ICTs for Participatory Local Development: Exploring a Systemic Approach

Workshop held by IT for Change in partnership with United Nations Development Programme

December 9th - 10th, 2008
Hotel Capitol, Bangalore

Workshop Report

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Acronyms

APC	Association for Progressive Communications
CA	Cape Access Project
CBO	Community Based Organisation
CELAC	Collecting and Exchange of Local Agriculture Content
CIC	Community Information Centre
CSC	Common Service Centre
DRISTI	Decentralised Rural Information Services and Technology Interventions
e-CF	e-Community Forum
ICT	Information and Communication Technology
ICTD	Information and Communication Technologies for Development
IKM	Information Kerala Mission
ITfC	IT for Change
MIS	Management Information System
MKSS	Mazdoor Kisan Shakti Sanghatan
MM	Mahiti Manthana
MSK	Mahila Samakhya Karnataka
NGO	Non-Governmental Organisation
NREGA	National Rural Employment Guarantee Act
NREGP	National Rural Employment Guarantee Programme
NREGS	National Rural Employment Guarantee Scheme
OPAPA	Open Academy for Philippine Agriculture
PGIS	Participatory Geographic Information System
PHC	Primary Health Centre
PIS	People Information System
RTI	Right to Information
SHG	Self-Help Group
SVYM	Swami Vivekananda Youth Movement
UNDP	United Nations Development Programme
VKB	Village Knowledge Broker

Introduction

IT for Change and the Information and Communication Technologies (ICT) for Poverty Reduction Programme of the Poverty Group of United Nations Development Programme (UNDP), New York, organised an international workshop on 'ICTs for Participatory Local Development: Exploring a Systemic Approach' on the 9th and 10th of December, 2008, in Bangalore, India. The workshop brought together around 20-25 researchers, policy makers and other actors in the area of local development and ICTs for development (ICTD). The workshop participants reviewed and discussed the possibilities of harnessing the transformatory potential of ICTs for participatory local development.

The accent in discussions on 'ICTs for transformative and inclusive local development' in the workshop was as follows:

1. Possibilities of systemic and integrated (across-the-sectors and in development strategies) use of ICTs;
2. Improving participation and empowerment, as a key objective of employing ICT and ICT-based service delivery;
3. Different types of emerging roles for state/non-state actors and implications for the citizen/state relationship;
4. Policy and institutional context required to achieve the above.

Five country researchers – from Brazil, India, Philippines, South Africa and Uganda – presented case studies and their initial findings on the subject from their respective countries. This included a country overview, with corresponding policy and institutional frameworks. The invited experts, policy makers and practitioners commented on these findings, and helped the researchers fine-tune their outputs, towards building appropriate recommendations for enabling use of ICTs in a systemic way for participatory local development. This also feeds into the development of a customisable roadmap and toolkit in a manner that is most useful to its potential audience – policy makers and practitioners in the areas of local development and ICTD.

Participants benefited by learning from first hand accounts from across the developing world of use of ICTs for local development, which were be presented in a manner that highlighted possibilities of systemic use of ICTs for local development, and the policy and institutional contexts of doing so. Open discussions developed themes for inclusion in the toolkit, while interactions amongst the diverse group of participants also supported the building a network of people interested in the area of local development and ICTs, and explored ways of working together.

The workshop was an intense knowledge sharing and learning exercise, and relied less on presentations. The workshop did not emerge as a discussion on ICTs, or even ICT applications, but evolved into a workshop on 'participatory local development', and the new possibilities that may have evolved to achieve such local development.

Participant Profiles

Mr. Amit Chakravarty works with the National Institute for Smart Government (NISG) in Hyderabad, India and coordinates NISG's ICTD project with funding from UNDP and the Government of India. His interests are in e-governance and facilitating the use of ICTs for development processes as local levels.

Ms. Anita Gurumurthy is the founding member and executive director of IT for Change, an NGO located in Bangalore, India. At IT for Change, Anita is currently co-coordinator of a research and advocacy project (Information Society for the South) that looks at imperatives for a South-based information society discourse. She is also co-coordinator of IT for Change's UNDP and Government of India supported grassroots project, *Mahiti Manthana*, which uses ICTs to empower women's collectives.

Dr. K.T. Arasu works for Alternatives in Development, an NGO based in the state of Tamil Nadu in India. After an initial career as an academic, he has shifted to being a full-time activist. His organisation is working in the state of Jharkhand to integrate ICTs to achieve the objectives of development by running central government sponsored Common Service Centres (CSC) in a disturbed and remote area with abysmally low infrastructure.

Ms. Aruna Roy is an Indian political and social activist and works with the Mazdoor Kisan Shakti Sangathan (MKSS) in the state of Rajasthan. The MKSS is a peasant and workers organisation, and is a working example of a transparent organisation. Roy has worked with peoples politics, looking at ways in which equality and justice can be claimed by people as their right.The MKSS built a grassroots movement that has triggered broad debate and a nationwide demand for the public's right to scrutinise official records, and are interested to explore ICTs for enabling transparency in local government functioning.

Mr. Ash Narain Roy has worked with the Institue for Social Sciences for 25 years, mainly in the fields of decentralisation, women's empowerment and rural development. He believes in integrating research with action and in finding answers through action research. In his organisation's advocacy, they believe in putting people at the centre of policy making, and were successful in bringing in a quota for women in the *panchayati raj*.

Bonginkosi 'B.B.' Biyela is currently Municipal Manager for the Uthungulu District Municipality in South Africa. He was the first Municipal Manager in South Africa's history to be elected President of the Zululand Chamber of Business. In his work, he has developed interest in ICTs and introduction of ICTs in local development systems in partnerships with other players.

Dr. Balasubramaniam R. founded the Swami Vivekananda Youth Movement (SVYM) in 1984 and is engaged in building a new civil society in India through grassroots to policy-level action in Health, Education and Community Development sectors. Acting as a key promoter/facilitator in the community's efforts towards self-reliance and empowerment, SVYM is developing local, innovative and cost-effective solutions to sustain community-driven progress. The organisation has more than 60 projects in the sectors of health, education, community development, awareness and training located throughout the districts of Karnataka State. Through a partnership with IT for Change, SVYM is recently exploring the use of new ICTs for achieving organisational goals.

Mr. R.N. Dash heads the *Panchayati Raj* Department in the state of Orissa in India. He has made efforts to implement ICTs at *gram panchayat* level. He is leading about 10,000 operative projects, which specifically employ IT in management information systems. He believes that IT can be used for increasing the efficiency of development delivery mechanism.

Mr. Edward Baliddawa is the Chairperson of the ICT Committee, Parliament of Uganda, where he has been involved in using ICTs and Science, Technology and Innovation towards accelerating growth and promoting sustainable development leading to the eradication of poverty towards the attainment of Millennium Development Goals. He has been quite passionate about both governance and ICTs for long.

Mr. Elango Rangaswamy is a chemical engineer by training and after ten years of work as a scientist in the government, he went back to his village to become the head of the local *panchayat*. He got re-elected for two terms and tried to make the village completely self-reliant in all aspects. It was in these efforts that he discovered the role of ICTs, and used them for a range of activities, from data collection to Internet banking. He feels that their use needs to concentrate much on holistic, total development, towards creating a model to fulfil Gandhian ideals of self reliance.

Dr. Erwin Alampay is an Assistant Professor at the National College of Public Administration and Governance (NCPAG) in the University of the Philippines. He completed his PhD on development policy and management at the School of Economics and Development at the University of Manchester, United Kingdom. He also has a degree in Master of Public Administration (MPA) from University of Philippines and a Master of Arts in Development Studies from the Institute of Social Studies in the Hague, The Netherlands.

Mr. Fortunato Dela Pena is an Undersecretary for R&D at the Department of Science and Technology and Executive Director of the Congressional Commission on Science and Technology and Engineering in the national government of the Philippines. He has experience in the areas of e-governance, technology management, small and medium enterprises, and regional cooperation. He has also written articles on technology transfer, policy development, and quality management practices.

Ms. Graciela Selaiman is from RITS in Brazil. She has been there for 10 years, providing information to NGOs, public institutions and the media. In the last eight years, they have established teleecommunications centres in partnership with local governments and also engaged in advocacy work at the national level on digital inclusion. They also engage in capacity building with regards to strategic use of ICTs to strengthen their work and networks. She believes that ICTs are powerful when in the hands of people, but is sceptical of the power structures that are delivering access to ICTs. Governments are keen on providing services, but see people as users and consumers rathar than as citizens.

Mr. Gurumurthy Kasinathan is a founding member of IT for Change. He is closely associated with the research, advocacy and field projects of the organisation. He also works with the Education Management function at the Azim Premji Foundation, and has over 15 years experience in management consulting, and information technology.

Dr. Michael Gurstein is currently Executive Director of the Centre for Community Informatics Research, Development and Training in Canada and a Director of The Information Society Institute

in South Africa. He has been active in helping to create a Telecentre Movement providing an opportunity for grassroots ICT users, practitioners and ICTD activists to come together to promote their collective interests and to participate in local, national, and global policy processes. He has extensive experience in community informatics – using ICTs to empower and develop communities.

Ms.Namrata Jaitli works as a Senior Manager in an Indian NGO called Society for Participatory Research in Asia (PRIA). PRIA has been in existence since last 26 years, as an international centre for participation and democratic governance. Namrata is interested in exploring the use of ICTs in local development processes, and how integration of these new technologies into existing systems can occur in an empowering way.

Mr. Nikhil Dey is from Mazdoor Kisan Shakti Sanghathan (MKSS), a peasant and workers association in central Rajasthan. This is a small organisation, but connects with many larger movements in the country. MKSS considers itself to be a political organisation, since most developmental processes are political, and they act in that framework. They are not funded by donors, but with funds mobilised from the communities. He believes that ICTs can empower and disempower, but they remain in the hands of the rich, and should instead be harnessed for meeting the needs of the poor.

Mr. Parminder Jeet Singh is an Executive Director of IT for Change and does advocacy work, research, and projects in villages. He has extensively engaged with ICTs – telecentres, commmunity radio and community video – in his work with NGOs, exploring how technology gets absorbed on the terms of the NGO. The overall hope is that in engaging with ICTs, power relations can be changed. He has scepticism towards ICTs since people who lead most ICTD projects are managerial and technical, not investing enough in process.

Ms. Radhika Lal is a senior policy advisor on ICT for poverty reduction and the MDGs with the Poverty Group in UNDP's Bureau for Development Policy in New York. By training she is an economist with a specialisation in political economy and trade issues. The focus of her work in UNDP is in integrated development approaches including the use of ICTs to enhance development effectiveness and empowerment and identification of policy options to realise this potential. In the context of her work at UNDP, in addition to advising developing country governments and working with partners on strategies and programmes relating to the role of ICT as an enabler of development, she has been active in global level fora in the context of the information society.

Mr. T. R. Raghunandan is the Joint Secretary of the Ministry of *Panchayati Raj* of the Government of India. Prior to that he was in service in the Government of the state of Karnataka and has always been critical of the erosion of power of local bodies. He has been responsible for developing a system for tracking village development funds and has critical insights on e-governance initiatives in India. He was more recently involved in the preparation of a Manual for District Planning as part of a Task Force set up by the National Planning Commission for the 11th Plan.

Mr. Raju K. is the Principal Secretary of Rural Development in the government of the state of Andhra Pradesh. He is responsible for the implementation of the National Rural Employment Guarantee Scheme (NREGS) in the state, and has engaged with ICTs at all stages of the programme. The complete operation of the NREGS is backed by 'end-to-end' digital systems, where

every single transaction gets recorded on the system the moment it is completed. It is not possible to do any of these transactions without the digital system recording it and projecting it in the public domain for anyone to see. The project design was led and fully owned by government officials and every phase of the software developed by a private vendor thoroughly reviewed over long sessions.

Mr. N. Ramakantan is the Director of Kerala Institute of Local Administration (KILA) in Thrissur. He is trained in political science and has worked under various capacities in academia and public sectors. KILA was set up with the objectives of facilitating and accelerating socio-economic development of the state through Local Self Government Institutions. He is currently looking after the divisions of the academic, administrative, and accounting segments and is interested in ICTs for local self governance processes.

