

# The Information and Knowledge Society in Latin America and the Caribbean

## Different Approaches and their Implications for Policies

ANA LAURA RIVOIR

ASSOCIATE PROFESOR

DEPARTAMENTO DE SOCIOLOGÍA, FACULTAD DE CIENCIAS SOCIALES

UNIVERSIDAD DE LA REPÚBLICA ORIENTAL DEL URUGUAY

[WWW.FCS.EDU.UY](http://WWW.FCS.EDU.UY)

*The documents stemming from the global and regional debates within the framework of the WSIS reflect different concepts regarding the process of consolidation of an “information society”. These approaches and views have direct implication in the design and implementation of policies. The current trend tends to group Southern countries on the periphery or, directly, towards exclusion, so they should build their own development strategies, based on their needs and realities. Within the world scenario, Latin America shows cohabitation between sectors integrated into global power networks, others that are slowly reaching some of the advantages of technological progress and wide excluded sectors. This paper explores the possibilities of Latin American countries to become reinserted into the global economic structure by considering alternatives that could be undertaken for a strategic development of the information and knowledge society in the region.*

This document is based on research carried out by the author, whose conclusions are presented in “Visiones de la sociedad de la información y el conocimiento y sus implicancias en las políticas: El proceso en América Latina y el Caribe”, available on line at: [wsispapers.choike.org/](http://wsispapers.choike.org/)

تتبع الوثائق الصادرة عن المناقشات التي دارت في إطار القمة العالمية لمجتمع المعلومات مفاهيم مختلفة حول ما يترتب على عملية إستقرار وتعمق "مجتمع معلومات". لهذه المناهج والرؤى إبعكاسات مباشرة على صياغة وتنفيذ السياسات. الإلتجاه الحالي يقوم على تجميع الدول الجنوبية على هامش المراكز المحورية، أو إستبعادها بشكل مباشر، حتى تقوم من جانبها بوضع إستراتيجياتها الخاصة بالتنمية، القائمة على احتياجاتها وواقعها. أمريكا اللاتينية تصنف، في إطار المشهد الدولي الحالي، باعتبارها قارة تتعايش بها في نفس الوقت قطاعات تدخل ضمن شبكات القوى الدولية، وقطاعات أخرى تحقق وبشكل بطيء بعض الفوائد من مزايا التقدم التكنولوجي، وقطاعات عريضة مستبعدة تماما. هذه الوثيقة تستعرض فرص دول أمريكا اللاتينية في إعادة اندماجها في هياكل الاقتصاد العالمي، أخذاً في الإعتبار البدائل التي يمكن تبنيها من أجل تنمية إستراتيجية لمجتمع المعلومات والمعرفة في الإقليم.

Los debates en el marco de la CMSI reflejan diversas concepciones sobre lo que implica el proceso de consolidación de una "sociedad de la información y el conocimiento". Estos enfoques tienen implicancias directas en la elaboración de estrategias y en la implementación de políticas. En América Latina conviven sectores insertos en las redes globales de poder con sectores que lentamente se incorporan a las ventajas del progreso tecnológico y con amplios sectores de excluidos. Este documento, partiendo de las visiones existentes en América Latina, explora las posibilidades del continente de reinsertarse en la estructura económica global, proponiendo alternativas para un desarrollo estratégico de la sociedad de la información y el conocimiento en la región.

*Les débats qui ont lieu dans le cadre du SMSI montrent diverses conceptions relatives au processus de consolidation d'une "société de l'information et du savoir". Ces approches ont des implications directes sur l'élaboration des stratégies et sur la mise en place des politiques. En Amérique Latine cohabitent divers secteurs: ceux qui ont accès aux réseaux mondiaux du pouvoir, ceux qui bénéficient des avantages du progrès technologique et ceux qui en sont exclus. A partir des approches existantes en Amérique Latine, ce document explore les possibilités du continent de se réinsérer dans la structure économique mondiale et propose des alternatives pour un développement stratégique de la société de l'information et du savoir dans la région.*

## Introduction

The documents stemming from debates developed within the framework of the World Summit on the Information Society (WSIS) reflect different concepts regarding the process of consolidation of an “information society” (IS) within contemporary societies. It is worth mentioning these approaches and views given their implication in the design of strategies and implementation of policies, including both theoretical definitions and perspectives from the point of view of all stakeholders involved. It should be taken into account that those perspectives linked to definitions of the IS in advanced economies or core countries is not the same as that of countries located on the periphery of global centres of power.

