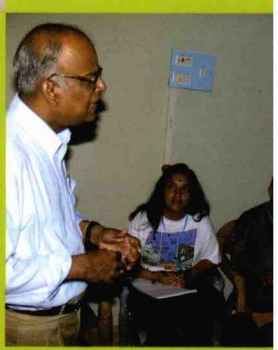
The Third - MSSRF South - South Exchange Travelling Workshop

15-22 October 2004
Tamil Nadu & Pondicherry, India



Workshop Report

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M S SWAMINATHAN RESEARCH FOUNDATION

MSSRF/PR/05/59

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Design and Printing: AMM Screens, Chennai

Foreword

The past decade has witnessed the rise of ICT-enabled development initiatives, notably the emergence of information kiosks (or telecentres) in different parts of the developing world. Concurrently, there has also been an increase in the number of skeptics who question the wisdom of investing in 'ICT4D' programmes when there are more serious concerns such as widespread hunger, poverty, malnutrition, and illiteracy. While many ICT4D experiments failed to deliver, no doubt there have been some successful experiments to show that ICTs, if used intelligently and innovatively and are embedded in a holistic development strategy, can make a difference. But these experiments are yet to be scaled up. Incidentally, MSSRF has formed a National Alliance to upscale the IDRC-supported Information Village Research Project, which operates in a dozen villages in Pondicherry, into a nationwide endeavour of making every village a knowledge centre.

How can we replicate such successful programmes? One way is to bring together development activists from many countries and facilitate sharing knowledge and experience. That is precisely what we at MSSRF have been doing in the past three years. Every year, we invite about 20 development workers – both from NGOs and from other agencies – to spend eight days with us, travelling from village to village, visiting knowledge centers and other development projects of MSSRF, meeting the volunteers and the local communities and learning from one another and sharing experiences. In addition to replicating what is done in India, the workshops allow for cross-fertilization with similar experiences elsewhere so that what is being done in similar situations can be shared, learnt and adopted where appropriate. I see these workshops as informal classrooms and knowledge is shared both by the villagers and the visitors.

The first such workshop took place in 2002 with support from Hivos, IICD and IDRC. The second workshop was held in 2003 with financial and logistic support from GKP. The third workshop held in October 2004 was also fully supported by GKP.

We invited Robert Chapman of ODI, London, and Geeta Sharma of OneWorld South Asia, New Delhi, to join the workshop as participants and prepare a report. In his report Robert concentrates on MSSRF's work and philosophy and emphasizes rightly that at MSSRF ICTs are not seen as a technical solution on their own but as enablers in a process of local prioritization and problem solving. He relates the success of the programme to embedding ICTs in a holistic approach encompassing a diverse range of development initiatives. Geeta, on the other hand, provides a narrative of events that took place and ends her report with quotes from the participants and a few suggestions.

We are grateful to all the participants, Robert and Geeta. We hope they found the workshop a rewarding experience. We are happy that many members of the GKP Secretariat, Richard Gerster, Geraldine Kouadio and Kathryn Johnson could join us on the first three days. But they missed the inauguration of the ISRO-MSSRF Village Resource Centres by India's Prime Minister through satellite-enabled video conferencing which took place on the fourth day. We are grateful to the village communities and volunteers in Pondicherry, Thiruvaiyaru and Dindigul district for their hospitality and enthusiastic participation in the workshop. We are grateful to our partner organizations – Rajiv Gandhi Veterinary College, Aravind Eye Hospitals, SEVA, DHAN Foundation – for welcoming the participants and telling them about their philosophy and work. We are grateful to GKP for supporting the event two years in a row. We consider the workshop as part of our contribution to GKP and we are looking for other ways to contribute. We are grateful to IDRC and CIDA for their support of the Information Village Research Project in Pondicherry, and to the scientists of the J R D Tata Ecotechnology Centre of MSSRF, who run the Biovillage Project.

On the last day of the workshop we asked participants to come up with one word that was upper most in their minds that would sum up their response to the workshop. Sunith from Thai Rural Net, the youngest member in the group, came up with 'Hope'. I felt very happy. It meant the workshop was a great success.

I am looking forward to the next workshop and to sharing knowledge and experience with a new set of partners. I guess if you enjoy doing something, it becomes an addiction!

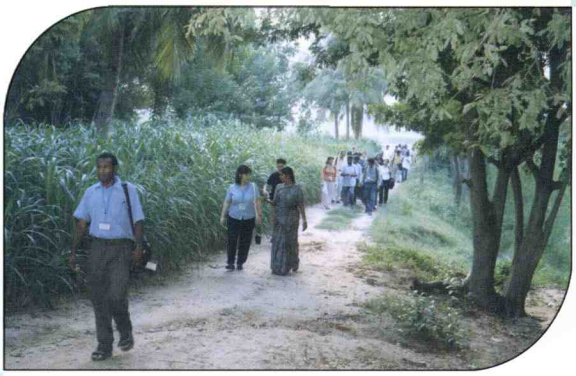
Happy reading! And your comments are welcome.

S. Arunachalam

March 2005

Arun
(Subbiah Arunachalam)
Distinguished Fellow, MSSRF

ICT enabled knowledge centres and learning in the global village[1]



Robert Chapman

The combination of the connectivity of the Internet and the flexibility of the World Wide Web has led to a revolution in information and communication. Advances in computer processing and telecommunication have further fuelled the pace of change towards an information society. For those connected, the death of distance has led to opportunities for networking and developing partnerships in a new knowledge economy operating as a global village. In South India IT companies are at the leading edge of this technological revolution and although the digital divide is as evident in India as in any other developing country efforts to bridge it are well underway. ICT-enabled knowledge centres have been established by the M S Swaminathan Research Foundation to bring marginalized rural communities the chance of being part of the global village. This has become a reality not only in terms of connectivity but by events aimed at sharing the experience with those attempting to reach excluded communities in other developing countries. The third of these South-South Exchange Workshops that took place in October 2004 brought 21 development practitioners together from 15 countries (including four from India) to learn about the MSSRF approach and share their own knowledge directly with the villagers. There were also eight others (two from Switzerland, one from USA,

and five from GKP Secretariat) who took part in the Pondicherry leg of the workshop – the first three days. This report outlines the MSSRF approach to establishing ICT-enabled knowledge centres and this experience of learning in the global village.

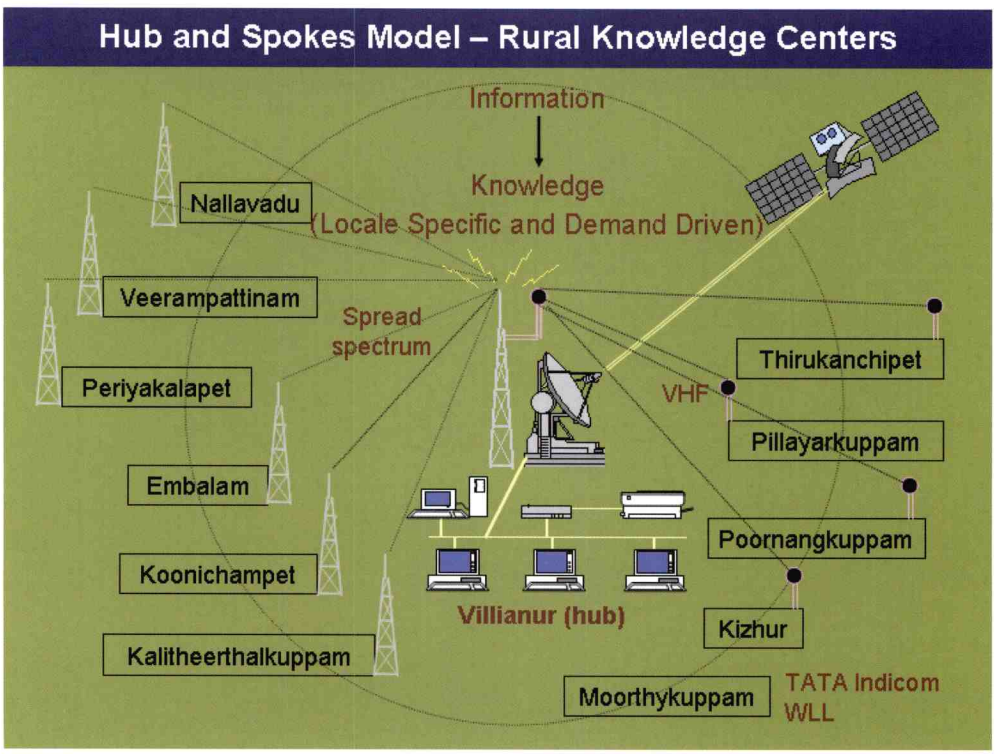


Figure 1: The hub and spokes model in Pondicherry

1. The MSSRF hub and spokes model

The hub and spokes model is innovative in two ways. First, the model is technologically innovative using the latest information and communication technologies (ICTs) to connect villages together and to the wider information networks of the outside world. Second and perhaps more importantly the institutional structure of the model is innovative in the way it is designed to *'reach the unreached'*.

