-tech work in parallel with rural empowerment. He designed an aggressive policy to attract IT investments, at the same time promoting the concept that this sector served the larger public interest. He installed a highly sophisticated network of communications systems in his home constituency as a model for other regions of the State. He was also the first Indian politician to advocate e-governance for making the state machinery more responsive to citizen needs at the district and panchayat level.
- *MS Swaminathan* has enormous credibility but is not regarded as one of the primary champions of ICT4D, as he is perceived to not have been too involved in promoting ICT4D or influencing policy. Many are of the opinion that he can lead a process that will carry everyone with him.
- Organisations such as AISECT and *Media Lab Asia*<sup>44</sup>, a commercial non-profit company associated with DIT in the Government of India are also mentioned as "champions" in their own right.

vii. *Proliferation of ICT4D projects*

During recent years there has been a proliferation of ICT projects in rural India. As noted in 2.2, the latest estimate is more than 50, which although few when the size of India is taken into account; indicate a strong growth. The Gyandoot initiative in rural Madhya Pradesh is regarded as one of the best examples of sustainable community networking. IT champions together with grassroots supporters have played a major role in demystifying and raising awareness about the use of interactive platforms for online knowledge sharing. Some focus on future developments, such as Rajora which advocates the use of user-friendly voice-recognition technologies and touch-screen interfaces for illiterate users, funding approaches based on local micro-finance and transactions instead of large grants from donor agencies, cyber laws protecting online use of land records, more sharing of community centre experiences and technical assistance programs for capacity building. More examples of such projects are given in section 2.2 of this report.

These initiatives have the potential to become a groundswell which, with more collaboration between them, can become a much stronger voice for the promotion of ICTs for rural development. In contrast to the private sector, the NGO sector which manages many of these projects have not yet established a concerted voice or forum for collaboration and networking with governments on policy and implementation issues. For the moment their influence remains scattered, but is adding to the growing awareness of the potential of ICTs in rural areas.

viii. *Opportunities for input into consultative policy making processes*

We understand from several sources as well as background documentation that a significant number of Government of India policy processes are conducted through a *collective process* involving ongoing dialogue with the private sector, international organisations and other players. Input is also obtained from other diverse sources, including analytical studies, reports by strategic groups, scrutiny of State/Union Territories policies, a study of foreign experiences, as well as national and international forums which Ministers and delegations attend to gather information. They receive reports from NGOs and consult with stakeholders and politicians.

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<sup>44</sup> "The role of Media Lab Asia is to facilitate the invention, refinement and dissemination of innovations that benefit the greatest number possible of the world's neediest people. Media Lab Asia works with industry, NGOs and governments to bring these innovations to every village in Asia. The key to success for the Lab is aiming to combine the creativity of entrepreneurs with the technical know-how of universities. They try to cultivate sustainable and culturally appropriate solutions, in spite of obstacles such as many different languages and the need to support local cultures and traditions." <http://www.medialabasia.org/>

They also receive reports from NGOs and consult with stakeholders and politicians. Sometimes they obtain information from research projects and through their own surveys.

These inputs are examined and analysed by a variety of people. A significant number of people might contribute to writing policy - never one individual, but mostly appointed working groups or groups of individual officials. Government and stakeholder meetings are organised and the inputs progress to Ministerial and Cabinet level, and sometimes through Parliament to Prime Minister level. If the majority approves the draft policy, it becomes a formal policy.

This means that if organisations that want to influence policy are well positioned and become part of the consultative process, they have mechanisms through which to do so. It also means that bodies that are well organised to have a concerted voice and profile in a certain field, they have a better chance to influence these processes. NASSCOM is an example of this. On the other hand this is not a certainty – MAIT has certainly been less successful in this. Good relationships, based on mutual trust and respect, with those who write and decide on policies always contribute to the chances to influence policy.

#### 4.4.2 Project related factors

##### i. *Status of MS Swaminathan*

We have already referred to MS Swaminathan's immense status in India. According to informants he understands rural India like few people do. Anecdotal information indicates that this tends to make MSSRF less dependent on *conscious* policy influence strategies, as his stature gives him a definite influence on Indian policy makers. There are indications that he might in future promote ICTs for resource-poor rural communities to a greater extent than before.

##### ii. *The profile of MSSRF*

MSSRF gained great credibility for its research and development projects, not only because of its leadership, but also because of its innovation, the quality of project execution and its relationships with local communities. Government departments in Pondicherry especially are aware of this. As mentioned before, a significant number of departments have linkages with the Foundation. They use the MSSRF to collect and disseminate information to rural areas. One of the key officials working with the IVRP noted that they prefer to work with MSSRF for the following reasons:

- It is a big organisation
- It has an existing network in Pondicherry
- It can reach the rural areas
- It is friendly, approachable and cooperative
- It has multi-level interdisciplinary national and international experience
- It has expertise that can inform policy and planning processes.

##### iii. *Strategic alliances and partnerships with government and other interested organisations*

We have already noted the importance of the strategic alliances and partnerships formed by the IVRP, especially at a local level. These close relationships with officials improve the chances that the work done by MSSRF will attract the attention of those with decision-making power. We noted that policy making normally takes place at another level and that the officials in Pondicherry tend to be mostly policy implementers. However they have opportunities to give policy input and thus to feed their experiences into the policy making process.

##### iv. *The high public profile of the IVRP*

As noted earlier in the report, the IVRP has a higher media profile than most other pilot projects. It also solicits great enthusiasm from visitors. In conjunction with the profile of both MS

Swaminathan and the MSSRF as organisation, this provides the IVRP with more power than most to influence policy and decision makers – as long as this advantage is harnessed effectively.

## 4.2 Barriers to Policy Influence

### i. *There is no concerted voice among ICT4D organisations*

It is estimated that at least 50 grassroots projects are currently using modern ICT for development. These projects have rarely been studied and they are seldom in touch with each other. Lessons learned in one are not transmitted to another and also not integrated into policy lessons or statements. Appropriate technologies are rarely evaluated. Central questions around sustainability, scalability and cost recovery are hardly ever addressed. So, opportunities from the diverse, creative Indian experience so far remain almost entirely wasted<sup>45</sup>. Furthermore, contrary to the private sector, the NGOs and others involved in the implementation of these projects have not organised themselves into an association that can present common positions and participate as a common voice in policy forums and government consultative meetings. Organisations such as NASSCOM have a powerful voice in policy making and have influenced debates on issues such as taxes, ISP's, markets and infrastructure. ICT4D does not have any such effective entrance into policy processes.

### ii. *The manner in which IVRP type projects are presented does not show the way forward*

“I never thought about the specifics of the project – we tend to look at ICT projects of this nature as a group.”

*Senior government official during interview*

Success stories and successful experiments like the IVRP are passing signals to the government and decision-makers. In a democracy the leaders and politicians need successes for re-election. They might take lessons from success cases on board, BUT only if these successes are projected without a political background, in other words are not associated with a specific political view or group. Furthermore, “pilot projects” have become an overused concept. Policy makers have to see the way forward. They must have a roadmap to demonstrate how a project can be scaled up and how it will evolve to maturity. Organisations such as MSSRF have to show over time what kind of evolution is possible – from tele- or information centre to knowledge generation hub, for example. This is not being done.

### iii. *Education, training and research in India do not focus adequately on the applications of software, ICT4D and related policy work*

According to academic informants, education and training in India are usually only aimed at software programming. Academic institutions teach software languages and neglect education in the use and application of software. They also do not focus on aspects such as the application of ICTs for development and there is thus also limited capacity in policy research in this field.

### iv. *The timeframe to see major policy influence by the IVRP is too short*

Some commercial interventions can have immediate impact on public policies and programmes. In India this was for example displayed during the establishment of the use of mobile phones on a large scale. Development interventions often take much longer to have any policy impact (if at all). The IVRP has been ongoing for a relatively long period, but has only recently begun with concerted initiatives to influence public policy. It might therefore be too soon to expect to find any major influence of this project in the ICT4D arena.

<sup>45</sup> *Grassroots ICT Projects in India: Some Preliminary Hypotheses*, ASCI Journal of Management; from [http://web.mit.edu/~kken/Public/PAPERS/ASCI\\_Journal\\_Intro\\_ASCI\\_version\\_.html](http://web.mit.edu/~kken/Public/PAPERS/ASCI_Journal_Intro_ASCI_version_.html)

- v. *International donor agencies and their interventions do not have the profile and influence in India that they have in other developing countries*

The budget contribution of bi- and multilateral agencies to the Indian economy and social upliftment programmes is small in comparison to that of other developing countries, for example in Africa. Their interventions therefore often do not have the profile in India that they would almost automatically have in other countries, and their interaction with government and policy makers is often at a greater distance than in many other parts of the world. Their influence on government activities therefore tends to be far less than in other developing regions. However, they are able to exert significant influence at state or local level – often in an area with a population as large as that of a country in Africa.

- vi. *Lack of infrastructure and trained human resources, five year timeframes and other practical considerations limit attention of policy makers and government officials to large-scale implementation of ICT4D programmes*

In section 1.2 we touched on the inadequacy of the infrastructure needed to carry large-scale implementation of ICT4D programmes. There is also not yet a critical mass of people to disseminate appropriate knowledge and information to villages. Moreover, technology improves quickly over time. In order to make an impact, ICT4D interventions may need to be subsidised for many years to come. These issues require concerted policy attention and long-term planning, yet policy makers and implementers focusing on five year timeframes for performance do not seem willing to address these issues with vigour.

- vii. *Current policy implementation processes and turnover in government positions prevent government ownership of and long-term interest in development solutions*

In the Indian government system high level people ‘float’ between posts and those in management positions can change frequently. Many officials manage and implement “pet” projects based on their own individual insights and preferences. Projects are driven by individuals, so when the specific “driving” individual leaves, the project ends. According to anecdote, political decisions are made, but then there is often no follow-up. Changes in the country’s leadership (for example a new Prime Minister) also usually results in a change in policies and priorities. The ownership of projects at institutional or community level, at the grassroots, implementing agency as well as at government level is extremely important. Current policy implementation processes, position changes and turnover of staff in government do not facilitate long-term planning for policy implementation and an interest in long-term solutions to development problems.