The information and knowledge society (IKS) is led by core countries and directed by market dynamics. Southern countries should build their own development strategies, since the current trend tends to group them on the periphery or directly guides them towards exclusion. Within the world scenario, Latin America is placed as a continent which shows cohabitation between sectors integrated into global power networks, sectors which are slowly reaching some of the advantages of technological progress and wide excluded sectors. At the same time, although the region is characterized by the adoption of development models with different peculiarities according to each country and government, the main characteristic is that of technological (even economic) dependence on core economies.

It is worth wondering, then: What are the possibilities of these countries to become reinserted into the global economic structure, thus avoiding the increase of inequalities and fostering social development? What approach and options should be undertaken in view of the IKS? Which are the strategic focal points of the IKS in Latin America?

The following article is based on a more comprehensive research work on those documents produced in preparatory governmental meetings of Latin America and the Caribbean (LAC) for the WSIS.

## Conceptual elements to understand the IKS in Latin America

### *The Information and Knowledge Society*

As used in this paper, “information and knowledge societies” (IKS) are those representing the result of socio-historical processes which have been analyzed and described by several authors and which were first identified through the changes that started taking place in industrial societies throughout the 1970s.

The IKS becomes consolidated on the basis of a knowledge-intensive economy developing within the framework of the new socio-technical paradigm. As described by Castells,<sup>1</sup> a revolution has taken place within this emerging society in terms of information technologies; economies have become more interdependent and the world capitalist system has been restructured. The relationship between economy, State and society has changed, increasing the power of capital vis-à-vis labour and the trend towards dismantling the welfare state as it has been known. Likewise, a process of increased inequalities and territorial and cultural differentiation has also been taking place.

In this process, as stated by Mercado,<sup>2</sup> “the emergence of new technologies, on the other hand, entailed new forms of organization in terms of knowledge generation, redefining the borders between scientific research and technological development. As never before, knowledge started to be regarded as a commodity.”

Innovation represents an outstanding knowledge activity and although formal research is the pillar of its production, the system is widening. Stakeholders have diversified and places for innovation are multiplying - users, non-specialized people, workers, etc. In the same sense,

---

1 Castells, M. (2000), *La era de la información. Economía, Sociedad Cultura*. Vol. I La sociedad red. Alianza Editorial, Barcelona.

2 Mercado, A. (2005), “La estructura Productiva de América Latina: ¿Convergencia hacia la sociedad del conocimiento?” in *Revista Venezolana de Economía y Ciencias Sociales*, Vol. 11 No 1, (January–April), Caracas.

Arocena and Sutz<sup>3</sup> identify four tendencies that characterize the present situation with regards to innovation: a) the “innovative acceleration”; b) the growing relationship among scientific research, technological development and innovation; c) the economic importance of knowledge; d) the social polarization brought about by the previous trends.

The process of innovation involves, then, different actors. It does not only comprise those who produce innovations and those who receive or apply them but also the ones that promote them and act as links among one another. The actors that play these roles can be found in different public, private and social institutions. The processes of technology incorporation - as social processes that they are - are complex and diverse, while also being specific and articulated to other constitutive dimensions of societies.

#### *Peripheral development within the IKS: Peculiarities of Latin America*

According to Tedesco,<sup>4</sup> optimistic approaches regarding the IKS have been replaced by more complex visions about the democratizing effects of the new patterns of social and economic organization based on knowledge and information: “The more general hypothesis on which these reviews are based maintains that a society and economy based on the intensive use of knowledge simultaneously produce phenomena of more equality and more inequality, of greater homogeneity and greater differentiation.”

At a global level, these inequalities result in large gaps among countries, but they are also evidenced within each society, city and region. Access to basic elements such as health, education and income is becoming increasingly unequal for human beings according to the economic sphere they belong to. The richest countries monopolize the most important advantages and benefits of technological progress while

---

3 Arocena, R. and J. Sutz (2003), *Subdesarrollo e Innovación. Navegando contra el viento*, Cambridge University Press / OEI, Madrid.