Mr. Ranjit Kumar Maiti is the Joint Secretary representing the Department of *Panchayati Raj* and Rural Development in the government of the state of West Bengal. He looked after the computerisation of the Department and also the *Panchayati Raj* Institutions. He leads the e-governance team of the west Bengal State Rural Development Agency. For the Common Service Centre (CSC) project under the National e-Governance Plan he is the Nodal Officer of the State Designated Agency. He also manages the Decentralised Rural Information Services and Technology Interventions (DRISTI) project, which aims to provide an IT-based solution for all major functions of *panchayats* (village level administrative units), including micro planning at village level and providing updated information to all the stakeholders for promoting transparency and accountability.

Dr. Shaun Pather is from the Cape Peninsula University of Technology in South Africa. An academic and social activist, he has two years of experience community informatics research. His focus is on ICTD, and he has researched a South African perspective on ICTD. His interests lie in influencing policies for universal access.

Mr. Seán Ó Siochrú is a consultant, writer, and advocate on media and ICT issues. His work has taken him to over fifty countries for various multi-lateral agencies, and includes programme evaluation, design, and implementation; policy and research advice; local team coordination; and event facilitation. His current interests include the idea of community-owned ICT network enterprises, and he is helping to design and implement pilots in several countries. He works with civil society organisations worldwide and is spokesperson of the campaign for Communications Rights in the Information Society.

Mr. Srikanth Nadhamuni is the Co-Founder and Managing Trustee of eGovernments Foundation, which aims to improve municipal governance in a scalable and systematic manner. Srikanth is a Silicon valley entrepreneur who has spent 16 years in the US, creating technology solutions at various companies, having worked in diverse projects such as the Pentium and UltraSparc chips, interactiveTV & Internet technologies. He has worked with NGOs in India for the past 12 years, including serving as President of ICA – a San Francisco Bay Area non-profit that funds NGOs across India.

Dr. Subbaih Arunachalam started his career as a research chemist, but found his calling in information science. In the past four decades, he has been an editor of scientific journals (at the Publications and Information Directorate of the Council for Scientific and Industrial Research and the Indian Academy of Sciences), the secretary of a scholarly academy of sciences (IASc), a teacher

of information science (at the Indian National Scientific Documentation Centre), and a development researcher (at the M.S. Swaminathan Research Foundation and the Indian Institute of Technology Madras). While working with M.S. Swaminathan Research Foundation, he initiated the South-South Exchange Traveling Workshop to facilitate hands on cross-cultural learning for knowledge workers from Africa, Asia and Latin America engaged in ICT-enabled development. Improving information access both for scientists and for the rural poor; scientometrics, ICT-enabled development and open access are among his current research interests.

Mr. P. V. Unnikrishnan is the Executive Mission Director of the Information Kerala Mission (IKM). He has been spearheading the IKM's goal of ICT transparency and efficiency. While he is credited with establishing efficient and responsive systems for good governance in local self governments, he has also been driving the mechanism set up for improving government service delivery through a comprehensive citizen interface systems, community information systems and business process re-engineering. He has advocated for back-end computerisation of several local departments in Kerala and has established a holistic social security network for developing an integrated micro-level resource based developmental information system.

Mr. Venkatesh Prasad works with IT for Change, and comes from Mysore district in the state of Karnataka. He is the coordinator the Centre for Community Informatics and Development and his work primarily involves using different technologies in the context of women and *dalit* empowerment. The Centre is directed towards breaking the accepted notion of ICTs belonging to an expert domain and advocates that the way development organisations engage with ICTs is central to their effectiveness. Although he is sceptical about the tendency of ICTs to push top-down models, he is positive about the potential of ICTs to facilitate decentralisation.

Mr. Vipul Mittra is the Development Commissioner in the government of the state of Gujarat, and is addressing several issues of digital inclusion in the *gram panchayats* all over the state. He has led the project on digitisation of poverty related data and online updataion for public access. Simultaneously his government has initiated the e-gram project, connecting villages through broadband, Internet connectivity and computers. He reflected on the dual challenge of demystifying technology at the grassroots level, while affecting integration into various public line departments at the administrative levels.

Dr. Vinod Pavarala is a Professor of Communication at the Sarojini Naidu School of Performing Arts, Fine Arts & Communication, University of Hyderabad in India. His teaching interests are in the areas of Communication and Development; Television and Popular Culture and also Communication and Culture. His ongoing project, ICTs Development and Democracy examines how access to ICTs to the poor and marginalised could lead to redefining the public sphere. He has done extensive research on community radio efforts around India, and is a founder member of the Community Radio Forum of India.

Mr. Wairagala Wakabi is a communication specialist who has a Masters of Arts in Journalism and Media Studies from Rhodes University, South Africa, and has completed a Postgraduate Diploma in ICT Policy and Regulation from Makerere University Business School. He has undertaken diverse research in the area of ICT over the last five years, including on a full-time basis over the last three years when he has been employed as a Research Associate with the Collaboration on International ICT Policy for East and Southern Africa (CIPESA). He has also undertaken research for many multi-lateral agencies and civil society neworks.

Mr. Willie Currie is from the Association for Progressive Communications, which is a network of civil society organisations across the world involved in local governance, development and telecentre operations. He works on policy issues particularly examining the inter-relationship between regional, national and global levels of policy making and how it impacts the local contexts.

Country Case Studies

1. South Africa

The South Africa research was undertaken by Dr. Shaun Pather. He contextualised his presentation with a brief overview of South Africa's ICT penetration and policy environment. All levels of the government – national, provincial and local are engaging in extensive 'e-initiatives', with the Department of Communications leading the policymaking. Although service specific policies on education, e-health, etc. including the Electronic Communications Act and Information Society and development plan (ISAD) have been forumlated at the central level, policy principles do not translate into action at regional and local levels. The absence of a coordinated ICTD strategy has resulted in a lack of nationwide inclusive appropriation of ICTs, along with differing national and local priorities.

With this background, Dr. Pather proceeded to discuss a case study on the **Cape Access Project (CA)**, initiated in the Western Cape provincial government. The project aims to ensure public access to technology and infrastructure through e-community forums (e-CF) for electronically interacting with government, business and each other towards an inclusive information society that empowers the marginalised to achieve their full potential. The project was initially steered by multistakeholder group of mainly provincial departments, who recognised the significance of community partnerships. e-CFs are gatekeepers of community information and also act as sites of struggle for the rights of marginalised. He detailed the case of a small fishing community, where the forum sprung to life when fishermen's fishing rights were threatened, and enabled strong partnerships and collaborations amongst the fishermen and community organisations. The Forum was supplemented by a Fisherman's ID project which supported subsistance activities and daily access to weather data, apart from stronger partnerships with Governments, NGO's, investors and community structures.

Overview: The Cape Access Project	**Overview: The Khanya Project**
• Initiated by West Cape provincial government.	• Initiated by West Cape provincial government and housed in the department of Education.
• E-community forums facilitating interaction with government, business, and community towards an inclusive information society.	• Enhancing curriculum design, implementation and learning through the systemic integration of ICTs.
• Facilitated by Fisherman's ID project which supports subsistence activities and daily access to weather data.	• Covers over a thousand schools and has improved access to ICS and capacity-building of students and other social actors engaged in the project.
• Fishing communities have used the forum to re-establish fishing rights and other forms of social action.	

The **Khanya Project** was also initiated by the Western Cape provincial government and housed in the Department of Education. This project aims to enhance curriculum design, implementation and

learning, and sought to strengthen learners and teachers through the systemic integration of ICTs. Dr. Pather described the e-schools set up through the project, and reflected on the advantages of private sector and civil society partnerships in programming. The Khanya project covers over a thousand schools and has improved access to ICTs and has built the capacity of students engaging in the project.

Dr. Pather synthesised findings from both case studies and provided a comparative perspective on both projects. In the CA project, communities were visualised as natural systems within which ICT interventions are integrated. This was useful in developing contextual perspectives on the role and scope for ICTs. However, the implementing public authorities did not plan for interactions with other stakeholders, particularly the local government, and this resulted in slow percolation to all levels of the community. On the other hand the Khanya project was born out of a deficiency in the existing education system, where all elements in the system were clearly thought through, and then integrated into the education system. This model has been used as a blueprint in formulating the Education Policy of South Africa, highlighting the significance of systemic integration and strong interlinking across governments together with local communities. Dr. Pather concluded his presentation with a strong emphasis on key principles for integration of ICTs in local development contexts: including the importance of coordination amongst functionaries, clarity of vision guided by an understanding of specific context, and strong linkages across government levels together with local communities.

Discussions

Dr. Pather's presentation was followed by a wide range of questions from the floor and a rich discussion ensued. Mr. Willie Currie enquired about any repurcussions in the context of a governmental initiative creating conditions for community protest against government. Dr. Pather affirmed this as an issue, and clarified how the local government remained in the background during implementation, since funds came from provincial government. Even the case of fishing rights was marked by an absence of the local government, and was undertaken by the community themselves.
For a question on how the officials managed community participation, Dr. Pather shared that local implementation officials were identified directly by provincial government, and they function without governmental involvement to facilitate community organising.

Mr. Seán Ó Siochrú was interested in the dynamics of leadership and ownership between the local government and the community. This would be particularly important in the light of the lack of ownership from the local government when confronted with the fishermen's protest. Dr. Pather reasoned that the local government officials would have been in a better position to design this project, and more significant than their discomfort at a protest launched against them was that the absence of local governnment involvement hampered the contextualisation of the project. The provincial government used project design blueprints, and this could have been nuanced had the local government come on board from the initial stages.

Dr. Michael Gurstein was interested in the microprocesses that enabled the shift from a passive community response to one that actively claimed entitlements. In response, Dr. Pather commented on the key roles played by two people in the e-CF. One was a literate fisherman, and the other was a person who had been involved from the beginning. This is a frequent pattern in other ICTD projects as well, where a few experienced people tend to lead things, which flags the importance of capacity building.

Mr. Arasu drew attention to the issue of sustainability by questioning the long-term viability of provincial funding. Dr. Pather said that both CA and Khanya projects operate on the presumption that government support is not 100%. Communities continuously work to provide shared funding and at the moment the funding for new efforts is happening as an add-on. He further highlighted that unless the projects are positioned as an integral part of the development mechanism, it will be hard to think systemically.
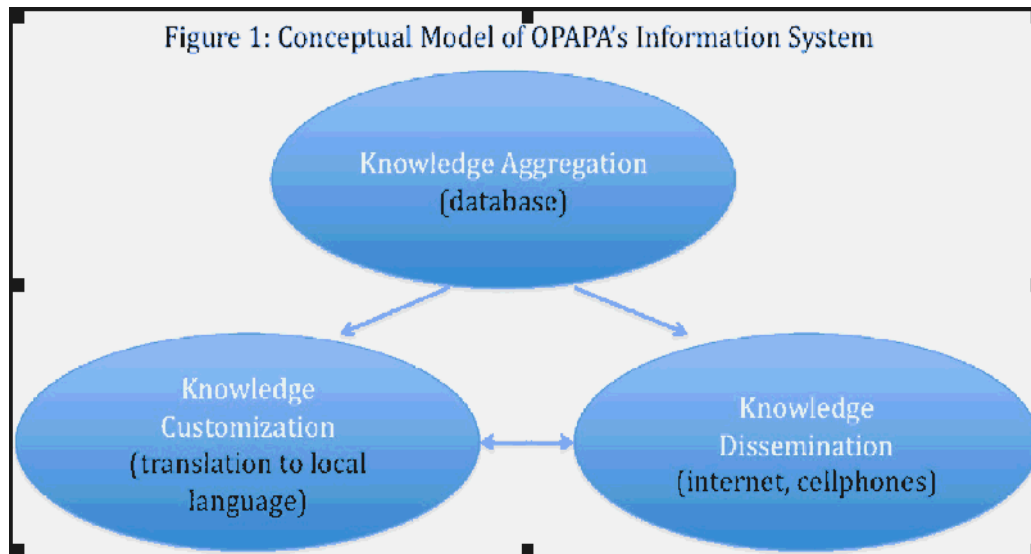
Mr. Vipul Mittra asked for clarifications on the extent of involvement and representation from the local community within the local government in the Khanya project. Dr. Pather explained how devolvement of administrative responsibilities occurs at the level of the national to provincial governments. Therefore, the provincial government can control the project across all local administrative units. In particular, the education system project is an interactive one and can be replicated into other local areas, and the Khanya sites are situated to ideally interact with other schools. But this is the responsibility of the provincial government, and this has not been engaged with.

