

EDITORIAL INTRODUCTION

Subhash C. Bhatnagar

This issue of *Regional Development Dialogue* (*RDD*) is a compendium of workshop papers which were first presented and discussed in a United Nations Centre for Regional Development (UNCRD) and United Nations Development Programme (UNDP)-Asia Pacific Development Information Programme (APDIP) workshop with the theme “Paving the Road towards Pro-Poor e-Governance,” held in Bangkok on 26-27 April 2006.

Some form of e-government is happening in all countries of the Asia-Pacific Region. Countries such as Sri Lanka report plans for countrywide e-development programmes encompassing information and communication technology (ICT) sector development and e-government as major components. India and Cambodia each have a national programme on the drawing board for development of e-government. Other countries which do not have national programmes, nonetheless report several e-government applications that have been built in different sectors. Many authors note that most of the developing countries from the Asia-Pacific Region are just embarking on e-government. At this juncture in the development of e-government, it is important to focus our attention on the benefits that e-government delivers to the citizens, particularly to poor and vulnerable citizens. If a large segment of the population of the developing countries in the region remains unserved, e-government would not be sustainable in the long run. It will lose much of the political support that it currently enjoys in many countries.

The purpose of this issue of *RDD* is to review the e-government plans and strategies of countries in the region; make an assessment of the degree to which these plans incorporate the concerns of the poor and the vulnerable; and review the outcomes so far. By presenting case studies from different countries which highlight various projects that were designed to impact the vulnerable, the journal hopes to highlight the rich potential that exists. The articles appearing in the volume also discuss the challenges that are faced in designing and implementing e-government with a focus on the vulnerable sections of society and make suggestions on how to move the agenda of pro-poor e-governance forward.

The volume contains twenty articles from eleven countries and the territory of Hong Kong Special Administrative Region (SAR) of China, in the Asia-Pacific Region. For nine of these countries two kinds of perspectives are presented: one from the government written by a senior government functionary and the other from civil society. The cross section of countries represents a wide range in terms of their e-government readiness and actual degree of ICT use in the public sector. For example Hong Kong SAR, Japan, and the Republic of Korea rate very high on most e-readiness rankings and have a large number

of e-government applications. On the other hand, Pakistan and Mongolia may be considered at the lower end of the e-readiness index with only a few countrywide applications. The mix of countries includes large countries such as China and India and small island countries such as Fiji and Sri Lanka.

These articles are presented in country-wise order. Each article reflects on several aspects of pro-poor e-governance. However, each article tackles one particular theme in much greater detail, e.g., e-government country strategies and descriptions of various projects and activities; an overview of country strategies with some assessment and examples of pro-poor focus (in applications, access infrastructure, and digital inclusion); and articles which describe a single pro-poor project (e.g., application or creation of telecentres) in detail as a specific case study. We present the articles in alphabetical order but the basic themes addressed by each article are identified in my overall introduction to the articles.

Leewood Phu's study describes Cambodia's strategy and plans for implementing ICT solutions to achieve policy goals, improve government service delivery, and also engage with the public in a more information-based manner. According to the author the Government Administration Information System (GAIS) project covering registration of real estate, registration of vehicles, and the issue of driving licenses implemented by the National ICT Development Authority (NiDA) has enhanced government revenues and improved the government's image. The Cambodian article presents interesting data on the extent of rent-seeking in the manual system that existed prior to GAIS and a suggestion that rent-seeking has diminished following the introduction of GAIS.

Commenting on the article, Kelly A. Hutchinson points out that connectivity poses a considerable challenge outside of the provincial capitals. Some programmes in Cambodia have established telecentres, however there is still a great need to reach vulnerable and marginalized groups. She emphasizes the need for more content in the local language and a focus on governance.

In the next article, Guo Liang provides an overview of e-government programmes in China and argues that the programme is focused on development of infrastructure rather than citizen services. He presents an evaluation of the many government websites and concludes that the on-line contents on government websites are less than satisfactory. Only 15.2 per cent of e-government websites have page views of more than 1,000 per day. He suggests that government officials need to be trained to understand e-governance and should provide better service on government websites. In addition to spending money on building websites, governments should educate the citizens about the advantages of using them.

The second article from China, by Yang Fengchun, provides a few examples of applications that are focused on the vulnerable sections of society. Eighty per cent of information service stations in villages and towns in China have networked computers. He cites the example of Guangdong Province which established information distribution platforms in eighty-two towns in 2003 to provide services for peasants. Even though many of these agricultural websites do not satisfy peasants' actual needs, the article cites a few success stories. In 2005, Dahuashan town sold more than 10 million kg of peaches through the "Chinese peach town" website of Pinggu, accounting for 57 per cent of the total peach output of the entire town, and realized a sales income of RMB 32 million, on-line. Another example of pro-poor applications is the use of video conference technology to conduct

interviews of migrant workers. It is an innovative idea that saves travel costs and prevents wage loss of poor migrant workers. Yang's overall assessment does not differ greatly from Liang's study that e-government in China has not provided any specific benefits to the most vulnerable groups. In China, e-government is mainly focused on economic development. Even in delivery of public service there is a lack of concern for vulnerable groups.

