Chapter 7

Role of ICTs in Combating Poverty
The fundamental principles underlying a proposed approach to information and communication technologies (ICTs) and development, and draws from those principles a set of recommendations for DFID's priorities in this area. ICTs are defined as technologies that facilitate communication and the processing and transmission of information by electronic means. This definition encompasses the full range of ICTs, from radio and television to telephones (fixed and mobile), computers and the Internet. The role of ICTs in combating poverty and fostering sustainable development has been the subject of increasing debate and experimentation within the international community.

The contrast between the complexity and expense of some of these technologies and the urgent, basic needs of the poor has led some to doubt whether ICTs should be a priority for DFID and other development agencies, or for developing countries themselves. Others have hailed these technologies as holding out great hope for developing countries, and have warned of a growing digital divide between rich and poor that must be narrowed by concerted international action. The study concludes that access to ICTs should not be seen as an end in itself; the measure of success remains progress towards reaching the International Development Targets, rather than the spread of technology or bridging the digital divide.

However, addressing the information and communication needs of the poor and creating information rich societies is an essential part of efforts to tackle poverty. Properly deployed, ICTs have enormous potential as tools to increase information flows and empower poor people.

DFID and other development partners should work closely with developing countries to maximise the contribution of the full range of ICTs to achieving the International Development Targets.

The study recommends that, in its approach to ICT issues, DFID should:
- Mainstream attention to the information and communication aspects of poverty and appropriate use of ICTs in the development process
- Address information and communication issues in national poverty reduction strategies;
- Focus on creating the right enabling environment for the spread of ICTs, for entrepreneurship and innovation, and the free flow of information
- Help the poorest address their information and communication needs;
- Improve and focus the response of the international community;
- Strengthen developing countries' voice in international negotiations on ICT issues.

DFID should build on the progress already made to mainstream consideration of information and communication issues for poverty reduction and the appropriate use of the full range of relevant ICTs as tools in development.

Advisory Departments will need to provide advice and raise awareness in DFID to help staff consider information and communications issues in their work. This process should include providing, for interested staff, concise, evidence-based material drawing on research and experience about what works and what does not.

Advisory Departments are also likely to be the appropriate 'home' for funds for supporting multilateral initiatives related to ICTs. DFID's country and regional departments should consider the recommendations for action with partners in developing countries and determine whether these are priorities for action by DFID in a particular country or region.

Advisory Groups will need to work with staff responsible for interactions with other development agencies to promote greater focus and effectiveness
within the international development community. Poverty has multiple and complex causes.

The poor are not just deprived of basic resources. They lack access to information that is vital to their lives and livelihoods: information about market prices for the goods they produce, about health, about the structure and services of public institutions, and about their rights. They lack political visibility and voice in the institutions and power relations that shape their lives. They lack access to knowledge, education and skills development that could improve their livelihoods. They often lack access to markets and institutions, both governmental and societal, that could provide them with needed resources and services.

They lack access to, and information about, income-earning opportunities. These causes are mutually reinforcing. There is a strong correlation between access to education and knowledge, particularly for girls and women, and such key poverty indicators as infant mortality, family size, and women's health.

In poor communities, the scarcity of trained local personnel (teachers, health workers, agricultural extension workers) and the impediments they face in accessing vital information and enhancing their skills, perpetuate the low educational attainment and poor health of these communities and makes them less able to cope with new challenges (such as AIDS, drought, or natural disasters).

These deprivations are compounded at the societal level. Structural impediments to economic growth, and the often highly unequal nature of the growth that does occur in developing countries, perpetuate poverty and inequality. Weak, inefficient or non-transparent markets and societal institutions, including governments, hinder economic growth, deter private sector innovation and investment, and weaken the ability of society to respond to the needs of the poor.
Lack of efficient internal information and communication, even of basic automation of tasks and records, makes government institutions slow and unresponsive, and shifts much of the burden of administrative transactions onto citizens.

Unequal access to, and control of, information creates opportunities for corruption and for the capture of the state by special interests. The poor have information, knowledge and communication needs as do all people, yet they are often unable to address them. Information, knowledge and communication are the lifeblood of economic and social interaction. However, given the multiple constraints they face, the poor are either unable to meet these needs, or must do so in costly ways that may perpetuate their disadvantaged position.