2. Philippines

Dr. Erwin Alampay undertook the Philippines case study and framed his presentation within the principles of using ICTs as tools for people's economic, social and political empowerment. He also distinguished ICTs from the rich field of development communication, pointing to their potential for the empowerment of marginalised groups. He stressed the importance of appropriate technologies and of embedding technological information systems into existing social systems. Dr. Alampay also advocated for project design to remain sensitive to the socio-political context, such that ICTs fit into small-scale, grassroots, and community centred organisations. He reflected on the ICTD situation in

the Philippines, where practice is much more advanced than theory, and the need to bridge that gap.

Dr. Alampay first presented the case study of the **Open Academy for Philippine Agriculture (OPAPA)**, which aims to create a platform for aggregation of knowledge from different national institutions. The project developed as a partnership between the Department of Science and Technology, technical institutions, State Universities and Extension Agencies. In addition to the creation of an online database, extensive customisation and dissemination was undertaken, including translation into local languages, dissemination through the Internet, mobile phone text messages in different languages, etc. The diagram below captures OPAPA's information system:

Figure 1: Conceptual Model of OPAPA's Information System

Knowledge Aggregation (database)

Knowledge Customization (translation to local language)

Knowledge Dissemination (internet, cellphones)

The decision to extensively use mobile phones was motivated by accessibility considerations, since the Internet is underutilised by NGOs and governments alike. Knowledge costumisation is largely a human undertaking and this component has also been built into the project with different ways of addressing requests, all mediated by ICTs. The project also maps the heterogeneity of communities involved in agricultural activities through online means, and generates information on infrastructure, technology access, etc.

Next Dr. Alampay presented a case study of the use of **Participatory Geographic Information Systems (PGIS)** for community mapping by an indigenous tribe in the Philippines. He highlighted the accomplishment of the community in adapting a technology that once was the exclusive domain of scientists and technologists. Indigenous communities in the Philippines are poor, discriminated against, and excluded from local development processes. Tenure security of ancestral land, right to manage the resources, and the recognition of its indigenous institutions and governance system, cultural identity, customs, and tradition are major developmental issues that serve to marginalise indigenous communities. These communities have established skills in mapping of land and resources, and the NGO-led PGIS project introduced a three-dimensional aspect into the traditional mapping techniques of indigenous peoples. The process used to develop mapping capabilities while building on existing community practices included a series of workshops for land use and cultural zone identification, culminating with a geo-database that was generated for the entire community. This PGIS database has been used for a broad range of activities, and mapping their ancestral domain has empowered communities to externalise their collective vision and advocate their rights to manage their land. The project continues to facilitate the long and continuing struggle of the

community for self-determination and for the recognition of their right to participate and become an active player in local development and governance.

Overview: The Open Academy for Philippine Agriculture (OPAPA)	**Overview: Participatory GIS for Community Mapping**
• OPAPA aims to create a platform for aggregation of knowledge from different national institutions. • Developed as a partnership between the Department of Science and Technology, technical insitutions, state universities and extension agencies. • Includes the creation of online database, extensive customisation, dissemination, and translation of information into local languages.	• Participatory Geographic Information Systems (GIS) for community mapping by an indigenous tribe in the Phillipphines. • Ensures security of ancestral land, right to management of resources, official recognition of indigenous institutions, identity, customs, and traditions. • Includes mapping capabilities useful for externalising collective visions and advocating for self-determination.

Dr. Alampay concluded his presentation by stressing on the need for the use of appropriate technologies in development processes, by considering relevance for and accessibility to the community. The socio-political context into which technologies are introduced is important, and communities give meaning and relevance to the technology. He also highlighted the role of institutional support and stakeholder participation in ICTD projects, and the need for participation and democratisation in these structures and processes. Demystification of technology is time-intensive, and arises in the context of mutual trust amongst all stakeholders. True empowerment through ICTs cannot be restricted to only building capabilities, but should also encompass ownership and control of ICT-enabled and ICT-induced processes.

Discussion

Ms. Namrata Jaitli asked for an elaboration on the extent of community participation in the PGIS project. Dr. Alampay likened the PGIS process to any other participatory development project, wherein community input is facilitated by an external agency. The specific difference in mapping processes is the introduction of temporality because of the consideration of spatial data from the past and present. This allows for the inclusion of various groups withing heterogeneous communities, for instance older and younger members, farmers, migrants, etc.

Mr. Mittra pointed out the context in the Indian state of Gujarat, which has one of highest penetration of mobile phones in India. The state is considering implementation of mobile banking and grievance redressal systems through text messages, and asked Dr. Alampay for information on similar projects in the Philippines. Dr. Alampay referred to the OPAPA project, where people can post queries to the database and receive automated responses for general queries. However, the mobile systems also incorporate unique queries that are answered by referral to individual experts. He recommended that these two models of moble text messaging could be explored by the Gujarat government.

Ms. Radhika Lal asked whether there was a pattern in the questions asked and whether the

information could be systematised, thus improving the service provided by that the 'experts', the agriculture extension workers. Dr. Alampay reflected on the difficulty of separating technology from social systems in which it is embedded. In every department there are good extension services on which the success of OPAPA is dependent, however not every query or request goes through extension workers. The role of the extension worker depends on the kind of ICT used, for instance, text messages are directly addressed by the database, while an Internet platform requires an extension worker to access and translate the information into local dialects before dissemination. This makes it difficult for generalised systemisation of the information databases and processes.

Mr. Unnikrishnan wanted to hear about how the PGIS was linked to ownership right of tribes, and or whether it was only means to capture info, or used as tool of rights for tribals. Dr. Alampay detailed how boundaries of land are first drawn out on paper, and then transferred to the PGIS database. This is followed by a posting of the newly drawn up boundaries in public areas for certain period of time, and if there are no disputes, the legal process of formalising comes into effect. Interestingly, the NGOs in the PGIS project have noted that indigenous people have great precision in identifiying their lands, and when their knowledge is correspondingly reflected in the computer, then they begin to value the computer. He also referred to the networks of NGOs that are involved the PGIS project, and how application depends on the socio-political dynamics of every community, and evolution of these contextualities is critical in any ICTs for local development initiative.

3. Uganda

Mr. Wakabi began with statistics on increase in overall telephone customers and penetration, as well as Internet access and connectivity in Uganda from 2003 to 2008. While the data indicated that the mobile connectivity has shot up massively from 2004 to 2007, the landline connectivity has remained almost constant. He detailed the universal access fund was formed in the year 2001 in Africa, to fund phone booths, Internet cafes, Internet points of presence, ICT training centres, and websites for districts, but the fund does not cover broadband. Mr. Wakabi highlighted challenges in Uganda, including limited ICT infrastructure, energy shortages, low affordability, limited awareness, and inadequate human resource capacity for ICT application.

The decentralisation programme implemented since 1987 in Uganda aims to enhance citizen participation in decision-making and service delivery processes. Decentralisation has been concurrent with an increasing inability of the government to manage information and processes. The lack of effective information system management, and absence of local level data hinder effective service delivery. Against the backdrop of these devolution principles, ICTs have a critical role to play to enhance speed of delivery, effectiveness and reach of government information and services. Uganda has been working at developing an e-government strategy, an effort that was accelerated with the creation of the Ministry for ICT in 2006. But whereas the use of ICT in government is widespread and goes back several years, local government are only beginning to use the new media to enhance their efficiency.

He first presented the case study of **Apac e-Society** was started by the Apac district local government and various civil society partners. The programme aims to improve service delivery and community participation by promoting collaboration between civil society, private sector and local government through the use of databases to share their development plans, budgets and work plans, as well as to provide development information to communities. Various ICT tools have been put in place to enhance this information exchange in this remote and impoverished district in

northern Uganda. A well equipped open access e- Library of local government plans and budgets has been established, and NGO plans and budgets are being added. A publicly accessible Financial Management Information System showing the influx of government, donor grants and tax income is also available, so is a District Monitoring Information System that shows the progress of development projects in the district. Efforts are made to repackage some of the content for consumption by the semi-literate, particularly by use of community radio programmes. This initiative works to improve communication between the district council, sub-counties and civil society through the use of community information centres (CICs), the Internet and radio. Target groups are alerted to services offered by the project through flyers, radio announcements and meetings; and ICT centre is also used for career guidance, ICT training, and livelihood skills training. Sensitisation and community mobilisation to use and access the CICs is on-going.

Overview: APAC e-society

- Started by the Apac district local government and various civil society partners to imporve service delivery and community participation.
- The society includes databases and a open-access e-Library of development plans, budgets, and development information.
- Considered to be an incubator for a workable e-Society model and largely envisaged as the instructive experienment at the local government level.

Overview: Collecting and Exchnge of Local Agriculture Content (CELAC)

- A programme of the Busoga Rural Open Source Development Initiative operating in all region of Uganda
- It aims to improve rural farmers' livelihoods and food security.
- It runs an ICT resource centre and demonstration field in rural districts, enables collection and dissemination of indigenous knowledge.

Overview: DistrictNet

- Run by the local government and civil society groups, it supports decentralisation in four districts.
- Addresses the concerns and plans of the Uganda Communications Commission of economic growth and poverty allievation through the use of ICTs.
- The outcomes of the project are improved communication, better record keeping, accountability, budgeting, and transparency.

Mr. Wakabi shared that Apac e-Society is an incubator for a workable e-Society model at the local government level, and to ensure that lessons learnt actually lead to improvement of the model, monitoring and evaluation are key activities of the initiative. Apac e-Society is a community/local government initiative, conceived and designed to meet the challenges an administrative unit was facing. It is not a national or generic ICT intervention. Besides, it is responding to one of the key challenges faced in governance in Uganda – the lack of efficiency, accountability, openness, and the misuse of public resources. It is an instructive experiment in e-government at the local government level and has important lessons for Uganda as a whole – and for other developing countries. Apac e-Society has enabled community participation, especially of marginalised groups. The programme is enhancing food security and supporting rural livelihoods, alongside improving governance in the area. A capacity development, training and change management in the CICs have also been established.

The second case study was that of **Collecting and Exchange of Local Agriculture Content (CELAC)**, which aims to improve rural farmers' livelihoods and food security through engaging farmer, government and civil society in knowledge sharing and information management of local content using ICTs. It operates in all regions of Uganda and enables collection of indigenous farming knowledge and its dissemination among diverse farming communities by employing various ICTs. A programme of the Busoga Rural Open Source Development Initiative, CELAC is principally focused on agriculture, in its programmatic activities it links in with health and education in recognition that they are equally key in transforming farming in rural areas. CELAC runs an ICT resource centre and demonstration field in a rural district, which is helping to transform perceptions towards ICTs, as rural communities can see how the computer, the Internet and the mobile phone could be used as tools to improve their social and economic well-being.

The initiation of CELAC was based on the community's needs, which were identified through a collaborative process that, among others, included local councils and the farmers' groups Village Knowledge Brokers (VKBs) ensure local communities/ farmers are involved. Knowledge is processed and repackaged by CELAC then disseminated back to the VKBs who pass it on to members in respective villages. CELAC networks to get registered as CBOs in the districts they operate from and to conductincome generating activities. Farmers have been able to diversify the crops they grow, and the economic activities they undertake, because of the knowledge and skills they have garnered through CELAC. In addition, because they have access to market information, they are in position to sell their produce to traders that offer the best possible prices. Besides enabling more women to take part in the programme, CELAC also works to ensure that farmers are at the heart of its programming and implementation. In its knowledge fairs, it uses participatory methods, which are suitable for enhancing the equitable participation of all.