Chen Jiangan while commenting on the two articles appears to judge the achievements of China less harshly. He discusses the challenges of moving a large country through multifaceted reforms in social and economic sectors and political systems. He argues that a great deal of progress has been made on many fronts, although it may be uneven and insufficient to catch up with the developed world. He marshals data to show the impressive gains in infrastructure but agrees with Liang that the entire effort has been top-down and focused on internal government efficiency rather than service delivery.

John Yat-chu Fung's article from Hong Kong SAR highlights the problem of digital exclusion, even in high-income countries. It describes a digital inclusion programme that was designed to take care of the economic sustainability of projects initiated by nongovernmental organizations (NGOs). The main strategy adopted was to ride on the international agenda of the World Summit on the Information Society (WSIS) to push for local changes. This was a multi-step approach: to bring to the government's attention the global agenda of building a more inclusive information society, to encourage a local response to the global WSIS agenda, and to suggest feasible solutions. Following the WSIS declaration, NGOs in Hong Kong SAR were keen to run digital inclusion programmes. NGOs have a close connection to the needs in the community and the necessary skills to conduct the programme but are usually constrained by inadequate funding. They required a flexible and supportive funding source for digital inclusion initiatives. The article describes the setting up of a Digital Solidarity Fund (DSF) for NGO projects through a partnership between the government and the corporate sector and also the support in administering the fund through its first tranche.

Doug Vogel, commenting on the article, cites another initiative in the universities that aims at digital inclusion by offering training on computers to disadvantaged groups and voices caution on the problem of sustainability as many government interventions easily fall victim to bureaucratic "red-tape" and lack of attention once a programme has been initiated. He points out that both short- and long-term effects of the DSF remain to be seen, since only one (of the six initially-funded projects) has been completed.

The next article, by John Budden, provides a changed perspective on the potential of new technologies for the development of Pacific Island countries. In his study on Fiji, he argues that the absence of good governance will obstruct the opportunity to exploit the full potential of technology for the purposes of development. What can we seriously expect from these technologies in the Pacific if "all Pacific Island countries score relatively poorly on international scales of governance?" he asks. Anand Chand then provides an overall description of Fiji's e-government plans and briefly discusses the "People's First Network" (PFnet) ICT model of the Solomon Islands. Fiji has developed a strategic plan to implement e-government over the next 5 years consisting of: connection of all nineteen public libraries to the Internet; establishment of rural telecentres; and establishing "supercentres" to assist the poor in urban areas who cannot afford to use Internet cafés. Since the operators at each station perform the functions of typing (from a handwritten note, usually in Pidgin English)

or verbally dictated) and sending the messages on behalf of the customers, illiteracy in English is not a constraint for the use of PFnet services. The cost of sending an email message at US\$ 0.26 cents and cost of receiving at US\$ 0.7 cents are quite affordable. Chand characterizes Fiji's effort as predominantly aimed at promoting business sector interests, lacking public consultation and participation by the poor.

Commenting on the two articles, Edo Stork identifies access to ICTs as the key issue raised by both articles. Generally, the most difficult part will be to make sure that the dispersed, poor, and remote population has affordable access to e-government services. A solution will need to consider pricing of ICT services for the grass-roots population and usage of innovative modalities such as those deployed by PFnet. When comparing ICT development in the Pacific to other parts of the world it is striking to see the large role of the independent (nongovernment) private sector in the West compared to their rather marginal role in the Pacific. This aspect is largely uninvestigated in the two articles.

The article by S. R. Das and R. Chandrashekhar presents a concise analysis of e-governance and its relevance to India. After setting the context, it describes the key features of India's National e-Government Programme (NEGP). However, the article does not say much on the involvement of civil society in the planning and execution of NEGP to ensure that marginalized groups are targeted and benefited. The article does imply that the overall thrust of government policy is to target the poor. He identifies the following challenges in implementing pro-poor e-governance: (a) to bring clarity to the objectives of pro-poor targeting; (b) to ensure delivery of public services in rural areas; (c) to balance standardization and localization; (d) to leverage the private sector and build public-private partnerships (PPPs) to serve rural areas; and (e) to make independent impact assessments of what has worked. There is a lack of internal capacity in e-government project conceptualization and implementation. In commenting on the articles, Rajeev Chawla makes an important point on the need for evolving a rigorous way of approval of e-government projects so that public money is not wasted for the purpose of just fulfilling a short-term objective of demonstrating administrative success.