Technical specifications

The Villianur hub consists of a single storey building with computers and communication equipment on the ground floor and a training room on the terrace under the thatched roof upstairs. Computers in the village knowledge centres are connected to the hub using e-mail via a hybrid wired and wireless network and power is generated through a hybrid of grid and photovoltaic cells positioned on the roof with storage in batteries on the ground floor. The staff at the hub can hold video conferences with the volunteers managing the knowledge centres in the village and can communicate with them via e-mail, telephone, VHF duplex radio and spread spectrum. Each morning an e-mail is sent with daily news, weather and market information to all the villages connected to the hub. The hub computers are connected to a LAN and to the Internet via dial-up accounts.

Institutional structure

Experts at MSSRF's Informatics centre in Chennai work closely with the other scientists such as those managing the projects of the JRD Tata Ecotechnology Centre. This collaboration ensures that the ongoing community development projects such as the biovillage at Pillayarkuppam result in a shared long term commitment to tackling the challenges expressed by the villagers themselves. From the beginning ICTs were not seen as a technical solution on their own but as *enablers* in a process of local prioritisation and problem solving. The hub in Villianur is impressively equipped and it is easy to underestimate the technical capacity of the core team based at Chennai that have designed it and actively manage and upgrade it. The staff based at the hub have a range of roles from working with the village centres, to creating databases of material in local languages and providing computer training. The village knowledge centres are managed by volunteers, predominantly groups of women many of whom have had less than ten years of schooling and have no previous experience of computers. The women volunteers represent some of the most marginalized members of the local community in terms of access to information and opportunities to communicate with others outside their household. Through managing the village knowledge centres the women volunteers are

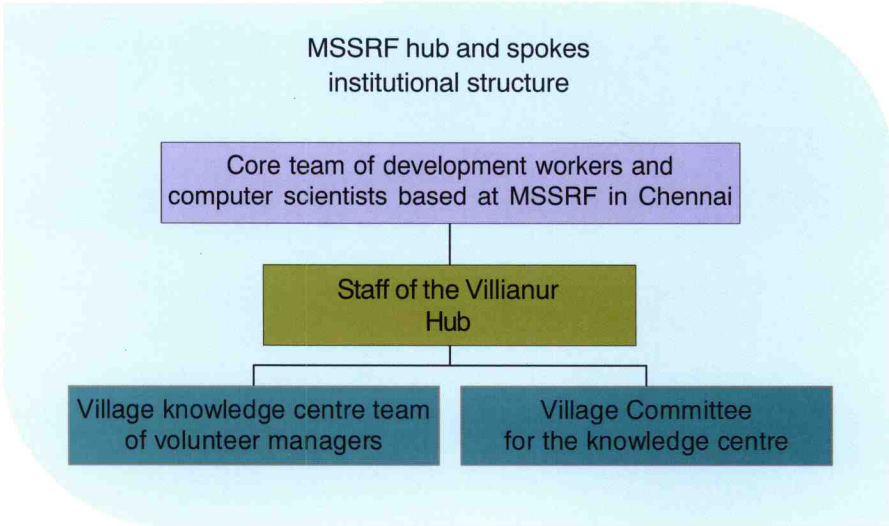
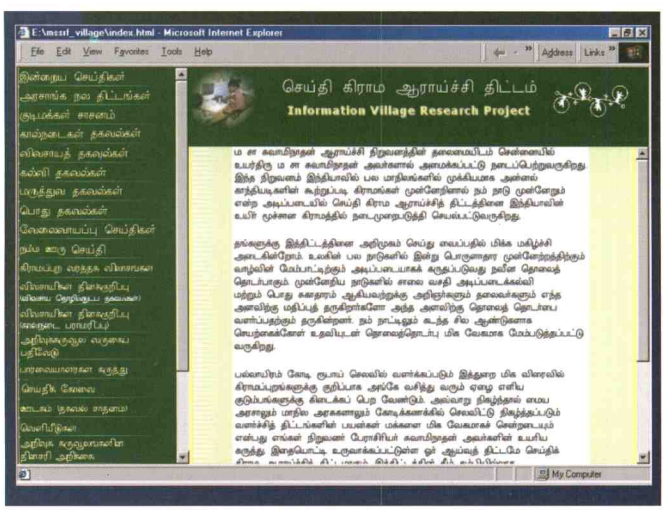


Figure 2: Institutional structure for Pondicherry knowledge centres

empowered by having a new role of assisting community members access useful information. The volunteers also have greater voice in community affairs and have established enterprises together as self help groups.

The village committee for the knowledge centre is in charge of providing suitable and well maintained premises for the knowledge centre. In villages such as Embalam the trustees of the local temple have taken on this role and in all cases the community has provided premises that is open for everyone to access.

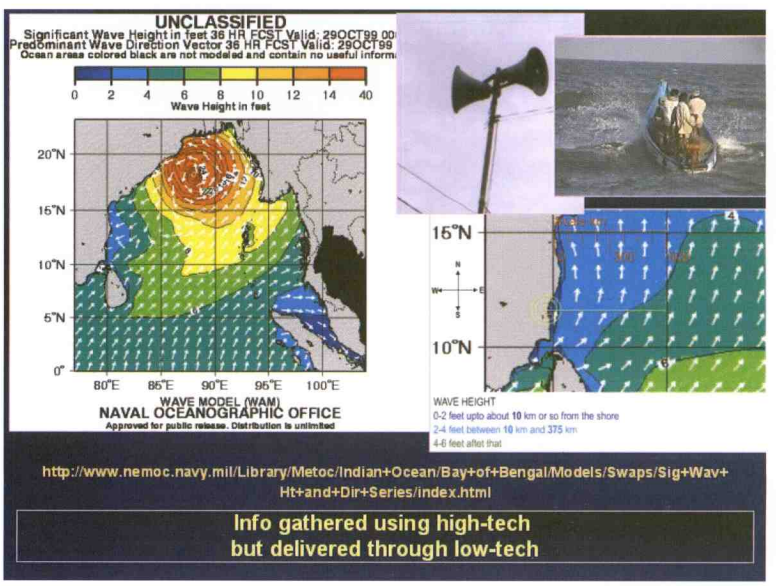


Local content creation

Local language databases on topics such as government services, agriculture and education have been systematically created since the project was initiated in 1998. Although the hub staff have access to the Internet most of the database content has been created specifically from local information sources

such as experts at the agricultural university in order to respond directly to requests from the knowledge centres. The demand driven nature of the content creation is a key factor in the operation of the hub and spokes model. In the same way as the Agricultural knowledge and information system for rural development (AKIS/RD) strategy[2] adopted by the FAO and the World Bank puts the farmer at the centre of a knowledge triangle so users of the knowledge centres are the centre of the local content creation process.

The emphasis is on *facilitating* the process of information sharing and knowledge generation at the village level rather than a didactic approach to providing materials from a central knowledge source to a passive recipient. The process is therefore a dynamic one in which the hub plays a supporting role in localising and integrating information from external sources according to the emerging needs of the knowledge centres. This is a long-term process and requires a patient and flexible approach to managing the hub and knowledge centres. One of the challenges has been stimulating the demand for information amongst villagers who were not necessarily aware of what information they wanted and how to ask for it. For this reason initial efforts concentrated on preparing databases of essentially static local information such as government services, and names and addresses of useful contacts such as doctors and vets in rural yellow pages. More demand driven



and dynamic information was then developed that could be tailored to specific village requirements. In Veeram pattinam, for example, fishermen wanted to know the wave heights forecast for their fishing ground in the Bay of Bengal. The hub centre now collects this information from a US navy website and calibrates the downloaded maps to scale for the fishing area. These are posted on the bulletin board at the knowledge centre and warnings are announced over a loudspeaker system saving many lives. A local newspaper has been established as another way of stimulating interest in local information and now 7500 copies are printed and distributed to the villages for free every two weeks.