The third case study discussed was DistrictNet, initiated in 2002 to support the decentralisation programmes in four Ugandan districts through the use of ICTs. It is run by the local government ministry and civil society groups , all of whom have been continuously and actively involved in the running of the programme. The programme was aligned with the plans of the Uganda

Communications Commission, the regulator in Uganda, to spread Internet connectivity to District centres, and with those of the Local Government Development Programme to restructure government structures to better address the national goals of economic growth and poverty alleviation. The programme was operationalised through the installation of Local Area Networks, Wide Area Networks, email and Internet systems, as well as data and voice communication links between district headquarters, pilot sub-counties and the central government headquarters. Through the project, the Ministry of Local Government established computerised databanks and information dissemination systems, and initiated an extensive training programme for users – mostly district officials – in basic ICT skills and the use of basic computer applications.

The outputs of this project have been improved communication between districts and lower local governments; improved cross-sector communication in districts; better record keeping facilities, data processing for needs assessment, planning, budgeting, accountability and transparency; and improved access to ICT skills in local governments. DistrictNet has enabled an increase in ICT awareness and knowledge empowerment among users. Equally, it is important to establish information outlets at low administrative levels so as to provide citizens with relevant data such as market and price information for agricultural commodities.

In conclusion, Mr. Wakabi reflected that the Apac and CELAC programmes have good mechanisms to establish the needs of community, as well as processes to respond to those needs. If there is a sectoral programme on poverty eradication, these two projects have a good probability of being relevant and of succeeding. He pointed to the need for ICTD projects to develop local content and applications to support these projects, and this is true not only for e-government. This content, including in local languages, should be in such areas as health, education, market information, agriculture, local administration, ad other areas of life and administration which are useful to people. He also highlighted issues of infrastructure and energy problems as being central to the implementation. These problems are further aggravated by certain policies that are limiting in their ability to extend connectivity.

Discussions

During the open discussion session, Mr. Edward Baliddawa reflected on the gaps in the Ugandan ICT policy and gave a brief overview of the role of the Parliament. In 2006, the ICT Ministry was set up, and several committees was formed. The primary role of the policymakers involved getting all disjointed efforts together into one Ministry. This was done to establish a comprehensive National Policy on ICT, which included the Electronics Signatures Bill, Computer Misuse Bill etc, considered critical for building the right ecology to facilitate ICT development initiatives. He pointed to the need to have a strong fibre backbone, for tackling issues of faster access, broadband and regulation of licenses.

Ms. Lal commented that there is need to use the open discussion session for comparative work drawing across studies. Her intervention was followed by a series of related questions on how budgeting through ICTs has created greater transparency and increased participation of the community. Mr. Wakabi reponded by giving a detailed analysis of the process used to make budgeting more open and inclusive in districts, which is placed in open domains for sub-districts, thus making it transparent. Those sub-districts that do very well get rewarded, and there are incentives for districts that do well, thus districts are then eager to bring out budgets and make them accessible to public.

Ms. Lal also raised a query on campaigns/attempts to bring the information to public on the lines of MKSS in India as well as on the role of VKBs. Mr. Wakabi said that the VKB is not involved in any e-programme that involves budgets. He also clarified that there have been campaigns to publish information in the newspapers, which has indeed reduced the misuse of public funds. Mr. Baliddawa added to the response by saying that the onus rests on the parliamentarians to take the information to the people, but infrastructure poses a big problem to the same. The current state policy makes it mandatory for the operators to share towers and penalties are imposed on those who do not comply with the requirement.

Dr. Vinod Pavarala sought more information on the CELAC case study since it raised important points about indigenous knowledge and the kind of protection that exists for Intellectual Property of communities. Mr. Wakabi responded by sharing that the information is collected by a team from CELAC programme and through the VKB, and reflects what they learn in field or during knowledge sharing fairs, where people talk about their problems and find solutions. VKBs should satisfy certain criteria to get elected, and act as two-way information conduits between the programme management and farmers.

This discussion was followed by an exchange of ideas through other case studies from the Indian experience. The role of intermediaries in e-gram programme in the state of Gujarat was discussed. In each village, five local youths, called *gram mitras*, are allocated work related to a specific department. Each is provided with a mobile phone, and during the initial stages of the programme, there is marked superiority of mobile-based text messaging system rather than an email-based system. To highlight the utility of mobiles and text messaging, an instance was shared on the use of text messaging to reach potential blood donors, during the time of emergencies. The deliberations concluded with a collective affirmation that access to information has been the most empowering element for the communities in all three Ugandan case studies, and in particular with respect to agricultural information.

4. Brazil

Ms. Selaiman contextualised the case studies she presented by providing an overall vision of the Brazilian efforts in digital inclusion for a population of 188 million people, marked by social and economic inequalites as well as a fragmented communications regulatory framework. There have been 20 digital inclusion projects implemented by the federal goverment aside from a number of other initiatives implemented by state and municipal governments in partnership with civil society and some in partnership with private sector as well. Due to a scattered approach, the projects in the country are duplicated and are usually concentrated in richer areas of the country. Brazil lacks a unified national strategy for digital inclusion and ICT for development. RITS in Brazil is trying to work with civil society and governments to achieve greater digital inclusion.

Ms. Selaiman explained that in countries like Brazil with deep socio-economic inequalities, there are structural limitations to inclusion in market-led processes. Therefore introducing complementary actions that focus on universalising access to telecommunications, especially to the Internet, is very vital. In this situation, some private companies and governments have promoted initiatives that seek to overcome those barriers and enable populations to appropriate the ICTs for fostering local development. In general, these initiatives may be divided in two groups: telecentres for public access and the so-called digital municipalities.

In the Brazilian Digitial Municipalities model the local government is the main provider of access, mainly in public buildings. Connectivity is either free or for a small fee, and technologies are usually wifi or wi-mesh. The governmental regulatory agency for telecommunications has created a specialised law which gives the local governments the legal authority to extend physical circuits within its territory, and there are special licences for non profit city connectivity. Design and implementation of the network is delivered by the local authority, while the vast majority of these experiences emphasise aspects of integration within public administration, reduction of costs with telephony and computerisation in health and education services. Since all decision making processes are placed squarely within the local authority or the government, most municipal initiatives also emphasise aspects of integration with the communities. The vast majority of Brazilian municipalities are condemned to pay much higher prices for Internet connection, or to have no access to these services – most of the smallest cities would be condemned to eternal disconnection, if there is no proper public policy to address this exclusion. This extremely impacts the perspectives of local development in the country. Ms. Selaiman argued for appropriate proper public policy to address this exclusion, to positively impact the potential for true local development.

She first discussed the case study of the **Duas Barras Municipal Network,** implemented in 2005 with investments from the local administration, with one antenna for every public area. In 2006, when the network was ready, the number of public and private business computers increased three times. The main critique of this digital municipality initiative is the lack of community participation in decision making process, which is reflected in the poor standards of the electronic government services as well. Though the network has connected all public buildings, it is not used for health, education or e-governance purposes, or even to increase civil society participation in any decision making process. There is a lack of clarity on the part of the municipality regarding the use of ICTs for development, and since the initiative has arisen as a result of local administrators, activities are

typically restricted to their politico-ideological leanings. Furthermore, the project is marked by an absence of any national policy framework to consolidate and co-ordinate efforts towards knowledge sharing and promoting community participation in capacity building.

Overview: Duas Barras Municipal Network

- The network connects all public buildings and involves public and private business computers in every public area.
- The purpose of the project is to improve community participation in decision-making process and to increase integration with other communities.
- So far, the activities have been restricted to the local administrators, but will be consolidated into a larger venture towards knowledge sharing and community participation.

Overview: The Interactive Participatory Budget (IPB) of Ipatinga

- IPB helped helped innovate the practice of popular participation in local government decision-making.
- Council representatives elected by the community submit recommendations, after which people participate in deciding their priority areas for the budget period.
- Because of the existence of points of public access, participation has widened from the middle-class to the larger community.

The second case study presented by Ms. Selaiman was the **Interactive Participatory Budget (IPB)** of Ipatinga, whose primary objective is to innovate the practice of popular participation in local government decision making. Ipatinga is the first participatory budgeting process in Brazil that has incorporated the Internet in its process. The municipality is divided into twelve different budget regions, with each region given differential amounts for their priorities, based on the indicators of social conditions and active citizenship. Indicators take into consideration the social needs such as average income, population, presence of school, local transportation. For the IPB process, people elect their council representatives every two years, who in turn elect councillors for determining budget recommendations. After there is an idea of the most frequent/urgent priorities, the municipal team makes a final feasibility assessment for the implementation of the proposal. People then collectively decide on their local priorities, and electronic voting is made possible by locating the computers in public areas along with the communications campaign that encourage people to participate with all the required help to use the technology. All budget proposals that are submitted by representatives online are disclosed to the general population through the website on IPB and supplemented by hard copies. Everyone has an email address, and they get live broadcasts of the council meetings, and any updates through the Internet. Because of the existence of points of public access, with facilitators providing support for the use of the IPB website, participation via the Internet is not restricted only to the middle class citizen who has computer at home. The use of the Internet aids in making an informed decision as people are more aware of the issues, and also enables the discussions to be more robust.

Discussions

Dr. Gurstein wanted details on the origin of Ipatinga IPB, and Ms. Selaiman gave credit to the Mayor from the workers party, who introduced the idea of using Internet for Participatory Budget. She further elaborated that unlike most programmes that end on changes in government, the success fo Ipatinga was enough for it to be pursued by successive governments as well. Additionally, the

constant feedback has had helped to improve the service and infrastructure available in the centres and thus improve community reach.

Several participants were keen on hearing more about challenges in encouraging participation of the most marginalised communities in IPB. Ms. Selaiman explained that the awareness campaign was not limited to only media alone, it reached out to public schools and hospitals. Further, the possibility of voting without having to speak infront of others and the inherent sense of anonymity increased the level of participation. This further sparked questions on how participation is affecting allocation in the PB, and whether priorities are getting realigned towards marginalised communities. Since her research had not yet looked at this, Ms. Selaiman said that she would consider this issue in future analyses.

While answering a query on the payment models for access, Ms. Selaiman highlighted that there was a need for more reflection, as well as a national policy to address the same. Content uploading allows the local governments to intervene, in ways that can be positive and negative to the community's interests. The municipality has been found to censor access to the telecentre, and this requires more investigation because if each municipality can qualify the use of the Internet, openness and equity becomes complicated. Mr. Dey also flagged a potential point of contention, where the online techniques would also increase the avenues for manipulating results and pointed to the need for safeguards, and also face-to-face assemblies that can add an extra dimension to online interactions.

Although the digital municipality case study exhibits a lot of potential to provide access to the citizens, it was pointed out that it has not been effectively used for e-governance purposes vis-a-vis access. Ms. Selaiman responded that the quality of use is directly related to quality of capacity building and other activities held in the state. If an NGO already has a programme, then the quality of the access is greatly impacted by the knowledge structure behind it. Hence the capacity and knowledge building associated with the access has a big role to play in impact. She also emphasised the need for greater research in this area. Mr. Singh summarised the discussion by unpacking the interplay between public provisioning and the strengthening of community decision making. Therefore the financial model is not possible, and the focus should be on developmental leapfrogging impact.

5.1 India: NREGS – The Andhra Pradesh Experience

Mr. K. Raju began with an overview of the objectives of National Rural Employment Guarantee Act (NREGA) in India. It has been effective since 2006 in a phased manner, and ensures the right to secure 100 days of income generating work, and enables livelihood security to households in rural areas. The Act covers equal wages for men and women, with a ban on contractors and a corresponding emphasis on works identified by local self government at the village level. In the state of Andhra Pradesh, the implementing state government ministry has established a NREGA website to track the employment status of all households. This introduction of ICTs has enabled every job work and every rupee to be tracked during implementation. As and when a transaction happens, the data is uploaded, and estimates for work and pay orders happen through the software, with all information stored in the public domain. All of this processes have helped trigger social accountability.

Biometric smart cards have already been given to about two million wage seekers with another ten

million wage seekers are in waiting. This is connected to the bank server so that they can directly draw their wages without problems of impersonation. Another empowering benefit has been that eight million workers have been insured under LIC and the entire information is available in the database, and the whole claim settlement process has become very easy. This is being managed by a CBO. Furthermore, wage seekers can invoke the Right to Information (RTI) Act to demand transparency and accountability from the government. With the help of a NGO, this form of ICT-enabled social auditing process is occuring throughout the state.