4 Tedesco, J. C. (2000), *Educación en la Sociedad del Conocimiento*, Fondo de Cultura Económica, Mexico.

the poorest countries remain practically excluded from it. Organizations such as the United Nations have stressed the need to take global and national steps aimed at redressing these trends.<sup>5</sup>

There are historical components that cause the structural insertion into the global system to render the Latin American leap into the IKS difficult. Those areas engaged in the production of raw materials have had a peripheral insertion at world level, which has resulted in low investment in research, training and endogenous innovation. Arocena and Sutz<sup>6</sup> state that: “The contemporary globalization of world production tends towards a dual distribution structure, thus concentrating the intensive and advanced training in science and technology in the North, while in Southern areas most productive tasks are spread out with low participation of knowledge-intensive local activities. In this sense, the Southern region of Latin America seems to be going through a neoperipheral reinsertion into the global economy.”

Studies carried out on the impact of such restructuring process, economic reforms and economic opening models since the 1970s in Latin America evidence the prevalence of primary economic activities, the low incorporation of knowledge into industry and/or directly point to deindustrialization. Apart from the above, there is also lack of technology investment efforts in these countries, which according to Moguillansky<sup>7</sup> results in a “more vulnerable international insertion, if compared to that existing under the import substitution model. Therefore, the cure has been worse than the ailment.”

The analysis of different macroeconomic indicators shows that the region is not going in the right direction to face these challenges. A return to primary activities in most economic sectors is evidenced together

---

5 United Nations Development Programme (2001), *Human Development Report 2001. Making new technologies work for human development*, Washington D.C.

6 Arocena, R. and J. Sutz, *op cit*.

7 Moguillansky, G. (2003), “La Innovación: el talón de Aquiles de la Inserción global de América Latina”, pp. 45-84. In: Calderón, F. (Coord.) (2003), *¿Es sostenible la globalización en América Latina? Debates con Manuel Castells. Volumen I La Globalización en América Latina: Asignaturas pendientes*, FCE/UNDP - Bolivia, Chile.

with an increase in exports based on the exploitation of natural resources, production of primary goods and a disproportionate rise in imports of manufactured goods. We deal here with a model of unsustainable productive development.

The incorporation of technology takes place through transnational companies as enclaves instead of being the result of endogenous development. No demand for technology has arisen from the diverse sectors of the economy that may encourage links with universities and technology institutes so as to foster a virtuous circle among creation, innovation and investment. Nor has the State defined policies aimed at encouraging the national system of innovation or integration links to the global system.

On the other hand, as stated by Mercado, while the large corporations in developed countries become actively engaged in research and consider knowledge as a key asset for their operation and survival, Latin America continues to demand the kind of research work that produces “useful” knowledge without taking any financing responsibilities and only appreciating it rhetorically. In this sense, Mercado<sup>8</sup> points out: “The region faces four key challenges: a technological challenge, characterized by a more complex production; an institutional challenge, characterized by strengthened spaces for the promotion and development of technology and scientific knowledge; the economic-productive challenge, characterized by the huge power of multinational corporations; and the ethical-political challenge, defined by the imperatives of sustainable development.”

The information and communication technologies (ICTs) represent the core element of the new technological paradigm and, according to Castells, they are “the key element to foster productivity in the process of production”. These technologies are required for the improvement of information processing technologies, the creation of knowledge and the production of technology. The digital divide, or differential access to ICTs - access, production and consumption of hardware, software,

---

8 Mercado, A., *op cit.*

contents, endogenous capacities - represents another weak flank of development strategies in Latin American countries. ICT appropriation then is fundamental for the development of Latin American countries, particularly within a context of growing inequalities. Inclusion in information networks and knowledge generation are also considered as key elements.

However, this potential transformation should not be identified with the mere inclusion of ICTs in any social area. It is worth making some clarifications regarding the role of technology in social analyses. Studies on technology have been subject to determinisms that have reduced their interpretation to one among the many existing explanatory dimensions. Technological determinism has been of significant importance in social studies and within them technology is regarded as the autonomous factor that promotes social change. Cultural determinism has also encouraged ethnocentric interpretations about technologies and their applications.