A rural nurse spends a day, and the cost of a bus fare, simply to travel to the regional capital to schedule a training session, for which he or she will have to travel again. A farmer sells goods to middlemen at a low price because of lack of information about prices at market. A mother watches her child die from diarrhoea because she has not learned about oral rehydration therapy. The poor often lack an effective voice in the institutions, policies and processes that shape their lives.

Not only do the challenges of their daily lives often leave poor people little time and opportunity to assert their rights and interests, but they are deprived of instruments for effectively articulating and aggregating their interests, learning about their rights and their entitlements to government services, and pressuring government at all levels to be responsive to their needs and interests. Their lack of effective voice perpetuates inefficient, and sometimes corrupt, forms of governance and service delivery that keep the poor in a subordinate position.

The knowledge and experience of poor people is often undervalued, and their perspectives on their needs and on solutions to their own problems are often ignored. Poor people will benefit from improved information flows
throughout society which improve the effectiveness of government, markets and other institutions that affect them.

In societies where information flows widely and access to communication services is widespread, markets and government institutions are likely to become more efficient, transparent and accountable. The institutions and organisations that serve the poor and defend their interests can be more effective.

Information and knowledge that are vital to the poor can be more easily and widely accessible. On the basis of that information, and with tools to communicate with others, the poor can make their own choices, voice their opinions, demand their rights and have more power over their own lives. Increasing communication and the flow of information and knowledge in ways that benefit the poor is therefore a critical component of poverty reduction and sustainable development.

Improving information flows and communication services is a necessary but not sufficient condition to eliminate poverty. The quality, diversity and relevance of information are as important as the sheer volume of information available in a society, or the scale of its communication networks. And even relevant information might not of itself be sufficient. A rural farmer could have the latest crop prices, but still be unable to get a fair price for his or her crop because of unequal power relations with middlemen or poor road networks. Information and communication can be used as tools to exert power over others, encourage violence or perpetuate inequality or prejudice.

While improving information and communication flows, and infrastructures, within a society might foster economic growth at a macro level, the benefits of that growth can be distributed very unequally within society. Therefore, addressing the information and communication needs of the poor must form one important component of a wider strategy to tackle poverty.
Information and communication technologies (ICTs) have an important role to play in reducing poverty by improving flows of information and communications. Much of the recent attention to the role of ICTs in development has focused on new technologies, such as the Internet and mobile phones. Yet the full range of ICTs is relevant to the fight against poverty. Radio and television are important information tools that are much more widespread in developing countries than telephones or the Internet. Print media is vital both to the spread of information and to fostering participation and diversity of views in society. Computers, even if not linked to global networks, are an important tool to increase efficiency in all sectors of society.

New technologies do not change the fundamental role of information and knowledge as drivers of development and poverty reduction, nor obscure the role of more established information and communication technologies. However, they create new opportunities to expand the availability, exchange and impact of information and knowledge.

The potential impact of ICTs on poverty can be seen at the micro, intermediate and macro levels. At the micro level, ICTs can be used by the poor directly to address their information needs, develop their own strategies and solutions for improving their lives, and articulate their interests in societal processes and institutions that affect them.

Properly used and broadly deployed, ICTs can increase the access of the poor to information on market prices for their crops and other goods, to health and educational resources, to information about government services and their own rights as citizens. ICTs can increase the voice and participation of the poor in policymaking, and help them express their needs and priorities to decision-makers. ICTs also enable poor people to share knowledge and seek solutions to their problems.
At the intermediate level, ICTs can help a range of intermediary institutions and agents work more effectively and be more responsive to the needs of the poor. Health workers can access the latest information, get assistance with diagnosis, and more effectively target interventions and resources with the help of ICTs.

Agricultural extension agents can more effectively access and share local and global knowledge on crops, pest management, irrigation and other aspects of small-scale agriculture relevant to the needs of the poorest. Teachers can access and share new training materials, continue their own training, and expose their students to the ideas and experiences of children elsewhere. Local government officials can get better information about the needs of the poor, communicate those needs more effectively to other levels of government, and be held more accountable by the local people they serve. ICTs can help local businesses be more productive, and more responsive to their customers. They can help local non-governmental organisations and community groups to mobilise more effectively, articulate the interests of the poor at the local level and share information and strategies with similar groups elsewhere.

