

## **Gender, ICTs and health in the Caribbean**

This chapter explores access and use of ICTs in the Caribbean paying special attention to their role in the promotion of gender and health issues in the region, and specifically in Jamaica. In Jamaica progress in the use of ICTs is visibly more advanced than in the other countries. The Jamaican government has fully supported this progress financially and technically, implementing policies to support the application and use of ICTs in national development. Jamaica has set the tone for the other Caribbean countries, particularly Trinidad and Tobago, Barbados and Guyana where ICT policies and IT strategic plans are currently in place. The chapter largely focuses on the internet because of its widespread influence.

### **Adoption of ICTs in the Caribbean**

The Caribbean is faced with several development challenges among them public health epidemics, environmental degradation, vulnerability of small size, poverty, geopolitical climate, expanding education and social services, debt burden and limited trade competitiveness. More seriously, the nations in the Caribbean are subject to a wide range of natural hazards - hurricanes, landslide, earthquakes, tsunamis and volcanoes. The value of ICTs particularly in addressing these challenges, as well as improving access to information required for decision making, research and production, is now well recognized as governments continue supporting them as powerful change agents throughout the Caribbean region. Marcelle (2003) sees a great potential for ICT applications in social sectors, education, health, and political participation.

The adoption of ICTs and their role in development in the Caribbean has been debatable with two different views: as movers of development, dealing directly with various development issues, and as contributors to the existing unequal development at the individual and societal levels. This disparity is partially linked to modernization and industrial economy where large companies create and own the new technologies primarily for the benefit of shareholders. These companies are not overly impressed with 'development speak' like building 'a people-centred, inclusive and development oriented information society' (Robinson 2003) that is emphasized by the international community, particularly the UNDP.

ICTs have been adapted in the Caribbean to a great extent within the government ministries, a trend that was strengthened by the World Summit on the Information Society (WSIS) in 2003. The summit facilitated the creation of an environment through which the full power of ICT can be brought to bear on the issue of Development, to the benefit of all. Following the summit, a number of Caribbean government ministries, industry and non-profit organizations, as well as academic institutions, are working diligently to establish ICTs as an important tool for information transfer, performing transactions, and capacity building.

The Caribbean governments have been desirous to bridge the digital divide and this has contributed to a variety of efforts that focus on the goal. This desire is also associated with the Millennium Declaration of the UN that called for urgent action to address the 'digital divide'. This call is addressed to governments, public and private sector, and to multilateral organizations to give high priority to the matter of access to ICTs for developing countries. Efforts have been made to create forums where government in the region meet to exchange experiences and expertise across the Caribbean region, so that that *lessons of best practices*

can be derived and shared by means of capacity building. In this regard, the Government of Italy through the United Nations Department of Economic and Social Affairs (UNDESA) in collaboration with the Caribbean Centre for Development Administration (CARICAD), a specialized institution of the Caribbean Community (CARICOM), has supported two ministerial consultations and high level workshops on capacity building in public administration and governance. The International Institute for Communication and Development (IICD) has also facilitated a National Roundtable on the use of ICT in Agriculture where participants were invited to develop project ideas which would best demonstrate the use of ICT in Agriculture (Freckleton 2002).

A follow-up Ministerial Consultation was planned in Jamaica two years later, with financial support from the Government of Italy, to discuss e-Government and ICTs for public sector management development (UNDESA 2001). One of the positive outcomes of the fora has been the recognition of the importance of an IT strategy particularly in the information dissemination and ensuring access to information and freedom of expression as indicated in the Caribbean Charter of Civil Society. In the Charter, governments are urged to respect, encourage and promote the existence of a diversity of sources of information as a means of ensuring greater public access to information (CARICOM 2004).

The advent of ICTs introduces a broader range of options for maximizing opportunities for Small Islands Development States (SIDS) economies. It is proposed that using ICTs to promote the sports like cricket and soccer, music and other cultural activities could contribute to the islands' economies. In music, ICTs would enable musicians to compete and win in major overseas markets. The Jamaican music industry is already a major earner of foreign exchange and provider of creative employment opportunities for a large number and diverse group of Jamaicans. Jamaican music producers have managed to remain at the cutting edge of digital audio technology with more than 60 professionally equipped recording studios in Kingston alone. These studios are outfitted with computers, the latest in digital audio production software, and are also connected to the internet. The use of the internet for buying, selling and listening to music, websites for display of public relations information, and the use of digital technology for recording and duplicating music, adds to the variety of ways in which the Jamaican music product can be sold (Stanbury 2003).