The above different elements show the unequal conditions existing in terms of technological development and endogenous capacities for building the IKS. Briefly, it may be pointed out that the inequalities in terms of situations with regards to the IKS are placed at two different levels: a) with respect to the historical and structural peculiarities of a society and the articulation of actors around technological innovation within each society, and b) the inequalities imposed by the current structuring of international economic relations as starting point for the weakest societies.

## Definition of a position within Latin America and the Caribbean for the WSIS

In this section, there is a review of elements arising from a series of discussions and proposals within the Latin American process between the first and second phase of the WSIS. At intergovernmental level, the results of two key events are analyzed: the Latin American and Caribbean Regional Technical Preparatory Meeting for the World Summit on the Information Society and the 10<sup>th</sup> Biennial Advising Meeting for



the INFOLAC programme,<sup>9</sup> held in Quito from 4 to 6 May 2005 and the Regional Preparatory Ministerial Conference of Latin America and the Caribbean for the Second Phase of the World Summit on the Information Society,<sup>10</sup> held in Rio de Janeiro from 8 to 10 June 2005. There follows a review of the documents produced during those meetings (Declaration and Plan of Action) and an analysis carried out by means of the participation in those events.<sup>11</sup>

### *Technical preparatory meeting - Quito, June 2005*

The main input for this meeting was the document put forward by the Economic Commission for Latin America and the Caribbean (ECLAC), *Towards a Plan of Action for the Information Society in Latin America and the Caribbean. eLAC 2007*.<sup>12</sup> The main purpose of the meeting - taking ECLAC's document as starting point - was to advance in the formulation of a draft Regional Action Plan to be used later as negotiation basis in the Conference to be held in Rio. Upon starting discussions in Quito, an agreement was reached to work only on the annex: *Goals of the Plan of Action for the Information Society in Latin America and the Caribbean*, focusing on the proposal of quantitative goals (mostly set forth by 2007) and avoiding the discussion of basic concepts and definitions included in the original document.

An element that covered the whole work on the document was the debate on the contents linked to ICTs. Underlying this debate there are different views about the role to be played by LAC countries in the

---

9 [portal.unesco.org/es/ev.php URL\\_ID=27169&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/es/ev.php_URL_ID=27169&URL_DO=DO_TOPIC&URL_SECTION=201.html)

10 [www.riocmsi.gov.br/](http://www.riocmsi.gov.br/)

11 This analysis is based on the participant-observation method. In this technique the researcher joins the dynamic of the process subject to study and becomes another participant. From his/her participation, the researcher carries out an analysis of the dynamics and contents of the process, and faces the challenge of overcoming a partial or biased analysis of facts. He/she can take advantage of having access to first-hand information and to particulars regarding the fact dynamics.

12 [wsispapers.choike.org/hacia\\_elac\\_2007\\_esp.pdf](http://wsispapers.choike.org/hacia_elac_2007_esp.pdf)

global IS. In this sense, attention was drawn to the lack of proposals for a more active role of the region in terms of the production of technology, information and knowledge in the draft document.<sup>13</sup>

Some of the delegations taking part<sup>14</sup> presented a document for consideration, including additional goals that reflect concern about aspects related to the production of technology, knowledge, infrastructure and contents in Latin America, focusing these elements on the specific development problems of the countries within the region.

The proposal includes the following items, which were included in the final document of the meeting:

- Promote the development of common indicators to jointly quantify knowledge access and ICT use.
- Create and foster regional cooperation networks among institutions and technological poles and parks, allowing the participation of scientific and technology institutions in the systems of innovation and national production of high value-added products and services and promoting the development of technical and scientific local expertise.
- Encourage local creation and regional exchange of contents that would strengthen citizen participation and human development, particularly those related to science, technology, digital inclusion and job training.
- Promote the development of the local technology industry in the area of input materials and technology for development as well as the maintenance of infrastructure.

---

13 For example, in the initial proposal, the only reference made to the academy and/or university is that which refers to the *Clara* network ([www.redclara.net/](http://www.redclara.net/)) (Goal 8). There is also no goal related to the creation or production of value added technology, knowledge or products.