- viii. *Government priorities often prevent serious exploration of ICT for development*

We have found that there is some movement in policies and a willingness among at least some government officials to explore the potential of ICTs for development of the masses and in particular in rural areas. However, government priorities still lie mainly elsewhere and this potential has thus not been explored in a concerted fashion, nor have distinct and detailed policies and action plans been developed. According to anecdote the current Prime Minister is perceived as serious about IT and he ensures that policies are quickly designed and implemented. In spite of this, the national and States’/Union Territories’ foci remain on software exports at the cost of domestic ICT issues. There has also been a shift towards e-governance. A number of key informants feel that hardware development and ICT4D receives only lip service and no action, and that policy makers and government officials do not know enough about these other aspects of the IT/ICT arena. Where they are interested, they seem to focus only on the ability of IT/ICTs to get their ideas, messages and project information to the rural people, rather than focusing on the wider concept of what it can do to empower people.

ix. *Political and government leaders have limited understanding and thus capacity to promote and drive issues around ICT4D*

A number of informants felt that the capacity of some of the key political and government leaders at the various levels to promote and drive issues around ICT4D is limited. This means that advocacy and education will have to play a significant role if these politicians or officials have an important role to play in making or influencing certain types of policy.

x. *The multi-tiered Indian government system and policy making processes are not necessarily conducive to policy influence, and external bodies often do not understand the pivotal mechanisms through which they can exert such influence*

We cannot purport to understand the Indian policy system in any great depth. We have studied relevant documents and spoken to key informants in order to gain some insight into the policy processes. Our observations are based on these sources of information. We acknowledge that there are many Indian experts who can speak with much greater authority on this subject. However we list some of the issues that might impact on efforts to influence public policy in India.

- The Indian government system is multi-tiered. This adds a layer of potential complexity to policy decision-making, and the relationships between these layers as described by various informants can be confusing. We did not have the time to investigate these in any depth. Information on key ICT policy role-players is scattered and unclear. In terms of policy influence, the top rung of civil service and top of elected officials seem to be the main force in the short or medium term. The real influence in a Ministry seems to be with the members of the Indian Administrative Service (IAS) who are selected on the basis of their performance in a national examination. At least one key informant believes that all the others have either limited spatial reach or will take much longer to create a large impact. This means that if the key role players can be influenced to take direct interest in a field or development initiative, they can provide a great multiplier effect.
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graph TD
    A[Federal (Central) Government of India] --- B[State/Union Territories Governments]
    B --- C[Panchayats]
  
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- There seems to be little tension between States/Union Territories and the central Government of India as far as IT/ICT policy is concerned. The States have the space within the broad national framework to act on their own initiative in terms of these policies. In this field they do not have to subscribe to central government policy, although they usually do follow national policy.
  - According to some informants, public policy making in India often seems to work iteratively and not linearly. It is not necessarily followed by implementation strategies and action plans. Policies and action plans and are sometimes not reconciled and distinctions between regulation and policy are sometimes unclear. This makes it difficult to pinpoint the concept and potential strategies for policy influence in the Indian context.
  - One of the key government informants in India confirmed what external observers had noted about a number of departments - that there is still not a significant focus on policy making in ICT4D in spite of the higher profile of the field during recent years. Instead, “pet projects” are funded which are not based on policy statements, but on the individual attractiveness of the project for the period of five years during which politicians and officials have to show their merit. According to the informant, during the last few years policy had been supply driven. In other words, available funds are the starting point and then decisions are taken about where these funds could be spent.

- The uptake of ideas in such a system can be very slow. At grassroots level a model might have been established for many years, but might only be brought into policy many years later. Close interaction by implementers with policy makers might facilitate faster uptake of useful models. The speed of the spread of ICT4D activities will depend on whether top level government officials and policy makers take decisions to implement them, or whether it will slowly happen in a “bottom-up” manner. So for dynamic implementation of ICT4D on a larger scale, action has to be taken at policy level.
- Informants also differ on some critical aspects. Some informants are of the opinion that higher-level government officials ask lower-level departments for information. They are dependent on departmental reports to obtain information regarding activities and trends at grassroots level. According to some, sections of the central government tend to dictate rather than listen to people. In such cases ideas are imposed from above and there is no culture of taking ideas from below. There is usually no effective reporting or evaluation system to help determine whether communities’ demands or needs have been met. On the other hand some say that the central government is more open to local government. They agree that State government policy does not influence the central government decisions, as the central government need to manage different political groupings as different parties head the various States. The central government thus finds it easier to work with panchayat leaders as they operate in a “development environment”, in contrast to State leaders who work in a “political environment.” If this is correct, State priorities and experiences might not be able to have any influence on central government policies. There are contrary points of view. Some say that panchayat leaders are for example willing to take ICT4D ideas on board, but have not been able to influence other levels of government.

The point is that those targeting policy makers should be clear whom they target and why, and understand how the policy influence processes within the government system work at the level which they want to influence, and in the country as a whole as it affects the state and local levels.

### 4.3 Concluding comments

During the first phase of the IVRP the project implementers did not focus on public policy influence – and rightly so. Their approach was to introduce innovations and learning, improve project implementation until they felt assured that it was a success, and only then seek to transfer their lessons in a concerted manner to policy makers and those who can influence policy and implementation processes.

This does not mean that the project has not had any policy influence. We have pointed out that some of their activities have indeed affected people’s thinking, approaches and programmes – more in the “enlightenment” mode of use. Some of this has happened inadvertently, but some, such as the recent Policy Makers Workshop, were targeted and with impressive follow-up activities. A momentum in this regard is thus slowly building up.

While their selected approach has delayed their potential policy influence, the moment that they have chosen to concentrate on this was at the right time, even though it was quite late in the project. A policy window has been opening and they have had many experiences and learnt many lessons that can be used to inform policy and programme planning efforts in ICT4D. Many projects rush into policy recommendation before the project has reached maturity and the implications of the work have been understood. It is commendable that this has not happened here.

The MSSRF/IVRP team now faces several main challenges:

- i. They need to do the synthesis and integration of these lessons at a level and in a format that will impress policy makers and programme planners, where possible joining hands with other role players and with their partners in strategic alliances. Issues such as sustainability (financial,

- managerial, ownership, human resource development, etc.), implications of larger scale roll-out and model development need to be considered.
- ii. They need to ensure a clear understanding of the policy processes and role players in the multi-tiered government system in India, and the strategic points of entry through which to achieve the most effective policy influence. This insight can direct the policy influence mechanisms and strategic plan of action towards the required results, either at state/local level, or at national level, or both.
  - iii. They need to streamline their action research opportunities, ensure maximal expert input (from the communities as well as from project implementers, advisors and external specialists) and ensure systematic documentation of the research to ensure that the maximum benefits are gained from future work. This can then be translated into lessons as well as synthesised and integrated information for policy and programme implementation purposes.
  - iv. They need to ensure that they capitalise on their strengths and use their comparative advantages and resources to the best of their ability. In our opinion the most critical factor will be the extent to which the stature and influence of Prof. Swaminathan and MSSRF, the IVRP experiences, and the experiences of other well-developed projects (whether successes or failures) can be mobilised to bring the results of mature policy analysis to the attention of the most influential policy makers in the Indian ICT arena..
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## Annexure 1: Extract from the Terms of Reference

"The case study will form one important set of data in improving PAN's capacity to support applied research and the production and dissemination of research results in which may be transformed into appropriate policies in deploying ICTs for social and economic development of developing countries. Conducting this case study in India, the consultant will employ a similar research framework and approach as the consultant had previously practiced in the case studies in Acacia ICTs projects in Mozambique, Uganda and South Africa. However, the consultant shall adjust the interview framework to suit the local Indian context.

The focus of the case study will explore not only the work undertaken by the Centre (PAN) but also the changing context in which the work was carried out and the processes that were used. It is anticipated that the study will cover a range of stories to include cases where policy outcomes may be perceived as either positive or negative (i.e. research leads to "good" policy making or "bad" policymaking). The case will present detailed stories of the policy influence process. The story will be developed through: (1) a review of documents including project design documents, monitoring documents (*inter alia* technical reports, trip reports, correspondence, other evaluations) and project reports; and where they can be located (2) interviews with project leaders and project participants, (3) interviews with those said to have been influenced and (4) interviews (be telephone) with relevant Centre staff (e.g. responsible Program Officers (PO)).

..... Pursuant to this contract, the consultant shall:

- a. contact the M.S. Swaminathan Research Foundation prior to visiting the project site in order to arrange for interviews of key people including the former project leader (Venkataraman Balaji of ICRISAT, Hyderabad) and Senthil Kumaran currently project leader of MSSRF. Some of the interviews can be conducted by phone. Main reports of the projects (progress and final) will be requested in advance. Based on the TORs and reading the project file, the consultant will develop interview guides for interview with project leaders and participants, program officers, beneficiaries and others reached in the implementation and follow up to the project. These interview guides will be shared with and approved by the Centre;
- b. travel to and in India to interview key informants for the case specified. Interviews should normally move out from those directly affiliated with the project to those purported to have been affected by or to have used the results in some way. Every effort should be made to ensure that interviews are conducted with representatives of at least three of the main groups involved: project implementers. Beneficiaries, POs, policy makers and where applicable related project participants (other funded or departmental studies which have been linked to the project).
- c. Prepare a satisfactory draft report for the case.... The IDRC staff may determine that it is advantageous to follow up the findings with further data collection in the field, either for the introduction of new respondents or to gather data in areas not yet addressed in the case; and
- d. Finalize the report and submit final satisfactory report in hard copy and electronic format...."