The second article from India, by Rahul De', discusses a project on the computerization of land records from Karnataka State. The application is similar to the one described in an article from Pakistan although the implementation is on a much wider scale. The project entitled "Bhoomi" has resulted in many direct benefits to 5.5 million farmers in the state. However, further research is needed to establish if there has been any second order impact, a term used by the author to define broader developmental impacts. An interesting issue raised by De' in discussing the project is that the system has become less flexible after computerization thus disempowering the officials that dealt with land records at the local level. On the other hand, the computerized system is more transparent which can be utilized by powerful interests to gain an unfair advantage. However, the author needs to reflect whether in the manual systems, that have great asymmetry in information access built in, the powerful may find it easy to abuse in worse ways — not through just knowing which land can be targeted but actually manipulating records without paying compensation.

Commenting on the article, Rajeev Chawla questions the basic premise of the author that all e-government projects should target long-term development. The approaches of the author and the commentator represent an interesting contrast on the yardstick by which such projects should be judged. Chawla also highlights a number of interesting indirect benefits

of Bhoomi which merit careful consideration.

Japan is represented by the article from Mamoru Murabayashi, Shinya Yamato, and Hideo Tsuji which examines community involvement in Mie Prefecture, central Japan, and reports on initiatives focused on citizens' participation in the affairs of their prefectural government. The authors present an interesting account of the use of the electronic bulletin board as an e-democracy conference room in a prefecture in Japan. The article sets the programme in the context of a phased programme of "New Public Governance" and highlights the difficulty of generating debate on the Internet and encouraging participation. The e-democracy conference room has had more than 1,500 participants for the past 3 years but given Mie's 1.87 million population, this should be considered as a very low rate of participation. The author draws important lessons, particularly that if in such experiments citizens' need for involvement in civic affairs is a precondition — ICT can only be a facilitator. In many societies this need does not exist because of historic reasons, a feudal culture or illiteracy and poverty. It would be interesting to know the profile of "regulars" who were the core of the participating groups and if the vulnerable groups such as the old and handicapped became involved. What actions if any were taken to encourage the involvement of such groups?

Yukiko Hamatani and Daniel Willam while commenting on the article point out several advantages of a bulletin board. Discussing the need to enhance participation, they point out the importance of having the right topics on the web. A major impediment to constructive debate is that people with access to the web prefer lighter themes rather than serious issues raised by the government. This tendency makes wider participation of the citizenry more difficult. Discussion themes should be considered that are within reach, and are of practical importance to both citizens and government, thus encouraging the participation of a larger section of the population. The commentators share the general tenor of the article that technology is merely an enabler. Even if civil participation is made easier and communication between all parties improves, it does not necessarily mean that, in total, more people participate. It could just be a substitution of traditional forms of democracy by a modern tool, with the same actors as before. The low number of participants in Mie Prefecture is indicative of the fact that the real cause of insufficient civil participation cannot be addressed only by a bulletin board. If the citizens themselves cannot access the Internet or if they are not interested in it, no system design or framework will be able to make them participate.

Seang-Tae Kim's article, the first of two on the Republic of Korea, presents a model taxonomy to understand the evolutionary path of e-government and e-democracy and how the two can be moved to a point of convergence. Young-Jin, Shin's article provides an overview of the Korean *National Master Plan on e-Government* consisting of many phases: a national basic information system project (1987-1996); Korea information infrastructure project (1995-present); informatization promotion (1996-2000); eleven e-government initiatives (2001-2002); and e-government roadmap priority tasks (2003-2007). The central government is expanding its home network systems to ten million households in 2007 and has plans to supply low-income and disabled people with a high-speed network for 140,000 households, Internet network for 100,000 households, and PCs for 470,000 households. In addition, there are plans to operate an e-learning, job information centre, and an informatization training programme for the low-income population.

Commenting on the two articles, Yeoul Hwangbo recaps that e-government has moved from a bureaucratic model to an information management model and then a citizen participation model, and to a governance model as a final stage. Organization-based e-democracy on the other hand has evolved into a pluralistic model via the information provision model with the interactive model as an intermediate stepping stone. He emphasizes the Republic of Korea's achievements in building infrastructure and networks and recommends the Korean experience to other countries.

The article by Lkhagvasuren Ariunaa provides an overview of ICT development in Mongolia. It reviews ICT developments; e-government initiatives that have been implemented and that are still planned; and discusses ways of enhancing the impact on society, especially on the poorest and most marginalized groups. The accompanying article by Odgerel Ulziikhutag and Shirbazar Sukhbaatar describes the e-government strategy of Mongolia and traces the challenges. Commenting on the Mongolian plans presented in the two articles, Sukhbaatar Enkhjargal points out that the twenty-two projects in the Master Plan is mostly a dream list. There are some well-designed and formulated programmes and projects, especially the e-Mongolia Programme, the e-Government Master Plan, and Low cost PC programme. The studies show that existing policy documents address only central government issues. In future, more intensive actions should be carried out to develop local e-government. Initial steps towards creation of Internet community centres have started in Mongolian rural areas through joint efforts and with valuable contributions from different stakeholders. Unfortunately, the funding for regular operation of such centres has become more problematic in the absence of a sustainable business model.