Using ICTs in a large scale programme has been a tremendous challenge for implementation. The project has been able to deliver rights to the rural poor, and has highlighted the criticality of systemic integration. Social audits at multiple work sites have been successful in triggering community level action. The realisation of employability rights has empowered rural poor, and the management is currently exploring a process to provide unemployment process when work is not provided.

Discussions

Mr. Srikanth Nadhamuni wondered how leakages through the bank could be plugged, which was a major problem of NREGA in the state of Uttar Pradesh. Mr. Raju pointed to the smart cards for prevention of falsification of muster rolls, although this is not a foolproof method. This necessitates community level vigilance with measures such as reading the muster roll every day. He cautioned that the use of ICTs can only reduce the chance of fraud but cannot completely eliminate it. Mr. Gurumurthy also stressed on the central role of community-based organisations (CBO) in providing access to critical information in this whole process, since they function as a proxy to take up cases on behalf of the wage seekers.

Ms. Aruna Roy expressed concern on the security of technology used in the project. Mr. Raju responded that community level accountability needs to be put in place, since technology doesn't take care of everything. Implementation success takes a nosedive when adminstrators relax

attributing infallibility to technology, and he shared that his administration has developed a checklist for every stage. This caution arises from the underlying principle that the technology can be 'beaten' at every stage.

Dr. Balasubramaniam raised the issue of validity of data which attains legitimacy when it comes though government forums and the need for checks and balances to ensure the accuracy of the information, especially due to the voluminous data involved. Mr. Raju echoed these sentiments,while also pointing to the practical problems confronting a transaction process. Even as job cards are issued, data is sent; and as payment is made, it goes into the website, but there is still a difficulty in verifying what actually is received by the wage seeker. These challenges are mitigated to a large extent by social audits, where there are instances of wrongly appropriated money being returned to the wage seekers. Because of these public processes, officials are compelled to respond, and information access has led to empowerment of the people.

The importance and the need for a hard copy in addition to online data/ information was pointed out by Mr. Nikhil Dey. He added that for the Andhra Pradesh project to become a benchmark for the rest of the country, studies should explore precisely how the community is using the information to make claims and stake entitlements for wage seeker at the local level. Mr Raju clarified that the whole system was designed keeping in view the idea that the payslip should be given to the wage seekers each week, which acts as a hard copy record for the NREGA. The wage seekers have to come with payslip and pass book for the social audit.

Mr. Ramakantan enquired about the application of ICTs for grievance redressal. Mr. Arasu responded to this from the floor, sharing the experience of his organisation in Jharkhand and how ICTs are ineffective in providing a solution for the practical challenges of local mafia systems and criminal groups that operate in these areas, and how all these tasks become contingent on bribes. The non-existence of a *gram panchayat* and the centralisation of power with a *gram sewak* leads to numerous administrative problems. Despite the smart cards, not much is achieved due to lack of connectivity, and indentifying ways in which ICTs can provide solutions to such situations is still elusive.

Mr. Venkatesh Prasad raised a question on the role of *gram panchayat* in the ICT-enabled systems. Mr. Raju said that the *gram panchayats* are the primary plannning and executing agency of job works, so they respond to labour demand and take part in maintenance of records. However, the computer hubs managed by ICTs have been deployed only at the *mandal*, or intermediate *panchayat* level. This has not gone down yet to the *gram panchayat* level, and once that happens, transactions can occur at the *gram panchayat* level itself.

5.2 India: *Mahiti Manthana*

Mr. Venkatesh Prasad presented the project led by IT for Change called *Mahiti Manthana* (MM), translating into 'churning out the information process'. It is implemented in one district in the state of Karnataka as a collaborative project with a government agency, Mahila Samakhya Karnataka (MSK). The project incorporates various technologies such as video, telecentre and radio and works through women's collectives established by MSK. The overarching objectives include shifting gendered structures of caste, power and space; creating a new culture of information by placing power in the hands of marginalised, *dalit* women, and by establishing institutional linkages with public local administration.

Mr. Prasad went on to describe some of the key features of this ICTD project that impinge on the local development outcomes. Ownership processes form an integral part of the project design, and community ownership is privileged despite the inherent implementation challenges. Ownership is built right from the initial stages of the project during the selection of space and operator for the telecentre, while ensuring buy-in from all members of the collectives and also the village elite. A needs assessment and baseline survey were conducted with women to develop a range and scope for the intervention.
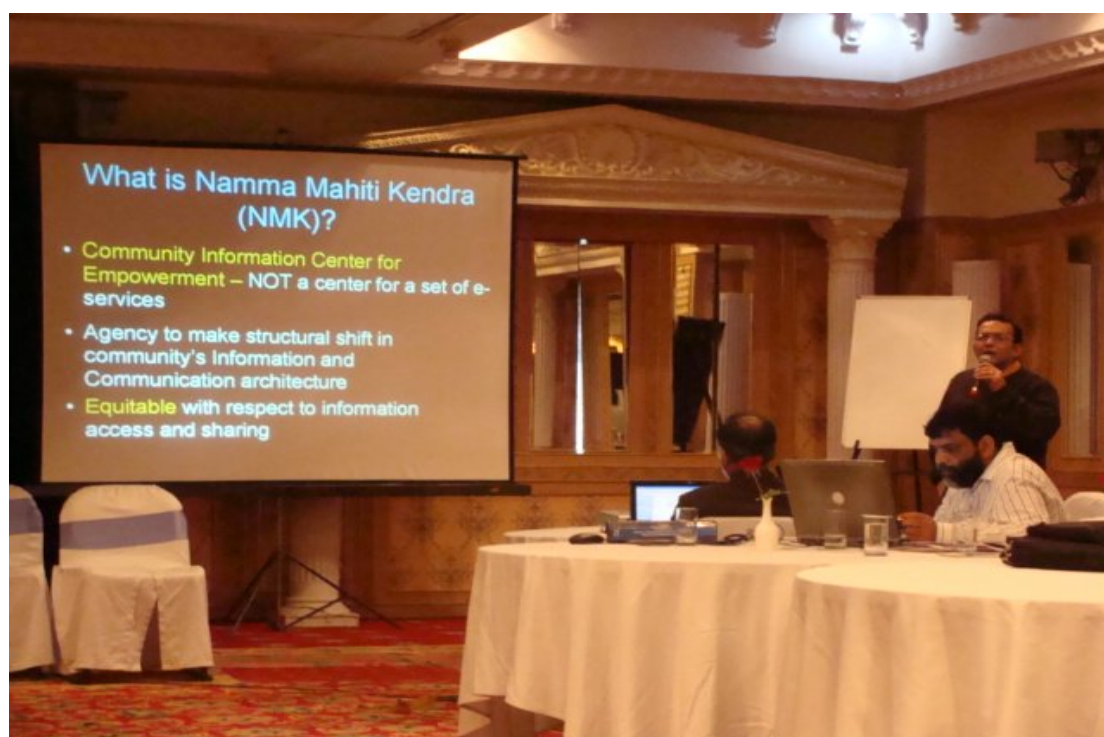
An adolescent girl is identified by women in the village for running the centre on day-to-day basis. She travels to all the local administrative agencies and facilitates the process of linkages between women and the government, thus expanding the information web of women. The project also mandates the formation of a Management Committee, consisting of upper and lower caste women, whose primary role is deciding the telecentre related activities, identifying the people for discharging work, and resolving conflicts on community level, services, charges, etc. Also, often the centre is located in a lower caste community. Although the change is slow, the upper caste women have started to come to *dalit* part of the village for meetings in the centre. Mr. Prasad also spoke of the venue as a potential site for conflict, since it is ideally a centre of communication, as a neutral and empowering space. Because of these aspects, upper castes insist that the telecentre should be located at the centre of village, areas that are dominated by them. To contend with these challenges, the role of the organisation has been to facilitate a space where all of this can come into the public domain.

Typically the village leaders want their sons to head the centre and even offer infrastructural support. But MM insists on the adolescent girl, even if it means fissuring of existing village norms and structures, such as mobility issues that girls usually face. The idea is that this girl can become a role model for the other women in the village, with some training in computer literacy and social dynamics. There are pay and non-pay services which are decided by the management

committee. Information on all departments is provided along with the names and addresses of the office bearers. The centre also includes computer training for drop-outs and vulnerable students. Entitlements and schemes are decided based on who would qualify as a below the poverty line family.

The majority of people in village do not know what departments exist, or whom to contact for what. A few middlemen make money through this informational assymetry that develops. MM decided to profile all the departments and have community screenings. Films about each department, where the official is asked to speak about the department were developed and screened, in addition include phone numbers and screenings for women. This has indeed introduced a different dynamic into the way a women approaches the departments, since she is better informed and knows whom to approach. At the centre the collective viewing and listening, helps people come together and generate action. In terms of impact, the awareness of citizenship rights among vulnerable groups especially woman has helped overcome the middle men problem. A lot of women are politically aware of their rights, generated through databases and departments have begun to see the value of the information centres, in terms of supporting their activities of reaching to the community. Speed of information and access has increased. The convergent platforms at the telecentre component in the project thus develop into more than just an information centre for "e-services", and act as centres owned by the women for empowerment, since the MM project believes in a process orientation that leads to equitable access and sharing of information.

Discussions

Drawing from the MM presentation and the project from Brazil, Dr. Gurstein commented how development obtains before or along with services and requires a longer term engagement and process, where ICTs can be used as a tool to get entry to communites. He futher cautioned that although the delivery of services by mobile is tempting, it can exist without actual fulfilment of developmental goals, and this should be guarded against.

Mr. Siochrú directed a question at understanding the layers of resistance the MM and the information centres had to face from within the villages and government structures. Mr. Prasad acknowledged that resistance at various levels is present, and emphasised that change doesn't happen without resistance. He also shared an example of the practical difficulty a woman encounters to get access to basic information. There is typical resistance from department, but also from power structures operating within the village, where the women's reputation is at stake for venturing out. The ICT centres have been able to shift these accepted norms of marginalisation.

Mr. Ranjit Kumar Maiti recommended that *panchayats* be included for implementing any programme with the community, and other participants echoed his sentiments. Mr. Prasad positioned MM as a pilot project that uses ICTs for empowerment, and provides a way to study how responsible citizens and development actors can respond to enormous issues that the system possess. After three years of implementation, the project is exploring possibilities with *gram panchayats*. The model is not to oppose *gram panchayat*, but to the objective is to work out methods together to help strengthen the system. These collaborations need to consider issues of control and power relations, while recognising that *panchayats* are elected bodies, and need not be fully representative of all sections. These are some of the considerations when working with local public adminstrative systems.

Mr. Prasad also clarified the database updation mechanisms and systems at the centres. The information received by the telecentre operators is mostly in the oral form. It is difficult to get government orders or official documents from the government functionary. The adolescent girl operators are the ones who collect, process, input and disseminate the data. For instance, in one village it was recently discovered that more than fifty percent of villagers registered under NREGA have not received job cards, and this has spurred the local community into action.

Overview: National Rural Development Guarantee Act Scheme (NREGS)

- Ensures the right to secure 100 days of income generating work and enables livelihood security to rural areas, covering both men and women, and mobilises local self-government.
- NREGA has launched biometric smart cards that are connected directly to banks so as to eliminate delays and loss of income due to middlemen.
- The project has been successful in highlighting the rights of rural poor, the criticality of systemic integration, and triggering community level action.

Overview: Mahiti Manthana (MM)

- Along with women's collectives working with Mahila Samakhya Karnataka (MSK), MM incorporates video, telecentre, and radio with the objectives of shifting gendered structures, and establishing linkages with public institutions.
- An adoloscent girl is identified by women for running the centre and is the point-person for a lot of services provided to the village.
- MM has become a centre owned by the women for empowerment, and has enabled women to become aware of their rights.

Break-Out Groups

Participants were divided into five break-out groups to discuss specific topics relating to the development of a toolkit on ICTs for participatory local development. These include: community telecentres, ICT-based systems for social audit and monitoring, ICT-based systems for microplanning and public information systems, mobile telephony based systems, ICTs for horizontal networking and community media. The following sections outline the major discussion points from each of the break-out groups.