## Annexure 2: Bibliography

1. AISECT. 2002. *AISECT 2002: A movement committed to I.T. for all by 2008*. All India Society for Electronics and Computer Technology.
2. AISECT. 2002. *Information Technology for Women: Empowering women with skills in information technology*. All India Society for Electronics and Computer Technology.
3. Annam, S.R. 2002. *ICT as Tool for Rural Development*. [http://thinkcycle.media.mit.edu/thinkcycle/main/development\\_by\\_design\\_2002/publication\\_ict\\_as\\_tool\\_for\\_rural\\_development/ICT\\_Shireesh\\_IITK\\_dyd02update.pdf](http://thinkcycle.media.mit.edu/thinkcycle/main/development_by_design_2002/publication_ict_as_tool_for_rural_development/ICT_Shireesh_IITK_dyd02update.pdf)
4. Anon. *Impact of Information Technology in Rural Areas - India (#03778 / 97-0005-01)*. Source: MSSRF
5. Anon. 1999. *Success Stories of Rural ICTS in a Developing Country: Report of the PANAsia Telecenter Learning & Evaluation Group's Mission to India, involving visits to the Foundation of Occupational Development and the M.S. Swaminathan Research Foundation*. Source: MSSRF
6. Anon. 2000. *India eyes steps to bring infotech to the masses*. <http://www.apnic.net/mailling-lists/s-asia-it/archive/2000/08/msg00026.html>
7. Anon. 2003. *146th Annual Convocation 2003: Convocation address by Prof M.S. Swaminathan, FRS*. University of Madras.
8. Anon. 2003. *Bill & Melinda Gates Foundation Access to Learning Award Application Form 2003*. Source: MSSRF
9. Anon. *Technologies used in the Information Village Research Project, Pondicherry for various way to spread the information to the rural villages (Impact of "Nammavur Sethi" magazine)*. Source: MSSRF
10. Armstrong, P et al. 2002. *Unlocking Economic Opportunity in the South through Local Content: A proposal from the G8 Dotforce*. <http://www.dgroups.org/groups/OKN/docs/ACF9.doc?ois=no>
11. Arunachalam, S. 1997. Item2: Interview with Dirk Asendorpf of Die Zeit (unabridged English Version). <http://www.apnic.net/mailling-lists/s-asia-it/archive/1998/06/msg00014.html>
12. Arunachalam, S. 1998. *Assuring quality and relevance of internet information in the real world*. <http://bmj.bmjournals.com/cgi/content/full/317/7171/1496#resp3>
13. Arunachalam, S. 1999. *Informatics in clinical practice in developing countries: still early days*. <http://bmj.bmjournals.com/cgi/content/full/319/7220/1297>
14. Arunachalam, S. 1999. *Information and Knowledge in the Age of Electronic Communication: A Developing Country Perspective*. <http://www.bytesforall.org/5TH/arun.htm>
15. Arunachalam, S. 1999. *Information and Knowledge in the Age of Electronic Communication: A Developing Country Perspective*. Source: MSSRF
16. Arunachalam, S. 2000. Economical with the truth. *New Scientist*, Vol. 165 no. 2229, p49
17. Arunachalam, S. 2000. In this issue: A tribute to Gene Garfield, the quintessential gatekeeper. *Current Science*, Vol. 79 no. 5, p544
18. Balaji, V. & Balasubramanian, K. 2000. Information Village. *Students Britannica – India Volume Six Select Essays*, p313-319
19. bmj.com. 1998. *News: The internet and the developing world*. <http://bmj.bmjournals.com/cgi/content/full/316/7138/1111/I>
20. Census of India 2001. 2002. *Results*. <http://www.censusindia.net/results/>
21. Choubey, S. 2002. *Multipurpose Electronics and Computer Centers: Promoting IT-Centered Maintenance and Employment in Rural Areas*. <http://www.worldbank.org/wbi/documents/sn37160/Chapter13-15.pdf>
22. Choubey, S. et al. 2002. *Plan 5000: Phase II* All India Society for Electronics and Computer Technology.
23. CIA. 2003. *The World Factbook India*. <http://www.cia.gov/cia/publications/factbook/geos/in.html>
24. Digital Divide Network. 2003. *India's Rural Masses Embrace Wi-Fi*. <http://www.digitaldividenetwork.org/content/news/index.cfm?key=893>

25. Dugger, C. W. 2000. *Connecting Rural India to the World*.  
<http://www.mssrf.org/informationvillage/Connecting%20Rural%20India%20to%20the%20World.htm>
26. Global Internet Policy Initiative – India (GIPI). 2002. *I.T Policy of Union Territory of Pondicherry*.  
[http://www.gipi.org.in/state\\_policy/Pondicherry.pdf](http://www.gipi.org.in/state_policy/Pondicherry.pdf)
27. Global Internet Policy Initiative – India (GIPI). 2002. *Information Technology Policy of Government of Tamil Nadu*. [www.gipi.org.in/state\\_policy/tn.pdf](http://www.gipi.org.in/state_policy/tn.pdf)
28. Global Internet Policy Initiative – India (GIPI). 2002. *IT Policy in India*. <http://www.gipi.org.in/ICT.html>
29. Global Internet Policy Initiative – India (GIPI). 2002. *Karnataka - The Millennium IT Policy - IT for the Common Man*. [http://www.gipi.org.in/state\\_policy/karnataka.pdf](http://www.gipi.org.in/state_policy/karnataka.pdf)
30. Government of Chhattisgarh. 2003. *Infrastructure Development Action Plan for Chhattisgarh – Final Report: Chapter V Position Paper – Information Technology*.  
<http://chhattisgarh.nic.in/opportunities/Information%20Technology.pdf>
31. Government of India Ministry of Information Technology. 2003. Working Group on Information Technology for masses. <http://itformasses.nic.in/>
32. Government of India Ministry of Statistics and Programme Implementation. 2003. *PRESS NOTE: Revised Estimates of Annual National Income, 2002-03 and Quarterly Estimates of Gross Domestic Product, 2002-03*. [http://mospi.nic.in/stat\\_pr.htm](http://mospi.nic.in/stat_pr.htm)
33. Government of India Planning Commission. 2002. *Five Year Plan (2002-2007)*.  
<http://planningcommission.nic.in/plans/planrel/fiveyr/welcome.html>
34. Government of India. 2000. *The Gazette of India Extraordinary – Part II – Section 1: The Information Technology Act, 2000 (No. 21 of 2000)*. <http://cca.gov.in/documents/act2000mod.pdf>
35. Government of India. 2002. *Statement By The Delegation Of India At Preparatory Committee-I Meeting Of World Summit On The Information Society (WSIS) (Geneva, July 1-5, 2002)*.  
[http://www.itu.int/wsis/docs/pc1/statements\\_general/india.doc](http://www.itu.int/wsis/docs/pc1/statements_general/india.doc)
36. Government of Pondicherry Department of Information Technology. *Government of Pondicherry IT Policy*.  
<http://pondicherry.nic.in/open/depts/infotec/intro.htm>
37. Government of Pondicherry. 2002. *Abstract of Statistics: 1998-99 to 2000-2001*. Directorate of Economics and Statistics, Pondicherry.
38. Government of Rajasthan Department of Information Technology and Communication. 2003. *IT Policy 2000, Government of Rajasthan, India*. <http://rajasthan.gov.in/it.pdf>
39. Government of Uttar Pradesh Department of Information Technology & Electronics. 2000. *The Communication Convergence Bill 2000*. <http://upgov.up.nic.in/infotech/conbill1.htm>
40. Gumucio-Dagron, A. 2001. *Prometheus riding a Cadillac? Telecentres as the promised flame of knowledge*.  
[www.telecentres.am/references/info/jdc-dagron.doc](http://www.telecentres.am/references/info/jdc-dagron.doc)
41. Gumucio-Dagron, A. 2003. *Take Five: A Handful of Essentials for ICTs in Development*.  
<http://www.comunica.org/1-2-watch/pdf/chapter2.pdf>
42. Harris, R. 2001. *Telecentres in Rural Asia: Towards a Success Model*.  
[http://www.orbicom.uqam.ca/in\\_focus/news/archives/2003\\_aout/11\\_aout\\_2003.pdf](http://www.orbicom.uqam.ca/in_focus/news/archives/2003_aout/11_aout_2003.pdf)
43. i4d. 2003. *Rendezvous: Digital GMS*. <http://www.i4donline.net/issue/may03/gms.htm>
44. i4d. 2003. *Rendezvous: ICTs for development*. [http://www.i4donline.net/issue/may03/ictford\\_full.htm](http://www.i4donline.net/issue/may03/ictford_full.htm)
45. i4d. 2003. *Rendezvous: The Indian development experience*.  
[http://www.i4donline.net/issue/may03/inddev\\_full.htm](http://www.i4donline.net/issue/may03/inddev_full.htm)
46. IDRC. 2003. *Pan Asia Networking*. [http://web.idrc.ca/ev.php?ID=4509\\_201&ID2=DO\\_TOPIC](http://web.idrc.ca/ev.php?ID=4509_201&ID2=DO_TOPIC)
47. International Telecommunications Union. 2003. *Visions of the Information Society: A developing world perspective*. <http://www.itu.int/osg/spu/visions/developing/index.html>
48. Jhunjhunwala, A. 2002. *Challenges in Rural Connectivity for India*.  
[http://www.bytesforall.org/9th/html/challenges\\_ashok.htm](http://www.bytesforall.org/9th/html/challenges_ashok.htm)

49. Keniston, K. 2003. *Notes on Sustainability*. [http://web.mit.edu/~kken/Public/PAPERS/on\\_sustainability.html](http://web.mit.edu/~kken/Public/PAPERS/on_sustainability.html)
50. Kenniston, K. 2002. *Grassroots ICT Projects in India: Some Preliminary Hypotheses*. [http://web.mit.edu/~kken/Public/PAPERS/ASCI\\_Journal\\_Intro\\_ASCI\\_version\\_.html](http://web.mit.edu/~kken/Public/PAPERS/ASCI_Journal_Intro_ASCI_version_.html)
51. Kenniston, K. 2002. *IT for the Common Man: Lessons from India – M.N Srinivas Memorial Lecture*. [http://web.mit.edu/~kken/Public/PAPERS/IT\\_for\\_the\\_Common\\_Man.html](http://web.mit.edu/~kken/Public/PAPERS/IT_for_the_Common_Man.html)
52. Kenniston, K. 2002. *IT for the Masses: Hope or Hype?* [http://web.mit.edu/~kken/Public/PAPERS/EPW\\_paper.html](http://web.mit.edu/~kken/Public/PAPERS/EPW_paper.html)
53. Kenniston, K. 2003. *IT for the Common Man: Lessons from India*. [http://www.i4donline.net/issue/may03/kenneth\\_full.htm](http://www.i4donline.net/issue/may03/kenneth_full.htm)
54. Lindquist, Evert A. 2001. *Discerning Policy Influence: Framework for a Strategic Evaluation of IDRC-Supported Research*. [http://web.idrc.ca/uploads/user-S/105223761903-idrc\\_framework\\_fin.doc](http://web.idrc.ca/uploads/user-S/105223761903-idrc_framework_fin.doc)
55. M. S. Swaminathan Research Foundation. 2003. *Rural Knowledge Centres: Harnessing Local Knowledge via Interactive Media Policy Makers Workshop. Proceedings no.50*. <http://www.mssrf.org/publications/pmw.pdf>
56. Mehta, R. 2000. *Tokyo Connection to E-volution of an Indian village*. <http://www.weekender.co.jp/LatestEdition/000421/coverstory.html>
57. MS Swaminathan Research Foundation. 2003. *Information Village Research Project (IVRP) Union Territory of Pondicherry*. <http://www.mssrf.org/informationvillage/infovil.html>
58. MSSRF. *Impact of ICTs in Rural Areas - India : Phase 2*. Source: MSSRF
59. MSSRF. *Impact of ICTs in Rural Areas (India) Phase II: Information Village Research Project in Union Territory of Pondicherry: Technical and Financial Report (Grant No.: 100580)*. Source: MSSRF
60. MSSRF. 1999. *Progress Report: Project for the Assessment of the Impact of Modern ICT in Rural Areas of India*. Source: MSSRF
61. MSSRF. 2002. *ICT Enabled Development - South-South Exchange Workshop (October 21 - 28, 2002)*. Source: MSSRF
62. MSSRF. 2002. *Information Village Research Project - Second Phase - First Year Report (Grant No.: 100580) July 2000 – March 2002*. Source: MSSRF
63. MSSRF. 2002. Internet reaches rural poor. *Appropriate Technology*, Vol. 27, No.1. p8-11
64. MSSRF. 2003. *2002 - 2003 Thirteenth Annual Report*. M.S. Swaminathan Research Foundation.
65. MSSRF. 2003. *Assessment of Impact of Information Technology on Rural Areas of India*. <http://www.mssrf.org/informationvillage/assessment.htm>
66. MSSRF. 2003. *Food Security Atlas of Rural India*. M.S. Swaminathan Research Foundation.
67. MSSRF. 2003. *History of MSSRF*. <http://www.mssrf.org/history>
68. MSSRF. 2003. *Impact of ICTs in Rural Areas (India) Phase II (File No: 100580)*. Source: MSSRF
69. MSSRF. 2003. *Information Village Research Project (IVRP) Union Territory of Pondicherry*. <http://www.mssrf.org/informationvillage/infovil.html>
70. MSSRF. 2003. *Towards a Knowledge Revolution in Rural India: MSSRF - TATA Virtual Academy for Food Security and Rural Prosperity - Concept and Operational Plan*. M.S. Swaminathan Research Foundation.
71. Mukherjee, A. 2000. *Villagers get cyber savvy*. <http://www.expressindia.com/fe/daily/20001116/faf12020.html>
72. Neilson S. *IDRC-Supported Research and its Influence on Public Policy: Knowledge Utilization and Public Policy Processes - A Literature Review*. Evaluation Unit, IDRC, December 2001.
73. Noronha, F. 2003. *IT still not reaching 70 percent of India's masses*. <http://www.expresscomputeronline.com/20030901/indiacomputes03.shtml>