2. Rural livelihoods

Sustainable livelihoods approaches are people centred recognising the capital assets of the poor and the influence of policies and institutions on their livelihood strategies[3].

In order to improve the decision-making of the poor it is necessary for those attempting to assist them to recognise the heterogeneity of their local contexts. In this way one-size-fits- all development solutions become less important paving the way for more pluralistic approaches. Rural livelihoods in particular are increasingly understood to involve a diverse range of strategies both within and outside the agricultural sector. The role of women and youth in household income generation must also be considered to be one of growing complexity including non-farm incomes such as remittances and wages from rural-urban migration of family members. It is clear that for information and communication to benefit the rural poor it needs to be relevant in the context of the choices available to them and to assist them to make decisions that lead to improved livelihood strategies. For this reason MSSRF has been encouraging

communities to use the knowledge centres as a catalyst for capacity building and income generating livelihood diversification.

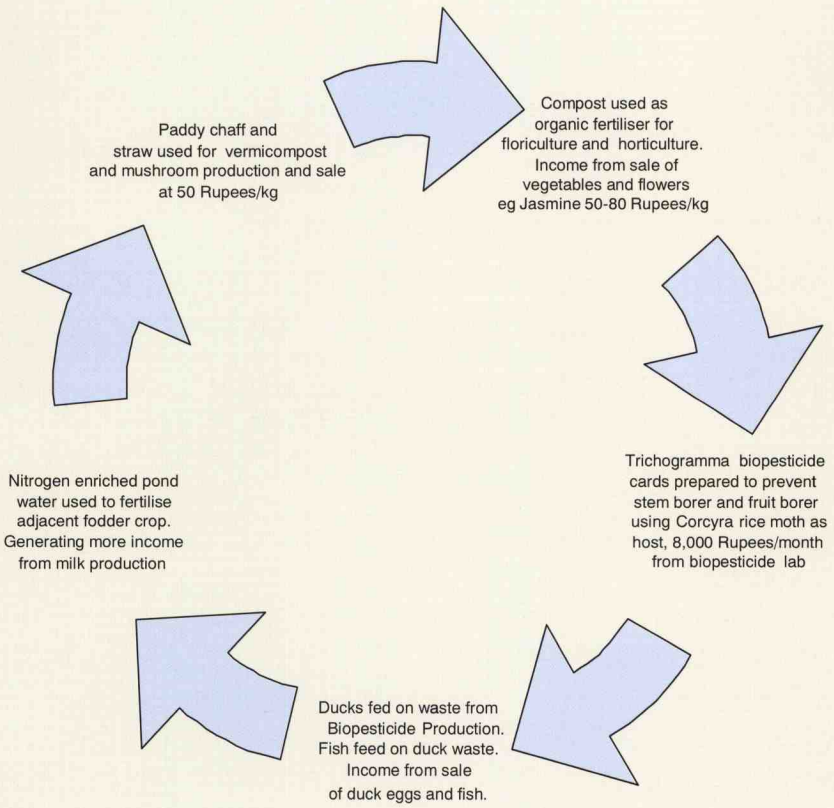


Figure 3: Biovillage ecological livelihood activities

Capacity building and income generation

The biovillage based at Pillayarkupam provides a focus for capacity building and income generating activities based on demonstrating ecological natural resource management approaches. The biovillage provides women with training on techniques for improved horticulture, floriculture, aquaculture and fodder crop production for livestock. The ecological focus aims to ensure value addition from all the activities to improve both the environment and the amount of income generated as shown in Figure 3. Training at the biovillage is based on demonstration and practical experience of the techniques involved and close collaboration with the villagers of the surrounding communities to help them adapt their own activities in similar ways. The staff at the biovillage also manage a knowledge centre on site to help coordinate the training materials and events. 179 self help groups (SHGs) have been created in 20 villages to implement some of the activities demonstrated at the biovillage with loans from MSSRF and the

Table 1: Rural livelihoods support through capacity building and income generation

Village	Livelihood activity	ICT enabling function
K Ramanathapuram	*Pseudomonas fluorescens* biopesticide production	SHG accounting software for business plan and bank loan application.
Samiyarpatti	Adult literacy training	Touch screen software personalised using photos taken by individual learners using a digital camera and use of CD writer and Flash software.
Sevanakarayanpatty	Hand made paper production using cellulose from banana stem	SHG accounting software for business plan and bank loan application.
Veerampattinam	Fishing, micro-enterprises making decorations using sea-shells	Wave height reports, fish stock data, CD production of local devotional song, e-mail contact with relatives in merchant navy.

Embalam	Farming, livestock, SHGs purchased power tiller to rent out to farmers, micro-enterprise production of shell crafts, incense sticks, soaps	Computer training, SHG accounting software, web cam for eye tests with Aravind Eye hospital, livestock information kiosk (developed by Rajiv Gandhi Veterinary College) with local language and touch screen application. Farmers access daily prices for produce on the local market.
Pillayarkuppam	Horticulture, floriculture, mushrooms, biopesticides, fish, ducks, vermicompost	SHG accounting software, computer training, coordination of biovillage training sessions and demonstrations.
Kunichampet	SHGs producing herbal medicine	Children and youth computer training, job searching and eye testing.
Kalitheerthalkuppam	Farming and milk production. Local milk co-operative encouraged by knowledge centre to install a computer for daily record keeping	Farmers access information on biopesticide and fertiliser prices, weather information at time of rice harvesting, daily vegetable market prices. Child health information and computer assisted learning program for children.
Sempatti	Farming, horticulture, floriculture	Satellite-based video conferencing between villager and experts in remote locations. Computer-aided learning programme for tribal children.

State Bank of India. The SHGs are trained to use local language accounting software to manage the business planning for their enterprise and loan repayment. The government of Pondicherry has asked MSSRF to establish a further 256 biovillages as part of a five year plan. Many women are only employed as wage labourers for 70 days a year and therefore these enterprises offer them a chance to supplement their income significantly for the rest of the year.

In K. Ramanathapuram village in Dindigul district a self help group consisting of 12 women has started to produce a biopesticide to control seed borne pathogens. MSSRF arranged for two members of the group to spend a week on a special course in Tamil at the Department of Plant Pathology of the Tamil Nadu Agricultural University in Coimbatore. The SHG is now producing the biopesticide *Pseudomonas fluorescens* for sale to local farmers and companies further afield in Trichy and Chennai. In Sevanakarayanpatty village the Jansirani SHG is producing paper and board from banana

waste. The pseudo stems that are discarded by local farmers are collected and used as pulp for a small scale paper mill installed in the village. They received training on hand made paper production from the Centre for Science for Villages in Wardha, Maharashtra. The village women who had not traveled beyond 20 miles in all their life went to another state where a different language is spoken! Now they are able to produce paper of high quality.

Another SHG in Samiyarpatti is using a knowledge centre to provide adult literacy training[4]. This programme uses a touch screen PC with a CD writer. In this multimedia programme a digital camera is used to integrate photographs of familiar people such as family members and household objects into the learning software. The trainers can then teach each person with an individualised programme. The photographs are burnt on a CD and the description (in Tamil, the local language) is written below using Flash and each letter and the full word articulated in clear voice by one of the literate members of the family or the trainer. When the individual places his/her CD in the computer the images appear on the screen and when an image is touched the words start forming and the voice is activated.

These types of capacity building and income generating activities all provide a greater range of choices for people's rural livelihoods. Women receive only about half the daily rate of men for agricultural labour (25 Rupees) and often have less formal education than men so they can benefit more from these types of opportunities.

The wide range of capacity building and livelihood activities being promoted by MSSRF in the villages gave the South-South Exchange participants considerable insight into the application of ICTs for development in India. The participants were able to describe a number of their own experiences to those managing the village knowledge centres drawing from the collective breadth of their experience outlined in Table 2.