In addition to music, the Caribbean region is blessed with a salubrious climate, abundant natural resources, and a young vibrant population. The region however consists of small open (island) economies has also been perennially buffeted by the winds of changes in far away lands that make the region vulnerable from increased mobility of human capital, goods and information.

Natural and other disasters including hurricanes, earthquakes, communicable diseases and other epidemics often cripple SIDS economically, and can lead to widespread human misery. Access to ICTs can be crucial in mitigating these effects as was recently observed during the hurricane season. During the 2004 hurricane season that devastated the Caribbean Islands, access to and use of ICTs became extremely crucial. In Jamaica, for example, telephone companies including mobile phone companies remained in operation throughout the disaster period. The cell-phones were associated with saving thousands as many people called upon their friends, neighbours, the media and the police for help like in a case of pregnant women who called upon the police to assist in her premature delivery when nobody else could reach to her. As part of their post-hurricane support, mobile generators were provided by cell phone

companies ensuring connectivity throughout the disaster period until the regular power supply was back in operation.

## **ICTs in Jamaica**

Like other developing countries, ICTs have been recognised as integral part of development in Jamaica with full support from the government. The availability of infrastructure, service providers and government support, ICT implementation has emerged quickly island-wide. In terms of infrastructure, by 2003 there were about 444,400 telephone lines, 1.4 million mobile phones and about 600,000 internet users. Since then, there are more people, particularly women and the youth who now have purchased cell-phone as more companies compete for customers, breaking the monopoly of the original service provider for both land lines and mobile networks. In terms of electricity, which is essential for connectivity, Jamaica has a surplus of electricity generation which stands at 6, 272KW. The number of computers per 1000 household is 18.74 and the number of internet subscribers is 2.69 per 100 persons in 2001 (CITO 2001). Personal computers are becoming more affordable with, for example, with new Dell model costing as low as US\$ 400 and being sold in a payment plan. However, with the internet cafés blooming throughout the region, and the increasing connectivity in the public and private sectors, access to internet does not require access to a telephone line or ownership of a computer.

The government has made the integration of IT into the economy a high priority and strategic imperative. The Ministry of Commerce has spearheaded this effort by having recently added 'Technology' to its name to read Ministry of Commerce, Science and Technology. With support from a \$17 million loan from the Inter-American Development Bank, the Ministry of Industry, Commerce and Technology was strengthened to enable it to continue to play a leading role in increasing e-readiness. The resources are being used to support the greater use of the internet to enhance the transparency and efficiency of government. Part of this has been training for up to 900 persons in ICTs. The focus has specifically been on the public sector, which over the years has lagged behind in the quality of services provided. These services to the public are poor and characterized by cumbersome procedures; long delays; unsatisfactory resolution of problems faced by clients; high private costs of compliance with laws and regulations; and discourteous behaviour (UNESCO 2002).

A Jamaican IT strategic plan was developed in January 2000 and updated in March 2001, and is currently being finalised. This strategy, spearheaded by UNESCO, promotes ICTs in Jamaica and the wider Caribbean Region for investment, social-cultural, economic, political and education achievements. The strategy takes a three-pronged approach that envisages transformations (1) in human resource development (2) in infrastructure and (3) in the enactment of an enabling legislative and policy framework. The strategy aims at promoting Jamaica as a Caribbean hub for IT activities and investment generating over 40,000 IT-related jobs (UNESCO 2002).

The Jamaican government is also working collaboratively with the IICD to support the establishment of ICTs in the agricultural sector as a strategy for improving the production and marketing of agricultural commodities. Through ICTs, information on prices, volumes, logistics, best practices and intermediate services would be made available to farmers. The provision of information was planned to take place either in a telecentre or via extension officers who would give the information to farmers in printed form or face-to-face. After only one year, it was reported that there was a tangible impact on farmers who are no longer forced

to depend on middlemen to market their crops (Freckleton 2002). In addition, out of an IICD ICT Roundtable held in Kingston in July 1998, Computer User Television Show emerged as a means to effectively disseminate useful computer knowledge.

### **Situation in other Caribbean countries**

Several other Caribbean countries, including Trinidad and Tobago, Barbados, and the Bahamas and Guyana are now pursuing ICT policies for social and economic transformation (Robinson 2003).

