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**CORE INDICATORS PROPOSAL REGARDING INFORMATION AND COMMUNICATION  
TECHNOLOGIES (ICT)**

Working group on measuring Information and Communication Technologies (ICT) and (OSILAC)

The Working group on measuring ICT, has been collaborating with the activities carried out by OSILAC<sup>1</sup> and the Partnership on Measuring ICT for Development, with the purpose of discussing and adopting harmonized measurements of ICT variables which aim at an organized measurement of the information society. This measurement depends on the availability of reliable data that allow to elaborate key indicators on, for example, infrastructure, access, use and impact of ICT.

In this sense, the countries of the region, and in particular the National Statistical Offices, have worked in defining a common set of indicators. Based on the principles of the World Summit for the Information Society (WSIS)<sup>2</sup>, OSILAC has worked jointly with the countries to obtain a useful and adapted measurement to their realities. At the same time it has worked in the world-wide context, being an active member of the Partnership on Measuring ICT for Development that was created to consolidate the efforts that several organizations were making on the information society measurement in 2004.<sup>3</sup>

As a product of these joint activities, a list of core ICT indicators has been generated and has been widely spread by the members of the Partnership in the different regions of the world. During 2004, joint regional workshops with the National Statistical Offices were carried out, with the objective to select a group of basic indicators to include in households and business surveys. The proposals done in all the regions of the developing world were later integrated in a global exercise. In February 2005, during the WSIS PrepComm thematic meeting for measuring information society, the Partnership presented the consolidation of the results of the regional workshops<sup>4</sup> and an agreement became on the final list of indicators that should be collected by all the countries. In addition to the indicators of ICT access and use in households and business, this list included indicators on ICT infrastructure proposed and consolidated by ITU, and indicators for the measurement of the ICT sector, proposed by the OECD and also agreed in a global way with the countries.<sup>5</sup>

<sup>1</sup>ECLAC, jointly with the Institute for the Connectivity in the Americas (ICA) of the International Development Research Center (IDRC), decided to develop the project Observatory for the Society of Information in Latin America and the Caribbean (OSILAC), with the objective to obtain a harmonized measurement of indicators related to the information society. This project received support of program @LIS of the European Commission later. During the second meeting of the Statistical Conference of the Américas (SCA) in June of 2003, the Division of Production Productivity and Management of ECLAC announced the creation of the OSILAC (see Report of the second meeting of the CEA, 58, p.16).

<sup>2</sup>As a result of the first stage of the Summit, it was agreed a Declaration of Principles and a Plan of Action for the Information Society. This Plan of Action recognizes the necessity to evaluate and to monitor the advances made in the application of the objectives and goals of the same, through the development of comparable statistical indicators and results of investigation, considering the circumstances of each country (Plan of Action CMSI, 12 of December 2003: "E. follow-up and evaluation, n.28").

<sup>3</sup> The Partnership was launched during the XI Conference of the UNCTAD in October of 2004, <http://measuring-ict.unctad.org>

<sup>4</sup>The global results are summarized in the document Measuring ICT: the global status of ICT Indicator. <http://www.cepal.org/socinfo/noticias/documentosdetrabajo/1/23121/A5-Partnership%20global%20stocktaking.pdf>

<sup>5</sup>The list of core indicators, as well as the methodological proposal for its incorporation in the surveys, is in the document: Core ICT indicators:

<http://www.cepal.org/socinfo/noticias/documentosdetrabajo/6/23116/Partnership%20core%20%20indicators%20English.pdf>

The countries of the region, mainly through the National Statistical Offices, have been implementing questions that allow to calculate the proposed indicators through households and business surveys. At the same time the regulation agencies have taken care of the indicators on ICT infrastructure, however there is still a pending work to deepen in the indicators of the ICT sector. In the case of the household and business indicators, 17 of the 33 countries of Latin America and the Caribbean included at least an indicator of ICT use between 2003 and 2006, 9 out of them included the totality or almost the totality of the list of core indicators in household surveys, and 7 in business surveys, others did it partially. The detailed list of countries that have incorporated the indicators can be seen in the annex. The core ICT indicators regarding ICT access by households, regarding to the ICT equipment possession (radio, TV, fixed and cellular telephone and computer) and also to the internet access, are included in the household surveys as part of the household equipment, in at least a year between 2004 and 2006 for 18 countries.

As it can be demonstrated from the results displayed, important advances have been made, nevertheless there is still work to be made in several countries of the region, mainly for the implementation of the complete list of indicators in the existing surveys. Therefore it is important to promote the formalization of the adoption of these indicators by the countries of the region, although it should be noticed that these indicators have been already approved and endorsed by important instances of the regional and global level, which surely is giving a strong impulse for the generation of harmonized measurements in this context.

The list has been recently endorsed by the United Nations Statistical Commission during its 38 session, held from February 27 to March 2 of 2007. During the meeting, the Statistical Commission approved the list of core ICT indicators proposed by the Partnership and that are the same appearing in this report, The commission encouraged countries to use this core list of indicators in their data collection programmes. Also it recognized that Information and Communication Technology is a rapidly evolving area, and encouraged the Partnership to continue working to improve and update the list of indicators, especially in view of measuring use of ICT in education, in government, the contribution of ICT to economic growth and social development, and barriers to use of ICT.

