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ECLAC



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Public policies for digital development

Economic Commission for Latin America and the Caribbean

The Economic Commission for Latin America and the Caribbean (ECLAC) maintains that information and communications technologies (ICTs) provide opportunities for the countries of Latin America and the Caribbean to boost their growth rate, enhance the well-being of their citizens, promote equal opportunities, increase the efficiency and transparency of the public sector, strengthen and diversify their cultural development and facilitate integration processes in the region. The Rio de Janeiro Commitment and the Regional Plan of Action for the Information Society in Latin America and the Caribbean (eLAC 2007) demonstrate the importance that the region attaches to development strategies for the information society, as witness the new generation of public policies being designed by a number of countries. This provides the backdrop for the articles presented in this Newsletter by ECLAC, the Organization of American States (OAS), the Department of Economic and Social Affairs of the United Nations, the World Bank and the Inter-American Development Bank (IDB).

José Luis Machinea, Executive Secretary, ECLAC



The information society and governance

Organization of American States

Strengthening governance in the region is one of the priorities set by the Organization of American States (OAS). The OAS Secretary General, José Miguel Insulza, has pledged that this organization will work with multilateral agencies to ensure that the information society contributes to democratic governance and to greater well-being for the population.

Capacity-building and cooperation in the area of electronic government - Department of Economic and Social Affairs of the United Nations

Latin America and the Caribbean are making progress in the development of electronic government but further advances are needed if ICTs are to succeed in effectively modernizing the State and making it more transparent. The Department of Economic and Social Affairs of the United Nations views electronic government as a tool for achieving public-sector reform and sound government, which, in turn, will facilitate the fulfilment of the Millennium Development Goals.



UNITED NATIONS



Universal access to communications - World Bank

The countries of the region have implemented mechanisms to finance programmes for universal access to the information society. In a study on 19 countries produced in cooperation with the Latin American Forum of Telecommunications Regulatory Bodies (REGULATEL) and ECLAC, the World Bank analyses recent practices, policy lessons and technological and regulatory trends and reports on opportunities for digital inclusion in the poorest rural and urban areas.



IDB

Preparing Latin America and the Caribbean for the dissemination of the new generation of ICTs

Inter-American Development Bank (IDB)

The countries of the region require new levels of collaboration as well as new commitments and ideas for taking advantage of the opportunities presented by the information society. The Inter-American Development Bank (IDB) reaffirms its commitment to support new forms of cooperation among governments, the private sector, civil society and international organizations to devise strategies and adopt effective initiatives for harnessing the opportunities provided by ICTs for strengthening sustainable social and economic development in the region.



eLAC2007 - Plan of Action for the Information Society in Latin America and the Caribbean

The representatives of the Latin American and Caribbean countries, gathered at the Regional Preparatory Ministerial Conference of Latin America and the Caribbean for the second phase of the World Summit on the Information Society, held in Rio de Janeiro, Brazil, from 8 to 10 June 2005, adopted the Plan of Action for the Information Society in Latin America and the Caribbean (eLAC2007). In this plan, they expressed the will to pursue a common policy in order to harness information and communication technologies for the achievement of regional development and integration. The objectives set out in eLAC2007 are as follows: to advance towards an information society that benefits all the inhabitants of the region; to foster development through growth with equity; to consolidate democracy and regional integration; and to speed up this process while reducing its economic and social costs.

eLAC2007 is based on the political declarations concerning the information society made by the countries of the region over the past five years. It is modeled on the Declaration of Principles and Plan of Action of the World Summit on the Information Society and on the United Nations Millennium Development Goals, together with their associated targets for 2015, and seeks to combine a strategic long-term perspective with specific short-term activities. The aim is to have a positive impact on the development of information societies in the region within a relatively short time span, that is, within a maximum of two years. In this regard, eLAC2007 builds a bridge between political consensus and a concrete operational agreement geared to the regional development of digital public policies.

This regional plan sets 30 specific goals encompassing 70 activities designed to produce tangible results and respond effectively to the specific needs of each of the countries of the region. The goals are based on projects and activities now under way so as to take advantage of synergies and enhance regional coordination. They also seek to foster the launch of new initiatives. In addition, they support the preparation and implementation of national initiatives on the basis of exchanges designed to deepen knowledge and understanding in critical areas. These quantifiable goals are directed towards concrete activities in five key areas: access and digital inclusion; creation of skills and knowledge; public transparency and efficiency; policy instruments; and an enabling environment.

Rather than being a simple political programme, the Plan of Action constitutes an effective platform for the development of projects and coordination of initiatives by international organizations, regional and sectoral institutions, Governments, enterprises and civil society. 

www.cepal.org/socinfo/elac



PUBLIC POLICIES FOR DIGITAL DEVELOPMENT

Advances and challenges in Latin America and the Caribbean



José Luis Machinea
Executive Secretary of the Economic
Commission for Latin America and the
Caribbean (ECLAC)

Information and communications technologies (ICT) are spreading rapidly throughout Latin America and the Caribbean, in parallel with the coming-of-age of a new generation of public policies geared towards digital development and inclusion.

I would like to set out the main lessons to be drawn from the learning process that has accompanied the development of new public policies in each and every Latin American and Caribbean country. The experience gained in this area indicates that institutional innovations are becoming increasingly necessary in order to leverage the impact of public ICT initiatives. Innovative action in this sphere can help to ensure that digital development and inclusion will have a positive impact in terms of growth, well-being, equity and public-sector efficiency and transparency.

The types of institutional innovations needed at this stage also entail a deepening of regional cooperation. A move in this direction can already be seen in the Plan of Action for the Information Society in Latin America and the Caribbean of June 2005, more commonly known as “eLAC2007”. It is also reflected in activities being pursued by United Nations agencies and non-governmental organizations (NGOs), which in recent months have engaged in an increasing degree of inter-agency cooperation that will certainly add strength to national and regional efforts.