#### Trinidad and Tobago

Trinidad and Tobago has a small population of 1.2 million with a literacy rate of 98.5% in 2002. Over the years, there has been a fairly low percentage of internet use, and access in the academia was limited to universities, private schools and some semi-private high schools. In recent years, the government has placed emphasis on ICTs to integrate the nation into the networked world which has resulted in the popularity of internet cafés as a popular means of urban access to the internet due to low household PC penetration.

In recognition for the role of ICTs in national development, the government of Trinidad and Tobago has also put emphasis on building an export-oriented software and ICT services industry. The government has developed a science and technology park to attract local and multinational ICT services industry, reducing the regulations that limit ICTs and starting a multi-stakeholder consultative process involving government, private sector and civil society. There are many B2F (business to financial sector) e-commerce web sites but few online transactions are taking place in the country. One potential avenue for extensive B2C (business to consumer) e-commerce use may be tourism, a sector in which the island still lags behind most of other Caribbean countries.

By 2002, a draft policy was developed through the Ministry of Information, Communication and Technology, incorporating e-government awareness; gender perspectives to enhance women's capabilities; and health, security, and education and training for sustainable development. In an effort to close the digital divide, the Trinidadian government has put more effort and support into digital opportunities. Part of that effort goes into ICT training which is now a high priority for many organizations, as the establishment of the legal and functional framework through which ICTs are governed.

#### Barbados

Similar success has been found in Barbados, a much smaller but more developed Caribbean island. The island is also better connected providing links to other Islands particularly in the promotion of tourism in the region. Barbados.org search engine ([www.barbados.org](http://www.barbados.org)) is a good example of ICT development, and also serves as a link to other islands. A recent newswire article reported on a survey of the major search engines and Barbados.org was more widely linked than any other Caribbean Island, beating Mexico, Jamaica and every Caribbean destination, even the Caribbean Tourism Organisation site. According to the article, the site has come to be regarded as the online Encyclopaedia of Barbados. Success in Barbados connectivity is associated with the economy, the development of a policy and IT strategies all of which recognize the role of ICTs in development. The available infrastructure allows access and use of ICTs throughout the Island.

## Other countries

Though not all Caribbean Islands have the capacity to do as well as Barbados, there is a great effort in the region in the adoption and adaptation of ICTs in various sectors. Recently governments that had previously resisted the influence of ICTs for political, economic and ideological reasons have now joined the bandwagon, playing an active role in their implementation. The Mexican model, followed by Cuba, recognises the strategic importance of ICTs for national development and therefore emphasises connectivity. Several programmes have been implemented to ensure connectivity (Finquelievich 2003). The model is, however, not without criticism particularly when viewed from a development perspective as ICTs are not related to strategies to fight poverty, or encourage local development.

Some Caribbean countries, such as Haiti, face difficult challenges and are still struggling with the adoption of ICTs. This slow pace is probably associated with the political climate in the island which has also directly affected infrastructure that is critical in the development, access and use of ICTs. Over the recent years, private organizations and NGOs have attempted to move this forward, stimulating the public and private sector, and universities to initiate access to and use of ICTs. The Haitian Internet Summit on December 2001 and published a document with a number of presentations covering several aspects of ICTs for the country. The document has input from Government officials, professionals and experts on matters such as infrastructure, e-commerce, telephone and internet access, regulation and legislation. This preliminary document will serve as the basis to the elaboration of a National Policy Document. With the help of the United Nations Institute for Training and Research, the Network of Sustainable Development in Haiti (RDDH) is pushing the development of the policy with financial and technical support from the UNDP Haiti.

Other challenges in the adoption and use of ICTs in the wider Caribbean as noted by UNESCO include the bureaucracies where compliance with laws and regulations takes precedence over achieving organizational objectives. In turn, this reduces responsiveness to emerging situations and discourages innovation (UNESCO 2002). Decision making is hierarchical and most decisions get pushed up to the senior level where such officials regard themselves as policy makers, controllers or regulators, rather than facilitators of ICT adoption and use. Marcelle (2003) also noted that, although ICTs are relatively affordable for the mass of the Caribbean population, the high levels of monopoly, small land mass and population size, sluggish implementation of new technologies, and low levels of innovation in deployment of applications, as well as the unmet demand for a regional infrastructure, all contribute to the challenges in the adoption of ICTs in the region. In spite of these challenges, the enthusiasts and proponents of ICTs in national development continue to push the technologies as tools to access, utilize and share information and knowledge, and to enable individuals, communities and peoples to achieve sustainable development and improve their quality of life.