74. Ofir, Z. M. 2003. *Strategic Evaluation: Research Influence on Policy. Synthesis Report of Case Studies - ICTs for Development in Mozambique, Senegal, South Africa and Uganda*. Report prepared for the IDRC Evaluation Unit, March 2003.
75. PulseOnline. 2001. *Global Policy: International – India Releases Draft Communication Convergence Bill*. <http://pulse.tiaonline.org/print.cfm?id=196>
76. Ramakrishnan, D.H. 2003. *Many takers for rural news*. The Hindu. Thursday, March 6, 2003.
77. Rao, M. 2001. *The Internet in India (Part-I). The hope amidst the hype*. <http://www.inomy.com/topstories1.asp>
78. Rao, M. 2001. *The Internet in India (Part-X). Rosy future, bumpy path*. <http://www.inomy.com/topstories10.asp>
79. Rao, M. 2002. *Rural Community Networks: Growing Social Capital via Interactive Technologies*. <http://www.indiainfoline.com/nevi/inwi/mm63.html>
80. Rao, M. 2003. #2. *The nature of the information society: A developing world perspective*. <http://www.itu.int/osg/spu/visions/Conference/rao.pdf>
81. Rao, M. 2003. *Eight C's of KM Success: Learn from the information technology sector's best knowledge enterprises*. <http://www.destinationkm.com/articles/default.asp?articleID=1085>
82. Samiullah, Y. & Rao, S. 2000. *Role of ICTs in Urban and Rural Poverty Reduction*. <http://www.teri.res.in/ictcap/present/session4/sami.doc>
83. Senthikumar, S et al. *Rural Knowledge Centres for Information Empowerment / Employment Generation / Livelihood Security in Union Territory of Pondicherry*. Source: MSSRF
84. Senthikumar, S et al. *Using ICTs in development: Information Village Research Project, Pondicherry*. Source: MSSRF
85. Shanmugavelan, M. 2000. *Information Technology (IT) in developing nations*. <http://www.mssrf.org/informationvillage/SDk.htm>
86. Sharma, C. 2002. *ICT Initiatives in India*. <http://www.datamationindia.com/ict1.html>
87. Singer, A. 2003. *IVRP makes a Canadian feel proud*. Source: MSSRF
88. Sood, A. D. 2002. *How to Wire Rural India? A Survey of the Problems and Possibilities of Digital Development*. [http://www.indiatogether.org/reports/WireRuralIndia.htm#\\_edn1](http://www.indiatogether.org/reports/WireRuralIndia.htm#_edn1)
89. Sood, A. D. 2002. *Towards a knowledge society*. <http://www.indiatogether.org/opinions/ictdiary.htm>
90. Sreekumar, T.T. 2003. *ICT innovations by civil society organizations in Rural India: De-hyping ICTs*. [http://www.i4donline.net/issue/may03/sreekumar\\_full.htm](http://www.i4donline.net/issue/may03/sreekumar_full.htm)
91. Stone, D., Maxwell, S. & Keating, M. 2001. *Bridging Research and Policy: An International Workshop Funded by the UK Department for International Development, Radcliffe House, Warwick University, 16-17 July 2001*. <http://www.gdnet.org/pdf/Bridging.pdf>
92. Swaminathan, M. and Saraswathi, L. 2003. *As the Salt in the Sea: The story of Project ACCESS*. M.S. Swaminathan Research Foundation.
93. Telecom Regulatory Authority of India. 2003. *PRESS RELEASE No. 40 / 2003: TRAI launches Quarterly Performance Indicators of Telecom Services updated for the quarter ending September, 2003 on their website*. <http://www.trai.gov.in/press%20release-%202nd%20dec%202003.htm>
94. Telecom Regulatory Authority of India. 2003. *The Indian Telecom Services Performance Indicators April – June 2003*. <http://www.trai.gov.in/report%20QE%20jun-03%20Final.htm>
95. Telecommunications Authority of India (TRAI). 2001. *D.O. No. 101-5/2000 MN Dated the 3rd October, 2001*. <http://www.trai.gov.in/CPIletter.htm>
96. Telecommunications Authority of India (TRAI). 2001. *D.O. No. 1838/Member (TRAI)/2001 September 22, 2001*. <http://www.trai.gov.in/Annex1.htm>
97. Weiss C. *Policy research as advocacy: Pro and con*. Knowledge & Policy, 4 (1/2): 37-56.







## **Annexure 3: Workshop Programme**

**WORKSHOP PROGRAMME CAN BE FOUND AT  
<http://www.mssrf.org/publications/pmw.pdf>**

## Annexure 4: Programme of Project Team in India

| on 6 Oct '03                                                                                                                                                                                             | Tue 7 Oct '03                                                                                                                                                                                                                                                                                        | Wed 8 Oct '03                                                                                                                                                                                                                                                             | Thu 9 Oct '03                                                                                                                                                                                                                                                                                                                                            | Fri 10 Oct '03                                                                                                                                                                                                                                                                                                              | Sat 11 Oct '03                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ARRIVE JOHANNESBURG-<br>MUMBAI-CHENNAI                                                                                                                                                                   | Introductory discussions<br>at MSSRF:<br><b>Mr S Senthilkumaran</b><br><b>Mr KG Rajamohan</b>                                                                                                                                                                                                        | Interviews (in person)<br>at the Policy Makers' Workshop,<br>MSSRF:<br><b>Dr V Balaji</b><br><b>Dr G Palanithurai</b>                                                                                                                                                     | Interviews (in person)<br>at the Policy Makers' Workshop,<br>MSSRF:<br><b>Mr DJ Raju</b><br><b>Mr Naresh Gupta</b><br><b>Mrs Rama Hariharan</b><br><b>Mr P Vivekanandan</b><br><b>Dr S Ramanathan</b><br><b>Ms Pearl Tiwari</b><br><b>Mr Suchit Nanda</b><br>at the Ramada Raj-Park Hotel:<br><b>Dr Manas Bhattacharya</b><br><b>Dr VK Dharmadhikari</b> | Interviews (in person)<br>at MSSRF:<br><b>Prof Subbaih Arunachalam</b><br><b>Prof MS Swaminathan</b><br><b>Ms Mina Swaminathan</b><br>at the offices of the Chennai State<br>Planning Commission:<br><b>Mr KS Lakshminarayanan</b><br><i>Interview arranged by and<br/>conducted in the presence of Mr<br/>Naresh Gupta</i> | Interview (telephonically)<br><b>Dr Madanmohan Rao</b><br>Interview (in person)<br>at the Ramada Raj-Park<br>Hotel:<br><b>Mr S Senthilkumaran</b>                            |
| on 13 Oct '03<br>Interviews (in person)                                                                                                                                                                  | Tue 14 Oct '03<br>Interviews (in person)                                                                                                                                                                                                                                                             | Wed 15 Oct '03<br>Interviews (in person)                                                                                                                                                                                                                                  | Thu 16 Oct '03<br>Interviews (in person)                                                                                                                                                                                                                                                                                                                 | Fri 17 Oct '03<br>Interviews (in person)                                                                                                                                                                                                                                                                                    | Sat 18 Oct '03                                                                                                                                                               |
| the Pondicherry Housing Board<br>Building:<br>• <b>Thiru MVV Satyanarayana</b><br>• <b>Mr Thiru V Arnudhakumar</b><br>Introduction to <b>Mr S Sekar</b>                                                  | at the Pondicherry Secretariat<br>Building:<br><b>Mr S Vaittianadane</b><br>at the Pondicherry Directorate of<br>Education:<br><b>Mr A Ramadas</b><br>at the Pondicherry Secretariat<br>Building:<br><b>Mr B Vijayan</b><br>Interviews on 14 Oct '03<br>conducted in the presence of KG<br>Rajamohan | at Pondicherry Housing Board<br>Building:<br><b>Mr S Sekar</b><br>Interview conducted in the<br>presence of KG Rajamohan<br>at IVRP Hub centre, Villianur :<br><b>Mr J Gobu</b><br><b>Mr R Rajasekara Pandey</b><br>DEPART PONDICHERRY<br>ARRIVE NEW DELHI<br>VIA CHENNAI | at CGO Complex:<br><b>Mr DC Misra</b><br>at the IDRC SARO offices:<br><b>Dr Chandran Thiruchittampalam</b><br>with <b>Dr Mahesh Uppal</b><br><b>Ms Shalini Kala</b>                                                                                                                                                                                      | at the India Habitat Centre:<br><b>Ms Gitanjali Sah</b><br>at the IDRC SARO offices:<br><b>Mr Frank Tulus</b><br>DEPART NEW DELHI<br>ARRIVE CHENNAI                                                                                                                                                                         | Consolidation of information<br>by the study team<br>Preparation of follow-up<br>interviews by email.<br><br><b>Sun 19 Oct '03</b><br>DEPART CHENNAI-<br>MUMBAI JOHANNESBURG |
| the IVRP Hub centre, Villianur:<br>• <b>KG Rajamohan</b><br>Observation visits<br>Tirukanchipet<br>• <b>Sakthival</b><br>• <b>Perampattinam Grampanchayat</b><br>• <b>Elunralai</b> with <b>Mr Segar</b> |                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                              |