I

UNEVEN DIFFUSION OF THE INTERNET IN LATIN AMERICA AND THE CARIBBEAN

The rapid spread of the digital revolution has had significant repercussions in the Latin American and Caribbean countries. Indeed, despite an obvious lag behind the developed countries and the existence of large access gaps among social groups, digital technologies and networks are swiftly multiplying in the region. In the years between 1994 and 2004, the number of fixed telephone lines increased by a factor of 2.4 and the number of mobile telephones jumped by a factor of 82, while the number of personal computers and Internet users soared by factors of 7.5 and 352. These indicators show that the countries of the region have begun the transition towards the information society.

The spread of ICT, especially Internet, has been slower and more asymmetrical in the region than it was in the initial phases of their mass introduction in developed countries, however. Internet access has been concentrated in large and medium-sized firms, central government, and households in the top income quintile, in a pattern that is shaped by structural and institutional factors.



Low per-capita income in the region's countries (which varies from a fifth to a quarter of developed-country averages) interferes with purchases of informatics or digital equipment, whether imported or domestically produced, on a mass scale. In turn, the penetration rate for fixed-line telephone services (which have thus far formed the basis for broadband or narrowband Internet access) is three times lower than in developed countries. This limits opportunities for capitalizing on economies of scale and density, thus pushing up the cost of such services. The backdrop to this situation is a highly unequal income distribution and sharp differences in telecommunications infrastructure from one area to another.

Owing to these obstacles, it would be difficult, at least in the medium term, for most of the region to replicate the developed-country pattern of mass individual and household Internet access. What is more, since in Latin America and the Caribbean the modality of individual access is limited (at least for now) to the wealthiest 10%-20% of the population, countries that are verging on that percentage will face even greater obstacles to Internet expansion in the near future.

The steady reduction in the prices of digital hardware and the advent of new wireless technologies will help to overcome some of these problems, but these factors alone will not be enough. More aggressive and efficient public policies on universal access are also needed, including changes in the regulatory model for the telecommunications industry, which is currently focused on the expansion of mobile telephony. Under these circumstances, part of the solution consists of low-cost financing schemes for the purchase of computers and the consolidation of efficient and sustainable models of collective Internet access.

In addition to structural factors, matters of an institutional nature also play a part. Market failures, flaws in competition policy, shortcomings in the telecommunications regulatory framework, lags in the modernization of the legal framework and delays in developing e-government all slow the expansion of ICT. As ECLAC has shown, underdeveloped and incomplete innovation systems also hinder the diffusion of new technologies and stand between the potential benefits and the interests of efficiency and equity.

Since neither the market nor existing institutions are adapting spontaneously to the new technologies and networks, public policies must be put in place to solve these structural and institutional problems.

II A NEW TYPE OF PUBLIC POLICY EMERGES

All the Latin American and Caribbean countries clearly understand that the larger their capacity to absorb, disseminate and create knowledge and information, the greater the positive impact on productivity, growth, well-being and public-sector efficiency and transparency. In a region

marked by stark economic and social inequalities, it is also important to realize that the larger the strides taken towards universal access and digital inclusion, the greater the knock-on effect in terms of equality of opportunities and income distribution.

Albeit at different rates and with differing degrees of consistency and depth, all the countries are taking steps to expand their telecommunications infrastructure, incorporate ICT into the public sector and into education, and alter their legal frameworks to facilitate e-commerce and e-transactions. This has resulted in the emergence of a digital public policy encompassing several dimensions, including access, human resources development, e-government, ICT industries, digital services and content, and the adaptation of the legal framework. The purpose of this policy is to accelerate the digital learning and diffusion process and thus backstop development-with-equity strategies.

In order to make headway, digital development and inclusion policies will require regulatory and legal changes, new financial instruments and subsidies, and the modernization of public administration. Given the cross-cutting nature of ICT, digital public policy cannot be managed by a single entity. All public institutions, at the federal as well as the national and municipal levels, must be engaged in their management.

This poses major challenges in terms of formulating a consistent public policy on digital development. First, public and private authorities must coordinate with each other in order to build on complementarities, reduce duplication and resolve disputes. Second, the mainstreaming of the digital dimension in all sectoral public policies must be actively promoted as a way of heightening the effectiveness, efficiency and transparency of public activities. All the countries of the region should therefore coordinate their governments' efforts to promote digital development and inclusion at the national level. The cross-cutting aspects of these new technologies are conducive to economies of scale and scope and to the emergence of complementarities among public policies, institutions and programmes, all of which heightens the impact of public activity and enhances the catalyzing role of the State.

Only a few of the countries of the region have developed coordination models; others are still at a phase in the learning process at which different approaches are operating alongside one another. Something all the countries do have in common, however, is that they are building cooperative networks through the implementation of special-purpose programmes and projects. Whether they are successful or not will depend on their political capital, legal attributes, financial resources and management capacity. The larger and more complex ICT programmes are, the greater the investment and the effort required to strengthen all four areas.

The countries of the region are engaged in institutional learning processes as they work to formulate and implement public policies on ICT. Many of the countries have made meaningful progress, but it is also true that many initiatives have failed to prosper or have yielded



meagre fruits. This should come as no surprise, since the problems that arise with respect to any public activity also apply to Internet and digital technologies when they become the focus of public policy. This is in addition to the fact that constraints on human resources and institutional capital and the cross-cutting nature of digital technologies pose new challenges for which there are, as yet, no broadly accepted solutions.

In short, the rapid expansion of this cross-cutting digital revolution is posing structural and institutional challenges in the Latin American and Caribbean countries, making coordination on ICT absolutely essential. As the countries seek better methods for implementing ICT, measures that facilitate continuous and collective learning will help them to derive the maximum benefits from ICT in terms of development, equity and social inclusion.

III THE ROLE OF REGIONAL COOPERATION

The emergence of a new generation of policies for digital development and inclusion was evidenced by the Regional Preparatory Ministerial Conference of Latin America and the Caribbean for the second phase of the World Summit on the Information Society, which was held in Rio de Janeiro from 8 to 10 June 2005. This conference represented the culmination of several years of discussions on ICT as they relate to growth with equity. At the end of the conference, the delegates adopted the Rio Commitment and the Plan of Action for the Information Society in Latin America and the Caribbean, known as “eLAC2007”, which contains 30 specific goals to be achieved over a two-year period. The validity of the plan was reaffirmed at complementary meetings held in Geneva and Santiago in September and October 2005; the plan will also be evaluated at a final meeting to be held for the purpose in El Salvador in 2007.