## **ICT and gender empowerment**

Within the context of gender, ICTs have a totally new meaning mainly because of their role as an empowerment tool for resistance, social mobilization and development in the hands of people and organizations. ICTs have mainly been adopted to support women's empowerment through application of ICTs in health, education, trade, employment and other women's development agenda. This is where programmes see technology as the change agent and have

integrated ICTs in their daily activities using them as tools to achieve their overall objectives. Various technologies have been incorporated into the efforts of gender empowerment and development from various perspectives whereby access to and control over information is seen as central to positive change for women. This access includes the online sharing of information and the creation of new cyber-communities, which is touted as crucial to women's education and political organization (Robins 2002). The integration perspective recognizes that both the technology and the content are interdependent. Rather than focus on the outcomes of technology, this more integrated perspective focuses on how ICTs as part of larger socio-technical processes that interact with both cultures and technologies and occur in specific contexts (Cooks and Isgro 2003).

NGOs in various parts of the world are now using the internet to get network with others in the same field and for advocacy. Others have taken upon themselves to provide ICT training and services among women. In Kenya for example, a multipurpose project on community telecentres network for African women provides public telephone services, fax and internet connectivity and e-mail its members and the wider communities. The project supports services in education, health, government, e-commerce, advertising and announcements. Under the project, women are trained on basic computer skills to enable them operate and manage the centres. On another perspective, the technologies have been pushed to ensure that local knowledge, including local gender knowledge is given importance in the media content. One of the most successful information networks for women is in Latin America where gender and ICT project was initiated following an urgent need for news with a gender perspective. A group of women started *Mademmujer*, an information and communication network that aimed to strengthen women's participation in Mexico (Plou 2003).

Several other NGOs in the developing countries strive to incorporate ICTs in their project activities, creating websites and sometimes spending a fortune to hire technical support to maintain them. While some do so for connectivity, networking and sharing information, there are a few who use the internet to meet the demands of their funding agencies. It is not uncommon for the some agencies to request for website information to validate NGO existence as a prerequisite for financial support. Some NGOs take advantage of the technologies using them to promote their activities as well as for advocacy, public relations and fund raising. These organizations recognize the benefits that gaining publicity and public recognition for concerns that have been private and hidden can provide for women in contexts that would otherwise have remained peripheral or invisible.

In Jamaica, for instance, the Women's Media Watch, an NGO that focuses and monitors the media coverage of gender-related issues in the Caribbean, has successfully used the media and other technologies in putting the organization in the limelight compared to other NGOs of this calibre. The organization focuses on ICT training, offering computer courses to its members free of charge and at a time that is convenient for them. The organization also provides internet access to its members, all of whom are volunteers. With the current connectivity and use of ICT for networking and communication, encouraging online discussions rather than face-to-face unless when absolutely necessary, the organization has attracted high profile women in the island and abroad thus earning its credibility from the local and international agencies.

Programmes with a strong background and use of ICTs and targeted toward women in the Caribbean have addressed issues such as violence against women, literacy and human rights. The main objective of these programmes, however, has been to link NGOs throughout the nation or internationally through the internet. The UNIFEM's Violence against Women

programme uses ICTs to provide women with a forum for addressing issues that previously had remained hidden to local communities and the wider world (Cooks and Isgro 2003). NGOs have been pressing for more specific principles, including the guaranteeing of gender equality within the emerging information society, by introducing it into all proposals, action-plans and follow-up programmes. This is in the context of the Convention for the Elimination of Discrimination Against Women (CEDAW) and the Beijing Platform of Action which emerged out of the 1995 World Conference on Women. These international conventions led to a consensus that women's rights are human rights thus denouncing all forms of violation of these rights among women and girls (UNESCO 2004).

Globally, there is a realization that women particularly those in rural and poor communities shoulder more responsibilities in their societies particularly in taking special care of the more vulnerable members of the society. In many developing countries, rural poverty has taken a female face where women are extremely marginalized in asset allocation. Through effective use of ICTs, women are able to produce more and market their agricultural products as well as compete in the global market. A good example is the JaBlum coffee, which is produced in a small place in her home at the Jamaican Blue Mountains but sold online to the world market.