## Annexure 5: List of Key Informants

| Name      | Position and Affiliation                                                                                                                                                                                 | Address                                                                                                   | Telephone                                    | Fax              | Email                                                |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------|------------------------------------------------------|
| Thiru V   | Assistant Project Officer<br>District Rural Development Agency, Rural Development Department, Government of Pondicherry                                                                                  | Pondicherry Housing Board Building<br>2nd Floor<br>Anna Nagar, Nellithope<br>Pondicherry - 605 005, India | +91 413 2205 794 or 220<br>3705              | -                | vamkumar@yahoo.com                                   |
| Subbiah   | Distinguished Fellow<br>MS Swaminathan Research Foundation (MSSRF)                                                                                                                                       | 3rd Cross Street, Institutional Area<br>Taramani<br>Chennai - 600 113, India                              | +91-44-22542698 or<br>22541229               | 91-44-22541319   | arun@mssrf.res.in                                    |
| V         | Head<br>Information systems Unit, IRMO, ICRISAT                                                                                                                                                          | Patancheru - 502 324, Andhra Pradesh,<br>India                                                            | +91 40 329 6161 ext<br>2205                  | 91 40 324 1239   | v.balaji@cgjar.org                                   |
| Manas     | Deputy Director General (Finance)<br>Department of Telecommunications, Ministry of Communication & IT, Government of India                                                                               | Sanchar Bhavan<br>20, Ashok Road<br>New Delhi - 110 001, India                                            | +91 11 233 72190                             | -                | ddgwpf@bol.net.in                                    |
| VK        | Scientist-G, e-governance group (Assessment, Awards, Replication)<br>Department of Information Technology, Government of India                                                                           | MCIT, Electronics Niketan<br>CGO Complex, Lodhi Road<br>New Delhi - 110 003, India                        | +91 11 243 63077 (O)<br>268 89812 (R)        | -                | vinay@mit.gov.in<br>or<br>vkdharmadhikari@mit.gov.in |
| Elunralai | IVRP Volunteer<br>(Knowledge Centre Operator)                                                                                                                                                            | -                                                                                                         | -                                            | -                | -                                                    |
| J         | Scientist<br>Information Village Research Project, MS Swaminathan Research Foundation (MSSRF)                                                                                                            | 25, Navasamadhhi Street, Villianur<br>Pondicherry - 605 110, India                                        | +91 413 226 7861 or 266<br>6484              | 0413 266 7313    | infovil@satyam.net.in                                |
| Naresh    | Member Secretary IAS<br>State Planning Commission, Government of Tamil Nadu                                                                                                                              | Ezhilegam, Chepauk<br>Chennai - 600 005, India                                                            | +91 44 2854 5460                             | -                | tnspc@tn.nic.in                                      |
| Rama      | Principal Systems Analyst & in charge of<br>Computerised Rural Information Systems project (CRISP), National Informatics Centre (NIC) Headquarters, Department of Information Technology, Govt. of India | A-block, CGO Complex, Lodhi Road<br>New Delhi - 110 003, India                                            | +91 11 2436 0563                             | -                | rama@hub.nic.in                                      |
| Shalini   | Programme Coordinator: Knowledge Networking<br>for Rural Development in Asia/Pacific Region (ENRAP)<br>IDRC South Asia Regional Office (SARO)                                                            | 208, Jor Bagh<br>New Delhi - 110 003, India                                                               | +91 11 2461 9411 ext<br>102                  | 91 11 2462 2707  | skala@idrc.org.in                                    |
| KS        | Chief Technical Advisor & General Manager<br>Electronics Corporation of Tamil Nadu Ltd.                                                                                                                  | 692, Anna Salai, Nandanam<br>Chennai - 600 035, India                                                     | +91 44 243 20128 (O)<br>+91 44 264 22336 (R) | +91 44 243 30612 | gmd@elcot.com                                        |
| R         | Programme Leader, PAN Programme, IDRC                                                                                                                                                                    | 250 Albert Street, PO Box 8500, Ottawa<br>K1G 3H9, Canada                                                 | +1 613 236-6163 ext.<br>2414                 | +1 613 567-7749  | Rlafond@idrc.ca                                      |
| DC        | Technical Director<br>National Informatics Centre (NIC), Department of                                                                                                                                   | A Block<br>CGO Complex, Lodhi Road                                                                        | +91 11 436 0563                              | +91 11 436 2628  | dcmisra@hub.nic.in                                   |

Information Technology, Government of India New Delhi - 110 003, India

|    |            |                   |                                                                                                                                                                                                                                   |                                                                                                         |                                                         |                                                      |
|----|------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------|
| Mr | Suchit     | Nanda             | Chairman and CEO<br>Nanda Netcom Pvt. Ltd                                                                                                                                                                                         | 707, Gateway Plaza<br>Hiranandani Gardens, Powai Lake<br>Mumbai (Bombay) - 400 076, India               | +91 22 570 1111                                         | sn@suchit.et                                         |
| Dr | G          | Palanithurai      | Dean: Faculty of Rural Sciences<br>Prof & Head: Department of Political Science<br>and Development Administration<br>Coordinator: Rajiv Ghandi<br>Chair for Panchayati Raj Studies<br>Chairperson: The Hunger Project, Tamil Nadu | Gandhigram Rural Institute<br>Deemed University<br>Gandhigram - 624 302, South India                    | +91 451 245 2371 or<br>1775 +91 451 245 1775            | gpgrj_rgc@yahoo.com                                  |
| Mr | KG         | Rajamohan         | Scientist<br>Information Village Research Project, MS<br>Swaminathan Research Foundation (MSSRF)                                                                                                                                  | 25, Navasamadhi Street, Villianur<br>Pondicherry - 605 110, India                                       | +91 413 226 7861 or 266<br>6484 (O) 413 225 7381<br>(R) | rajamohan2002@sify.com or<br>infovil@sathyam.net.in  |
| Mr | R          | Rajasekara Pandya | Social Scientist<br>Information Village Research Project, MS<br>Swaminathan Research Foundation (MSSRF)                                                                                                                           | 25, Navasamadhi Street, Villianur<br>Pondicherry - 605 110, India                                       | +91 413 226 7861 or 266<br>6484                         | VS_Pondy@iioim ail.com                               |
| Mr | DJ         | Raju              | Assistant General Manager<br>Agriculture Technical Cell, State Bank of India                                                                                                                                                      | Local Head Office "Circletop House"<br>16, College Lane<br>Chennai - 600 006, India                     | +91 44 2821 4116 or<br>2821 7422                        | -                                                    |
| Mr | A          | Ramadas           | Deputy Director (El.Edn.)<br>Directorate of Education, Government of<br>Pondicherry                                                                                                                                               | Pondicherry - 605 013, India                                                                            | +91 413 241 805 203 +91<br>413 201824 (R)               | dietramadas@hotmail.com                              |
| Dr | S          | Ramanathan        | Director of Research<br>Tamil Nadu Agricultural University                                                                                                                                                                        | Coimbatore - 641 003, India                                                                             | +91 422 245 0763 or 422<br>243 1222 ext 247             | dr_aris2000@yahoo.com or<br>inrii_kmb@sanch arnet.in |
| Dr | Madanmohan | Rao               | Independent IT Consultant; Editor, INOMY                                                                                                                                                                                          | Ebony 701, Raheja Residency<br>Koramangala 3rd Block<br>Bangalore - 560 034, India                      | +91 80 550 2465 or<br>Check                             | madan@inomy.com                                      |
| Ms | Gitanjali  | Sah               | Project Coordinator<br>Habitat Learning Centre                                                                                                                                                                                    | India Habitat Centre, Lodhi Road<br>New Delhi - 110 003, India                                          | Check                                                   | gitanjali_sah@rediffmail.com                         |
| Mr |            | Sakthival         | IVRP Volunteer<br>(Knowledge Centre Operator)                                                                                                                                                                                     | -                                                                                                       | -                                                       | -                                                    |
| Mr | Thiru MVV  | Satyanarayana     | Project Officer<br>District Rural Development Agency, Rural<br>Development Department, Government of<br>Pondicherry                                                                                                               | Pondicherry Housing Board Building<br>2nd Floor, Anna Nagar, Nellithope<br>Pondicherry - 605 005, India | +91 413 2205 794 or 220<br>3705                         | -                                                    |
| Mr |            | Segar             | IVRP Volunteer<br>(Knowledge Centre Operator)                                                                                                                                                                                     | -                                                                                                       | -                                                       | -                                                    |

|          |                   |                                                                                                                                      |                                                                                         |                                            |                                  |                                                         |
|----------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------|---------------------------------------------------------|
| S        | Sekar             | Scientific Officer<br>Department of Science, Technology and<br>Environment, Government of Pondicherry                                | Anna Nagar<br>Pondicherry - 605 005, India                                              | +91 413 220 1256                           | +91 413 220 3494                 | dste.dste@sify.com                                      |
| S        | Senthikumar       | Associate Director<br>Informatics Division, M S Swaminathan<br>Research Foundation                                                   | 3rd Cross Street<br>Institutional Area, Taramani<br>Chennai - 600 113, India            | +91 44 22542791 / 2698 /<br>2699 / 1229    | +91 44 22541319                  | senthil@mssrf.res.in                                    |
| Mina     | Swaminathan       | Honorary Director<br>Uttara Devi Resource Centre for Gender and<br>Development, MS Swaminathan Research<br>Foundation (MSSRF)        | 3rd Cross Street<br>Institutional Area, Taramani<br>Chennai - 600 113, India            | +91-44-22542698,<br>22541229               | +91-44-22541319                  | mina@mssrf.res.in                                       |
| MS       | Swaminathan       | Chairperson<br>MS Swaminathan Research Foundation<br>(MSSRF)                                                                         | 3rd Cross Street<br>Institutional Area, Taramani<br>Chennai - 600 113, India            | +91-44-22542698,<br>22541229               | +91-44-22541319                  | msswami@mssrf.res.in                                    |
| Chandran | Thiruchittampalam | Counselor (Development)<br>Canadian International Development Agency<br>(CIDA)                                                       | Canadian High Commission<br>7/8 Shanitipath, Chanakyapuri<br>New Delhi - 110 021, India | +91 11 687 6500                            | +91 11 687 6478                  | chandran.thiru@dfait-maect.gc.ca                        |
| Pearl    | Tiwari            | General Manager<br>Community Services, Ambuja Cement<br>Foundation                                                                   | CST. Road<br>Vidyanagari, Kaima, Santacruz (E)<br>Mumbai - 400 098, India               | +91 22 5693 1800 - 10 or<br>18 - 25        | +91 22 2652 1414 or<br>2652 1515 | codexal@ambujamail.com or<br>pearthiwari@ambujamail.com |
| Frank    | Tulus             | ICT Officer<br>IDRC South Asia Regional Office (SARO)                                                                                | 208, Jor Bagh<br>New Delhi - 110 003, India                                             | +91 11 2464 4493 ext<br>111                | +91 11 2462 2707                 | ftulus@idrc.org.in                                      |
| Mahesh   | Uppal             | Advisor (Telecom)<br>India-Canada Cooperation Office (ICCO): A<br>project of the Canadian International<br>Development Agency (CIDA) | 86, Paschim Marg, Vasant Vihar<br>New Delhi - 110 057, India                            | +91 11 2614 4051 / 6652<br>or 981 004 2969 | +91 11 2614 6236                 | muppal@delhi.icco.net                                   |
| S        | Vaittianadane     | Director<br>Directorate of Economics and Statistics,<br>Government of Pondicherry                                                    | 505, Kamaraj Salai, Saram<br>Pondicherry - 605 013, India                               | +91 413 224 6079                           | +91 413 224 6709                 | eanus@pondy.pon.nic.in or<br>dires@pondy.pon.nic.in     |
| B        | Vijayan           | Secretary to Government, Chief Electoral<br>Officer: Government of Pondicherry, Chief<br>Secretariat                                 | Secretariat Building<br>Pondicherry - 605 001, India                                    | +91 413 344 484 (O)<br>0413 372 083 (R)    | +91 413 337 500                  | vijayan@pondy.pon.nic.in                                |
| P        | Vivekanandan      | Executive Director<br>SEVA (Sustainable-Agriculture & Environmental<br>Voluntary Action)                                             | 45, T.P.M. Nagar, Viratipathu<br>Madurai - 560 071, India                               | +91 452 238 0082                           | +91 452 230 0425                 | numvali@vsnl.com                                        |

## Annexure 6: Interview Guides

These questions helped to guide and direct the discussions but were not always applied rigorously. In many cases interviews had to be tailor-made depending on the specific role or experience of the informant. However, an effort was made to ensure that all the important issues noted in these interview guides were covered in each interview.