At the macro level, ICTs can help foster more efficient and transparent markets, more participatory processes of governance, and new forms of economic and social innovation that benefit the poor. Broad and efficient information flows, and robust communications infrastructure, are vital components of well-functioning markets.

Weak information flows and poor communications infrastructure constitute one of the major impediments to sustainable economic growth in developing countries. Lack of information, and thus lack of transparency, weaken the responsiveness and accountability of government institutions and create an environment where corruption can flourish. Conversely, when the poor have information about the programmes and resources of government, their rights as
citizens, and the match between the declared objectives of government and the actual delivery of services and resources, they have greater opportunities to exert pressure and hold government accountable.

ICTs are a valuable tool for information sharing and awareness raising within the wider development community, to combat poverty and advance the International Development Targets. Multilateral and bilateral development agencies can work more effectively with each other and with their partners in developing countries. A broader range of views and voices from developing countries can be brought into the international debate on poverty and development, including the voices of the poor.

NGOs and civil society groups can network worldwide and collaborate more effectively. Citizens in developed countries can be more effectively exposed to the realities of poverty and the importance of a concerted international response.

There are, however, some limitations and impediments which need to be addressed to ensure that ICTs have a positive impact on poverty. At the macro level, the unequal reach of these new tools and networks could exacerbate inequality.

There is a risk that the rich will have greater access to ICTs than the poor who will be excluded from the benefits of the 'knowledge economy'. This could perpetuate or increase existing disparities of income, knowledge, skills and measures of social development. This heightens the importance of positive measures to meet the information and communication needs of the poorest and assure that these technologies are deployed in a way that expands the information available to the poor, that increases their opportunities for effective voice in the decisions and institutions that affect their lives, and that increases the accountability and transparency of government institutions at all levels.
At the micro level, there are impediments to effective use of ICTs by and for the poor. Some ICTs, such as radio, can be widely accessed without specialist skills except knowledge of the language being spoken. Others, such as use of computers or the Internet, require skills both from users and for the maintenance of decentralised networks and the adaptation of software to local uses. Illiteracy can be a significant impediment to the use of many ICTs (although ICTs can also be used in creative ways to combat illiteracy, such as in the subtitling of television).

Impediments to poor people benefiting from ICTs due to lack of skills can be reduced both by education and training to increase individuals' skills and by developing applications which are adapted to the needs of low skilled or illiterate users.

Poor and disadvantaged groups, particularly women, may face special constraints in accessing ICTs and using them for their specific needs. Women tend to be poorer, face greater social constraints and are less likely to be educated or literate than men. They are likely to use ICTs in different ways, and have different information requirements, to men. Women are less likely to be able to pay for access to ICTs, either because of an absolute lack of funds or because they lack control of household expenditure.

Constraints on women's time or their movement outside of the home can also reduce their ability to access technologies. Similar constraints apply to other population groups who for historical, ethnic or cultural reasons are particularly marginalised or disadvantaged. ICTs are only helpful if users are able to make use of the information and communication opportunities they create.

It is important not only to assure that relevant information is available to the poor in their own languages, but also that ICTs foster the availability of a variety of sources of information, and diverse approaches to the challenges facing the poor, so that they can decide for themselves how to meet their needs. Creating
information-rich environments means not only assuring that information is widely available, but assuring that multiple voices (including the voices of the poor and traditionally disadvantaged groups) are heard.

There are barriers to adaptation and innovation of applications of ICTs and content such as broadcast programmes. Radio and television programmes, telephone based information services and computers are all highly adaptable to end users. In the right policy and regulatory environment, people tend to develop specialised products to meet local needs.

However, in many cases, there are barriers to local innovation such as government monopoly of radio broadcasting. Under liberalised broadcasting regimes private broadcasters may be reluctant to invest in producing programming content relevant to poor people because of lack of interest to advertisers.

In some countries, linguistic or other causes of fragmented markets reduces the commercial incentives for production of software applications or radio and television programmes in local languages. The rapid spread of open source software offers considerable potential to reduce the cost of software for users in developing countries and allow greater adaptation of software to needs in developing countries.