The article by Muhammed Usman Qazi reports on the computerization of land records in a pilot project in Pakistan which can directly benefit the poor. In providing a critique of the project, Salman Ansari adds some details of how land record computerization is being replicated in other districts and the role public-private partnerships are playing in such a scaling up. Both the author and the commentator while being very laudatory of the effort, fail to describe the major implementation challenges. Ansari lists a number of benefits to business and industry that can flow out of a computerized land record system.

In the second case study from Pakistan, M. Yahya Waliullah and S. M. Raza provide a description of a computerized system that was implemented through the interaction of civil society with the government in Sindh Province to control certain types of crime. Commenting on the article, Ansari endorses the application as one of the best success stories. It is clear from the description of the author and the commentator that the benefits of the reform have gone to urban populations. Success has come in equal measures from the sophisticated technology tools and the pressure to use such tools that could have only come from political support and civil society involvement.

Erwin Alampay describes the Electronic Governance in Local Government Units (e-LGU) Project which is the Philippine Government's primary initiative for citizens' inclusion in the information society. This article looks at three aspects of the project: (a) website development; (b) the creation of revenue-generating systems; and (c) the provision of access to an ICT infrastructure through community e-centres. Presenting an evaluation, he opines that although more than 90 per cent of the local agencies have a web presence, most of the websites are at the first stage of evolution and have not been successful in engaging the citizens because of poor functionality, lack of awareness among citizens, and

surprisingly, a lack of awareness even among mayors and governors running local governments.

The second article on the Philippines is by Emmanuel C. Lallana and discusses the use of mobile phones and “short message system” (SMS) as a tool for empowerment and promoting democratic principles in the Philippines. The strengths and weakness of SMS as a medium for promoting e-democracy are identified. Many anecdotal examples of the use of SMS for mobilizing public opinion, collecting feedback, and for delivery of information are provided. Examples of several agencies that have either WAP enabled their websites or can deal with SMS messages are listed. Data on the uptake of a few of the services is also provided. The traffic through SMS needs to be seen in the context of the size of the population that can send SMS (with access to mobile phones or PCs). SMS traffic needs to be compared with other channels such as letters by ordinary mail, SMS, phone to call centres, IVRS, e-mail, websites, and walk-in to government offices for major applications or agencies which deal with the public. Analysis of the profile of citizens with whom SMS is popular can reveal whether only young people use SMS or such technologies can also provide a voice to vulnerable sections. Some analysis of the unique conditions in the Philippines that make the use of SMS so popular among citizens and the factors that lead to trust and credibility of SMS as a means of conveying information can help other countries to promote the use of SMS.

Devyani Mani, commenting on the two article, lauds the e-LGU initiative but notes that so far it does not adequately address the needs of the poor. SMS and m-government are considered as having great potential resulting from their affordability and wide reach. Among the recommendations listed for e-government to more effectively address poverty reduction, she notes that more efforts must be made to increase accountability in order to dissuade the “widespread tendency of elite capture of development programmes...”

Shoban Rainford’s article on e-Sri Lanka describes an integrated approach to planning for e-government. One of the projects in e-Sri Lanka that may impact the poor is the creation of the *nanasalas* to provide 150 services in rural areas. There are two types of *nanasalas* currently in operation: those owned and operated by individual entrepreneurs from the communities, and those run by religious institutions such as temples or churches, the latter being points of congregation for the community, as well as being social institutions able to serve the needs of the community. The article emphasizes the participatory approach used in the entire life cycle of the project. Unfortunately it is too early to comment on the outcome of the project.

The second article from Sri Lanka by Harsha Lingaye provides more details on the setting up of the *nanasalas*. Sri Lanka has used a least-cost subsidy approach to identify partners from NGOs to set up telecentres. Commenting on the two articles Rohan Samarajiva and Helani Galpaya probe the question whether e-government has improved the relative position of the poor and has it led to greater participation by the poor in government decision-making. They surmise that the two articles from Sri Lanka do not produce much evidence of a pro-poor stance of the e-government programme. They go on to provide their own example of a call centre that allows citizens to access government information through a phone call. They believe that access through phone may be friendlier to the poor in comparison to access through the Internet.

The article on Thailand by Wichian Chutimaskul presents a variety of initiatives that this country has taken to focus on the poor. A centralized database profiling poverty will allow centralized planning for poverty alleviation. The efficacy of centralized planning can be questioned in the light of experience from other countries such as India, which are trying to provide computerized decision support to decentralized planning that will require use of local databases.^{1/} An interesting initiative (called OTOP) for promoting e-commerce in rural areas of Thailand has not been very successful in the absence of other inputs such as design and the lack of logistic facilities to move products to markets. Other interventions are sometimes necessary to exploit the full potential of ICT. The article argues for greater efforts in building e-literacy among the poor but fails to provide a practical way of doing so. It argues for a more rigorous evaluation of e-government projects.