14 The original version was proposed by Argentina, Brazil, Bolivia, Chile, Cuba, Peru, Uruguay and Venezuela.

- Set up a regional working group to study the development and challenges of creative industries/content development industries, establishing regional and global coordination mechanisms, seeking solutions for common problems such as the financing of intangible goods, the distribution of cultural and communication goods and services in the region and the improvement of local capacities for the production of contents with due respect to cultural diversity.

Other substantial modifications proposed dealt with the incorporation of aspects of regional identity into the goals set forth, as well as inequalities within regions and countries in terms of issues such as access. Some of these elements were included in the “Quito revision” of the *eLAC 2007*<sup>15</sup> document, whose final version was in charge of the coordination of the Group of Latin American and Caribbean countries (GRULAC) at the International Telecommunication Union (ITU), in Geneva.

### *Participation of civil society*

A small number of civil society organizations were invited to participate as observers in the Quito meeting and had the possibility to make contributions during a space devoted to this end at one of the sessions. In this way, they put forward their proposals for the document on goals,<sup>16</sup> as well as a document<sup>17</sup> proposing some general criteria to be considered as being transversal to goals. Among these criteria were: a) that they should reflect UN principles and, particularly, their coordination with MDGs; b) to consider the gender dimension; c) to consider a broad perspective on ICTs, not only limited to the Internet; d) to

---

15 [wsispapers.choike.org/elac\\_2007\\_final\\_quito.pdf](http://wsispapers.choike.org/elac_2007_final_quito.pdf)

16 [wsispapers.choike.org/recomendaciones\\_metas\\_elac2007.pdf](http://wsispapers.choike.org/recomendaciones_metas_elac2007.pdf)

17 *General criteria proposed by civil society organizations for the Regional Action Plan eLAC 2007*. Quito, 4-6 May 2005. Signed by: Latin American Information Agency, Latin American Association of Radio Broadcasting Education, World Association of Community Radio Broadcasters (AMARC) in LAC, Third World Institute (ITeM), APC ICT Policy Monitor, DAWN Network, Sustainable Development Network, Information Network for the Third Sector (RITS), Infodesarrollo.ec Network. [wsispapers.choike.org/criterios\\_generales\\_elac.pdf](http://wsispapers.choike.org/criterios_generales_elac.pdf)

consider a broad participation when setting up the Working Groups proposed and to make financing sources known. Of these four core points, only the first one is partially taken into consideration in the Quito document.

#### *Interministerial Conference of Rio de Janeiro, June 2005*

The event that took place in Rio de Janeiro is part of the process that has been carried out by LAC countries since the Geneva Summit in 2003.

From the draft documents prepared at the preparatory meeting held in Quito and the compilation of comments carried out by the ITU-GRULAC Coordination, the Rio Conference made progress in building a LAC agenda towards the IS. Work was intense during the three-day meeting which concluded with the adoption of a Declaration of Principles: “*The Rio Commitment*” and a Regional Action Plan: “*eLAC 2007*”, aimed at the fulfilment of 30 goals by all LAC countries by 2007.<sup>18</sup>

#### *Participation of civil society*

At the Conference held in Rio de Janeiro, civil society organizations participated as observers, being allowed to attend the opening and closing sessions, as well as parallel events, although they could not witness debates. Those civil society organizations invited to the conference participated on two occasions at the plenary session on 8 and 10 June 2005.<sup>19</sup> On the last occasion, organizations expressed their disagreement with the fact that at the meeting in Rio de Janeiro “the mechanisms of participation and rules of procedure established within the framework of the Summit were not respected, thus preventing the participation of delegates from civil society in the debates and working meetings as well as the appropriate access to documents under discussion.”<sup>20</sup>

---

18 Both documents are available at: [www.cepal.org/socinfo/elac/](http://www.cepal.org/socinfo/elac/)

19 *Ibid.*

20 Participation of civil society organizations, 10 June 2005, Rio de Janeiro. [www.choike.org/nuevo/informes/2968.html](http://www.choike.org/nuevo/informes/2968.html)