Many United Nations agencies, international organizations and NGOs have embarked on a process of dialogue and on joint projects in support of the national and regional activities undertaken by Latin American and Caribbean Governments. One example of a project in which ECLAC is participating is the Observatory for the Information Society in Latin America and the Caribbean (OSILAC), where it is working with the Institute for Connectivity in the Americas (ICA). Another is a study undertaken jointly with the Latin American Telecommunications Regulators Forum (REGULATEL) and the World Bank, which seeks to structure a new generation of universal access policies. Already prominent in eLAC2007 are the Network of e-Government Leaders of Latin America and the Caribbean (RedGEALC) and the CLARA network, which links different research centres.

This framework of convergence forms the backdrop for this Newsletter, which offers contributions from representatives of the Organization of

American States (OAS), the Inter-American Development Bank (IDB), the World Bank and the Department of Economic and Social Affairs of the United Nations.

The renewed drive to strengthen inter-agency coordination seen in the last few months, together with international agencies’ readiness to support Governments in implementing the goals of eLAC2007, will facilitate the dissemination of best practices and shared learning. By the same token, they will also pave the way for activities that will have regional impacts and will help strengthen the contribution of Latin America and the Caribbean to the World Summit on the Information Society. 

José Luis Machinea

*Executive Secretary of the Economic Commission for
Latin America and the Caribbean (ECLAC)*



THE INFORMATION SOCIETY AND GOVERNANCE

The binomial of hope

At a time when the entire region is clamoring for stronger democratic governance, information and communication technologies (ICT) are destined to become, at one and the same time, a catalyst, a tool and an incentive whereby the information society can also become the governance society.

The construction of democratic governance rests on four fundamental pillars: a modern, efficient and credible institutional structure; a developed and reliable legal framework; a mechanism for citizen participation; and a culture of transparency and accountability.

When Lawrence Roberts launched the Advanced Research Projects Agency Network (ARPANET) in the second half of the 1960s to serve as a secure mechanism for data transmission between strategic points of the United States defense system, little did he imagine that he was creating a powerful tool that would change the day-to-day life of people around the world.

By the same token, it is difficult for the vast majority of the inhabitants of Latin America and the Caribbean to conceive how information and communication technologies can improve the quality of their lives. Yet, although these technologies are only just beginning to make inroads in Latin America and the Caribbean and therefore still have far to go, they have already left an indelible mark in a number of key areas in terms of the well-being of the region's citizens, especially education, public administration, economic activity and agricultural development.

Strengthening governance in the region is one of the major priorities of the Organization of American States (OAS). A number of the activities being implemented by the Secretariat through the Department of Democratic and Political Affairs and the Executive Secretariat for Integral Development are guided by the objective of strengthening governance in the region and place emphasis on what have been described as the foundations of governance: efficiency, transparency and citizen participation in all areas relating to the public sector in the region. This modernization process has been made possible, in large part, by the formation of a productive relationship with the private sector, a firm commitment to the expansion of horizontal cooperation among countries of Latin America and the Caribbean, and intensive human resource training efforts.

The Network of E-Government Leaders in Latin America and the Caribbean, created jointly with the Institute for Connectivity in the Americas and recently joined by the Inter-American Development Bank, is the visible portion of a much larger effort that has provided

training in e-government to over a thousand civil servants in the region, implemented more than 20 e-government projects and facilitated numerous exchanges of experts between countries through a horizontal cooperation fund.

Fortunately, there is no shortage of examples of the positive impact that ICT are having in terms of the modernization of the public sector in Latin America and the Caribbean. In Jamaica, the Customs Automated Services (CASE) project for modernizing the national customs service, which came on stream in July 2003, doubled customs receipts in its first year of operation, which coincided with a period of economic stagnation. In Mexico, 80% of the public bidding processes (over US\$ 20 billion) may be accessed and monitored on line by any member of the public via Compranet.

Any number of cases could be cited from practically any of the countries of the region. These very real achievements should not, however, be a source of complacency or an excuse to relax our efforts; on the contrary, they should serve as an ongoing motivation to redouble our efforts and our commitment to extend the benefits of the information society to all citizens in the Americas, however remote the area in which they live.

Thus, on behalf of the General Secretariat of the Organization of American States, I applaud the United Nations Secretary-General's appeal for all nations of the world to provide their citizens with the benefits of the information society. May I also take this opportunity to wish the delegates gathering at the World Summit on the Information Society every success in their deliberations in Tunis. I also wish to commend the Economic Commission for Latin America and the Caribbean (ECLAC) on the leadership it has provided in the preparation, negotiation and adoption of the regional document, eLAC2007, which will guide the efforts of all the countries in Latin America and the Caribbean in working to create the information society. In this important task, OAS will assume the responsibility that falls to it in promoting the progress of Latin America and the Caribbean and will join forces with ECLAC and other multilateral organizations to ensure that the information society lays the foundation for the type of governance that our people need in order to attain the level of well-being that they deserve. 🌐

José Miguel Insulza

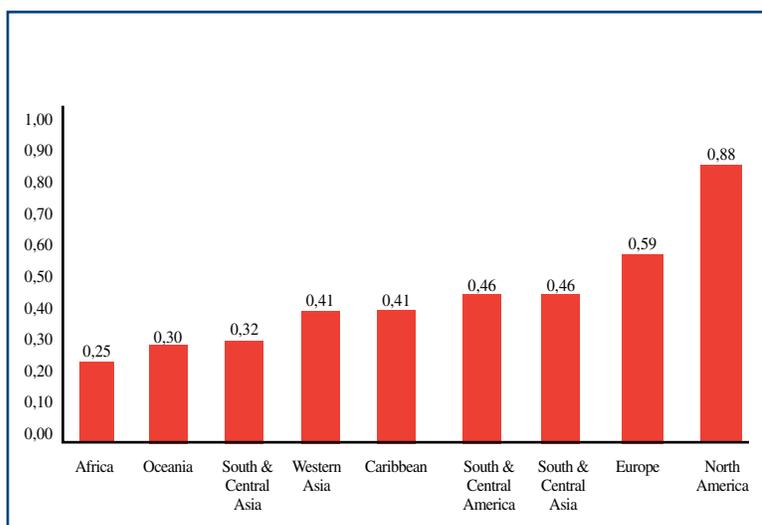
Secretary General of the Organization of American States



Readiness, capacity and cooperation on e-government: How the division for public administration and development management supports the implementation of eLAC 2007

According to the United Nations Global e-Government Readiness Report 2004, Central and South America ranked fourth as a world region in terms of e-government readiness, following North America, Europe and Southern and Eastern Asia, while the Caribbean ranked fifth.