Donyaprueh Krairit, in commenting, recognizes its value as a summary and fact-finding report of the situation of pro-poor e-governance in Thailand. However, he laments the absence of an analytical framework which prevents readers from understanding the rationale for many of the recommendations made by the author.

E-GOVERNMENT STATUS IN THE ASIA-PACIFIC REGION

Many of the articles presented in this volume describe the national e-government strategy and programmes and provide a partial assessment of the degree to which concerns of the poor have been addressed. Most authors mention that a large number of websites of government agencies and departments publish information. Very few of these websites allow transactions. Most of the published information is static in nature and is not always kept up to date as is reported in one of the China studies. Similar conclusions can be drawn for other countries indicating that the planning for e-government is supply-driven.^{2/}

The focus of most of the applications is on internal efficiency rather than service delivery. The few projects that do focus on service delivery are confined to licenses and taxes. Choice of application is mostly urban-focused. Needs of the poor have not been specifically targeted. There is a general lack of concern about understanding the demand or making efforts to catalyse the demand. There are three ways in which the needs of the poor could be targeted in a national e-government programme: building infrastructure to provide access points; building applications that directly benefit the poor; and encouraging participation in the planning process so that needs of the poor are articulated.

Creating economically viable telecentres in rural areas through NGO/private sector participation is a possible means of providing access to rural and isolated populations. Articles from India, Fiji, Mongolia, and Sri Lanka discuss various plans for setting up telecentres in rural areas. Not all telecentre projects have been successful in the past. The reasons cited for failure in Mongolia include capacity, management, and budgets. An article on Fiji identifies the high costs that need to be incurred for opening telecentres in remote island locations.

The Government of India has announced a new policy for creating 100,000 rural computerized service centres (available on the Ministry of IT website). However, many of the existing telecentres are not delivering government services. This may be due to a lack of computerization in government agencies or a lack of coordination between government

agencies and the private owners of telecentres.

A few articles included in this *RDD* issue (India, China, Pakistan, and Thailand) indicate that ICT applications can be designed to deliver benefits to the poor and can also empower the citizens by promoting transparency and reducing corruption. There are many ways such as electronic bulletin boards and SMS through which participation can be facilitated. Most articles in this issue present a supply-side view of e-government — how many agencies are computerized or how many websites have been developed. A systematic analysis of use and impact is not reported. However, even the limited supply-side view indicates that the needs of the poor, rural populations, and vulnerable groups have been largely ignored by e-government planners. There is not much evidence that the poor have become empowered by acquiring the ability to influence policy or actions of the government that affect them. This is primarily so because of the lack of efforts and not due to the ineffectiveness of the efforts.

Most countries do not use participatory approaches in the design of their e-government programmes/projects to elicit the needs of the vulnerable groups and as a consequence most of the projects do not focus on the needs of the poor. Most authors recognize that the needs of vulnerable groups could be different in terms of access points for service, content, and the nature of the interface.

CHALLENGES IN MEETING THE NEEDS OF THE POOR

There are some obvious challenges in building pro-poor e-government. Many of these challenges were recognized in virtually every article.

Defining Who is Vulnerable?

If the vulnerable have to be impacted, the first step will be to clearly identify the vulnerable sections in each country. Different countries have varying definitions of who is vulnerable. In fact most authors have not attempted to provide a definition of the vulnerable groups in their country. However, for most developing countries, rural populations and the poor have been treated as vulnerable. Some countries such as Cambodia, India, Pakistan, and Thailand have varying proportions of their populations as illiterates — and such groups are considered vulnerable. The vulnerability of these groups stems primarily from their poverty. Their inability to afford access to any sort of computing equipment further denies them an opportunity to use ICTs to improve their circumstances.

In more developed countries other types of vulnerability such as old age, physical handicaps, and IT illiteracy have been identified. Although some articles describe projects/initiatives designed to impact the poor/vulnerable, the overall assessment is that services to the un-served population have not expanded and the basket of services for the poor has not been enlarged through implementation of e-government applications.

Poor Infrastructure and High Cost of Access in Remote Areas

Most developing countries lack the necessary infrastructure to build computerized systems and provide access to such systems via the Internet in rural and remote areas. Even the basic infrastructure of a stable electricity supply does not exist in rural/remote areas of many

countries. Basic communication infrastructure such as access to telephony is also poor as is reflected in the table below. In the absence of telecommunication infrastructure, providing Internet access in rural areas becomes expensive.