Poor people depend on information and knowledge networks that they can trust. Until they come to trust new sources of information poor people may not switch quickly to new technologies even if these allow quicker access to information. This is particularly relevant in countries where information is not freely available and where the media is controlled or heavily influenced by the state or concentrated in the hands of a small elite.

These changes can, in some ways, be helped by ICTs, particularly given their power to bypass or provide alternatives to traditional lines of information and
communication. However, the provision of ICTs neither accomplishes by itself, nor removes the need for, those deeper changes.

The impediments to broad deployment of ICTs as tools of poverty reduction are not unique to ICTs as a sector. They are impediments caused by poor governance, inadequate education and training, and poor enabling environments. These are issues that all countries have struggled to address for some time.

ICTs can contribute to addressing these issues, but they do not replace them, and the international community's response to the ICT challenge must be organised in light of this principle. The most important role in creating information-rich environments in developing countries, and making ICTs effective tools for combating poverty and empowering the poor, belongs to developing countries themselves.

Developing country governments need to create enabling environments that will foster the free flow of information, the growth of information and communications networks, the widespread adoption of locally-appropriate ICT tools, and the empowerment of the poor and disadvantaged through the use of these tools and networks. They need to do so in close partnership with their citizens, with the private sector, with civil society, and most importantly with the poor themselves.

In this sense, this challenge is an integral part of the broader challenge of fostering participatory and sustainable approaches to development. A number of developing country governments are already making efforts to realise the development benefits afforded by ICTs, either as engines of economic growth and international competitiveness or as tools of realising the International Development Targets in their country.
An appropriate enabling environment for information and communication technologies, including effective regulatory mechanisms, is essential. Demand for access to information and communication services in developing countries is substantial, even among the poor, and much of this demand is currently not met. There is considerable evidence that the poor are willing to spend some of their resources on information and communications services, if they are available, because they otherwise spend scarce resources (time, money or both) on meeting their information and communications needs in less efficient ways.

Experience from the telecommunications sector around the world suggests that moving from public sector monopoly provision to a well regulated, competitive private market leads to rapid improvements in quality, cost and access to services. Through an appropriate mix of market incentives and government efforts, access can be extended to the poorest and most remote communities. It is equally important that developing country governments implement policies that foster private sector investment and innovation more broadly. For example, small and medium enterprises are a fundamental engine of job creation and economic growth, and they often serve as early adopters of innovation in business technologies and processes. Yet in many countries, there are enormous regulatory and financial barriers to enterprise formation, which hinder innovation and growth.

The economic benefits of improved communication and information flows will be much greater when the enabling environment supports innovation and enterprise creation. In addition, micro, small and medium enterprises are vital providers of many services to poor people, including those related to information and communication.

An effective and dynamic private sector will lead to improved services and cheaper goods for poor people. A third important element of the enabling environment is implementing policies to allow for the free flow of information,
and permit and encourage diversity in broadcast and print media. In many countries, restrictive broadcast regimes limit the variety of opinions and information that can be heard by the poor. Governments need to allow and encourage free expression and an independent media with diverse media ownership. For example, making radio licences available for local and community radio stations can increase options for making broadcasting more appropriate to the needs of communities.

Highly concentrated ownership of media outlets can also reduce diversity of information sources and limit the production of local content. Government policies to promote transparency and accountability such as freedom of information legislation can also be important.

Promoting ICT access for the poor, and particularly those in rural and remote areas, requires efforts by government, the private sector, and other partners. The rural poor are typically the last to have access to these services and infrastructures because of technical and economic impediments.

The challenge for developing country governments is to differentiate between those access impediments that could be addressed by private sector or community-led initiatives, given the right policy and regulatory measures, and those that require the commitment of government resources, at least for a transitional period. For example, universal access to telecommunications services—usually defined as access to a payphone within walking distance—is seen by many governments as a public policy goal.

In most countries, the majority of the population can be served on a commercial basis, but government may need to take proactive steps to ensure services are available for the poorest and those in very remote areas.

If the international community is to help developing countries mainstream ICTs as tools of poverty reduction and the International Development Targets, it
must organise itself more effectively to do so. This does not mean new ICT initiatives at an international level. On the contrary, it means clarity on objectives, priorities and division of labour. It means focusing ICT efforts on their role in helping to achieve the International Development Targets and not on "bridging digital divides". It means sharing much more effectively and widely the lessons learned from experience thus far.