REGIONAL e-GOVERNMENT READINESS, 2004



A review of the progress made by countries in the region since the previous year indicates that around two-thirds of the countries of Central and South America made steady progress in 2004, and either maintained their relative position in the global rankings, or improved them. The regional e-government readiness mean was 0.46, above the world average, which reflects progress, consolidation and improvements in the e-government programmes of several countries in the region. Despite this progress, several countries in Central and South America remain at the initial stages of e-government development. Countries in the Caribbean subregion, with an e-government readiness mean of 0.41, are placed about average in the global rankings. A few of the better-placed countries improved their position marginally with respect to the previous year. Half of the countries of the region were above the world average.

The United Nations Global e-Government Surveys present a comparative ranking of the 191 Member States of the United Nations according to two primary indicators, namely the state of e-readiness and the extent of e-participation worldwide.

The Surveys are one among the wide array of products, tools and services relating to knowledge systems and e-government that the Division for Public Administration and Development Management of the United Nations Department of Economic and Social Affairs makes available to United Nations Member States of the Latin American and Caribbean region and the world to build awareness and capacity, support development of regional cooperation initiatives, and promote resource mobilization and partnership-building. In this way, the Division is actively engaged in the implementation of the eLAC 2007 Plan of Action. The Division seeks to examine the dual role of government in promoting a society's and the public sector's knowledge systems, and the capacity to generate, acquire, manage, disseminate, appropriate and apply knowledge resources towards nationally defined development goals in support of the Millennium Development Goals. The Division also examines the role of e-government as one component of a knowledge system and a tool for meeting public-sector reform and good governance objectives. While focusing largely on e-government, the Division also considers linkages between e-government, e-governance and e-democracy.

The Division's current activities in Latin America and the Caribbean relate to several of the "Action Lines" identified in the eLAC Plan of Action, and include the following (the numbers of the corresponding eLAC Action Lines are provided in parenthesis for ease of reference):

- *Build e-government capacity of local public sector officials through training and professional enhancement (Goal 5, Action 5.3):* LEGOV, a new online source for local government to serve as an entry point to information, discussion and networking, addresses specific opportunities and challenges that local governments face as they seek to apply ICT to their internal and external operations.
- *Establish or strengthen platforms for exchange of information and knowledge (Goal 13, Action 13.1):* The United Nations Online Network in Public Administration (UNPAN) promotes the sharing of knowledge, experiences and best practices throughout the world



in public policy, public administration and civil service, through capacity-building and cooperation among the United Nations Member States, with emphasis on South-South cooperation. The Division for Public Administration and Development Management has also established an institutional partnership with the Latin American and Caribbean Institute for Economic and Social Planning (ILPES) for sharing of information with global users in the area of governance and economic and social planning through the UNPAN platform, in which ECLAC has a window to display products such as newsletters, training manuals, publications, and others. (<http://www.unpan.org/latin.asp>).

- *Support development of regional cooperation projects for knowledge-sharing and capacity-building, and promote resource mobilization and partnership-building in support of project implementation (Goal 13, Action 13.1):* The newly established subregional Technical and Advisory Support Facility (TASF) on e-government to serve CARICOM member States, promotes the development of national e-government capacity in the region. Another ongoing activity in the Caribbean is the Capacity-Building Initiative on ICT for Development, currently implemented in St. Lucia and St. Vincent, with specific focus on e-accounting applications. The fledgling Global Centre for ICT in Parliament is expected to launch specific initiatives in Latin America and the Caribbean.
- *Support development and implementation of national and subregional strategies and action plans (Goal 20, Actions 20.1 and 20.2):* The Caribbean e-Government Initiative, launched in 2002, led to the formulation and adoption of a regional e-government strategy by the Caribbean countries in 2004 <http://www.unpan.org/lacwig/latin-caribbean-working-group.asp>. The Central American e-Government Task Force is currently working towards formulating a regional strategy for the Central American countries plus Belize and the Dominican Republic. http://www.unpan.org/directory/conference/guest/browseoneconference.asp?conference_id=1836
- *Support e-government readiness assessments at the country level (Goal 24, Action 24.1):* the Division for Public Administration and Development Management adopts a three-tier approach to e-government readiness assessment: global, regional and national. The United Nations Global e-Government Surveys (described above) assess the Member States of the United Nations and provide a benchmark to gauge their comparative state of e-government readiness. At the national level, countries are encouraged to use METER, the Measuring and Evaluation Tool for e-Government Readiness Assessment, a diagnostic tool prepared by the Division to assist national governments in the development of more relevant e-government strategies and action plans. E-government readiness assessments using an early version of METER were conducted in

nine countries of the region, namely Barbados, Belize, Grenada, Guyana, Jamaica, St. Lucia, St. Vincent, Suriname, and Trinidad & Tobago.

The Division for Public Administration and Development Management is a depository of experience and technical expertise on knowledge systems and e-government, and stands ready to support requesting Governments with analytical, advisory, advocacy and capacity-building services.

To download the Surveys, see: <http://www.unpan.org/egovernment4.asp>. 

Guido Bertucci

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United Nations Department of Economic
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UNIVERSAL ACCESS TELECOMMUNICATIONS: A World Bank Perspective

The Latin American region was among the first to recognize that promoting access to—and effective use of— ICT in rural and isolated areas is decisive for increasing the competitiveness of their economies and fostering economic and social development. Beginning in the late 1980s, a growing number of Latin American countries pioneered comprehensive telecommunications reform programmes that combined initiatives to increase private sector investment, establish transparent and fair regulatory frameworks and institutions and put in place schemes of universal access aimed at increasing access to and use of ICT in rural and low-income areas.