There are several ICT-related success stories from the Jamaican agricultural sector. The recognition of the opportunities associated with ICTs has prompted the need for training among women in the sector. Through a series of workshops, the Jamaica Organic Agriculture Movement trains women farm entrepreneurs on ICT tools and services. This training is conducted with support from Networked Intelligence for Development, a Canadian based organization that supports communities in developing and transition economies to assist them to harness the opportunities of evolving ICTs and to establish their identities in the information era. Topics covered in the training include the following: internet use for both personal and business needs including internet search for information on trade and marketing activities and opportunities; participate in a virtual expo; sharing of new agricultural practices, product processing, export and information management methods among other topics.

ICT training has become one of the critical skills necessary to compete in the labour market for women in the Caribbean. In Jamaica, two government-supported institutions offer IT training – the HEART Trust/National Training Agency has offered a range of courses since the mid-1980s. These include MS Office, basic and intermediate information technology, call centre worker training including data entry, and training in networks, as well as training in programming in concert with the Caribbean Institute of Technology. Female enrolment in lower level IT training courses has ranged around 70% since 1999, having been as high as 83% in earlier years. The programming course that came on stream in 1999 – interestingly, has had more male participation leading to the conclusion that, 'certainly more males continue to move into programming; more females into data-processing.' (Francis-Brown, 2003).

## **Gender gap**

A gender-gap exists in the access and use of ICTs in both developed and developing countries. The internet use for example has become a home activity because almost one-half of the homes have internet access in the developed world whereas, except in upper income groups, home access to a computer (and to the internet) is not a widespread phenomenon in developing countries. Studies indicate that men are more likely than women to use the Web to read news, seek financial information and trade stocks online, participate in online auctions, access government web sites and search for sports news. Women on the other hand are more

likely to seek health information and play online games and are more inclined than men to get religious information and research new jobs (Pastore 2000).

Most Caribbean women access the internet at the work place rather than at home or in internet cafés. With about 80% of the workforce being female, ICTs are more accessible to women than to men. In Trinidad and Tobago, even with the adoption of cell phones and increased telephone connectivity, call centres are still popular because provide cheaper telephone calls and they provide easy access to the internet at the same location. In the Caribbean, these centres are a key employment resources for many women, particularly for marketing and customer service, although the more senior and skilled jobs are taken by men. With the outsourcing of labour now prevalent in the USA and other developing countries, these centres have become major employment sites for women who, in addition to learning the skills have to assume an American accent.

Women are employed in the wider technology markets as typists, and as data entry and processing clerks. Existing research on employment in the sector, from the late 1990s, touches on the cases of Barbados and Jamaica, where free zone enclaves have encouraged teleworking. Leith and Hopeton Dunn (1999) and Carla Freeman (1998) exploring the use of ICTs by women found that women are overwhelmingly employed at the lower end of the technology market in Barbados, doing basic data entry and data processing. Medium and high-technology jobs, involving scanning, imaging and software development and installation, training and repairs, are male dominated. The gap in wages and working conditions is also wide. Freeman does note though that at a Dominican Republic sister plant to the one she studied in Barbados, around 40% of the data processing operators were male. She posited the draw of computer technology, increased unemployment, and students earning funds to further their education, as factors there.

Throughout the Caribbean, agencies, governments, networks and organizations that have started to incorporate a gender perspective in their initiatives struggle with the imperative to align their ICT programme objectives (and within that, their gender and ICT policies) with poverty reduction strategies and the Millennium Development Goals, which now underpin much of the ICT for development agenda. While the problem of a gender digital-divide is more widely recognized, there is little understanding of how ICT policies, programmes and projects in any context are changing women's impoverished state. Similarly, little attention is given to how information and communication flows are affecting women's rights. There is little effort to develop effective mechanisms for ensuring equal participation of women in all levels of policymaking that genuinely contribute to addressing inequalities and disempowerment. A gender imbalance is, however, clear in tertiary level education where more women than men are pursuing a higher degree. The University of the West Indies for example is composed of 80% women while only 20% are men. This imbalance is reflected in the world of work where more workers, particularly in the lower levels are women, compared to the very few men who occupy the top decision-making positions.

### **ICTs and health communication**

Health communication has taken huge strides in the recent years through research and the use of various communication strategies and tactics whether through mass media health campaigns or simply sending out specific messages to specific audiences. Health communication stresses use of a variety of communication strategies that will increase understanding between communication sources and their target audience. The goal of health

communication is to create a demand for information and services and promote those services for the promotion and maintenance of health and well-being. Integration of ICTs in achieving this goal has become crucial particularly in strategic communication for behaviour change.