### A. Interview guide for those inside the project and/or involved in some way in its design and execution (Phases I and II)

*What led to the project (Phases I and II)?*

- How did you get involved?
- What was your role?
- What was the issue or condition you wanted to address? (Gender probe – were there gender considerations and if so, what were they?)
- Who were the key players in your view? (Gender probe – be specific about the key players and what role they played, in order to determine the type and/or level of involvement, engagement, participation of the various actors; to examine if there are any differences between the level and/or type of involvement by men and women; and to determine which women need to be considered).
- Who makes policy – individuals or group? (Gender probe – who is involved at this level; how would you characterize their involvement?)
- In your opinion, what constitutes “policy influence”?
- Did the project team discuss policy influence and was this incorporated into the proposal or in its strategies and action plans?
- Or: In terms of your understanding of the process of research influencing policy – where does this project fit into that process?
- Are you aware of the mechanisms through which policy is influenced? Were you ever exposed to training or other capacity building activities related to mechanisms through which to influence policy?
- Were there any constraints or barriers when developing the project? If so, what were they?

*What happened during the project (Phases I and II)?*

- When it started, what did the project intend to achieve?
- What happened? (outputs, constraints, approach)
- Were the objectives met, revised, changed, dropped, added?
- Did you draw lessons from the project that could inform policy makers? If so, what did you do with these lessons?
- What dissemination strategies were used and to what effect? (Gender probe – were different dissemination strategies used for men and women? Why/why not?)
- Were researchers involved in the project?
- Who was influenced (people inside and outside the policy process)? If so, in what ways?
- Who used the research/the project results? In what ways? (Gender probe – be specific about “who” and “what”; men and women might use the research for different purposes; or perhaps one or the other did not find it useful).
- Now that the project is complete, what do policy makers know or do that they did not know or do before? How do you know that?
- What do researchers know now that they did not know or do before? How do you know that?
- What does IDRC now know or do that it did not know or do before? Why did it happen?



- What is your vision for the future involvement of the project in efforts to influence policy?

#### *The project context*

- What factors in the external environment had an influence on the project and could have affected its role in policy influence?
- What changed, or remained constant during the project in terms of its environment (political, legislative, economic, technical, social)?

### **B. Interview guide for those outside the project and who might indirectly influence policy**

- What do you do and what is your role in the ICT arena?
- How did you get to know about the MSSRF IVRP? Has it had any effect on your knowledge, opinions and/or actions?
- What is your opinion about the role that this project has played/is playing in the ICT for development arena? And compared to other similar initiatives?
- Do you know of any impact or influence that the IVRP has had outside the project itself – on policy or otherwise? If so, what was this and why did it have this impact or influence?
- In your opinion, what constitutes “policy influence”?
- Do you know how ICT related policies (and those related to ICT for development) are made in the state/Union Territories/country? What are the formal and informal processes? (Gender probe – who is involved at this level; how would you characterize their involvement?)
- In your opinion, do policy makers take cognizance of, or use these types of pilot projects in their policy making? (Gender probe – are there differences in the way in which these are used by men and women?)
- If so, according to your experience are there mechanisms which can facilitate this influence? What can such projects do better to ensure an influence outside the immediate project environment?
- What are the factors that could have affected the policy thinking and development in the “ICT for development” arena during the past five years?
- Who are the main role players in the ICT policy arena in the state/Union Territories/country? (Gender probe – be specific about the key players their role, in order to determine the type and/or level of involvement, engagement, participation of the various actors; to examine if there are any differences between the level and/or type of involvement by men and women; and to determine which women need to be considered).
- To what extent have gender issues been a concern in the ICT policy environment at state/Union Territories/ country level? Do policies exist with a specific focus on gender in the ICT arena? Are there gender related policies that should be examined when trying to understand the ICT (for development) policy environment?
- Did you find the Policy Makers Workshop useful (asked only of those who attended the workshop)? Why/why not? (Gender probe – are there differences in the way women and men have perceived the workshop? If so, try to determine the reason for these differences).
- What do you think is the potential of this type of event for influencing policy in the ICT for development arena? Why do you say so? Have there been other similar events, locally, nationally or internationally to which this one can be compared in terms of potential to influence policy?

### **C. Interview guide for those outside the project who might directly influence policy – policy workers and policy decision-makers**

- What is your role in the ICT or “ICTs for (rural) development” arena? What contributions, if any, have you made to ICT policy?

- What triggered your interest in ICTs for development?
- What are the official ICT related public policy making processes in the state/Union Territories/country? Who are the main role players in the ICT policy arena, both inside and outside the government? (Gender probe – who is involved at this level; how would you characterize their involvement?)
- What kinds, and what sources, of information do policy makers use to inform their work? (Gender probe – do these differ between men and women?)
- What social, economic, legislative and political factors could have had/are having an effect on public policy making in ICTs for development?
- In your opinion, what constitutes “policy influence”?
- How did you get to know about the MSSRF IVRP? What sources of information brought it to your attention? What is the extent of your knowledge of the project, in other words, what do you know about it?
- What is your perception of the IVRP and its potential as a model for bringing the information society to rural communities?
- Has your exposure to the IVRP affected your thinking, perceptions and/or actions in any way? If so, in what way(s)? If not, why not? (Gender probe – are there marked differences between men and women in this respect?)
- How can projects like the IVRP assist in informing policies and action plans? What mechanisms will enable or facilitate this? What should they do to ensure that policy makers will take note of the lessons learnt?
- What policies and action plans are important in understanding the current context and environment in which the IVRP has been implemented? What contextual factors have influenced policy making in the ICT and ICT for development arena during the past five years?
- What role has gender played in the ICT - and specifically in the ICT for development - policy arena? To what extent have ICT related policies been “engendered”?



## Annexure 7: Selected Remarks Recorded in the Visitor's Book 2001-2003

### INDIAN GOVERNMENT

#### Governor, State in India

"I was very impressed to see the organization and functioning of this Value Addition Center. I think there is tremendous scope for ushering a social and economic revolution in our rural areas with the use of modern scientific technology. I hope that the vision of our great agricultural scientist which created this network will spread to all parts of the country bringing immense benefit to our Nation."

#### Scientist, Ministry of Information Technology, New Delhi

"It is a very wonderful task performed among illiterate rural peoples....I will make note of the mission of this programme. Please continue the same in other villages and update the technology."

#### Senior Government Official, Department of Agriculture, Pondicherry

"It is very interesting to know the activities. I will try to see how best Dept of Agriculture can work together with this hub."

#### Senior Government Official, Tamil Nadu

"I had heard a lot about the good work being done by the MSSRF and specially the concept of Info villages. Today, after the visit to the info village value addition center, I realize how the front line technology can be used for real empowerment of poor, transparency in government by making people aware of their rights. Ultimately it makes a qualitative and quantitative difference to the lives of villagers who so far were really unreachable..... I have learnt a lot and use this kind of experience for the betterment of our people...."

#### Principal Secretary, Development and Planning Department, Government of State in India

"I'm immensely impressed by the nature of the extent of work being done in this project. The thing that appealed to us the best is that the online project is based on needs as perceived by the beneficiaries."

#### Senior Official, Government of India, New Delhi

"I visited the IVRP (MSSRF), Information Village along with all the participants who attended workshop held at Pondicherry on 30-31st October 2001. The information gathered here is very informative and really useful for farmers. It saves farmers energy and time both. I wish all the success on behalf of the participants."

#### Deputy Commissioner, Government of State in India

"As a part of a team of Officers from four different States, we visited the value addition center at Villianur. The Information Village Research Project is novel effort of application of IT and communication to the needs of the village people. This is an important step in bridging the great digital divide. We are very impressed with the efforts of MSSRF people. *However, it is time to think about replication and working the most cost effective model for reaching rural people with their information needs.*"

#### Minister for Agriculture, Food and Civil Supplies, Government of State in India

"I have been much impressed after visiting this Information center, which is in service for the rural people. I hope everybody will take the help of these technical facilities."

#### IAS Official, MD/Small Farmer's Agro Business Consortium, New Delhi

A very interesting and impressive effort. MSSRF deserves all praise for this. I came here to learn, and to study the systems developed by MSSRF here, so that SFAC can try to replicate such models through the Agri-Clinic & Agri-business centers schemes, which SFAC is implementing for the Government of India, Ministry of Agriculture, Department of Agriculture & Cooperation, New Delhi. We will surely pursue any possible collaboration."

#### Senior Official, Department of Space, Government of India

"An interesting experiment – *needs lot more efforts to collect and update information and dissemination.* Wish you good luck."

#### Representative, Department of IT & Biotechnology, Government of State in India

"I was impressed by the hub and cluster approach and by the range of information provided by the centers....Clearly the project has much higher potential but an excellent beginning has been made. ....I feel the project has the potential to become the focal point of the Indian village and bring to the rural folk the prosperity and knowledge management can."

**Principal Adviser, Planning Commission, New Delhi**

"The use of information technology for all is an outstanding effort. Congratulations on the effort."

**Minister for Agriculture, Government of State in India**

"Most respectable and honorable, Father of Green Revolution Sri. Dr.MS Swaminathan's untiring efforts brought the Information Village Research Project which seeks the growth of improving the economical and social status of the rural community through the advent of ICT through rural knowledge centers...."