The initial intention of the South-South exchange approach was to share scientific information and learn from the respective experiences of scientists from these countries. The range of experiences being shared by the participants of this South-South exchange also appear to be focused on the scientific and technological applications being used, in this case ICTs. However, as Tables 1 and 2 illustrate it is possible to identify a more

Table 2: South-South Exchange participants experience

Organisation	Project experience	ICT enabling function
Ghana Information Network for Knowledge Sharing (GINKS)	Advocacy on ICTs and development, capacity building, research on ICTs and development issues.	Online networking platform for civil society organisations, newsletter.
Information Network Uganda	Knowledge and information sharing between government, private sector and NGOs through newsletters, media campaigns, and workshops.	I-Network website and partner organisations functioning as I-Network nodes for content development, policy advocacy, capacity building and evaluation.
Fundacion Chasquinet, Ecuador	Public policy on ICTs, rural 'somos telecentros' network. Local content creation.	Free software and toolkits (eg for people with disabilities) developed for the telecentres.
Asodigua Telecentre, Guatemala	Education such as astronomy and mathematics for the indigenous Maya population in the district of Solola.	Internet access for students, videos provided for schools, micro-enterprise and marketing, community mobilisation through the 'somos telecentros' network.
Intermediate Technology for Development Group (ITDG), Peru	Advocacy on ICTs and community empowerment through telecentres.	Telecentres in rural communities connected with the 'somos telecentros' network.

Thai Ruralnet, Thailand.	Promoting the use of ICTs in support of rural development in Thailand. Empowering rural communities to use more traditional approaches to land husbandry.	Databases of indigenous knowledge collected. Youth groups mobilised as social entrepreneurs using ICT in rural areas.
Centre for Environment Education, (CEE) Gujarat, India.	Environmental awareness raising through innovative programmes and educational material for training and dissemination for children and youth.	Multi media materials, library and documentation centre, and secretariat for South East Asia Network for Environmental Education (SASEANEE).
Acacia Programme, Uganda.	ICTs for community empowerment with information on agriculture, health, natural resource management, governance, commerce and education.	Content for agricultural and health information to be accessed at three telecentres by rural communities.
NEEDS, Jharkand, India	Food security and liveli hoods support (eg grain banking, plant nurseries, micro-finance). Education and health information.	Rural technology park to promote rural industry and support farming using ICTs (eg for pest identification), micro-enterprises.
African Leadership Forum, Nigeria	ICT awareness raising through computer rebuilding and use in schools and youth clubs.	Donated computers 'rebuilt' by recipients to help demystify the technology with the help of professional technicians.
e-Barangay Project, Philippines.	e-government services through a consortium of government agencies, NGOs, private institutions, schools and IT groups.	Computers with internet connections and telephone lines installed in Barangays with online training and access to services such as e-Health.
Self Employed Women's Association (SEWA), Ahmedabad, India	Training for women through the SEWA Academy such as literacy, learning by doing, income generation and problem solving.	Sanchar communication unit operates as documentation centre for reports, surveys and videos, photos and magazines. Women are trained to make video productions on their own issues to mobilise other members and government policy makers.

Development through access to network resources (D.Net), Bangladesh	ICT policy and advocacy, research and dissemination, e-government, networking for capacity building through knowledge sharing among the poor.	Networks for research , business information, rural livelihood information and heritage information using databases and websites.
HELP Resources, Inc. Papua New Guinea	Media training for local youth and community telecentres.	Rural telecentres used by vanilla farmers to access new markets for their crops, arrange orders and shipping documentation.
Social Strategic Foundation, Malaysia	Community mobilisation amongst urban poor to encourage computer literacy and job matching..	Youths trained in ICTs with courses both for those in school and out of school.
Bangladesh Frienship Education Society Bangladesh	Education for all, especially in rural areas, rural development, human rights.	ICT education in village
PROTÉGÉ QV Cameroon	Environmental protection Natural resource management Quality of life.	Setting up cyberspace and library
Digital Divid Data Cambodia	Jobs and educational opportunities for disadvantaged and marginalized people.	Outsourcing data services for business and government

fundamental aspect of the experience that relates to the shared approaches to supporting livelihoods. The NGOs and others taking part in the South-South exchange workshop all aim to serve their respective stakeholders in ways that ultimately impact on their livelihoods and ICTs are being used as enablers in the process. MSSRF has developed a model of using ICTs as an enabler for development through a long-term and flexible approach that puts community ownership at the centre of the knowledge sharing activities. In sharing this approach with MSSRF the NGOs are not just learning about the technological capacity made available in Indian villages but the wider NGO concern of empowering communities through innovative means. In this way the South-South exchange approach can help to reduce unnecessary focus on ICTs as a means to an end in themselves and encourage NGOs to learn from each other to harness them as tools for achieving their existing and long standing goals.

3. New developments and Future prospects

To build on the experience in Pondicherry MSSRF has established a National Virtual Academy for Food Security and Rural Prosperity (NVA) to promote learning at the village level. Outstanding local experts such as the volunteers in the knowledge centres will be selected as fellows of the academy to formalise their role as knowledge brokers within the community. The NVA will provide a basis for co-ordinating further capacity building efforts within the communities and retain the emphasis on local ownership and local content creation. A National Alliance has been formed to promote Mission 2007 that aims to make 'Every Village a Knowledge Centre' by the 60th anniversary of India's independence on 15th August 2007. This will entail establishing more than a hundred thousand knowledge centres to cater to over 630,000 villages and a partnership of over 90 organisations from public, private and non-governmental sectors has been created to take this initiative forward. At Thiruvaiyaru this partnership approach showed initial high-profile results with the inauguration of a village centre with a live telemedicine diagnosis of a patient through a satellite connection[5] between five remote locations including the Prime Minister's residence in New Delhi. At this event South-South exchange partners were able to witness history in the making and be part of the national news on their first visit to India. More important though is that participants were inspired by the creativity and ambition of MSSRF and the heights to which an NGO can aim for on behalf of the grassroots communities it has chosen to serve; literally into space with the satellite link and figuratively to the holder of the highest political office in the country, the Prime Minister.

References:

[1] A report based on the South-South Exchange Travelling Workshop, 15-22 October 2004, sponsored by the Global Knowledge Partnership (GKP).

[2] FAO/World Bank (2000) *Agricultural Knowledge and Information Systems for Rural Development: Strategic Vision and Guiding Principles.* Rome: Food and Agriculture Organisation of the United Nations.

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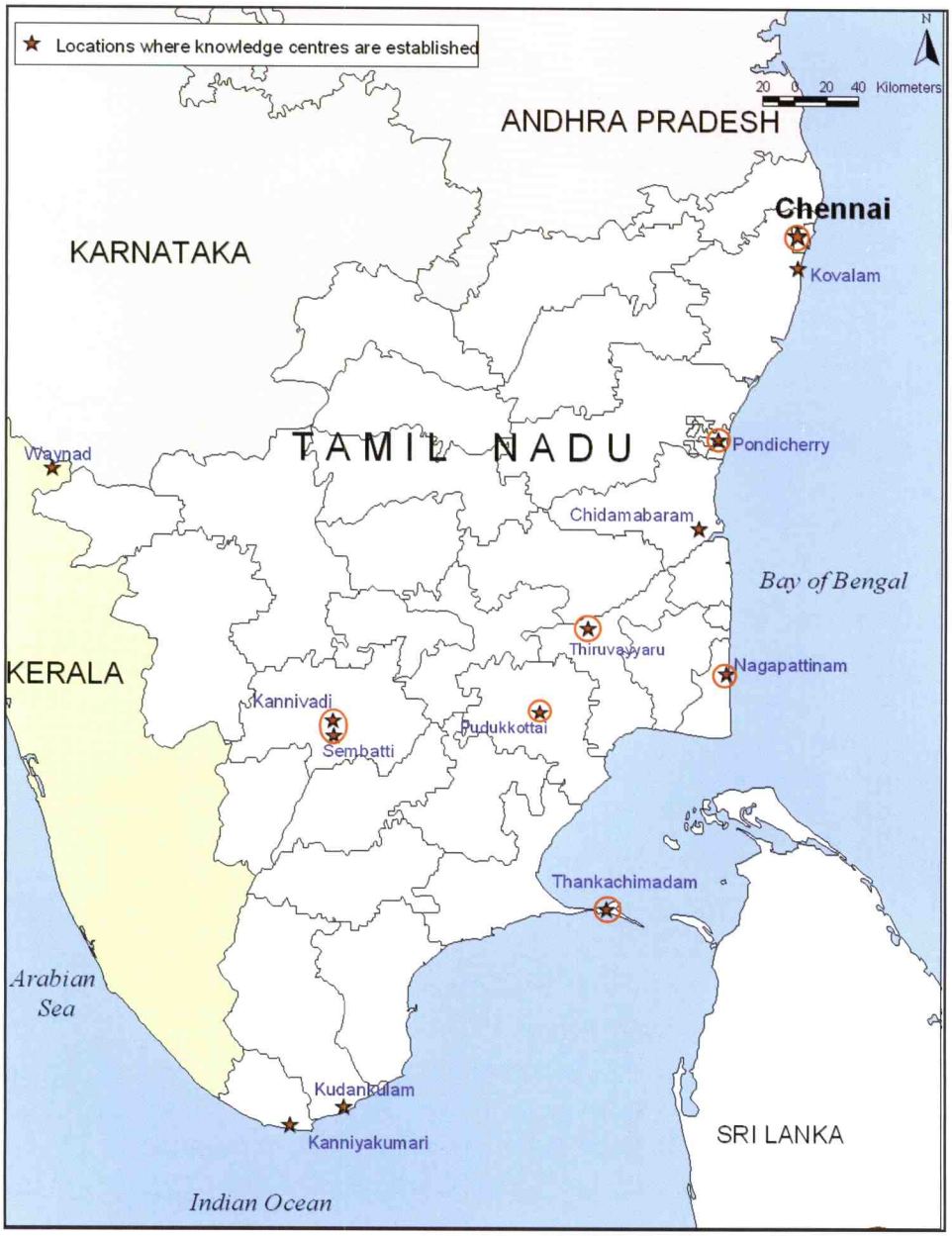
[4] Funded by the Commonwealth of Learning (COL) and with technical support from MSSRF.