In recognition of the pioneering role of Latin American universal access programmes, the World Bank Group (WBG), in cooperation with the Latin American Telecommunications Regulators Fora (Regulatel), the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) and with financing from the Public Private Infrastructure Advisory Facility (PPIAF), is carrying out a study of universal access programmes in 19 Latin American countries. This study seeks to identify lessons and best practices from Latin America, as well as to help policymakers and regulators put in place a new generation of universal access programmes. Some preliminary findings of this ongoing study include the following:

- Sector reform and competition are prerequisites for universal access. Latin American countries, which fostered private-sector led growth and investments, implemented pro-competition and transparent legal/regulatory frameworks and created capable independent regulators, have experienced greater increases in teledensity.
- Sector reform is an ongoing process that requires the updating and revising of regulatory frameworks and institutions, given the dynamic nature of ICT markets and technologies. Imperfections in the legal and regulatory framework can have a significant effect on universal access. A recent World Bank study found that in one Latin American country that had carried out basic sector reforms, 30% of the “universal access gap” was due to legal and regulatory barriers, or imperfections that needed to be addressed through a second wave of regulatory reforms.
- The first generation of universal access programmes in Latin America, many of which aimed at increasing community access to public payphones, were fairly successful, as illustrated by Peru

where the distance rural consumers have to travel to reach a payphone decreased from an average of 58 kilometres to 5.2 kilometres.

- Latin American countries have created effective and popular mechanisms to finance universal access programmes, mostly through the establishment of universal access funds, with subsidies allocated through competitive minimal subsidy tenders and disbursed on the basis of output based aid (OBA) mechanisms. Universal access funds are generally financed out of contributions (normally about 1%-2% of revenues) from all licensed telecommunications operators. Generally, these funds are best administered by an independent body that follows policy guidelines from a sector ministry or inter-ministerial board.
- Universal access funds can play a key role in attracting private sector investments in rural areas that are not commercially viable on their own. Most private-sector operators initially invest and focus on urban areas and proceed very cautiously in terms of extending networks to lower-tier segments of the economy and rural areas. Universal access programmes could create the necessary regulatory and financial incentives for accelerated expansion into rural areas. However, public funding or subsidies should aim to partially finance upfront and start-up costs while leveraging additional private sector investments to the extent possible, rather than subsidizing operating costs or lower tariffs.
- Rural and low-income people increasingly view ICT, especially cellular telephones, as highly valued basic commodities and services for which they are willing to pay. On average, people spend approximately 2% of their incomes on telephone services. Experiences in Latin America indicate that people living in rural areas often pay as much as 3%-5% of their incomes for communications services. As a result, commercial operations in rural markets are proving to be more commercially viable than initially expected. For instance, public payphone programmes in isolated rural communities have demonstrated to private operators that there is sufficient demand to sustain commercial operations for other ICT services.

As implementation of Latin American universal access programmes progresses and as markets continue to grow and evolve, a number of issues arise that require policy makers to constantly revise their universal access objectives and plans. Some of these include:



- Applicability of universal access programmes and funds for more advanced services beyond basic voice and connectivity. Universal access programmes are increasingly being called upon to improve access to other telecommunications infrastructure, such as mobile telephony, Internet, telecenters, and broadband services. However, given the limited financial resources and the competing demand for public funds from other development projects, policymakers' emphasis should remain on how best to leverage the use of universal access funds to stimulate private investment. In particular, policymakers should be very cautious about using universal access funds to support initiatives that require ongoing public financing and are unlikely to be commercially viable in the long run.
- There is increasing recognition that universal access programmes need to address not only supply-side constraints—as was the case with first generation programmes—but also demand-side constraints. Universal access programmes are more effective when there is a realization that the need for subsidies declines over time as a result of increased demand. However, stimulating demand for ICT to achieve economies of scale may in certain instances require indirect public intervention, such as the implementation of e-government and e-education programmes. Governments in developing economies are not only important users of ICT but they also have the size and public position to demonstrate the relevance of these technologies in improving productivity in the delivery of public and private services.
- There is a growing interest in devising universal access programmes, which would not only stimulate increased investment by large players, but would also lead to competition and the development of smaller companies that can often be more responsive to local and grass-roots demand in rural communities.

This study is only one of several WGB initiatives aimed at supporting the efforts of policymakers and regulators in Latin America, as well as other regions, to address telecommunications reform and access goals. The World Bank has also provided policy advice and technical assistance for the reform process in over 80 countries and supported universal access schemes in 30 countries. In addition, its private-sector arm, the International Finance Corporation (IFC), has mobilized over US\$ 6 billion in financing for ICT projects in developing countries over the past 10 years. WBG is committed to continuing to promote access to, and effective use of, ICT in rural and low-income areas in support of the achievement of the Millennium Development Goals. 

Mohsen A. Khalil

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Preparing Latin America and the Caribbean for the dissemination of the new generation of information and communications technologies

A strategy for equitable participation in the information societies must give particular attention to broad public access to information and communications technologies (ICT). These technologies are going through an intense process of convergence of telecommunications and information science, which offers a vast range of possibilities of accessing new media for creating, disseminating and processing information via high-speed networks with impressive performance and extensive coverage. The intensive use of networks in the production and distribution of goods and services opens up new opportunities for the socioeconomic development of societies. At this stage of the “digital revolution”, information and knowledge are tools of crucial importance for productivity, well-being and institutional development.

ICT have been disseminated rapidly in Latin America and the Caribbean, despite the fact that the region is lagging behind the developed countries and the huge inequalities that create substantial gaps in access between social groups. This gap in access to digital goods, symbolized by Internet access, has three dimensions: physical, referring to the lack of adequate infrastructure in remote areas and among low-income groups; economic, referring to the high access cost compared to the average income of some individuals; and sociocultural, referring to the influence of age, ethnic origin, sex and level of education on access patterns.