TABLE 1. COMPARATIVE DATA ON DIFFERENT COUNTRIES

Countries	Population (million)	Per Capita Income in US\$	Population Density per km ²	Percentage population below Poverty	Literacy Level Percentage	Telecom Penetration Percentage	Internet Penetration Percentage	e-Readiness Score
Cambodia	15.01	2,000	70.6	40	73.6	0.25	0.3	NA
China	1,306.72	5,600	636	10	90.9	20.92	8.5	3.85
Fiji	0.85	5,900	48	25.5	92	12.35	7.1	NA
Hong Kong	7.05	34,200	6,317		93	55.51	69.2	8.32
India	1,112.22	3,100	328	25	61	4.63	4.5	4.17
Japan	128.39	29,400	337	NA	99.9	58.57	67.2	7.42
Mongolia	2.5	1,900	1.8		NA	5.17	0.1	7.73
Pakistan	163.98	2,200	202	32	48.7	2.66	2.1	2.74
Philippines	85.71	5,000	292	40	92.6	4.00	9.1	2.93
Sri Lanka	19.63	4,000	305	22	90.4	4.42	1.4	4.03
Republic of Korea	50.63	19,200	491	4	97.9	47.24	67	3.8
Thailand	66.52	8,100	127	10	92.6	10.55	12.7	4.69

By some estimates the cost of an Internet kiosk in a rural area is nearly twice the cost in urban areas because a rural kiosk needs a power back-up as well as a satellite connection for communication besides the computing equipment.^{3/} Some of the countries are experimenting with new technologies which can lower the costs of providing access in rural areas. Even if Internet access is provided, it is unlikely to be broadband, limiting the kind of applications that can be supported. The experience of some countries suggests that the problem is one of the last mile. Many countries like India have invested in large networks using optical fibre which connect the semi-urban towns but do not reach the villages.

Problem of IT and General Illiteracy

In addition to the problems of infrastructure, there are problems of illiteracy that need to be overcome. Applications have to be designed for use by illiterate people or even if people are literate (as in Sri Lanka) to provide a local language interface. Use of devices such as touch screens can further multiply the costs. Building content in local languages can also be an expensive proposition. In general there is a lack of IT literacy. This requires that most on-line services need to be offered through an intermediary (operator) who can understand the needs of the illiterate client, operate the computer to service the needs, and often interpret the output if the needs are informational.

Lack of Human Capacity in Government

Another big challenge is the human capacity within governments to perform some of the critical tasks that are essential for building successful e-government applications. These include conceptualizing the application scope and scale, process reengineering, architecting the solutions, software development, maintenance of hardware/software, and training.

For example, the key challenges identified in the adaptation of the e-government initiatives in Mongolia, especially for poor and vulnerable groups, are citizen participation, human development and security issues, and the digital divide. Citizen participation is still low, due to a lack of initiative, and due to the inertia left behind by a command-administrative system. The low population density, financial constraints, and underdeveloped communication networks have added barriers to participation, while there exists a poor understanding of democracy and human rights.

The challenges that are recognized can in some measure be overcome with additional resources. However, there are many challenges that are not recognized. There are other forms of divide, such as gender, age, economic, and regional which also need to be overcome. Providing services on the doorstep of populations with greater heterogeneity and geographically dispersed demand escalates costs.

Weak and Latent Demand and the Need to Scale up

In most rural/inaccessible areas, there are large pockets of semi-literate people who have not yet had any experience of benefiting from access to knowledge and information. Nor can they conceptualize the benefits of electronic delivery of government services. The demand for services therefore needs to be catalysed as it is weak. An effort needs to be made to understand the latent needs. In the face of weak demand, building appropriate content with no market pull working is another challenge that is not recognized.

A large number of pilot projects have built telecentres to provide access to information and services in rural areas. Some of them have been successful in catalysing and servicing the demand. However, few have been scaled up.^{4/} Finally it is the scale that can create an impact on the poor. The efforts needed to reform processes, manage change, and scale up have been underestimated by e-government planners. The above challenges raise concerns that need to be addressed at the level of national policy and strategy formulation as well as some challenges that must be addressed during project implementation.

ISSUES IN NATIONAL POLICY/STRATEGY

The primary concern is one of lack of focus of national e-government strategies or policies on vulnerable groups whether these are the poor who cannot afford to access services or those groups which are denied an opportunity to access because of some other barrier. As a Chinese article indicated, the political profile of these groups will need to be raised for them to receive consideration from the policymakers.

However, even if the intent to serve the poor exists, the process of developing a national strategy needs to be such that the interests of the vulnerable groups are represented and articulated. Often, the processes of strategy formulation is not participatory. It is driven by the central IT departments/ministries. Sometimes other agencies and departments that are responsible for pro-poor programmes may not even be formally consulted. There is less likelihood of consultation with the civil-society groups which work closely with the vulnerable sections and can articulate their needs. It is difficult to infer whether the lack of consultation is a result of technocratic thinking or a lack of availability of a suitable process of consultation. There is an urgent need to address the “application” divide which

refers to the need for e-government applications targeting the specific needs of the poor. The extent to which the voice of the poor is heard and addressed efficiently is a function of the level of democracy/freedom of speech/commitment of the government to tackle the digital divide. While NGOs (which stay close to the needs and wants of the grass roots) can be used to channel/facilitate communication between the people and their government (bottom-up); it is also necessary to ensure that genuine commitment from the political level (top-down). These two approaches need to be synergised.