[5] With the Indian Space Research Organisation (ISRO).

About the author

Robert Chapman is a research officer at the Overseas Development Institute (ODI) in the Rural Policy and Governance Group and is part of the team managing the Agricultural Research and Extension Network, which is ODI's largest network with over 1000 members in 40 countries. He has undertaken research and consultancy for bilateral and multilateral development agencies on information and communication for development, agricultural research and extension systems and sustainable rural development.

Project sites some of which participants visited



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15 - 22 October 2004, Tamil Nadu & Pondicherry, India

Workshop Report

Geeta Sharma

Programme Manager, Advocacy, OneWorld South Asia

The M S Swaminathan Research Foundation (MSSRF) based in Chennai, India, organized the third South-South Exchange Travelling Workshop during 15-22 October 2004 in Southern India, with financial and logistic support from GKP.

MSSRF held the first South-South Exchange Travelling Workshop in October 2002, with financial support from Hivos, IICD and IDRC, and the second in October-November 2003 with finanacial and logistic support from GKP.

Purpose

The workshop concept was based on the premise that mere academic education and training was not good enough for development practitioners. Its aim then was to facilitate the exchange of knowledge and experience between visiting participants from civil societies of developing countries and the village communities engaged in ICT-enabled development in South India. These Village Knowledge Centres, part of MSSRF Information Village Research Project (IVRP), are an initiative aimed at ICT-enabled knowledge delivery to the poor for alleviating poverty.

Participants

In all, 21 participants from 15 countries of Asia, Africa and Latin America attended the workshop. Most of these participants were (programme officers or implementers of ICT enabled development projects in NGOs, business and government departments). A few members of staff of the GKP secretariat, two professionals from Switzerland, and a student intern from the USA also joined the first three days of the workshop.

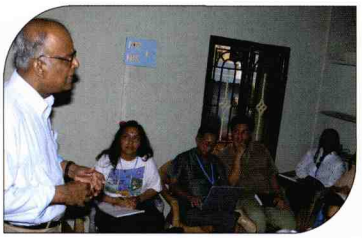
Workshop format

The workshop focused on learning by doing and interactive learning. Hence most of the workshop happened at project sites and only a couple of sessions were held at MSSRF headquarters or in a conference room. In a valedictory held on the last day of the workshop at the MSSRF headquarters, participants shared their learning and were awarded certificates of participation.

The workshop began with a brief orientation session on October 15 in Pondicherry where the participants provided a profile of their organizations and their work. Prof. Subbiah Arunachalam (Arun), who headed the MSSRF team, outlined the objectives of the workshop.

Thereafter the workshop venue shifted to the rural pastures of Pondicherry and Tamil Nadu. The participants were taken by a van from Chennai on a week-long sojourn to far-flung villages and districts to see the ICT-enabled development projects. They travelled to 12 villages and project sites to interact with the local communities and knowledge centre managers and representatives of NGOs and government organisations involved in development projects.

The project locales varied from the costal villages of Veerampattinam in Pondicherry (eastern coast) to the lush green surroundings of Thiruvaiyaru, in Thanjavur, known as the granary of Tamil Nadu or the equally green villages of Sevenakkarianpatti and Samiyarpatti in the horticultural belt of Dindigul district.



At each of these stops, the participants were shown power point presentations by the volunteers and project staff. Short discussions with the communities followed these and the participants shared experiences. As many members of the local communities are not fluent in English, the MSSRF team, mainly Prof. Arun, translated the proceedings.

In a departure from earlier workshops that focused on MSSRF project sites, the workshop participants also visited three organisations to learn about their ICT interventions in the development programmes. These were the Dhan Foundation, SEVA and Aravind Eye Hospital, all three of them in the temple town of Madurai.

MSSRF Team

Prof. Subbiah Arunachalam led the MSSRF team that guided the participants through eight days of learning and sharing. He was ably supported by Senthilkumaran, Rameshswaran, Sivakumar, Rajamohan, and Rino. Knowledge Centre volunteers and project staff at the Knowledge Centres took part in on-site exchanges.

Experiences from the field

The workshop was a rewarding experience for the development experts and for many of them it was the first exposure to India, Asian poverty and rural reality. It provided an opportunity for the participants to look at and compare the development challenges in alleviating poverty in their own countries in perspective.

What was striking was the sheer magnitude of the challenges because of the vast population, the development innovations that were participative and the integration of technology in the development paradigm in a way that empowered the communities and did not treat them as mere testing grounds.

Also, the workshop clearly demonstrated that information and communication technology could be an integral component of development if used intelligently and innovatively. And its deployment can be successful if it is integrated with the development

work. Its use has to be synergised to help address each aspect of poverty – improving agriculture and animal husbandry, improving health care delivery, creation of livelihood opportunities, facilitating micro credit and micro enterprises and help in capacity building.

In some of the villages, the MSSRF was already running development projects and ICTs were brought in to add value to the efforts, by involving the communities in every aspect of setting up and running the centres.

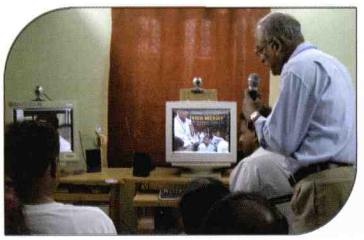
What we learnt as we moved from one project site to another is outlined below.

1. Neutral technology used intelligently

Rapid advances in computer processing and telecommunication have complimented the promise held by Information and Communication Technologies in alleviating poverty. These developments have sparked off telecenter initiatives across continents. But clearly the deployment of technology tools has not been successful in all cases.

The information villages of MSSSRF clearly showed how the right technology and the right mix of technology can bring out the desired results. The first stop of the Travelling workshop, the Villianur Hub in Pondicherry and the village centres it links to in a hub-and-spokes model, amply demonstrated this.

The Villianur hub, located 13 km west of Pondicherry, is connected to 11 villages in the area in an information loop that helps people access information they need to improve their lives. Alive to limitations of the telecommunication and power infrastructure, the MSSRF experts put together a smart mix of technology tools to ensure that the information linkages did not break due to infrastructure problems. So a hybrid wired and wireless network, comprising computers, telephones, VHF duplex radio devices, spread spectrum and email connectivity through dial up telephone lines and VSAT that enables voice and data transfer, was put in place. The solar panels installed at the rooftop of the single -



storey building of the Villianur hub ensure that the computers run even when there is a power failure.

The wireless spread spectrum tower atop the building helps connect the villages that don't have telephones and receive the daily information bulletin from the hub on market prices of goods, weather reports and general news put together by volunteers in the community.

This innovative mix and match of technology provided useful insights to the participants to overcome infrastructure and technology challenges in their countries. Many of them who were grappling with problems of power and telephone connectivity found these options useful.