The challenge lies in designing and implementing access policies that integrate all ICT and combine public and private initiatives for technology use as a tool to overcome the digital divide. Despite the physical, economic and sociocultural restrictions, a new generation of lower-cost, scalable and wide-area ICT – Wi-Fi and WiMAX and other Broadband Wireless Access (BWA) systems – opens up interesting opportunities for digital inclusion. These new forms of broadband access complement other wireless access technologies based on: the digital subscriber line (DSL), used mainly by telephone operators; cable modem, used by cable television operators; optical fibre, which is fairly expensive; coaxial cables; and systems that are still being tested, such as power line communications (PLC) in which electricity networks are used for data and voice transmission.

In economic terms, the new multimedia Internet services and applications –especially Voice over Internet Protocol (VoIP) - are significantly increasing the demand for broadband services. Accordingly, in areas that lack a traditional telecommunications infrastructure, wireless broadband solutions are more appropriate than conventional wired technologies. The recent reduction in the cost of broadband options, ease of installation, low initial investment, increased supply in response to demand and the lower relative maintenance costs are some of the factors contributing to the shift.

It may not be feasible for traditional telecommunications operators to provide services in remote areas and to low-income groups. In this context, the use of new technologies for digital inclusion requires public policies with a comprehensive perspective on ICT. Achieving universal access requires full use to be made of these technologies and the minimizing of

market failures. This is possible if the policies go beyond infrastructure supply to include applications that stimulate demand for new multimedia Internet services in the fields of education, health, e-government and e-commerce (with the latter being adapted to the needs small and medium-sized enterprises). For this purpose, a regulatory framework must be developed that includes incentives for digital inclusion.

The positive results obtained by the region in terms of public Internet booths and other access facilities (including the popular Internet cafés); the widespread use of mobile telephones among low-income groups; and the demand for solutions from municipal, departmental and national public authorities (including the possibility for agreements with civil society and the private sector) are all steps in the right direction. The countries of the region therefore have a good starting point for implementing access policies for low-income groups that can then be integrated with other public policies relating to social issues, education, health and other areas.

The pioneering initiatives of a number of municipalities in the region that offer free wireless Internet connection can truly be considered laboratories for the dissemination of the new generation of ICT.¹ Consideration of the advantages and disadvantages of the different options could generate new policy measures.

The regulatory and institutional difficulties should not be underestimated, nor should the uncertainties inherent in a sector of rapid technological growth. Thus, the use of Voice over Internet Protocol reduces the price of national and international long-distance communications. This may benefit the low-income groups that use public telephone booths, but is bad for business from the point of view of traditional telephone operators, and therefore has a negative effect on the sources of universal access funds. These enterprises are already reacting to the loss of the voice services market through the ‘triple play’ bundling of telephone, Internet, and subscriber television services, plus mobile telephony. This process is generating significant tensions between private operators and regulatory agencies.

There is mounting pressure for regulatory change, and it is worth wondering what direction the new rules should be taking. The situation of ICT in the region, the challenges of the digital divide and emerging technologies indicate a need for pre-emptive and firm action by the public authorities. In this context, efforts must be made to assess the potential of new trends, study international and regional experiences and to initiate the design of ICT access policies that promote digital inclusion. 

Information Society Program

Division of Production, Productivity and Management, ECLAC.

¹ The new technologies offer a vast range of possibilities for use, as they can be adapted to specific geographical and population characteristics. For example, satellites are the most appropriate means of transmission for isolated areas with very low population density, including some parts of the Andes and the Amazon.



FOSTERING THE DEVELOPMENT AND DIFFUSION OF ICT IN LAC COUNTRIES:

A strong and durable IDB commitment

The generation of knowledge and the rapid diffusion and application of that knowledge made possible by the unprecedented progress of information and communication technologies (ICT) are one of the fundamental pillars of sustainable development and responsible growth across the world.

Countries of the Latin American and Caribbean region are no exception. They are fully involved in this process of global change as they adapt their economic and social structures to better benefit from the new conditions of development created by the unprecedented pace and scale of global flows in information, products and services, capital, people and ideas

We all dream that rapid technological change and the corresponding drop in prices will make it possible for all individuals, from their childhood onwards, to have access to a digital window to the universe. However, for this dream to come true, several challenges need to be addressed effectively and to be overcome: the dramatic disparities in the digital divide and the still significant spiral of poverty and exclusion, as well as the existing economic, social and cultural barriers.

The IDB has a long-standing and constantly evolving partnership in working with the countries of Latin America and the Caribbean in the integration of science and technology, and especially ICT, in the region's overall development strategy with the objective of accelerating a sustainable dynamic of social and economic development. The region confronts many different challenges that require consideration and action; factors such as political stability, transparent and accountable governance, physical infrastructure and the rule of law are some of the issues that need attention from national and international institutions. New forms of collaborative action among governments, the private sector, and non-profit and international organizations will be key for the development of strategies and effective initiatives in the Latin American and Caribbean region. This message is a special opportunity for us to reiterate the Bank's commitment to this partnership and to make it successful and executable.

Internet penetration in Latin America and the Caribbean increased 211 percent between 2000 and 2005, while the number of personal computers in homes increased 170 percent between 1999 and 2003. Unfortunately, the capacity of the region to absorb these technologies is much less than that of the industrialized countries. Only 10.3 percent of the population has internet access, compared with approximately

66 percent in the United States. Similarly, indexes on networked readiness, growth and competitiveness, and e-government readiness place most Latin American and Caribbean countries below the average in these areas. This dichotomy contributes to and reflects the profound inequalities in levels of human development we witness in the region. The IDB is committed to ensuring that these technologies contribute to overcoming such inequalities and, since the Millennium Summit in 2000, our activities have been increasingly viewed through the lens of the Millennium Development Goals (MDGs). The key development goals that the international community has adopted in 2000 are more and more part of our work with the countries and our collaboration with other international organizations.

The IDB will continue to cooperate with other international organizations in the areas of economic growth, social development and governance to ensure that ICT contributes effectively to carrying out the objectives of the WSIS Plan of Action and achieving the Millennium Development Goals (MDGs). At the global level, the IDB has played a significant role in the first World Summit on the Information Society in Geneva and is helping to coordinate the contribution of the region in the summit's second phase.