Break-Out Group 1: Community telecentres

The scope of the discussion revolved around the provisioning of appropriate services. The need for decentralisation in ICTD projects was emphasised by participants in this group. They saw access to information processes as critical for self-development along with promotion of local content. Discussions highlighted the potential of the audio-visual medium in addition to text-based messaging for increasing the base of communication in ICT-led projects.

The group outlined certain principles for establishment of community telecentres. Empowerment of communities with active participation and involvement from people emerged as a guiding principle throughout the discussions. Issues of gender, ownership, contextualised technologies, public space and openness were posited as a prerequisite for telecentres that impact social justice goals. This group questioned the varied roles of a telecentre and its infrastructural readiness, and focused on the distinction between 'providing services' and 'empowerment'. This distinction was flagged in the context of the Common Service Scheme (CSC) of the Government of India, which have been conceptualised as business propositions delivering services without addressing participation and equity. Prior to establishment of community telecentres, it is critical to take the local community on board and build on the participatory models that are publicly rooted and supported. The group posited that although infrastructure has to be provided by the government to make a project sustainable, the traditional structures and the dynamics of power relations at the grassroots need to be integrated while contextualising technology choices. A number of ideas were exchanged about involving women self-help groups (SHG) and other groups in the management of CSC as approved through consensus with the community. Discussion also considered the problematic aspects within *panchayats*, such as the low representation of socially backward and most marginalised groups, which may strike at the 'legitimacy' of *panchayats* as the forum/ defacto platforms for CSC/TC co-ordination.

The group debated on the most effective ways to sustain and develop CSCs, pointing at the structural shortcomings of the top-down CSC design. The possible modes of operation, with a focus on public/ community ownership was discussed which included Public Private Partnership mode.
The role of *gram panchayat* and *gram sewak* are crucial to community rooted ICT processes. The gendered aspect of CSCs was pointed out as vital and integral to address, towards strengthening accessibility and participation by women within intra-organisational structures and systems. This group flagged the difficulty in decentralising telecentres management, while also developing them as centres for integrating developmental projects to deliver a variety of services such as health, medicine and agriculture.

The break-out group discussion concluded with the presentation of policy directives. Public Private Partnerships (PPP) may not be viable for achieving social justice goals, and hence the thrust should be on Citizen-Government Partnerships. Members strongly came out with an emphasis on government provisioning of connectivity and information as facilitated by ICTs. Poverty is directly proportional to distance from information, and telecentres should be postured as a critical spaces for achieving developmental objectives in community-centric ways.

Break-Out Group 2: ICT-based systems for social audit and monitoring

This cluster group discussed three cases: NREGA in Andhra Pradesh, IKM and *Mahiti Manthana* in Karnataka. In the NREGA, a comprehensive Management Information System (MIS) was built based on transactions handled by government officers with the help of CBOs. It provides background for disclosure on expenditure and assets created, and has also turned out to be a major success story in national level programme monitoring. The MIS created with the information base maintained locally facilitates a process of social audit which could potentially throw up to some extent falsifications in the documents created.

The IKM project has created an extensive information framework for handling planning related information on participatory formulation, appraisal, approval and implementation of local level development projects. This has helped the state government in providing proactive support to the local governments in the various stages of the plan lifecycle and intervening in situations where guidelines are flaunted. Transparency has increased and information is made available in the public domain. The compilation of information has facilitated political action, but it has not triggered the social audit process.

Through the MM project, community telecentres at the *gram* and sub-district level have been created in Mysore with a young girl acting as a community information services facilitator. The centres are managed by women's collectives formed locally. Need-based community information is shared and community radio and video have been proactively used for information dissemination, local logistics and social action. However the team is yet to handle the community information for challenging the official information.

The group also discussed ways to improve participation of the marginalised while promoting systemic integration of ICTs in developmental processes. Demand-driven ICT systems should be linked to social action, which requires integration of the experiences of the MIS building. Efforts for fostering transparency and ensuring RTI could be the practical instrument for generating community demand for information. Access to technology is critical, but the community systems surrounding technology use are more critical. In order to make the information exchange more meaningful, a proactive approach is necessary to ensure access and also to re-engineer the existing information systems in government.

Providing information on schemes, accounts, expenditure, beneficiary selection, demographics etc are radically new interventions, but these should be accompanied by targeted efforts on the one hand to promote mandatory disclosure, and on the other hand by improvements in the authenticity of the information provided by the public authority. This requires substantial efforts on the supply side by the public authorities including streamlining departmental information systems, one time updating of records, as well as substantial capacity building for proactive disclosure. The public

access ICT kiosks located at the sub-district and *panchayat* level can be used as access points, while national satellite transmission and community media can provide effective channels for communication.

The group discussed the importance of developing common frameworks for information sharing across departments and also ensuring local level validation with peoples' own information systems. This implicates a role for community electronic forums for involving community members, with the telecentres evolving from service delivery points to 'Community Knowledge Support Centres'. These Knowledge Centres can collect and continuously update community information, which can be used to challenge the governmental information systems, thereby enriching and improving both.

The break-out group concluded with a discussion on existing policy frameworks for addressing the digital divide and promoting ICT literacy, RTI, legal literacy from a rights perspective, and citizen charters for ensuring public accountability of the public authority. There is a need to make all these more focussed for effective local political action and empowerment of the marginalised by:

- devising channels for airing the voices of the unheard improving up on mandatory disclosure norms
- clearly defining information channelling within government through templates and links with registers documents files, databases etc.
- avoiding information clutter by packaging information and proactively improve content through accessing and utilising it for local action
- synchronising virtual channels with face to face community level interactions
- and developing clear performance benchmarks for service delivery and governance.

Break-Out Group 3: ICT-based systems for micro planning and public information systems

This group began with discussions on the need for clarity on the components that go into building a Public Information System (PIS) as opposed to MIS. It was concluded that PIS is bottom-up approach, which distinguishes it from social audit. Three principles emerged.

- Questions should be formulated by the community;
- Reflective of people's needs;
- Free and open Access.

The Abhiyan project in the state of Gujarat was used as an example of collection of household information and subsequent use in developmental micro-planning. The organisation allocated funds to anyone coming up with their own plan in village, thus privileging a bottom-up approach. Also, the structural issues of how the information is collected and stored attains importance, especially when checked for their utilitarian value. For instance in the case of land records, the community-based resource mapping generated information on areas that the government had been unable to map. The group elaborated that PIS differs from people's planning in the context of scale, where digital mapping provides a common platform while expanding the base of communication and externalises processes, allowing for interaction with the rest of the world. A central principle of PIS is the gathering and sharing of information, where the beneficiaries have limited access to other sources of information. The PIS will develop into a truly functional people's system only if there is a concerted effort to share and fill gaps in information.

The group discussed case studies from Brazil, Cambodia and the state of West Bengal in India to gain insights on building meaningful PIS. In India, a set of information was developed by communities and validated by people themselves, while in Cambodia community collaboration with a university generated a PGIS used for community's purposes. Brazil has a history of issues of land allotment to the landless, and many differences exist between governmental data and actual land available for occupation. Bridging these information asymmetries through ICT's is an important outcome of PIS. A promising mechanism for collecting and preserving information is through the use of digital platforms, facilitated by local civil society organisations. This information would be critical for local development, and the group briefly analysed the interactive participatory budgeting system in Brazil.

Issues of veracity of information structures are ongoing challenges for PIS, and point to the necessity of exploring different ways to understand the ecology of knowledge. The group argued that PIS should evolve over a period of time in any project, and the factors that give PIS legitimacy must be factored into ICTD. In India, for instance, the *panchayat* councils can be a good point to bring out information, where authentication begins as the information is processed by each hamlet validated through a tripartite system of community, *panchayat* and *gram sabha*. A few examples of contradictions between official and people's data were shared and reflected upon. The group also issued a cautionary note that e-governance services provided by the government may prioritise cost effectiveness over the needs of the community, and consequently underscored the interrogation of spaces for participation and communication.

Policy priorities for PIS must include a framework mediated through ICTs that afford a complex validation process. In a debate about Open Information Systems, parallels were drawn between wikipedia and *gram sabha* while pointing that the *gram sabhas* may not necessarily be an inclusive space for women and *dalits*. The group posited that safeguards are needed to make the system work, as also a space for collective organisation, which is open and enables free access to all. In defining 'open' and 'collective', the group indicated the facilitation of access to information, multiple users, single platforms for official and non official data, open software and hardware that enable the democratisation of information systems.

Break-Out Group 4: Mobile telephony based systems

Debate in this break-out group began by addressing the dichotomy framing the use of mobile phones, which are easier to procure, versus the Internet that ensures greater access and penetration. Discussions also recognised the necessity for mobile applications to connect to liveliehoods, health and other developmental priorities. Issues of control like gender, caste, social norms operating from within and without the system were deliberated upon.

The remainder of the discussion was sharply divided between the mobile phone optimists and those who believe mobiles should be analysed critically before proceeding with wide scale replication. Members in support of the latter opinion pointed out that mobile network operators are not necessarily tuned to the needs of the community, and their commercial interests would surpass the needs of the community. However, mobile phones can very effectively be used by the government for public service delivery, and also serve as a substitute for smartcards for identification and authentication. For instance, mobiles are being increasingly used by doctors in remote areas to connnect with speacialists, and also by to Disaster Management Committees for disaster management.

Another case discussed was on primary health, and the final one was an experience from the Kwa-Zulu Natal province in South Africa. At the primary health centre (PHC), patient information was uploaded to a backend system through the use of mobiles in the field. A medical specialist would thenrespond with diagnosis and prescription. This method of voice menu driven mobile content performs very well in reach to larger numbers, but also presents challenges in the form of management of toll free centres and also followups for development works requested through the PHC.

Some members questioned the feasability of using mobiles as smartcards, since that raises questions of whether mobiles would then be issued to all citizens as a matter of a right, and if not then how would it address the large section who are excluded and fall outside the realm of owning a mobile. The group also discussed that in the context of participation, the existing projects related to mobile phones on the ground do not speak to the most marginalised. There is a huge gap in systematic research to understand peer to peer and other ICT-based models used by marginalised communities to connect within a community informatics context, and the group argued for more research in this area.

Break-Out Group 5: ICTs for horizontal networking and community media

Much of the discussion in this cluster focused on community radio as a potential means of communication and horizontal networking in rural areas. The group was of the opinion that community radio is one of the best ways to reach marginalised communities, while providing them with a 'voice' in development communication. Group members shared their experiences and knowledge of various radio-for-rural development projects and experiments in the states of Kerala, Karnataka, Andhra Pradesh, and Pondicherry. Some also mentioned experiments over satellite radio (e.g. WorldSpace) to engage with a notion of community as 'community of interest' that is geographically spread. Discussions highlighted that although some of these projects were community-centric, many were not community-driven and could not be sustained in the long-term.

Members of the group suggested that community radio has the potential to enhance community solidarity; through sharing of similar problems and solutions to them, there would be a strengthening of people's confidence in their capacities to address their own problems with their own resources. For this to happen in any significant way, it is important that the community perceives a sense of ownership over the process and the means of production (i.e., both symbolic and actual).

The group also noted that many field-level NGOs and activists do not think of community radio as an end in itself, but only as a tool. They are concerned at the immediate, tangible benefits that can accrue to the community from the information they receive from the community media. However, experience has shown that the process of participation in a community media programme is as, if not more, important than the product. The primary issue in participation is the facilitation of dialogue and debate among members of a community so that they become the ultimate arbiters and negotiators of the development norms suitable for them. Community media must embed themselves in ongoing processes of participatory local development and build on established participatory cultures and institutions.

While the group was of the general opinion that community media had some limitations for horizontal networking beyond a narrow, geographical area, it was pointed by some participants that

participatory (community) video work has succeeded in reaching out to wider communities. Community video, it was said, has a powerful sense of credibility, believability and horizontal networking through video should be seen as a sharing between collectives, and not just between individuals. Special mention was made of the films made by women of the Community Media Trust of the Deccan Development Society in the state Andhra Pradesh on the failure of Bt cotton in Warangal district. These films were translated into several foreign languages, including Spanish and Swahili, and have been used around the world for policy advocacy. The films and the advocacy work that accompanied it has, in fact, led to the banning of Bt cotton in the state of Andhra Pradesh.