Behaviour change communication (BCC), the current 'buzzword' in health communication, is a combination of communication strategies to reach a target audience and to attain their participation in the communication process. The BCC approach focuses on increased understanding of the need for behaviour change but, at the same time, also takes into consideration other factors causing the health problem (Rice 2001). Communication and behaviour change programmes target certain behaviours and addresses them strategically and appropriately through use of, for example, ICTs. Strategic communication replaces the traditional doctor-patient, one-way, source-oriented communication and includes use of audience-centred communication strategies for different segmented audiences rather than the general use of the mass media to reach the general audience.

Women's health concerns in the Caribbean are several, ranging from cancer, diabetes, cardiac problems, nutrition and weight issues. Most serious is HIV/AIDS which is now becoming a woman's problem. Health organizations are increasingly using the internet to disseminate information on these and other problems although the information is generally not directly targeted at women. How many women access online health information is an area of research focus.

ICTs have also been used in other areas that address health and gender with support from local and international community. An example of this is the recognition of their role in the promotion of the gender and reproductive health issues particularly their ability to reach women of various backgrounds with information and education on matters that affect them directly. The 1994 Plan of Action, that came out of the International Conference on Population and Development in Cairo for instance, emphasizes the use of communication technologies to meet the IEC (Information, Education and Communication) for reproductive health decision making among women. It is now common for NGOs in the family planning and reproductive health field to use their websites and other technologies including CD-ROMs for packaging and disseminating information. Engender Health and Family Health International, both international NGOs, are good examples, producing materials and training manuals on the topic. More organizations have gone a step further to develop materials for a variety of audiences including the media for easy access, understanding and use of the information.

### **Online resources in the health field**

The effective use of ICTs in the health sector is only now being recognized compared to other development areas. In Jamaica, for instance, the health sector has been lagging behind in the adoption and use of ICTs compared to agriculture, which has received much support internationally in the adoption and application of ICTs. In an attempt to assist the health sector with the adoption and use of ICTs, external agencies have, over the last decade, intervened and initiated training and capacity building for persons working in the sector. The Peace Corps Health Volunteers for example, assisted their counterparts with the creation of the South-East Regional Health Authority website. The website provides information about the pools, tourism establishments, and food-handling establishments that have passed health inspections; HIV resources in southern and eastern Jamaica; and hospital locations and

contact information. The site also contains job listings and media coverage of events in the region.

Over the recent three to four years, adoption and use of ICTs in the health sector is becoming more visible with the Ministry of Health taking the lead in terms of web development and using the internet for information dissemination. The Ministry now has a fully developed website with current information on existing programmes, national health data, current events and activities as well as contact information for key resource persons. The Ministry's website has become an extremely important resource for researchers and students particularly with current information on the current HIV/AIDS and other health problems.

Similarly, the National AIDS Committees (NACs) in the region, are major resource for HIV/AIDS information and data. The Jamaican NAC website, for instance, provides important current data and links to the HIV/AIDS situation locally and globally, providing links to the international agencies and current issues in the prevention activities. The Caribbean AIDS Telecommunication Information Network, established with support from the CDC, CIDA and the UK Department for International Development, also seeks to improve the health status of participating countries through an increased awareness on the impact and prevention of sexually transmitted diseases, HIV and AIDS. Its website has become an important resource for journalists, researchers, students and others.

Other important online resource for health in the region is the Caribbean Epidemiologic Centre (CAREC). CAREC has linked various websites belonging to the key health organizations including the Pan American Health Organization (PAHO) with offices in Jamaica and Barbados. The organization has encouraged the media in promoting health in the Caribbean, establishing a competitive health journalism award that encourages and rewards the region's journalists for the wide coverage of health issues. In addition, a discussion forum for journalists had yielded great interest on health topics among media personnel.

Connectivity for health purposes and the importance of the internet as an important health resource is recognized by the CARICOM and was included in their Agenda 2003 and the Platform for Action. As indicated in the CARICOM agenda for 2003, each Caribbean country is should determine for itself how best to assess its readiness to develop an Agenda for Connectivity, and the level of analytical detail needed for its ongoing work. One of the areas of that required urgent connectivity is health (in addition to education, e-governance, e-commerce), where each country is informed of the importance of connectivity and the advantages to society particularly in the provision of broadly based public health services.