Perhaps it will be easier to target the poor and the vulnerable if the applications are developed at the local levels of government. However, in many countries the development of e-government strategy is top-down from the central government. For example, the article on Philippines' LGUs discusses the strategy of development of ICT applications for local government in the Philippines and debates the choice between a totally centralized specification, design, and implementation versus a completely decentralized process of development. It recommends a middle path of centrally-defined standards and local development. A variety of middle paths has been explored by other countries. Therefore, keeping the balance between central coordination and agency ownership is an important issue when the programmes are driven by central governments as was also pointed out in the Thailand article.

As the experience from the Philippines and Mie Prefecture in Japan suggests, there are many different technologies that can be used to promote participation by the general public in the affairs of the government. Therefore, national policies have to encourage an appropriate mix of media and technology for sharing information and community-building. This may include SMS through cell phones, community radio, and the Internet.

Often the failure to impact the poor comes not from a lack of intent and strategy but from poor implementation. Institutionalizing national e-government plans and designing implementation mechanisms that will ensure the development of appropriate applications and make them sustainable should be seen as an important part of the strategy-building process. There have been many challenges in scaling up successful pilot projects that have demonstrated pro-poor impact. The task is too large for the government to handle on its own. A partnership among government, civil society, and the private sector is the best way to promote digital inclusion and pro-poor government programmes as was brought out in the Sri Lankan and Hong Kong SAR articles. Private sectors can bring in the investments and operational management expertise; government can provide the enabling policies and bridging subsidies; and civil society can intermediate between the technology and illiterate populations by interpreting the needs and scouting for solutions. Governments need to develop pragmatic policies on providing subsidies to compensate for higher costs of taking ICTs to rural areas or vulnerable groups. However, subsidies are not required in all cases and the private sector may well be able to provide access in those areas which have a strong rural economy. There are many ways to provide the subsidy on a competitive basis. Only in the most backward areas would a direct intervention by the government be needed.

Examples of public-private partnership (PPP) were cited from many countries such as India and the Republic of Korea. For instance, the Korean Government expanded e-literacy in rural areas by means of PPP. Although vested interests may prevent the success of a PPP, on balance many presenters recommended that governments explore PPP in many areas of pro-poor e-government.

One aspect that is often ignored in most national plans is the need to assess the impact of projects in a systematic way. Several e-government projects were described in different articles including some that were designed to help the vulnerable groups. However, very few of the articles could shed much light on the usage of these applications and the impact on citizens. There is therefore no way for the policymakers either to understand what works and what does not or obtain any guidance on the nature of projects that should be adopted.

India is addressing some of the above issues through its *National e-Government Plan* which aims to: (a) implement mission-mode projects in key departments (that focus on development or serve rural populations) with large public interface; (b) ensure that even the remote areas can benefit from ICT; (c) provide generic programme components including capacity building; and (d) build a component on impact assessment. The training programmes are mainly targeting e-government leaders, Chief Information Officers, Chief Technology Officers, internal users of ICT systems, external users, and people with general IT skills in the government. The skill areas for capacity-building are financial management, process re-engineering, change management, technology management/leadership, and programme/project management.

PROJECT IMPLEMENTATION-LEVEL ISSUES

Just as it is important for the national strategies to be developed in a participatory way so that applications are likely to have an impact on vulnerable groups and can be given priority, the design of such applications must also be developed using participatory approaches. A participatory design approach can ensure that access mechanisms, content, and interface are designed for the poor/vulnerable.

Almost all authors mentioned sustainability of projects as a main concern. The “level of participation of the poor”; “capacity-building/education”; “commitment of government” are factors relevant to long-term sustainability of pro-poor e-government initiatives. Some authors highlighted that government commitment has to be reflected in the form of “well-structured” policies, reasonably defined, clear objectives, and carefully designed procedures to ensure proper use of public funds. There is also a need to balance the emphasis on budgetary controls for maintaining accountability with the need for flexibility to encourage innovations.

Economic viability of projects is important for long-term sustainability. The design of each project must focus on activities that help generate income. These could be affordable user fees, commissions from delivery of priced services offered by the private sector and opportunities of earning advertising revenues. Involvement of the private sector through PPP is seen to be a means of ensuring sustainability.

Another factor that was seen to be critical for sustainability was coordination, especially among government departments. Often turf wars between departments delay projects that span different departments. In such situations there is a need to define an organizational mechanism with sufficient authority to enforce cross-departmental linkages and drive the design and implementation of such interdepartmental e-government initiatives.

Each project needs to build a monitoring and evaluation system to track whether vulnerable groups use the application and benefit from it. Low usage of applications designed for the poor can often be traced to a lack of awareness about the existence of the system and the kinds of benefits it can deliver. For example an application for on-line issue of certificates and licenses must create awareness about the procedures, service standards in the new system, the fact that operators cannot use discretion to expedite processing and therefore a bribe does not need to be paid, and the kind of information which can be demanded from service providers. It takes considerable time and resources to put such information across in the rural areas. A conscious programme of creating awareness has to be mounted. To create such awareness, other media such as TV, radio, local language print media, and the private sector would need to be involved in a coordinated campaign.