The group also discussed some policy issues in relation to community radio in India. Members called for creation of a level playing field for CBOs applying for community radio licenses and speeding up the cumbersome licensing process. Among other changes in the community radio policy suggested by the group included: allow networking of CR stations to enable more effective horizontal networking among communities; and explore frequency-sharing and programme sharing. Other policy suggestions were: the need for proper spectrum mapping in countries where this has not been done to ensure adequate space for community broadcasting; open source alternatives for editing softwares; more user-friendly interfaces for computer-based editing; customs-duty exemptions for equipment meant for community media. The group was of the opinion that one should explore different ownership and management structures of community media that are not only democratic and inclusive, but also help communities overcome resource limitations. Finally, the group recommended more systematic research and documentation to learn from community media experiences and to be able to fully understand their potential for forging horizontal networking.

Open Discussions

The moderators of the open session, Ms. Lal and Mr. Singh, elaborated on the context for the plenary by focussing on a few key points of departure. The presentations from the earlier sessions revealed that many good ICTD plans are not working due to non-functional systems. Wresting power away from the stronghold of traditional information brokers is difficult, particularly in cases of extreme inequality, where systems do not work according to projections immediately. In these situations, the important questions to ask for ICTs in development is - who represents the community. Equally critical is the issue of parallel systems, since in many countries independent ICTD projects enter the developmental landscape and bypass similar governmental interventions. It is important to get a sense of how service delivery and governmental activities can be enabled by ICTs, while simultaneously focusing on empowering aspects of ICT use and appropriation.

Insights from earlier sessions provided granularity on the anamolies and challenges in the integration of ICTs within the existing system to inspire and facilitate greater participation of the people. Project presentations highlighted techno-managerial systems that capture the role of service delivery, which leads to the 'straddling' of development goals by restrictive technical priorities. Also central to the debate is the issue of availability of technology and access. Ms. Lal and Mr. Singh detailed the preparation of a toolkit for policy recommendations towards ICTs for participatory local development, arising out of the discussions at the workshop. They also discussed the possibility of establishing a resource portal to deal with ICT applications that would have participatory implications and systemic impact.

The moderators laid out the objectives of the plenary discussion as two-fold: a) a detailed exploration of models for ICTD practice, in the context of techno-social systems that synergestically work together for participatory development and b) institutional level frameworks to facilitate ICTs in participatory local development models on the ground, which implicate policymaking decisions. The ensuing discussions in the open group were rich and varied and reflected a broad range of perspectives and diverse experiences on practice and policy at global and local levels. Some of the emergent themes and principles for an ICT-enabled development ecology at local levels are synthesised in the next several sections.

e-Governance in the Indian context

Mr. Raghunandan provided a detailed analysis of e-governance in India as an example of overall challenges and risks in ICT for participatory development projects, especially those driven by developing country national governments. He strongly criticised the rural e-governance schemes in India, and attributed their failure to the dismal condition of rural governance in India. In a landscape of 'false dawns', short-term pilots, low capacity and limited coordination between administrative levels, a weak system of decentralised rural governance has not been able to adapt to and appropriate the top-down and market-based introduction of ICTs into governance processes through 'e-governance'. Mr. Raghunandan commented that similar situations exist in many other countries in the South, and encouraged the diverse voices at this workshop to work together towards alternative principles of ICT-enabled governance reform and development.

He argued that ICTs can completely rewrite governmental interaction in the same way that it has rewritten corporate interaction; the biggest difference being that corporates are motivated by profit with inherent flexibilities, while governments are bound by larger laws and constitutional imperatives. The social equity and justice imperatives of governments are critical in limiting the use of ICTs for centralising activities, while enabling their holistic appropriation towards models rooted in the tenets of democracy, participation and equality. Simultaneously ICTs put pressure on institutions to 'leapfrog' structure and design imperatives and begin to question the rationale and productivity of governmental organisation, leading to debate on how best to structure ICT-driven administrative reform and services outsourcing. Introduction of ICTs also has the potential to move governance from a service-delivery to a rights-based framework. These multiple layers of ICT-based outcomes should be considered before prescribing centralised, market-oriented large-scale models, as has unfortunately been done by the Indian national government.

Mr. Raghunandan suggested that the central government led programme on e-governance has not captured the various nuances in ICT-enabled processes, and hence state governments can and should work on their own programmes for e-governance as embedded within priniciples of governance reform and facilitated by ICTs. He also directed civil society players to provide the critical analysis that is required to ensure e-governance addresses structural issues of reform, participation and social justice. In terms of ICT applications, transparency in budgeting to enable participatory decisionmaking and implementation can transform local administrative institutions. It is in encouraging these schemes and principles that the civil society plays a significant role and governments should be held accountable for governance reform by civil society led community movements.

Institutional arrangements: moving towards decentralisation

Mr. Elango recounted his experience in a *panchayat* in the state of Tamil Nadu, where he led a programme of digitising all local information and putting it online through a specially set up website. When the programme was initiated in the *panchayat*, people were surprised at the amount of data available, but proceeded with data collection in a in a participatory manner led by communities. These data are still updated and used in participatory management projects, pointing to the fact that data availability is crucial to desmystify the planning process at local levels. Community contributions are used to conduct several development works, and although initially there was some resistance from higher levels of adminstration, the collective will of the community accompanied by accurate information greatly bolstered the case for local, decentralised development and planning processes. Over the years, the *panchayat* has set up a website, networked with other pachayats for capacity building in ICT-enabled planning. The biggest challenges to these processes are lack of support from line departments, and absence of relevant localised ICT applications.

In contrast to the case of the state of Tamil Nadu, the state of Gujarat has followed a largely centralised model of ICT use in local development. The state government has ICT enabled *panchayats* in a centralised manner with functional computers and internal servers within a short period of time. Although the empowerment related outcomes of these centres are debatable, the computerisation has enabled clear pathways of data access. Activities like data entry, technical support have been outsourced, thus circumventing the need for capacity building of *panchayat* functionaries, in contrast to the Tamil Nadu case. Despite the centralised model, the programme has enabled improvements in accountability of the *panchayat* and of the *gram sabhas*, since all

resolutions are uploaded onto the websites.

Mr. Raghunandan compared both models of ICTs for local development, and argued for more nuanced analyses on both. In some states with low conflict between state and local administrations, the centralised model may take off, while in others low involvement from the state in local issues provides a great platform for decentralised efforts. However, he issued a note of caution that achieving economies of scale through the decentralised model was an untenable goal, and may in fact, circumvent the fulfilment of broader development goals. A publicly funded model, with implementation and decision making devolved to local levels, has the potential to upscale while also maintaining context and local priorities. Mr. Arasu presented the case of the state of Jharkhand as an example of the challenges in devolution of power inspite of decentralised processes. In the state, implementation of CSCs has been taken up by an NGO and is addressing various aspects of local development processes including the NREGS scheme. This strategy has facilitated extensive community involvement, challenging traditionally accepted norms of participation. However, due to the fragile governmental structure, there is limited support and also resistance from various departments for provision of service. In these dynamic situations, clearer reflection is needed on the outcomes of centralised vis-a-vis decentralised use of ICTs.

Mr. B.B. Biyela commented on the necessity to clearly establish the different potential outcomes between a centralised and decentralised version of ICT use. For instance, in Uganda, the national government indicated the requirements for certain information to be placed on websites, and prescribed certain other considerations. However, the responsibility of setting up each website was completely devolved to the municipality level. In this way, community involvement was encouraged in budgeting, reporting, and acces to information. On the other hand, he emphasised that if the centralised route is adopted, then outcomes are likely to be perceived at the level of economic benefit, but ownership is harder to obtain. In both options, he pleaded for public infrastructure provisioning and pointed to the importance of access to ICT infrastructure for large-scale empowerment.

Integration of ICT-based projects into public administration systems

Mr. Raghunandan provided a critical assessment of the NREGS implementation in the state of Andhra Pradesh. The law prescribes the *panchayat* as the principle authority for planning and implementation, including identification of projects and allocation of employment. However, the software used in AP does not allow for this and is deployed only in the mandal (sub-district) levels, such that the mandal ties up with local SHGs for allocation of work, completely bypassing the *panchayat*. Although there are tangible improvements in income and infrastructure, these obfuscate issues of institutional ownership and integration that are particularly critical for ICT-based intervention.

Drawing the discussion towards the ICTD strategy of the Indian state, Mr. Singh critiqued the lack of structural integration of the government-led e-governance schemes, the CSCs. Several states have outsourced the planning process for e-governance and ICT-based development interventions to private consultants, defined by a market fundamentalist approach, which goes against the grain of the social welfare approach of the government. Mr. Maiti provided an alternate view by pointing out the 'lived realities' in the state of West Bengal, which has decided to intentionally select the *panchayat* and block (sub-district) officers to accomodate the central government sponsored CSC

scheme. Although the CSC and *gram panchayat* are separated in physical location, there is constant interaction between the *panchayat* and CSC staff. Implementation of NREGS is given priority through the CSC and the functional improvements enable the sustenence of the *panchayat* and of the services to citizens.

Mr. Mittra presented a case of ICTs for governance and development through a local administration centric approach in the state of Gujarat. The e-gram initiative is perhaps unique amongst telecentre-based e-governance approaches in India in being promoted by the state government, while being scaffolded within local public institutions. Rather than placing the ICT infrastructure as an add-on to pre-existing systems, the government re-designed the community extension model in the form of the 'gram mitra' programme, and created potentialities for true synergies between the re-shaped public systems and newly introduced ICT systems. The *gram mitra* programme seeks to improve awareness of development schemes amongst rural populations, while providing opportunities for rural youth to engage in development processes in their roles as *gram mitras*. This forms the foundation for the village secretariat initiative of the state government, and enables shared community development efforts rooted in existing public administrative systems.

Community appropriation of ICT-based processes and systems: participation and social audit

Participants discussed examples of government-led ICT programmes that have succeeded in incorporating community monitoring into implementation. Mr. Dash detailed a natural disaster relief programme led by the government of the state of Orissa, and implemented with the support of *panchayats*. Tendering for repair works, planning and monitoring of infrastructure project success were all facilitated through ICTs. A functional grievance management system with feedback systems doubles up as a mechanism for monitoring. The success of the system was evident in better quality of work executed and in minimising erraneous payments.

Based on an example from Rajasthan, Mr. Dey reflected on how ICTs are beneficial for scaling up, networking and reducing timelags, particularly in their role in facilitating participation. Through an extensive government-led effort of digitising information on electoral candidates coupled with dissemination through websites, access to information and positions of the candidates became available. Contextualisation processes were undertaken and offline AV material was also used for dissemination. This example raised important questions for ICT ecology in the context of community involvement, including ownership and control over information, convergence between digital and non-digital methods of sharing information, nature of the point of contact where information is transmitted, and what choices are enabling the democratic nature of the various processes along the information sharing trajectory.

Closely related to these arguments, there was discussion on power structures underpinning ICT-mediated local development processes. For instance, identifying information mediatories or knowledge workers who operate the newly established node of information carries the risk of encouraging new power centres rather than enabling a transfer and devolution of traditionally restrictive power arrangements. Mr. Dey also spoke about the participatory budgeting movement, which introduces a range of specialists, and cautioned against the creation of another level of dependency among communities rather than diffusing power. At this juncture, Ms. Gurumurthy pointed to the social audit happening in feminist circles on the domestic violence act, and how

social audit need not be done by experts. Any ICT-based process should have inbuilt mechanisms for social auditing, which has direct implications for policymaking.

Referring to the NREGS software and website Mr. Kasinathan suggested that social audit is relevant even in the case of ICT applications. He indicated that the current NREGS software being used was not amenable to social audit nor is it amenable to being shaped by communities, but these are considerations to be factored into the next stages of implementation. Moreover, the software provider has not only reduced transperancy of information collation but also the institutional powers and legal mandate as laid down in the Act. Mr. Raghunandan cautioned against the circumvention of openness in ICT applications when technical experts are bereft of regulatory system compliance to implementing agencies.