### **Other ICT-based approaches to health**

In Jamaica, the Telemedicine Research and Development Unit at the University of the West Indies has recently developed a created a seven-step integrated telemedicine programme known as 'The Caribbean Model' which, when implemented, will allow patients to have immediate access to their doctor or medical records, using their telephone as a starting point. This project involves use of the information technology with the management of health information to create the conditions for access of the patient anytime, anywhere mainly through the phone and internet. This project is made possible with the current access to the cell phones in the island.

Other ICTs used to promote health in the Caribbean include use of the videoconferences. This technology has been developed extensively through the two main universities in the region,

the University of Technology and the University of the West Indies. The University of Technology in Jamaica for example recently launched the Technological Innovation Centre as part of the World Bank-backed Global Development Learning Network. Similarly, the University of the West Indies Distance Education Unit is used as a teaching channel throughout the Caribbean.

Other developments from an institutional perspective include the University of the West Indies School of Nursing which, with support from the Commonwealth of Learning, is now a fully developed online programme that is offered throughout the region. More recently the Caribbean Institute of Media and Communication, launched a graduate programme that stresses the use of ICTs. The programme is designed with heavy emphasis in health communication and utilizes computers and other technologies for course delivery. Each student is equipped with a laptop computer with a wireless internet connection to enable them to access online materials while in class. Like other university programmes, the majority of participants are women (90%) thus giving it a strong gender component. The courses offered have paid much attention to gender and health issues in the Caribbean. Some of these issues as indicated current research projects include gender and youth empowerment, prevention of gender-based violence and other crimes directly affecting women and youth, as well as prevention of reproductive health problems including HIV/AIDS.

## **Conclusions**

The view of ICTs role in the development of the Caribbean region has contributed to their successful adoption and adaptation with much support from the private and the public sectors. The current efforts and interventions to incorporate ICTs in development activities have proved that there is great potential and great demand for ICT development in the region. The governments have provided support not only through infrastructure but in enabling the development of policies and IT strategies that guide the adoption, access and use of the available technologies.

Training for ICTs has been one of the interventions for addressing the digital divide with government and private sectors establishing training centres throughout the region. Other interventions have included the development of IT policies and strategic plans across the Caribbean islands. Their development and implementation has however been hampered by the bureaucracies within the governments and delay from the top decision makers. Many agencies have therefore continued working with draft policies, most of which have been criticised for incompleteness. In general, the policies have been found to be gender-blind or gender-neutral, not addressing issues that directly affect women, and adopting technologies that are not women friendly. Also, there continues to be a serious lack of acknowledgement and commitment to redressing gender imbalances by ensuring that women participate and benefit from the emerging global knowledge-based economy at all levels. Few studies conducted on gender and ICT have indicated a lower internet access among women compared to men. However, such data are missing for the Caribbean region. There is a need for a large scale study to determine access and use of the internet and other communication technologies in the region.

Organizations in the Caribbean have taken a wide strand toward incorporating ICTs in their projects using them to network with a variety of agencies as well as search for support internationally. Those actively involved in advocacy and networking for example require ICTs skills to perform their duties and compete in today's world. Bringing NGOs particularly

those dealing with gender issues into the limelight has contributed to their support from the international agencies. This role of ICTs has been appreciated by both the NGOs and the International community where collaboration has become a much easier process particularly where the latter sets the agenda. There is however still a great need to close the gender gap in the access and use of ICTs.

The role of ICTs in addressing the health and other issues that are gender specific is an area that requires research focus. Telemedicine also has been found to be a cost and time effective remedy to shortcomings in the medical system whereas other technology becomes necessary in the maintenance of a good health system: laboratories, economical and methodological drug distribution (group purchasing of medicine) and pharmacy benefit management.

Evidence from Caribbean indicates that empowering women through ICTs requires more than just introducing them to computers and other technologies. Even where the infrastructure and technologies are available, more women in the Caribbean still use them for basic functions. The computers for example are used for word processing, checking e-mails or accessing the internet (mostly at the workplace) while access at home remains limited. The implication here is that social, cultural, economic, geographical issues associated with the adoption and use of the technology. These issues determine who has access to what technologies and how to use them effectively and therefore limiting the potential for the technologies in addressing some critical development issues particularly those associated to women and development. It is clear from the studies cited here that ICTs by themselves cannot transform the lives of women for better or for worse. They are not an end in themselves, rather as tools that speed up the achievement of economic and social goals.

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