2. Relevance of information to local needs:

Veerampattinam, a fishermen village and a popular knowledge centre linked to the Villianur hub, showed how the relevance of content to the needs of the people can add to the success of a telecentre.

Weather reports and information on wave heights are important for this village where fishing is the major vocation. This information downloaded from a US Navy website by the MSSRF staff at the Villianur hub is delivered to the villagers, using an innovative combination of modern (internet sourced and email) and traditional (announcements through loudspeakers) means.

Interestingly, a powerful lamp fixed at the top of the spread spectrum antenna, the tallest structure in the area, serves as a lighthouse for the fishermen who go out for fishing usually in the night. The idea of using the tall spread spectrum tower as a 'light house' came from the village community.

An electronic board installed in the centre, located in a Panchayat building next to the village temple, gives valuable tips to the fishermen on the availability of fish in the sea. The information on potential fish zones, received by Fax from the Hyderabad-based

Indian National Centre for Ocean Information Services of the Department of Ocean Development, has helped them increase their yields.

But it's not just the fishermen or men who are benefiting from the information loop at these knowledge centres. A participatory, bottom-up model that required sensitivity and patience by the project team, led the villagers to themselves assess, decide and even demand information that was of use to them. So in all the village knowledge centres, dynamic information is gathered and disseminated daily. This includes information on government and fisheries schemes, employment opportunities, and even counseling. In other knowledge centres, this extends to information on crops, farm practices, animal husbandry, market prices, education, and health care.

This local content creation and sharing in the villages of Pondicherry provided the basis for the Open Knowledge Network (www.openknowledge.net) project implemented by OneWorld International and MSSRF and many other OneWorld partners.

The OKN project seeks to harness and facilitate horizontal knowledge generation and sharing among grassroots communities. The content is created using bottom-up participatory methods involving the communities and disseminated by knowledge workers across states, regions and continents, using Internet and world space radio technology.

The OKN has facilitated the creation of a supplement for the local newspaper giving information of daily use for the village communities and a weekly radio programme on traditional knowledge, which is being broadcast on the state radio once a week.

The newspaper (Namma Oor Seithi or our Village News) has become a popular source of information on jobs,

market prices, and matrimony ads and other relevant information. It has started attracting announcements from government departments and local traders as well. The newspaper in fact helped achieve in Pondicherry what the local government machinery could not. A school started English medium classes, but failed to attract students for many months after its was inaugurated. At this point, local volunteers stepped in to help. They announced the English medium classes through the village newspaper. The impact was predictable - more than 150 students were enrolled within a month.

Another innovation, the creation of Rural Yellow pages, evoked a lot of interest among the participants. The Yellow pages gave information on every conceivable daily need of the village communities. These ranged from information on banks, barbers and brick sellers, hospitals, and government agencies to tailoring shops and lottery agencies, to the post office, printing press and Panchayat (village governing body) office. A survey by the MSSRF team revealed that it was of immense use to the villagers. Information on useful telephone numbers, doctors, midwives, vets, locksmiths and a host of others, has proved to be of considerable use to the villages.

In discussions with the communities, it became clear that the key to creating successful information centres was to provide demand-driven information that put people's needs before what experts thought they needed.

3. Local ownership and volunteering

Putting technology in the hands of the communities and local ownership were the clear focus of these knowledge centres. Participatory Rural Appraisals were carried out and village communities themselves identified an accessible rent-free building (in many cases it was the village temple or a public building that housed these centres), and provided electricity and volunteers to run the centres. MSSRF provided the equipment and the project staff gave training for the volunteers who themselves manage the knowledge centres.

MoUs signed with the community and setting up of community level management committees for the knowledge centres have helped ensure the safety of the equipment

and the smooth functioning of the knowledge centres. In Veerampattinam, as many as six volunteers, who have been associated with the KC since its inception, continue to volunteer their services.

The centres also impart computer training to students and local youth. The nominal fee charged for this was the only monetary incentive for the volunteers. But the gains from this centre to the community were big enough to encourage community ownership.

But more than the money, as the participants learnt during their interactions with the volunteers, it was the benefits that accrued to them as families and village communities that made them devote considerable amount of their time to running the centres.

The participants were inspired when they heard that the initiative for some of the centres such as Sevenakkarianpatti where dalit women had set up a paper manufacturing plant and the knowledge centre at Kalitheerthalkuppam, a milk production village, came from the local communities.

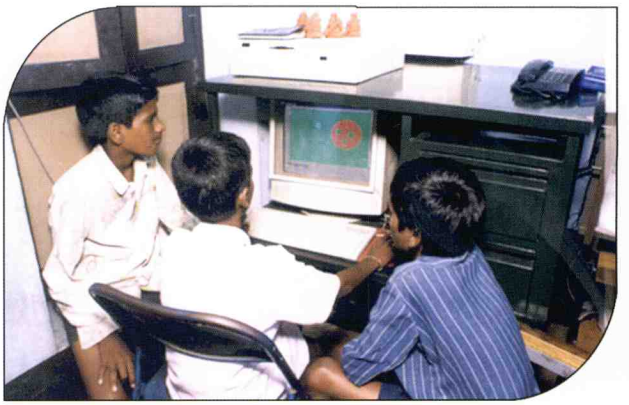
4. Pathways to a development Antyodaya *(unto the last)*

The local ownership model, in which the communities own and manage knowledge centres, did not just bring information that helped improve lives of the village communities. Quietly and sometimes pro-actively, it also opened doors to social change in which women (discussed in Genderpreneurship section) and the Dalits (traditionally marginalized groups based on caste stratifications) got mainstreamed.

The guiding philosophy here was the Gandhian concept of Antyodaya (unto the last). All the knowledge centres, housed in community owned, public buildings are accessible to all irrespective of gender, caste, educational status or class affiliations.

This Antyodaya concept unfolded at two levels. One where the Dalits and other marginalized groups were able to go to these centres for information and even work as volunteers in these Knowledge Centres and gain acceptability in the community.

A dalit woman labourer demanded her rightful wage of Rs 60 as against Rs 40 being



given by the labour contractor after she learnt of her entitlement from the information centre. The contractor refused to pay and the woman had to go without work for some days. Finally, the contractor, who needed the casual labour, came around and agreed to pay her the entitled rates.

At another level, the Dalit villages came to the fore to demand the setting up of knowledge centres in their villages. Once opened, these centres became such valuable sources of information that people from neighbouring, non-dalit villages, came to them for services.

A case in point is Koonichampet, a landless labourers village, where a knowledge centre was opened in 2003, on demand from the villagers. Almost 80 percent of the village population lives below the poverty line. But their determination and enthusiasm to reap the benefits of information have begun to change lives.

The Koonichampet centre is run by youth volunteers and provides computer education, information on employment opportunities, and eye care and paramedic facilities. The employment information and the cattle care tips it provides has helped many families, for whom cattle or employment outside is the only source of sustenance. The centre has also emerged as an information hub for neighbouring villagers that come here to access relevant information from employment to cattle care to entitlements and educational opportunities.

For the participants, many of whom were unaware of such caste-based apartheid, the story of this village provided an inspiration. "This has shown us that poverty is just a definition that can be changed if people decide to take charge of their lives. The only propeller they need is an empowering tool, such as information," was a comment that Ortese Vitalis of Africa Leadership Forum, Nigeria, made.

Also, as Natalie Kimbugwe, I-Network, Uganda pointed out, the Koonichampet example reiterates that technology is neutral. Only, it needs to be used appropriately. This

to her was a learning that could be used in any situation, in any context in countries grappling with poverty and false divides.

5. 'Genderpreneurship'

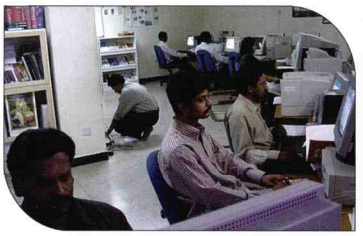
The knowledge centres also showcased how technology used appropriately could empower women. In many of the knowledge centres, women were at the helm as volunteers, knowledge workers, information gatherers and disseminators, managers and as beneficiaries. Not just that, these women, were able to use the information to bring larger benefits to their communities and not just to themselves. In most of the centres, the women at the helm are sourcing information, providing computer education, forming Self Help Groups (SHGs) and are using the loans to educate their children and start cottage industries.

The **Embalam Knowledge Centre**, opened in 1999 in a village temple, is fully managed by women who have been recognized as neutral players above the caste and political machinations that plagued the centre in its initial days.