Dr. Gurstein compared bottom-up processes to ICT-led processes in their inherent similarities of distribution of power, pointing to ICTD projects as being less about systems and more about political engagements and movements. He re-emphasised the need to consider how ICTs can provide a community-centric lens to political strategies and enable political processes, thus strengthening democracy.

Role of different actors

An important emerging point from the discussions was the critical role of different actors in any ICT for local development initiative. Dr. Pather spoke of the lessons learnt from the business experience, where good systems analysis and design of appropriate systems has occured in the context of vibrant stakeholder participation. For ICTD, it is important to negotiate on the levels of engagement from governments, civil society and communty groups. He reflected on the arguments proposed by the Cluster Group discussion on telecentres, including the need for a balance between a welfare-based approach of governments and a rights-based approach of citizens. The group proposed 'communty-government' partnerships, as opposed to private-government partnerships that form part of the dominant discourse on ICTD. Since ICTs have transformatory potential, there is a need for close interactions between the public sector and communities, to ensure that in the process of partnerships, certain unique needs can be realised.

Mr. Fortunato Dela Pena provided a historical perspective on ICTD initiatives that focus on community involvement in processes, along with local organisations and governments. These initiatives often fail to replicate because of a lack of institutionalisation of the roles and responsibilities of different participants in the process. For instance, there may be students, experts and affluent people in communities who are willing to contribute, but are ignored in the conceptualisation of participation due to homogenisation of communities and instrumentalisation of participation. He suggested that ICTs be used to elicit meaningful contributions from all kinds of stakeholders, and be systematised into ICT-based local development projects towards building truly participatory efforts.

Mr. Singh took the discussion on partnerships in ICTD forward by advocating for a model of governmental support, while creating space for local governments to have autonomy. This is the form of partnership that the state of Gujarat has been able to do in the e-gram project. He also stressed that the role of the private player is important and must not be ignored. Technical support can be provided by a private player, as in the e-gram project, where the role definition is rooted

within a clear system of governmental regulation. Hence, defining and implementing clear roles for governments, communities and private players is an important consideration for ICTs for participatory local development projects. In this context, Mr. Dey strongly outlined the difference in perspective between the consumer and citizenship approaches to ICT systems and processes, while Mr. Raghunandan underscored the imperative of a rights-based approach to ICTD. Ms. Lal captured this important distinction by challenging the outsourcing of ICT processes to the private sector, asking whether the concommitant front-ending of public services can really impact governmental roles.

Privacy politics

Mr. Siochru tabled a discussion on privacy concerns, and alerted that Indian governments and civil society take for granted that all types of information will be made available by communities. In Europe and Africa, issues of privacy and data protection of personal information are old debates and the Indian ICT-enabled systems need to be assessed in the perspective of privacy issues in these other regions. Mr. Singh contended this opinion by pointing out that in India, information is such a desire and brings with it much political gain that the tradeoff of privacy has been typically been accepted thus far. Exceptions to this situation do occur, and Mr. Unnikrishnan reflected on the issues of vulnerability in identifying Muslim households in various states of the country, and the risks of mapping the status of women in several patriarchal communities. In light of several recent terrorist attacks in India, Mr. Raghunandan predicted many issues of privacy arising from dominant communities and cautioned against subtle ways in which privacy issues could impinge on meaningful engagement with ICTs for participatory local development initiatives.

Sustainability of the developmental intervention

The discussion on principles of ICTs for local participatory development veered strongly toward the topic of sustainability. Mr. Kasinathan compared a village knowledge centre and its strong developmental context to public provisioning of education and health centres. Once ICTs are accepted as a social welfare necessity, then the implications of establishing centres in the context of empowerment will outweigh any investments from a cost perspective. Sustainability of the development initiative will assume importance over viability of the physical 'bricks-and-mortar' infrastructure. He drew attention to the CSC scheme, where the model of an entrepreneur to manage the centre on a commercial basis conflicts with the free provisioning of government services. Questioning whether a privately owned centre can avoid the overshadowing of basic welfare objectives by the commercial interest, he debunked the notion of private partnerships enabling governmental functioning while constantly aiming for financial viability. In contrast, the models implemented in the state of West Bengal, where the ICT centre is housed within the *panchayat* system presents possibilities for accountability and community monitoring, thus strengthening the sustainability parameters of the centre. Clearly, the connections between ICT-based initiatives and local administration need not only connect to ownership issues, but also to sustainability concerns.

Mr. Raghunandan argued for the public spending imperative in ICTD initiatives by framing the sustainability debate within the CSC scheme. The model of having a central agency and subsequent state agencies selected through tendering is flawed for flaunting of the tenets of decentralisation and

ownership building within states. The required numbers of CSCs have not been established, and only those states that set up ICTD initiatives without waiting for a central government directive have been able to achieve positive governance reform outcomes. He strongly asserted that government service delivery does not offer itself to being driven by a revenue model, and was of the opinion that if this is pursued, then the CSCs will not be viable. He strongly criticised the falsification of 'success' of ICT applications, which are actually surviving on markets of fabricated needs, like that of the Bhoomi project in the state of Karnataka, where a farmer is forced to pay for a certificate each year to avail of crop loans. He emphasised that for ICT-led local development initiatives, the revenue model should not be thought of, and placed the responsibility of provisioning squarely within the realm of public funding.

Mr. Dey connected access to basic governmental services at ICT centres to the provision of governmental entitlements through public funding and support, where the question of commercial viability must not enter the debate. He posited that any governmental ICT initiative including the existing CSC scheme should be based on this principle, while access to commercial services can be undertaken through separate commercial centres that run on the model of cybercafes. Here the important takeaway is to not mix service delivery and its profit motive with governmental functioning for social justice and equity.

Conclusions

All participants provided a brief overview of their inputs into the toolkit, leading from the earlier open discussion session. These included:

- success stories are often hyped up, and the toolkit should include pitfalls and negative results;
- issues of privacy should be considered in the toolkit;
- the impacts of economic opportunities should be highlighted;
- the benefits and disadvantages in adopting a centralised model and a decentralised model should be outlined;
- appropriate information is critical, especially since the dominant posturing of ICTs is in a market-centric worldview, catering mostly to advantaged groups of people;
- the toolkit should reflect the message that poverty is directly proportional to useful information;
- the Chile Health Services would be a good case study to understand and present;
- the toolkit should be easy to read and understand and presented in practical and concrete terms;
- there should be a reflection on empowering the people who use ICTs, so that they can participate in processes related to their own lives, rather than being passive recipients of information and government services;
- the toolkit should recommend open data formats for the public information and reflect a strong open standards policy;
- reflection on the gamut of technologies that exist, and their different roles;
- the toolkit needs to address how governmental information will be stored, retreived and collected;
- the toolkit should position ICT-based system should be in a mode to strengthen the local government, and not as a parallel system;

- there should be adequate reflection on improving the process of empowerment;
- there should be talk about similar technologies, and also make it more sophisticated than the use of mobile phones, and there should be some information on the challenges that some of these projects have;
- the toolkit should also contain some qualification on selection criteria for the case studies.

In her concluding insights, Ms. Lal offered an overview of the shared understandings from the workshop towards achieving a balance between the process of empowering citizens and a simultaneous strengthening of local governance. When these concurrent processes are facilitated by ICTs, models begin to emerge for policy makers on using ICTs for systematising participatory local development efforts. She also emphasised the need to make ICTs work for the poor and for institutions themselves, while allowing for appropriation by and empowerment of communities through ICTs. Mr. Singh echoed these thoughts while reiterating the advantage of modeling for policy makers and practitioners to take ideas forward. He encouraged participants to share resources and debate on issues emerging from the workshop towards developing rigourous models for ICTs for local participatory development.

Annexures

1. List of Participants

Names	Country	Organisation	email
		Participant List - 'ICTs for Participatory Local Development '	
Amit Chakravarthy	India	Manager(ICTD), National Institute for Smart Government, India	amit.chakravarty@nisg.org
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Willie Currie	South Africa	Association for Progressive Communications, South Africa	willie.currie@gmail.com

2. Workshop Agenda

<u>**9th December 2008 - *Day One***</u>

From	To	Topic	Speaker/ Facilitator	Session Objectives
9:00	9:30	Registration		
9:30	10:00	Overview of workshop – objectives and expectations.	*Gurumurthy Kasinathan* (ITfC) and *Radhika Lal* (UNDP)	Understanding of workshop goals and objectives
10:00	10:15	Participants introduce themselves within seating clusters: Each participant shares very briefly about: 1.Her/his background and expectations from the workshop. 2.Why s/he is positive about using ICTs for participatory development, 3.why s/he is skeptical about using ICTs for participatory development.	Cluster Rapporteur	Warming up and understanding the backgrounds and expectations of co-participants.
10:15	11:15	2 Research Presentations - *20 minutes per presentation plus 10 minutes discussion ONLY for clarifications.*	*Shaun Pather* (South Africa), *Erwin Alampay* (Philippines)	Absorbing and understanding research findings in and across country contexts.
11:15	11:30	Coffee Break		
11:30	12:00	3rd Research Presentation	*K. Raju* (India)	-do-
12:00	13:30	Plenary I - on the themes for discussions on Day 1 *Framing of issues vis-à-vis the following five themes of 'ICTs for participatory local development' followed by discussion:* 1. Community Telecentres 2. ICTs based systems for social audit and monitoring 3. ICTs based systems for micro planning and PIS (Public Information Systems) 4. Mobile Telephony based systems 5. ICTs for horizontal networking and community media	*Parminder Jeet Singh* (ITfC)	Developing the scope of each theme, and framing key issues under each.
13:30	14:30	Lunch		
14:30	15:45	Theme-wise clusters of participants on each of the themes	Cluster Rapporteur	In-depth discussions on the specific theme in relation to ICTs for participatory local development
15:45	16:00	Coffee Break		
16:00	18:00	Plenary II - Five minute reports from each cluster, followed by an open discussion on key points and issues.	*Fortunato Dela Pena* (Philippines) and *Aruna Roy* (India)	Efforts to synthesize key points and issues emerging from different themes into a synergistic approach to ICTs for participatory development

\underline{10th December 2008 – *Day Two*}				
Fro m	**To**	**Topic**	**Speaker/ Facilitator**	**Session Objectives**
9:00	9:20	Brief Wrap up of day 1 and plans and expectations for day 2	*Radhika Lal* and *Parminder Jeet Singh*	Linking day 1 with day 2
9:20	10:50	3 Research Presentations - *20 minutes per presentation plus 10 minutes discussion ONLY for clarifications.*	*Wairagala Wakabi* (Uganda), *Graciela Selaiman* (Brazil), *Venkatesh Prasad* (India)	Absorbing and understanding research findings in and across country contexts.
10:50	11:05	Coffee Break		
11:05	11:45	Plenary III - on the themes for discussions on Day 2 *Framing of issues vis-à-vis the following five themes of 'ICTs for participatory local development' followed by discussion:* 1. Policy requirements for leveraging ICTs for participatory local development 2. Practices around integrated application of ICTs for enabling 'new development eco-systems' 3. ICTs for triggering local economic opportunities 4. Changing citizen-state relationships 5. New emerging roles for different stakeholders	*Radhika Lal*	Developing the scope of each theme, and framing key issues for each.
11:45	13:00	Theme-wise clusters of participants on each of the themes	Cluster Rapporteur	Discussions on the specific theme in relation to ICTs for participatory local development
13:00	14:00	Lunch		
14:00	16:00	Plenary IV - Five minute reports from each cluster, followed by an open discussion on key points and issues.	*T.R. Raghunandan* (India) and *Anita Gurumurthy* (ITfC)	Efforts to synthesize key points and issues emerging from different discussions into scoping a possible 'way forward'
16:00	16:15	Coffee Break		
16:15	17:30	Open House – Critical issues and ideas that should go into a policy and practice toolkit on 'ICTs for Participatory Local Development'	*Edward Baliddawa* (Uganda)	Generate ideas for the toolkit that will be put together after the workshop
17:30	17:45	Wrap-up - Summary and way forward	*Radhika Lal* and *Parminder Jeet Singh*	