**Representative, Department of Agriculture, Pondicherry, and 18 newly recruited Agriculture officers**

"The use of computers in IVRP, Villianur, is really unimaginable and the needs of all sections of the people /society is fulfilled with variety of information. Really wonderful experience."

**IAS Official, State IT Mission**

"We are extremely happy that we could make a meaningful visit to your value added center of Information Village research Project. We could gain many things and was really value addition to know the way in which you collect and transmit data in the content of the new project ..... which we initiated in the .....district of .....state. Congratulations. Keep it up."

**INDIAN ORGANISATIONS**

**Senior Official, Commissioner of Agriculture, Chennai; representatives from AgrilIndia, SAMETTI and others**

"....The dynamic data provided to farmers and fishermen is remarkable. Learned new things, which would be replicated."

**Specialists, Aravind Eye Hospital, Madurai**

"...This is a real eye opener and it will be a great help to all villages. I wish this system spread to rest of Tamil Nadu. We all appreciate the great vision of MS Swaminathan and the group."

**Members, Library and Information Services, Kalpakkam**

"We the members from MALA - Kalpakkam chapter feel elated by visiting this center... Information is power. This is really felt in this center."

**Representative, Web Health Center, Tata Consultancy Service, Chennai**

"The efficient functioning of your centers gives us the hope that information technology can indeed be used to improve the lot of the rural poor in India. We will be glad to provide value addition to the project."

**Representative, DDGC(NRM)ICAR, Krishi Bhavan, New Delhi**

"This is an excellent example of applications of IT for rural upliftment...."

**Executive, MP Agency for promotion of IT (MAPIT), Bhopal**

"It was a great pleasure to see technology being used to fulfill real needs. I am impressed about the processes followed to make the application relevant to the beneficiaries group and use of appropriate technologies - wireless communication, solar power and interface in Tamil."

**Member, Jharkand Council for Science & Technology, Ranchi**

"We wish such types of centers come up through out our country and we become strong INDIA."

**Government and Organisational Representatives, State in India**

"A group of people consisting of 25 farmers, NGOs and Government officials from Agriculture in .....visited Pondicherry on an exposure visit..... It was very impressive, educative and practical, enhancing the use of information technology with respect to the development of Agriculture."

**INDIAN NGOS**

**Representative, Honey Bee**

"My trip and workshop had been a great moment. Your hospitality and professionalism and of course the work is commendable."

**Representatives, Vivekanda Girijana Kalyan Kendra (VGKK), Karnataka**

"...I am grateful for opening my eyes to the incredible work done by you. The example you and MSSRF have set should be a light house that draws every serious NGO here."

**Members, ISPWDK NGO partners, Karnataka**

"We are the team of 14 members on sustainable agriculture from SDC/IC watershed programme in Karnataka. as part of exposure, we visited this Knowledge center in Embalam and Villianur Information center. The salient features which impressed us most are

- Knowledge and information are important in development which this project tries to provide at farmers door steps
- We feel motivated and necessitated to have such technology at our villages in Karnataka. It was a good learning visit to us."

**ACADEMIC INSTITUTIONS, INDIA**

**Senior Representative, Extension Education, Tamil Nadu Veterinary and Animal Sciences University, Chennai**

"...The approach to the community with suitable information for sustainable improvement is laudable. A new experience for the veterinarian/scientist to get a glimpse of the rural knowledge center."

**Student, IIM, Bangalore**

"I was here primarily to study how computers and the Internet can affect traders, local producer communities etc. I am highly enthused at seeing all this activity and grateful to the help provided pertaining to my research."

**Kongu Engineering College Staff and Students, Erode (two staff and 47 students)**

"Your hand work is appreciated. We too like to join along with you to take the current technology to the pillars of India."

**Scientist, Shimla Council of Science & Technology**

"I am really impressed by this work done by this center and it is worth to install in our State of Himachala Pradesh."

**Staff and 18 Postgraduate Students, Stelle Maris College, Chennai**

"The visit was an eye opener in the most sought after are of information technology and communication. The effort is commendable. The most important ingredient in the development effort is 'reaching out' to people and establishing the 'network'."

**INTERNATIONAL GOVERNMENT REPRESENTATIVES**

**Senior Official, Ministry of Women & Welfare Affairs, Cambodia**

"I am very happy to visit the women center, the volunteer women so clever and smart. We go back and give back this information to women in Cambodia."

**Ministry of Agriculture and Labor Team, NFC Ranawara, Sri Lanka**

"The visit though brief was very informative the fact that these panchayat members also were very local in their appreciation of the facility is indicative of its effectiveness. The number of information being collected and disseminated also impresses me."

**Vice President, Republic of Uganda**

"It is a revolution that is happening here! Villagers and women at that, proving to the world that technology is not alien to them. This is the way forward -Congratulations and God Bless you all and success in all you are doing."

**Senior Official, Ministry of State Health, Kampala, Uganda**

"I wish to register our thanks on behalf the Uganda delegates to the village I formation research center progamme. We had a good insight on how much information can do to benefit and change rural population

who otherwise would not access relevant and timely information. This project has demonstrated that with minimal infrastructure one can transform a society through IT."

**Representative, Ethiopian Science & Technology Commission, Ethiopia**

"MSSRF is a powerful demonstration of how IT can be put to use in changing the life of and empowering the rural people. One would wish to see more of these around globe."

**INTERNATIONAL ORGANISATIONS**

**Adviser of NATO**

"It was a great pleasure to visit the village knowledge center, Villianur, for the first time. The pioneering work done has had a visible impact on the society in the nearby villages.... Women empowerment seems to be the most important aspect of this impact and the economic improvement that this implies. This excellent initiative of MSSRF needs to be multiplied a thousand lines and more for India's development. I congratulate all the people involved."

**Scientific Officer, World Life Sciences Forum BioVision**

"...The Chairman of the BioVision Forum was right in prompting a visit to your center. The information about your initiative will be shared to 1 000 Life Science experts gathered in Lyon, France on April 8-11, 2003."

**Representative, Commonwealth of Learning, Vancouver, Canada**

"You are doing remarkable work. Congratulations."

**Senior Official, UNESCO-Jakarta**

"This has been a learning experience, an eye opener for me. I thank MSSRF for giving me this opportunity to learn from this experience and have a model to share with other countries as well in the area of ICT, empowerment of poor communities through information dissemination, etc."

**World Corps Representative, Seattle USA and Chennai**

"What you are doing is very inspiring. I hope we at World Corps can learn more and perhaps take some of this information to help us in our efforts. GOOD LUCK!"

**Executive, British Council, South India**

"The work of this project is the 21st Century equivalent to the introduction of the Public Libraries in the 19th Century in UK in terms of the impact that it is having on people's lives."

**ISNAR Representative, The Netherlands.**

"You are doing really outstanding work, showing the way on how IT can be useful to villages. We thank you for a most interesting visit."

**SIDA Representative, Stockholm, Sweden**

"We as donor organizations discuss quite a lot how to make use of ICT, modern information technology, in improving living conditions in poor people in rural areas. You have come forward in showing in practice how this can work. .... I hope colleagues of mine together with Bangladeshi NGO and local Government representatives of Greater Faridpur areas will get a chance to see this for themselves. This could inspire them to create something similar."

**Representatives, FAO**

"Many thanks for a fascinating visit to the hub and village centers, you have given us all a wonderful insight into the MSSRF programme and we are very grateful. I hope we can continue to work with you and learn from the innovative approached you are developing. Many thanks from us all!"

**Representative, Peace Boat, Japan**

"It was indeed a privilege to visit the Villianur hub center and the Embalam knowledge centers, am sure that the wonderful work done by MSSRF and the communities themselves will bring many benefits for all in the long run."

**Executive, USAID, New Delhi**

"The thought, insight, dedication and innovation that is going into this project is truly exceptional."

**Executive One World, Finland**

"A very interesting research project that gives a lot of hope of bridging the digital divide..."

**Representative, One World International, London**

"A fascinating project which takes into account all the difficulties normally associated with ICT. It is very heartening to see a project that not only works so well but also has many aspects, which can be scaled up for other regions and countries. In particular, the generation of local content for local needs, supported and run by the local community itself is the best example of social capital I have ever seen."

**Writer, Sweden (writing a book about ICT for development)**

"I am amazed at what information is about to small villages. Very little information means so much which is the contrary to how it is to Sweden, where we have too much information. Now I have understood the deeper value of knowledge."

**Researcher, South Australian Parliament, Australia**

"Very impressive technology and society project that sends message of hope and empowerment to the people that really need it."

**Organic farmer sponsored by Watson Foundation, USA**

"I see this as a very useful model to ensure that technology is utilized equitably and to ensure that rural people also have the opportunity to become conversant in IT. I will recommend this model to other development organizations focused on IT programs."

**Executive, CARE International, Lucknow**

"I am very impressed by the impact and sustainability the project is delivering. Being a great believer that it is great driver of social and economic development for the most vulnerable communities. I was impressed to see this project being a living example of that belief."

**One World International Representative, London, UK**

"I am writing on behalf of the whole One World. London.... The Village Knowledge Center is indeed a unique project in terms of its success with the rural poor and its potential as replicable model."

**Programme Coordinator, Nairobi**

"The Kenya team very much impressed with the initiatives and activities of the information project. This kind of innovation is not there in our country. It is something that we will be definitely wishing to introduce in our countries."

**FAO Representative, Regional Office for Asia & the Pacific**

It was so nice to see very active women volunteers working in centers. It looks forward for this programme to grow more in rural areas of India

**ACADEMIC INSTITUTIONS, INTERNATIONAL**

**Executive, CIIFAD, Cornell University, USA**

"Our visit to the center was very encouraging, even exciting to see what is being accomplished and to learn what can be accomplished from the institutional base being established with a strong village network. We wish you every success."

**Researcher, University of California, Irvine**

"I have traveled around the world and I find your project to be one of the finest examples of IT for community development. The world has much to learn from your work and I will be honored to have the privilege to help pass on what I've seen here. Congratulations and keep it up."

**Researcher, University of Colorado, USA**

"Until coming here today, I was skeptical about the usefulness of information technology to poor farmers and landless rural people. ....I am skeptical no longer. I look forward to sharing my new knowledge with others who like I were doubtful that access to the Internet can make a meaningful impact on rural livelihood!"

**Representative, London School of Economics**

"I visited almost all the information Villages in about seven days and was amazed by the sights in the villages. The enthusiasm, the eagerness and warm welcome I received from the villagers and the MSSRF staff was really good. I have learnt immensely and I know that this experience is going to help me a lot in my life."



**Representative, London School of Economics**

"...what I saw is really what we need more in India. Single- minded dedication of the staff of MSSRF, their willingness to share information is really out of this world. I really want to see the project growing in size and spreading from one village to another and benefiting millions. And connecting them to the rest of the world in a unique way."