Two of them, Usha Rani and Kasturi, have won recognition for their social commitment as Fellows of the National Virtual Academy, an initiative of MSSRF to honour and train grassroots knowledge workers.

Today, these women, who had only basic level of education and no computer training, are facilitating computer courses and even running family counseling centres in the evening. They are also using the SHG accounting software developed by MSSRF, and are helping women from neighbouring villages set up such SHGs.

Handling computers and computing and



providing information to the entire village have given the women a new confidence and status that was unimaginable earlier. "Without this knowledge centre we would have been ten years behind in opportunities and awareness," commented Usha Rani.

One of the participants asked the women how they felt at being given this power by their men folk. The women were quick to retort with confidence, in the presence of the men present there, " we were not given these opportunities; we took them and showed the way to the men!" The village men, acknowledged the fact with a smile.

It's not just about confidence but also sustenance. The knowledge centres have helped women set up self-help groups and starting micro-enterprises.

These SHGs were happy with their success and are of homogenous compositions. In Pillayarakuppam, the hub of bio village activities, the women SHGs, supported by MSSRF, were sourcing loans and training facilities to help their members with economic opportunities through organic farming, horticulture, floriculture, and mushroom farming. Similar initiatives are also taking place in Dindigul district of Tamil Nadu, where a website [www.oddanchatrammarket.com] assists the producers to announce their stocks to upcountry buyers. A kitchen garden has been initiated at the Sempatti knowledge centre to demonstrate the nutritional value of organic farm produce.

In Kalitheerthalkuppam, a milk production village, women were at the helm of managing the centre and a leading milk cooperative. Like other centres, they provide information on cattle care, education and employment and local farming information as well. The women are using ICTs to ensure strict quality control of their milk produce. For instance they use technology to measure and record the volume and fat content of the milk brought in by members and for maintaining accounts and calculating monthly payments. They also send information on fat content to the central milk co-operative to ensure that there is no dilution of milk in transit.

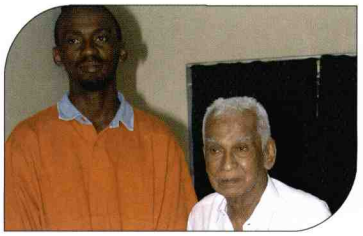
Enthused by this innovative use of the information and technology loop, men in the neighbouring villages have approached the women to help them set up similar cooperatives. For Ambika, a knowledge centre volunteer and NVA fellow, who helped

in setting up of the centre without any monetary incentive, " This inspiration to others to set up such centres is incentive enough."

Women of K. Ramanathapuram village in Dindigul district provided one of the most inspiring examples of *genderpreneurship.* Some women who had a chance meeting with a MSSRF worker in a seeds cooperative meeting, showed initiative in setting up their own micro-enterprise. Twelve of them formed a self help group, raised the money for two of them to take training from the Department of Plant Pathology of the State Agricultural University, arranged by MSSRF, and set up an enterprise to produce a bio-pesticide – *Pseudomonas fluorescence* – to control seed-borne pathogens. Their product is not just a success but is now being marketed to local farmers, and companies in Chennai and other districts. These women, who have only elementary education, have also developed a five-year business plan.

In a nearby village called Sevenakkarianpatti, a group of dalit women have set up another SHG, named after Jhansi Rani, the legendary Indian warrior queen, to produce hand-made paper products from banana waste. Here again, it was the knowledge centre enabled information and handholding support by MSSRF that helped them take a loan, travel hundreds of kilometers to another state to get the relevant training and set up the small scale paper mill. The women are using the ICT facilities offered by the nearby knowledge centre to market their produce. They have even opened an email account to handle the product related queries. These women have come a long way from working as casual labour at Rs 25 a day and that too for only 120 days of the year. They have now repaid most of their loans taken with MSSRF's help. They too have a business plan and put their earnings back in business. The only money they take home is for their sustenance of their families. And the rates they claim for their labour is a pittance – Rs 30 (two-third of a dollar) a day!

The biopesticide production, at K. Ramanathapuram, started much later than the paper production at Sevenakkarianpatti, but is already a profitable venture. Creating a market



for the hand-made paper in an organized sector is proving to be difficult for the village women. Here is a challenge for MSSRF to make this dalit-women-run enterprise a financially viable business.

Another sterling example of women's initiative awaited the participants in Samiyarpatti village. Here too an SGH, led by Sridevi, a young spirited woman and an NVA Fellow, is using the knowledge centre to fulfill a felt need of the villagers – adult literacy.

The women managing the knowledge centre to provide adult literacy training are using visually enabling software developed by MSSRF. A digital camera helps integrate familiar images—of family members and household objects – into learning software. The touch screen that displays the words when these images are touched helps the person relate the written word to the visual. As the picture appears on the screen the corresponding word is formed letter by letter and is accompanied by each letter and the word being pronounced clearly by the facilitator. The multimedia approach makes it easy for the learner. More than 50 adults in the village have gained from the Commonwealth of Learning (CoL) supported programme in the past two years. A woman beneficiary of the adult learning programme proudly told the participants how she was able to find her way back to the village without any assistance when she lost her way home during a recent pilgrimage to a temple town in a neighbouring state.

The experiences of these villages proved valuable for the participants who were grappling with issues of gender bias and access to technology, especially in countries such as Papua New Guinea, Cameroon and Bangladesh.

Enabling institutional support

The Knowledge Centre approach also clearly demonstrated that a committed NGO and community efforts by themselves were not enough to sustain and develop these efforts. Government and institutional buy in and support are important too.

The pro-active support of two institutions – the Rajiv Gandhi Veterinary College and the Indian Space Research Organization, were good examples of how such linkages can add critical value to such programmes.

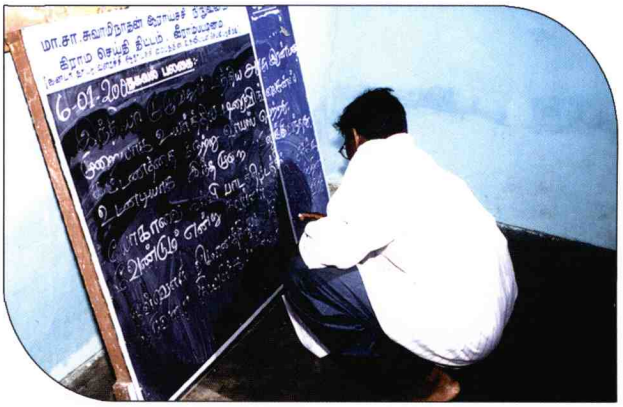
The Rajiv Gandhi Veterinary College in Pondicherry is providing information on animal husbandry and training to village communities, many of which depend on their cattle for sustenance. Training and timely interventions by the staff have helped develop a cadre of paramedics in villages and save lives of many cattle. A touch screen interactive kiosk developed by the College to enable villagers to get information is used extensively.

The workshop participants saw at Thiruvaiyaru in Thanjavur district, the unveiling of another partnership where MSSRF and ISRO together launched, the Village Resource Centre Project. The project aims to use India's space technology to deliver, to rural areas, critical information relevant to their needs. Thus three Village Resource Centres in Thiruvaiyaru, Thankatchimadam and Sempatti and the MSSRF headquarters at Chennai were connected via a satellite-enabled video and audio link. Each centre was able to communicate through videoconference with the other centres to seek information on health, education, agriculture and more. In Thiruvaiyaru, where the participants were present to witness the formal inauguration of these centres by the Prime Minister of India Dr Manmohan Singh via videoconfernce link from his residence in Delhi on 18 october 2004, a 38 year old woman suffering from a heart disease obtained medical advice from doctors sitting in far away Chennai.

As Mahmud Hassan from D.net Bangladesh described, it was "an experience in witnessing history being made."

Learning from other organizations

In a departure from the earlier two workshops, this time the participants visited three



other organisations integrating ICTs innovatively in their development programmes.

SEVA is an NGO based in the Temple town of Madurai. The NGO is involved in identifying, documenting and communicating indigenous agricultural and rural technologies and grassroots innovations. Interactions with the SEVA founder P Vivekanandan, gave the participants points to ponder over knowledge flow. Through its work, SEVA has shown that traditional and indigenous knowledge needs to be encouraged and given due recognition. Also this knowledge needs to be shared and communicated to other rural areas, which can gain from these innovations. ICTs he felt had a potential to facilitate this. Incidentally, MSSRF had invited Mr Vivekanandan to conduct workshops on indigenous knowledge and traditional methods of animal husbandry at Villianur for the benefit of the rural communities in Pondicherry.