WSIS, with its largely open and participatory process, has proved the importance of going beyond technological issues, embracing a discussion grounded in the larger picture of economic development, a discussion of technology as a tool for improving human life. With WSIS we hope for a "gathering" where the interests and voices of all countries will be heard and where decisions that ensure that development responds to the unique values, needs, conditions and resources of each country are implemented.

To move forward, the IDB will continue to evolve internally to meet the changing requirements of the countries in the region. The most recent step in our ongoing institutional adjustments was the creation of a new sub-department within the Bank that brings together three important pillars of the emerging knowledge economy: education, ICT, and science and technology. This initiative should facilitate more efficient synergies among projects in these policy areas as well as more efficient interaction with the countries. Similarly, our ICT4Bus program is helping small and medium-sized enterprises to use ICT to become more competitive and productive. The overall Bank strategy in this area is currently being updated, and extensive external consultation is planned.



We look forward to continuing and expanding the individual and collective regional dialogue with the countries in order to ensure that there is consensus on outcomes, outputs and indicators needed to measure, monitor and evaluate the contribution of ICT and of the knowledge economy to the achievement of development objectives. Increasingly, the IDB has been involved in supporting country efforts to build capacity for formulating national ICT strategies and integrating them into overall development planning. The active involvement of the countries themselves has been essential in representing and encouraging new forms of collaborative interaction.

The magnitude of the challenges confronted by the countries requires that international organizations streamline interactions with the countries by leveraging complementary core capacities and by generating multi-pronged responses. There is a need for strategic partnerships at the local and global levels that can gather all major sectors and stakeholders around well-coordinated actions. The United Nations Economic Commission for Latin America and the Caribbean, the Organization of American States, the World Bank, Development Gateway and the family of United Nations organizations, along with the IDB, the private sector and national governments and others, all have something unique to contribute. We can all complement each other's efforts to achieve a common objective, and we are all dependent on the cooperation of others to accomplish the common goal of development. I am pleased

to note that a number of efforts are underway in this context. Now we must move ahead to the next phase, a phase in which all stakeholders will show their willingness to make real commitments and push forward major initiatives for change and long-lasting development.

I will conclude by pointing out that the Latin American and Caribbean countries, like most others around the world, are extremely rich in creativity and entrepreneurial skills. To leverage this potential, new levels of collaboration, new pledges and bold ideas are needed.

The WSIS-2 deliberations and the individual and collective actions that will follow must help create the enabling conditions so that all can participate in and benefit from development. Organizations like the IDB must act as catalysts and facilitators for an inclusive, wide-ranging ICT revolution by continuing to amplify common development-oriented objectives and by championing efforts to mobilize support, attendance and participation.

IDB will continue to be an effective partner in this process. 

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CHALLENGES INVOLVED IN MONITORING eLAC 2007

Benchmarking and monitoring any multi-country, multi-thematic plan of action is a necessary but very difficult task. Quantifying goals set forth in a regional action plan related to a new and innovative subject such as the development of the information society is even more challenging. Goals may not be objectively measured, subjects may be very recent, indicators may not have been developed or information on the status and advancements of ICT in Latin America and the Caribbean may simply not exist. This is why paragraph 28(f) of the Plan of Action of the World Summit on the Information Society states that "All countries and regions should develop tools so as to provide statistical information on the Information Society, with basic indicators and analysis of its key dimensions". As noted in eLAC2007, the Latin American and Caribbean countries have agreed to take up the challenge of making effective use of ICT for development, and implementation of their policy goals therefore cannot remain on hold while progress is made in compiling the corresponding statistics.

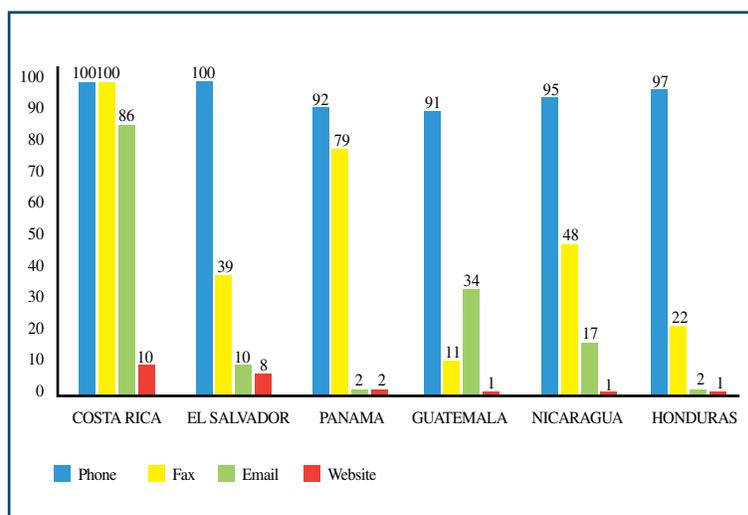
The interdependence between implementing policies oriented towards agreed targets and monitoring them is very strong, but only partially achievable. For example, goal 6.1 of eLAC2007 calls for the connection of "at least half of local urban governments and one third of local rural governments to the Internet, ensuring local governments' staff capacity in relation to ICT." As the following graph from Central America shows, the challenge is still formidable in some parts of Latin America and the Caribbean, as harmonized statistics for the entire region do not yet exist. The existence of this information for Central America is a first step in meeting the challenge in this subregion.

Even though indicators are scarce and evidence anecdotal, efforts must be made. Policymakers' awareness of this is reflected in target 26.1 of eLAC2007, which explicitly sets forth the need to develop socio-economically differentiated ICT indicators for use in monitoring readiness, access and usage of technology by all actors involved in the information society.

The present report is a first attempt to quantify 35 out of the 70 action lines relating to the Plan's 30 goals. It is a first and incomplete baseline exercise that uses information provided by different sources, including official statistics from national statistics offices, administrative registries such as those maintained by regulatory authorities, and academic and private sources.