THE WAY FORWARD

The topic of e-governance is relatively recent for most developing countries. The UNCRD-UNDP initiative of holding a workshop in Bangkok and publication of an *RDD* issue on this theme are early efforts in focusing on the poor and the vulnerable. There has been a lack of any critical examination of the process of strategizing; choice of applications; and process of design and implementation in an e-government programme. Often a supply-side view is taken, while outcome and impact on clients, agencies, and society are not assessed. With hardly any project where impact has been assessed systematically, successes/failures have often been reported on the basis of anecdotal evidence. The articles in this volume presented many different perspectives on pro-poor e-governance. The conclusions point to an overall lack of serious concern for the poor and vulnerable in the design and implementation of e-government programmes.

Given that e-government is at an early stage in many countries of the region, the way forward can at best define the first steps that can be taken. In the concluding sessions of the workshop the participants suggested the following steps.

- Each country should define which sections of the population constitute the vulnerable group that need to be targeted. Their geographical spread needs to be mapped. Participatory approaches need to be used in developing e-government programmes and plans so that the needs of the poor are well-articulated and can be reflected in the choice of applications and their design.
- Existing national e-government programmes and e-government projects should be audited in a systematic way to determine the potential and actual impact on the poor and the vulnerable. A “Tool Kit” can be designed for the purpose of carrying out such an audit.
- Policymakers need to be sensitized to the fact that the digital divide will be further exacerbated unless e-government specifically focuses on the poor and the vulnerable and that e-government has the potential to deliver significant benefits to the vulnerable/poor.
- Capacity needs to be built for e-government programme designers to: (a) promote participation by relevant stakeholder groups from civil society in formulating e-government plans and strategies; (b) define policy frameworks that promote the use of

different technologies that are relevant for the poor; provide incentive for creation of appropriate content, and create affordable and convenient access points; (c) make application choices that can potentially impact the poor/vulnerable; and (d) create partnership with NGOs, media, and private sector in implementing pro-poor e-governance

- Capacity needs to be built for project implementers to use participatory methods in design and implementation of projects/applications focused on the poor/vulnerable.
- A large amount of training material (case studies, tool kits) needs to be created to support capacity-building.
- There is considerable scope for regional cooperation in sharing telecommunication infrastructure for creating access points, build content, and exchange best practices. Moreover regional and cross-border development issues such as HIV/AIDS, natural resources and disaster management, trade and transport, tourism, etc., are areas where regional e-government cooperation could be of significant mutual benefit. Mechanisms need to be evolved to develop such cooperation.

A variety of stakeholders including governments, civil society, private sector, academia, and the multilateral development institutions will all have to play some part in making pro-poor e-governance happen. International agencies can play a proactive role in some aspects and a facilitator/enabler role in other aspects. Current e-government initiatives mainly focus on the efficiency of government services. The challenge in the future is to make sure that e-government initiatives also target the poor. Guiding principles need to be identified to ensure the effectiveness in implementation of e-government initiatives targeting the poor. Having taken a pioneering role in organizing the Bangkok workshop to focus attention on pro-poor e-governance, this *RDD* volume is a small step which can effectively carry the message further.

And as a final note, I should clarify that as the guest editor for this *RDD*, I had no role in putting together the impressive list of professionals who contributed to this journal, and therefore deserve no credit on that score.

NOTES

- 1/ Shirin Madon and Subhash C. Bhatnagar, "Institutionalising Decentralised Information Systems for Local Level Planning: Comparing Approaches across Two States in India," *Journal of Global Information Technology Management* 3 (4:2000):45-59; see also Subhash Bhatnagar, "e-Government in the Asia-Pacific Region: An Assessment of Issues and Strategies". Available from <http://www.apdip.net/resources/governance/egovernance-egovernment/APDIP-eGovPaper-Subhash.pdf>; accessed 2006.
- 2/ Janet Kaaya, "Implementing e-government Services in East Africa: Assessing Status through Content Analysis of Government Websites" (Los Angeles, CA: University of California Los Angeles, Department of Information Studies, 2005, EJEG, 2,1. Available from <http://www.ejeg.com/volume-2/volume2-issue-1/v2-i1-papers.htm> (last modified September 2005); accessed 2006.
- 3/ Hani Shakeel *et al.*, "Comparing Urban and Rural Telecenters Costs," *EJISDC* 4 (2:2001):1-13. Available from <http://www.is.cityu.edu.hk/research/ejisdc/vol4/v4r2.pdf>; accessed 2006.
- 4/ Indian Institute of Management (IIM) Ahmedabad, India: Social E-Applications Venture Fund. Available from <http://www.iimahd.ernet.in/egov/ifip/april2004/SERVEFund.pdf>; accessed 2006.