Just as it happens at a global level, there are different perspectives coexisting with regards to the IS at the regional level. On the one hand, there is a view that considers this phenomenon in very complex terms, with an approach based on human rights and focused on aspects related to social development. This perspective is closely related to the principles put forward by civil society and to the documents developed by international organizations such as UNESCO. In the Latin American process, this view was expressed through the effort aimed at creating a perspective of the IS from Latin American countries, regarding them not as mere ICT and content users but also as current or potential producers of technology and related products. This vision is clearly reflected on item 20 of the *Rio Commitment*, for example.<sup>21</sup>

At the opposite end there could be a view that focuses on the market and the private sector as main stakeholders within the process. From this perspective, both the social and community aspects and the relation of the IS with the endogenous development processes of these countries remain limited to the minimum scope. The social dimension is linked to technology access, particularly the Internet, and to digital literacy for more distant social groups, addressing the “access gap” in terms of specific policies for excluded groups.

There is also an “intermediate” view, which highlights the importance of technologies for achieving social progress and aims to promote the development of technology industries, by engaging them in local productive systems.

Underlying these three views there are also different perspectives regarding the role to be played by the State and its policies. While in the second case it is understood that the State should limit its participation to the

---

21 “20. Our firm conviction that all individuals should take an active part in an information society based on shared knowledge, not only as users of new technologies but also as agents of development and content production. To achieve this, we reaffirm the need for promoting the free flow of ideas and information and the development of a regional and global culture of knowledge sharing.” [www.cepal.org/socinfo/noticias/documentosdetrabajo/7/21677/Compromiso\\_de\\_Rio\\_de\\_Janeiro.pdf](http://www.cepal.org/socinfo/noticias/documentosdetrabajo/7/21677/Compromiso_de_Rio_de_Janeiro.pdf)

creation of a suitable environment for extending infrastructure, the other two views consider that the State should be involved in a more extensive and proactive way throughout the development process.

## Focal points of discussion

The different perspectives previously described give rise to questions and debate points aimed at the development of Latin American strategies towards the IKS. By way of systematization, there follows a list of issues that should be studied more thoroughly:

Issues	Debate subjects	General questions
Knowledge property	<p>Rules that govern intellectual property systems, particularly patents and copyrights.</p> <p>How these systems promote the privatization of knowledge which remains in the hands of large corporations;</p> <p>Dissemination and use of local, cultural, native and identity-based knowledge of Latin American societies.</p>	<p>Who owns the cultural, biological and eventually digital property of Latin America? Which is the most suitable patent and copyrights system to the reality of the region?</p> <p>Should knowledge be considered as a public good?</p>
Production of technology	<p>The possibilities of Latin America to become globally inserted as producer of technology as opposed to the idea that these spaces cannot possibly be conquered.</p>	<p>Are there possibilities to establish regional strategies for technology production? Is the Latin American space within the global market limited to that of producer of raw materials?</p>

Issues	Debate subjects	General questions
Digital identity and culture	The creation of cultural contents and products by using multimedia and convergent new technologies; the need to feed Internet with Latin American information, the digitalization of the historical and cultural heritage, the digital back-up of collective memory. Strengthening of Latin American identities.	Which are the priorities and how should they be carried out? Who are those interested in systematizing, digitalizing and making this information public? Who would be benefited (markets, local societies)?
Software (free vs. proprietary)	This is a debate that takes place at international level. In the case of Latin America, there is an incipient software and computing service industry which defends proprietary software. On the other hand, certain consensus has been reached regarding the advantages of free software in terms of costs and democratizing aspects.	In order to strengthen the local industry, is it profitable for the State to make purchases from the local industry? Would the local industry be strengthened by the generalized expansion of free software to all possible areas, but above all to education, thus generating enabling environments in terms of innovation and learning?
Capacity building	The training of professionals and people in general, the infrastructure conditions and the extent to which education, technology and scientific production are valued.	Which dimensions and issues should be given priority when talking about training according to the local and regional realities?