There are two types of aims associated with eLAC2007: results-based

ICT INFRASTRUCTURE IN CENTRAL AMERICAN MUNICIPALITIES, 2004 (Percentages)



Source: OSILAC

goals that can be objectively measured, and action-based goals that define steps to be taken to achieve expected outcomes. Available statistics for benchmarking results-based goals are largely unrelated to agreed policy goals. For example, goals 3.1 and 3.2 are to "double the number of public schools [...] that are connected to the Internet or connect one third of them, if possible via broadband" and to "considerably increase the number of computers per student in educational establishments and encourage its efficient use for learning." As the following table shows, information available to the Observatory for the Information Society in Latin America and the Caribbean (OSILAC) is neither harmonized nor complete. Working towards a proposed goal and monitoring advances requires a more comprehensive and systematic approach to developing the relevant indicators.

As most Governments in the region begin to "promote and strengthen national action plans for the development of the information society" (target 22.2), they will face the challenge of developing national follow-up mechanisms to monitor the progress made in implementing their strategies and initiatives. Since national priorities differ, indicators, monitoring mechanisms and methodologies also have to be adapted to



ACCESS TO ICT IN PRIMARY AND SECONDARY EDUCATIONAL ESTABLISHMENTS

Primary and secondary establishments	Chile* (2005)	Colombia (2001)	Peru (2003)	Costa Rica (2004)	El Salvador (2004)
Establishments	9 500	59 119	59 119	4 625	N/A
Computer available	N/A	24,1%	18,6%	N/A	N/A
Internet available	75% (40% broadband)	6,3%	0,57%	18%	N/A
Pupils per computer	30	36**	N/A	N/A	98,1

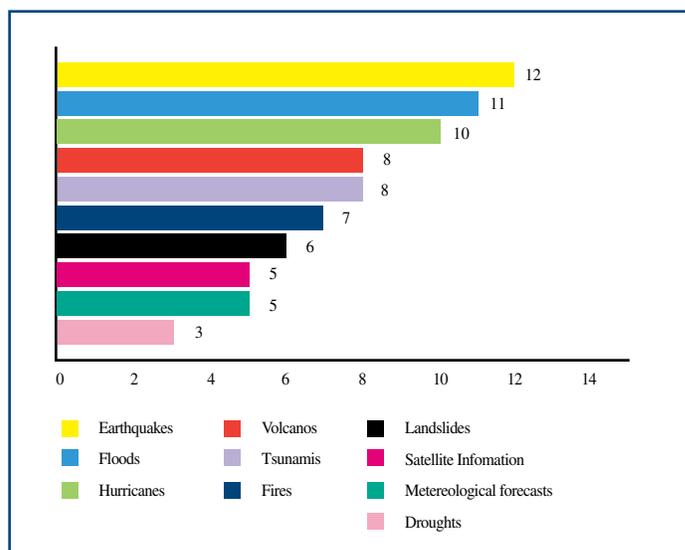
Source: OSILAC

Notes: *Data on Chile cover only those establishments that are subsidized by the State. Data for Peru and Colombia include official and non-official (public and private) establishments. **Includes pre-school establishments.

local conditions and factors. As many aspects of information societies are qualitative in nature, progress in such areas is not reflected in the traditional basket of information-society statistics, and new types of data therefore need to be developed and compiled for use in policy evaluation.

For example, goal 18 of eLAC2007 calls for the strengthening of “the regional and international interconnection of digital information networks for disaster prevention, while considering regional administration and

LATIN AMERICA AND THE CARIBBEAN (13 COUNTRIES): Information provided by national disaster prevention centres, 2004



Source: OSILAC

coordination of assistance in the event of disasters.” This goal is more important to some countries than for others, besides being a rather action-oriented goal, which currently lacks statistical monitoring. However, as the following graph shows, many valuable initiatives exist in the region. Increasing knowledge on such issues is again the first priority, and this will prove to be easier if it is pursued within the context of regional cooperation. 🌐

OSILAC
Observatory for the Information Society in
Latin America and the Caribbean



OSILAC - Observatory for the Information Society in Latin America and the Caribbean

The goal of OSILAC is to centralize and harmonize data and indicators that can be used to monitor the development of the information society in Latin America and the Caribbean. The Observatory is intended to support national statistical offices in collecting and enhancing the quality of indicators for information and communications technologies (ICT) in the region and in the methodological processes involved. OSILAC is promoting an international platform on ICT statistics with the following aims:

(1) To compile data, indicators and qualitative information on ICT. On the basis of this information, OSILAC produces reports on the implementation of international and regional action plans in this area. Two reports have been produced to date: “Benchmarking the WSIS Plan of Action in Latin America and the Caribbean” and “Where do Latin America and the Caribbean stand in relation to the eLAC2007 Plan of Action?”.

(2) To standardize and harmonize ICT measurements at the regional, subregional and national levels. For that purpose, it promotes the creation of harmonized methodological frameworks and unified working procedures for the statistical offices in the region. In cooperation with the Partnership on Measuring ICT for Development, OSILAC prepared and agreed on 10 core ICT questions for incorporation in household surveys and 8 core questions for businesses. Seventeen national statistical offices from Latin America and the Caribbean contributed to this process. Similar processes were carried out in the member countries of the Organisation for Economic Co-operation and Development (OECD) and in countries of Africa, Asia and the Pacific, and Western Asia based on the OSILAC methodology.

(3) To increase and improve the quantity and quality of ICT data gathered in the region. Training activities are held with the regional statistical community based on methodological documents prepared by OSILAC. To date, there have been two annual seminars, in November 2004 and October 2005, two subregional workshops in Central America in June 2005, and one workshop with experts from the telecommunications

regulatory agencies of the Latin American Telecommunications Regulators Forum (REGULATEL).

The creation of OSILAC was announced at the second meeting of the Statistical Conference of the Americas of the Economic Commission for Latin America and the Caribbean (ECLAC), which was held in June 2003. This project is a joint effort between ECLAC, the Institute for Connectivity in the Americas (ICA) and the PAN Americas corporate project of the International Development Research Centre (IDRC) and the European Commission through its project @LIS. 

OSILAC

*Observatory for the Information Society in
Latin America and the Caribbean*

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