**Representative, University of Canterbury, Christchurch, New Zealand**

"Absolutely fantastic! A center and programme like this gives tremendous optimism and hope to me for rural emancipation and empowerment. All the people involved in visualising, implementing and sustaining this project deserve to be congratulated and supported in their wonderful endeavor. I feel privileged to have a chance to visit this place..."

**Representative, Monash Asia Institute, Monash University, Melbourne, Australia**

"A highly impressive experiment -the Swaminathan Foundation is to be appreciated on their innovative approach to poverty alleviation. I have much better appreciation of how this experiment might be replicated."

**Researcher, Oxford University**

"As a Social Scientist I am overwhelmed by your great success in bringing the power of new technology to applications of such major benefits. Many Congratulations!"

**Kevin Pantan & Basil Baldwin, Faculty of Rural Management, University of Sydney, Orange**

"The dissemination of information through computer technology is the best I have seen. It is especially important for empowering women. We met many women who spoke most eloquently and asked us most challenging questions. Obviously their use of the technology has given them the knowledge and confidence to ask these questions."

**MEDIA****Special Correspondent, Outlook**

"...Your efforts are a great step forward for a social cause."

**Representative, Moving Picture Co, Mumbai**

"As documentary filmmakers, we are always on the lookout for interesting stories and your IT Project in these five villages has been an amazing experience. This is truly technology at the grassroots level. The sight of the fisherman in his traditional boat with a satellite messaging handset will remain with me for a long time. A very well coordinated and efficiently executed project."

**Journalist, New Delhi**

"Exciting enterprise. I think of has enormous potential which still needs to be realized. Congratulations!"

**French TV Representative, Canadian Broadcasting Company**

"Discovering the villages of Embalam and Veerampattinam was a great experience and I do think I can make a good film about it. I strongly believe in communication as a mean to create a better world and the knowledge Centers enhance this belief. Powerful work..."

**Representative, Young Asia television, Chennai**

"Best wishes on the Information Village Project -should reach more villages. Superb, excellent technology."

**ANI-TV Media Representative, Chennai**

"...Hope the future of our country makes use of this knowledge base and development to our villages. As Gandhi said 'India lies in its villages'."

**Representative, DPR, PIB, Bangalore**

"The knowledge center supported by Information village research project is very unique and novel in its approach and hope it will serve the best interests of the village community by networking of information and meeting their needs from one point. This concept deserves to be emulated. The media was very appreciative of the work done by this project center."





I.

**Science for African Development**

Talk delivered at the Substantive Session of the Economic and Social Council of the United Nations

*Geneva, Switzerland, July 17, 2001*

Even with technologies available today, there are many fascinating experiments under way to explore the effects that these new communication tools can have on education and development. The next few slides show photographs of a rural village in India, not different from many other villages in the developing world. But in this village there is a computer room, connected by wireless Internet to a service center run by the M.S. Swaminathan Foundation in Chennai. This "information village" project, and others like it, have successfully relied on women from the village itself to provide daily weather and market prices, as well as agricultural and health information, to all the inhabitants. There are more than 30 such experiments under way today in India alone. As scientists, we need to study and learn from these experiments - so as to make a science out of connecting the world to knowledge resources. With the technology moving so fast, it is critical to "learn by doing" in this way, so that we learn how to make the next wave of the technology even more useful for productive and sustainable economic development.

II.

**Expanding the Institutions of Science**

President's Address, 138th Annual Meeting, Washington, D.C.,  
April 30, 2001

... .. - if we are to be successful in spreading our scientific and technical knowledge throughout the world - we need to think much more like a successful modern corporation in identifying and respecting our "customers." In other words, we need to do intensive market research, in which we interact closely with those who might be able to use our knowledge and attempt to meet their needs. Ten years ago, this type of research would have required a major investment in "traveling agents" of the National Academies. Now, the new interconnected world of the Internet easily facilitates consultation with those who might benefit from our work. But it would constitute a major change - both in practical terms and philosophically - for us to make a serious commitment to a continual repackaging of information on our Web site, in response to the needs of potential users.

How might we do this? Two years ago I described my visit to India, where I first became aware of innovative efforts to use the Internet to bring scientific knowledge to bear on improving the quality of life in impoverished communities. At that time, I inaugurated one of the "Information Villages" created by foreign associate M.S. Swaminathan, near Chennai. Early this year, I revisited the same village to receive a progress report from the local women who had been operating the

computers that connect their farming village to a regional wireless Internet network. In this village, some 1,000 people had learned to use the computers, including many children. In particular, the women had clearly been empowered, and they enthusiastically reported how their sudden access to information about crops, weather, market prices, and government programs had improved the life of the village. This information had already saved lives in a nearby village where data from a U.S. Navy weather Web site is used to alert fishermen of impending high seas; in other villages not connected to the network, the fishing boats went to sea in a developing typhoon and met disaster.

It is straightforward to envision a not-too-distant future where all of the world's scientists are connected to the World Wide Web. This network represents, however, only the top level in the global knowledge system. If science is to become a major force for good around the globe, it must reach more than just scientists and professional elites. Reaching the rest of the people in the world will require a second level of "adapter organizations" -- the local universities, governments, clinics, and nongovernmental organizations -- which understand and are in direct contact with the most needy citizens in their societies. One of these organizations is the one I visited, the M.S. Swaminathan Foundation, which translates selected information gleaned from the Internet into the local language in a readily accessible form.

III.

### **Science and the World's Future**

President's Address, 136th Annual Meeting, Washington, DC

April 26, 1999

If we are to generate the world that we want for our grandchildren, we scientists will need to reach much more deeply into our own society -- as well as into every hamlet and village across the world. To better understand what this goal might mean in practice, I have gone far afield to seek out opportunities that would bring me face to face with new experiences and ideas. This past year, as part of a major study of international agriculture, I traveled to Africa. There I witnessed the challenges for science in the remote fields of subsistence farmers in Kenya, when visiting an impressive set of agricultural experiments that were guided by scientists and carried out by village women on their own land. I also spent time in rural India. There I examined an imaginative set of experiments in electronic knowledge delivery designed by our foreign associate, M.S. Swaminathan, of which you shall hear more later.

If we are to reach this goal, connecting scientists to each other is only the first step. Scientists everywhere must use these initial connections as a tool for spreading their knowledge, skills, and values throughout their own nations, including their local communities. By taking full advantage of new information technologies, the scientific community has an unprecedented opportunity to close the vast "knowledge gap" between all peoples. How might this be possible?

I want to highlight a wonderful example that points the way forward. As mentioned previously, the M.S. Swaminathan Foundation has established an experimental network in India that will soon connect more than 20 isolated rural villages to a wireless Internet service. About half of the population in most of these villages has a total family income of less than \$25 per month. The project is designed to provide knowledge on demand to meet local needs using the World Wide Web, and it does so through a bottom-up process. The process starts with volunteer teams that help poll the villagers to find out what knowledge they want. Particularly popular thus far are women's health information, advice on growing local crops and protecting them from diseases, the daily market prices for these crops, local weather forecasts, and clear information about the bewildering array of programs that are provided by the Indian government to aid poor families. To participate, each village must provide a public room for the computer system, as well as the salaries for a set of trained operators. In return, the village receives the needed hardware and maintenance for the communication system, specially designed Web sites in the local language that convey the requested information, and training programs for those villagers who have been selected to run their local knowledge system.

Drawing on this concept, I envision a global electronic network that connects scientists to people at all levels -- farmers' organizations and village women, for example. The network will allow them to easily access the scientific and technical knowledge that they need to solve local problems and enhance the quality of their lives, as well as to communicate their own insights and needs back to scientists.

IV

### **A World that Banks on Science**

President's Address, 141st Annual Meeting, Washington, DC

April 19, 2004

Many interesting experiments are in progress around the world, and I have been attempting to follow some of them to see what can be learned about effective strategies for attaining the vision elaborated in *Our Common Journey*. This past January, my wife Betty and I made our third visit to the villages of Pondicherry, India, where an NGO founded by our foreign associate M.S. Swaminathan has been deeply engaged in a variety of science-based experiments in rural development. (See <http://www.mssrf.org>)

On previous trips, we had visited the information kiosks in these villages, which connect the otherwise isolated villagers to a wireless Internet service in their local language that provides them with daily market prices, and weather, health, and agriculture information. We had also followed the development of several science-based enterprises—in which, for example, a small group of landless villagers produces mushrooms or milk for sale.

At the end of each of our earlier visits, Betty and I were left with the feeling that the problem of both long-term sustainability and scale were overwhelming. Perhaps this highly dedicated and uniquely skilled NGO could, with the support of various donors, ultimately affect 20 or 40 villages, with a total population of 100,000 people. But what would happen when its leadership changed, or when the current donors decided to move on to other projects? And, most important, what about the remaining 700 million Indians who live in similar situations elsewhere? The challenge seemed overwhelming and the whole enterprise fragile.

### ***Bringing in the bankers***

I was surprised to encounter a completely new element in our last visit. The State Bank of India is now intimately involved as a partner with the M.S. Swaminathan Research Foundation in each of the village projects that we helped to inaugurate. Some of the projects were dairies, as before, but other groups of villagers had set up small production plants for biocontrol agents.

In this example, a group of villagers had established a factory to produce the small parasitic wasp, *Trichogramma*, which deposits its eggs on those of larger insects and destroys them. Some of their product is being used in their own village to replace pesticides and increase plant yields – thus bringing both health and economic benefits. The remaining product is being sold in the market to generate income. And the women involved had begun to train new groups in neighboring villages. Here was a perfect example of the type of science-based franchise for sustainable development that I had been seeking.

The State Bank funded the equipment and supplies needed by each of the groups through loans, and it was our privilege to hand out the checks, some for more than \$5,000. The interest rates charged are generally about 20 percent per year, which is much less than the rates of the traditional moneylenders, who may demand 10 percent per month or more.

Is this a public service activity, subsidized by the government? To my surprise I learned that the answer is no. These cooperatively held loans are being made to so-called "Self-Help Groups" – each composed of 10 to 20 villagers who had learned to work together. They are among the bank's best-performing customers, with 95 percent of repayments being made on time.

Through 700,000 Self-Help Groups, about 70 million people have thus far been helped with bank credit in India, with an average loan per group of about \$700. About 90 percent of these groups consist only of women. According to the general manager of the Central Bank of India, these loans are "meant to deliver women from socioeconomic oppression, and empower them through monetary security."

The bottom-up development generated by loans to cooperative groups of the rural poor is a major movement encouraged by the Indian government. It is being stimulated, guided, and monitored by India's National Bank for Agriculture and Rural Development (NABARD), whose Web site provides guidance on the establishment and evaluation of Self-Help Groups, as well as many other informative details. We need only think back to Jimmy Stewart's role as George Bailey in the 1946 movie *It's a Wonderful Life* – still a holiday classic – to remind ourselves of the important role that credit provided to ordinary Americans by local banks has had on our own nation's development.