Issues	Debate subjects	General questions
Market role	<p>The feasibility of technological innovations is not taken into account when dealing with financial support, regulation, promotion, policies and credits to be provided by the State. The constraints faced by countries in this respect are evident - priorities in budget distribution should also be reconsidered. Also, it should be consider that most telecommunication companies in the region have been privatized and they are key stakeholders.</p>	<p>What role is played by the market? What are the possibilities of public policies? Which is the degree of independence in terms of processes of infrastructure generation and their subsequent implementation? Which is the regulatory framework?</p>
Community access	<p>Telecentres, community centres and ICT dissemination represent important elements in terms of the creation, promotion and capilarity of technologies for social, useful and pedagogical use. However, their sustainability should be analyzed: their closing down when they do not offer tools to solve people's problems, their lack of feasibility when there is no technical and/or financial support, etc.</p>	<p>Should community centres be offered technological support? Should telecentres be endowed with social and cultural projects and aims?</p>



## What should be done?

The research work carried out provides some clues as to the perspectives and paths to be followed in order to link the IKS to the development of LAC countries. The perspective from which the IKS is considered has direct implications for the actions and measures to be taken by the different stakeholders involved (political sector, governments, international institutions, citizens, entrepreneurs, etc.). Being peripheral societies within the IKS, Latin American societies should build their own perspective.

The important thing is to reject pro-technology views and take steps aimed at creating new capacities and strengthening the already existing ones. These measures are to be implemented at all levels - local, national, sub-regional, regional and global - as framework for action. The idea is to include and coordinate the action of the different stakeholders within a process of endogenous development. Otherwise, current trends will keep consolidating and the socio-economic, political and cultural situation of LAC societies will be aggravated. Below, some suggestions are provided in this respect:

- Accept the relevance of *governmental policies*. The State should play a relevant role in terms of setting guidelines, legal context and negotiation spaces aimed at the fulfilment of goals and their incidence on social development. The institutional character of these policies should be considered, thus making them applicable throughout the pyramidal structure of States and turning them inter-sectoral.
- Aim at the commitment and *coordination with the different social actors* in an effective and plural way from the institutional point of view and at the same time to have the necessary capacities and powers to carry out such coordination and process. The education system, the industrial and economic agents, technology infrastructures, civil society organizations, Universities, research centres, and corresponding ministries should all be coordinated by means of a synergic work.

- *Private companies* and their articulation with development priorities set by governments should be a focal point of policies.
- Develop and strengthen *technology infrastructure* and basic training for the appropriation of technologies and their use in the different social, productive and cultural areas in order to achieve goals set according to the priorities of each population and aimed at solving the most pressing problems of societies. The socio-political and technological priorities should be articulated and subject to constant revision since they produce a dynamic of ongoing transformation and are sometimes difficult to predict.
- In view of the situation in many countries of the region, where a large number of people have no access to electric power networks, it is also important to coordinate the governmental and business agendas in order to implement *integrated and convergent processes* with regard to access to basic technologies.
- Provide resources and support to *education* or knowledge-creating institutions - universities, research centres, etc. To take into account the necessary literacy skills and their articulation with the new technologies and pedagogical and didactic challenges, by using ICT assets, including the traditional media. To encourage the training of people in issues and areas of top priority for development and inclusion into the IKS and to consider its implication in the proposal of curriculum guides for primary, secondary and tertiary education, aiming at giving priority to the training of professionals capable of creating knowledge and technology and managing local processes for their development.
- Implement policies and programmes to encourage the *innovation and development* of science and technology, with the participation of the different stakeholders; thus regarding this process as the setting up of a social network for innovation and development.
- Encourage and extend *ICT use as a tool* for social communication, productive development, improvement of working processes, governmental administration and social participation, among other

areas, thus preventing ICTs from becoming an end in themselves and linking their introduction to training processes and clear social development goals.

- Foster the *production of knowledge and local contents*, for the purpose of creating a local industry as well as promoting Latin American culture, thus strengthening its local identity within the global network.
- Make policies aimed at *social inclusion* taking advantage of ICTs. For example, to establish and use multimedia community centres, not for a consumption or connection purpose but instead for labour and citizen purposes.

The most suitable policies and strategies for Latin America in the IKS are aimed at encouraging changes in terms of development models by introducing a new social and productive paradigm and creating conditions, in all areas of society, for building sustainable and endogenous capacities for the generation, development, transformation and appropriation of information and knowledge from within the continent, as well as innovation and technological change. In this way, an attempt would be made to take advantage of a window of opportunities that is likely to unleash real development processes in Latin American societies. ■