DHAN Foundation, a professional development organization, focuses on micro finance, tank fed agriculture and capacity building of professionals for the development sector. The foundation has added an ICT dimension to its programmes and is currently running over 30 village Internet centres in Tamil Nadu. These centres help the village communities send applications for birth and death certificates, and sending queries to Aravind Eye hospital about eye care and to agriculture specialists about crops. The foundation also runs computer aided adult literacy centres. Dr M P Vasimali, Executive Director, in his interactions with the development experts, cautioned about the hype created globally on the potential of ICTs for development. He said research and relevance of ICTs to local people and the sustainability of such initiatives need to be evaluated carefully.

Aravind Eye Hospital: Led by the vision of octogenarian, Dr G Venkataswamy, popularly known as Dr V, the Aravind Eye Hospitals in India are committed to providing eye care to the poor.

The Aravind network of hospitals provides free eye care (mainly cataract surgery) to

over 100,000 poor in India every year. In a novel scheme, fees charged from 30 per cent of the patients help subsidize or provide free eye care to the rest of the 70 per cent.

To ensure that its free services reach the unreached the hospital has tied up training programmes with NGOs such as MSSRF and DHAN foundation to take eye care to the rural communities. These NGOs test members of the local communities and transmit case reports and photographs of eyes by email or through video conferencing to the doctors at Aravind. Those needing surgeries are brought to the hospitals by village volunteers.

Dr V, whose fingers were crippled by rheumatoid arthritis when he was 45, trained himself to hold the scalpel and perform cataract surgery. In time, he successfully performed thousands of eye surgeries. His story and simple message: *"If you believe that you can, it is already done"* inspired one and all.

Summing up, Valedictory and Certificate Distribution

This final day of the workshop was at the MSSRF headquarters in Chennai. The participants discussed and shared their learning and experiences in small working groups. This was followed by a Plenary where certificates were distributed to the participants.

South-South learning and sharing

The interactive sessions between the development experts and the grassroots level workers at the end of each site visit allowed for the experts to share their learning from the grassroots communities. Also it gave the village communities a chance to learn from experiences in other countries.

Visitors First

Here are some comments by the participants about what they were taking home

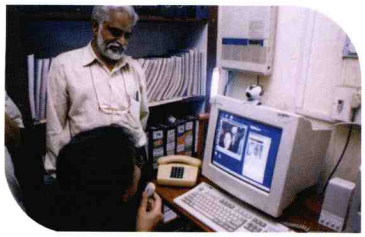
For Maingu Christopher of HELP Resources, Papua New Guinea, the experience had shown how community participation and interest increased ownership of the process. The support role of NGOs, research and academic institutes adds the right value to the project as against being impositions of perceived knowledge from the top. Also the cost of ICTs (the way they have been used in the Knowledge Centres) makes them favourable to the use of ICTs.

For Sunit Shrestha, Director Thai Rural Net Group, Thailand, it was an experience in learning what poverty is all about. The magnitude and intensity was immense. But project experiences had shown that if ICTs are in the right hands and have the right support, they could help alleviate poverty.

For Natalie Kimbugwe, I-Network Uganda, the project had shown the courage in the people to develop themselves as individuals and as a nation with minimal emphasis on monetary benefits "Also, I realized that the women are very strong and they are fighting hard to do away with poverty but one thing for sure is woman can not be isolated from man and vice versa; the two have to learn to respect each other and work together in harmony."

For Maddikera Balaji, Project Coordinator, Centre for Environment Education, India, Willingness to volunteer by the community, a core factor at all the centres, was a great plus point as paid services are difficult to sustain in the long run. Active women's participation - reducing the risk of trained people leaving the village for greener pastures in nearby towns and cities, helps towards sustainability of such programmes. He also felt that "The Open Knowledge Network centres should be extended to other NGOs country wide for greater information sharing among the communities of all the states of India."

For Mahmud Hassan, Programme Director, D.Net, Bangladesh, commitment and vision of community people are more important than their educational level and technical skills to run and operate such centres. "Information dissemination is the purpose



and ICTs can be helpful tools and should be used only when necessary and effective."

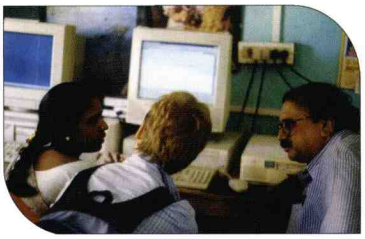
For Frederick Kintu, Project Officer, National Acacia Programme, Uganda, it was good to understand the concept of knowledge centres was borne from the minds of the rural dwellers themselves. The knowledge centres which are similar to Rural Tele-centres in some parts of Uganda and other developing countries have proved to be of paramount importance to both the natives of the villages and to the local govt. for channelising useful information to the local people. "However, the MSSRF should try to position the knowledge centres in a way that the direct support and assistance can be got from the government as well so that the derived costs on service delivery are kept at the minimum and to reduce bureaucratic tendencies in government circles."

For Siyam Siwe Sylvie, Coordinator, PROTÉGÉ QV, Cameroon, the workshop provided her insights into practical ways of using ICTs to alleviate poverty; new strategies for women participating in development processes (with them and not for them); the attitude that giving the skills to the poor through ICTs to change their lives improves their confidence and permits to go faster in the resolution of their problems and that technology is accessible to everyone, it is just a matter of using the most appropriate one.

For Fernandez Cecilla, New Technologies Program Specialist, ITDG, Peru, the learning was that technology and services in the knowledge centres had been adapted to the needs of the people; a volunteer network had been built to support the system and it was from the community and that there was a happy blend of old and new technologies and traditional knowledge was given its due importance and was being used and shared.

For Joshua Kofi Mangesi, Coordinator, Ghana Information Network for Knowledge, " the focus of the knowledge centre was not on all the fancy computer equipments, but more on how the communities were improving their livelihoods using the power placed in their own hands the power of information; to innovate, and take charge of their own destinies."

For Murari Choudhary, Executive Director, NEEDS, Jharkhand, India, the workshop provided insights to improve his organization's ICT interventions in livelihood



and governance spheres "The workshop has helped me in the following two ways – in improving the intervention model and analyzing the issue of our plan on 'hardware settings' for block hub and village knowledge centres."

And then the hosts...

For the village communities and the volunteers and the torchbearers of the ICT led knowledge revolution the questions to the visiting developing experts veered more on their country experiences. Suggestions to improve the already working model were provided. For SHGs for instance it was recommended that they upgrade their data management skills and also opt for eco-tourism to exploit wider markets for their micro-enterprises. Those involved in organic farming, for instance, could tap the growing market for organic foods. The village head of Koonichampet village asked about the land ownership and farming patterns in other countries and was pleasantly surprised to learn that women had the ownership rights in countries such as Ghana and Cameroon. Participants from India offered to share with the village communities, best practices in similar enterprises and SHGs in their areas.

Suggestions for Change

The participants made some suggestions on the workshop format:

- More time should be given for interaction with the communities.
- A folder of all presentations (in English) presented to the delegates in advance can help save time for interaction with the communities.
- Not just successes but failures and challenges should also be shared and discussed.
- A short presentation of Indian culture, people and history on the first day
- Less time for Travelling and more for exchange between participations after visits

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- A short feedback session should be held every morning before starting for project sites.
- Every day of the workshop, two or three participants can make presentation on their orgnisations for better sharing and interactions.

In a nutshell

"There are a number of small groups and institutions around the world actively working in the field of ICT-enabled development and poverty reduction. Why not bring them together and take them to different communities where some good ICT-enabled development work is taking place for exchanging their knowledge and experience among themselves as well as learning from the insights of the local communities that the group will be visiting," said Prof. Arun, who conceived the idea for such a South-South exchange and worked to make it a reality. The third of such workshops with support from GKP has largely achieved its objective of bringing about such learning by sharing.

For all those involved in the interactive learning, being there (on site) seeing it all, absorbing the learnings and the lessons and then putting them into practice, in relevant situations, is a format worth continuing and improving. Certainly, the exchanges in real world settings is likely to be more productive than the exchanges and sharing on the subject that is taking place in conference halls across the world.

About the author

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