Following this line, the SCA's working group on measuring ICT and OSILAC invite the Statistical Conference of the Americas to:

- 1) adopt and endorse the core list of ICT indicators contained in this report;
- 2) encourage countries to use the core list of ICT indicators as a basis to collect data on ICT through its surveys and
- 3) encourage countries to provide to the ECLAC's Technical Secretariat and OSILAC, the data bases containing the information on sociodemographic, economic variables as well as ICT access and use variables generated in their household and business surveys for the maintenance of the OSILAC's Information System on ICT.

## List of core ICT indicators

### *Core indicators on ICT infrastructure and access*

<b>Basic core</b>	
A1	Fixed telephone lines per 100 inhabitants
A2	Mobile cellular subscribers per 100 inhabitants
A3	Computers per 100 inhabitants
A4	Internet subscribers per 100 inhabitants
A5	Broadband Internet subscribers per 100 inhabitants
A6	International Internet bandwidth per inhabitant
A7	Percentage of population covered by mobile cellular telephony
A8	Internet access tariffs (20 hours per month), in US\$, and as a percentage of per capita income
A9	Mobile cellular tariffs (100 minutes of use per month), in US\$, and as a percentage of per capita income
A10	Percentage of localities with public Internet access centres (PIACs) by number of inhabitants (rural/urban)
<b>Extended core</b>	
A11	Radio sets per 100 inhabitants
A12	Television sets per 100 inhabitants

### *Core indicators on access to, and use of, ICT by households and individuals*

<b>Basic core</b>	
HH1	Proportion of households with a radio
HH2	Proportion of households with a TV
HH3	Proportion of households with a fixed line telephone
HH4	Proportion of households with a mobile cellular telephone
HH5	Proportion of households with a computer
HH6	Proportion of individuals who used a computer (from any location) in the last 12 months
HH7	Proportion of households with Internet access at home
HH8	Proportion of individuals who used the Internet (from any location) in the last 12 months
HH9	Location of individual use of the Internet in the last 12 months <ol style="list-style-type: none"> <li>1. At home</li> <li>2. At work</li> <li>3. Place of education</li> <li>4. At another person's home</li> <li>5. Community Internet access facility (specific denomination depends on national practices)</li> <li>6. Commercial Internet access facility (specific denomination depends on national practices)</li> <li>7. Others</li> </ol>
HH10	Internet activities undertaken by individuals in the last 12 months: <ol style="list-style-type: none"> <li>1. Getting information               <ul style="list-style-type: none"> <li>○ About goods or services</li> <li>○ Related to health or health services</li> <li>○ From government organisations/public authorities via websites or e-mail</li> <li>○ Other information or general Web browsing</li> </ul> </li> <li>2. Communicating</li> <li>3. Purchasing or ordering goods or services</li> <li>4. Internet banking</li> <li>5. Formal education or training activities</li> <li>6. Dealing with government organisations/public authorities</li> <li>7. Leisure activities               <ul style="list-style-type: none"> <li>○ Playing/downloading video or computer games</li> <li>○ Downloading movies, music or software</li> <li>○ Reading/downloading electronic books, newspapers or magazines</li> <li>○ Other leisure activities</li> </ul> </li> </ol>

<b>Extended core</b>	
HH11	Proportion of individuals with use of a mobile telephone
HH12	Proportion of households with access to the Internet by type of access 8. Categories allow an aggregation to narrowband and broadband, where broadband excludes slower speed technologies, such as dial-up modem, ISDN and most 2G mobile phone access. Broadband will usually have an advertised download speed of at least 256 kbit/s.
HH13	Frequency of individual access to the Internet in the last 12 months (from any location) 9. at least once a day 10. at least once a week but not every day 11. at least once a month but not every week 12. less than once a month
Reference indicator	
HHR1 <sup>1</sup>	Proportion of households with electricity

*Core indicators on use of ICT by businesses*

<b>Basic core</b>	
B1	Proportion of businesses using computers
B2	Proportion of employees using computers
B3	Proportion of businesses using the Internet
B4	Proportion of employees using the Internet
B5	Proportion of businesses with a Web presence
B6	Proportion of businesses with an intranet
B7	Proportion of businesses receiving orders over the Internet
B8	Proportion of businesses placing orders over the Internet
<b>Extended core</b>	
B9	Proportion of businesses using the Internet by type of access 13. Categories allow an aggregation to narrowband and broadband, where broadband excludes slower speed technologies, such as dial-up modem, ISDN and most 2G mobile phone access. Broadband will usually have an advertised download speed of at least 256 kbit/s.
B10	Proportion of businesses with a Local Area Network (LAN)
B11	Proportion of businesses with an extranet
B12	Proportion of businesses using the Internet by type of activity 14. Sending and receiving e-mail 15. Getting information <ul style="list-style-type: none"> <li>o About goods or services</li> <li>o From government organisations/public authorities via websites or e-mail</li> <li>o Other information searches or research activities</li> </ul> 16. Performing Internet banking or accessing other financial services 17. Dealing with government organisations/public authorities 18. Providing customer services 19. Delivering products online

*Core indicators on the ICT sector and trade in ICT goods*

<b>ICT sector and trade basic core</b>	
ICT1	Proportion of total business sector workforce involved in the ICT sector
ICT2	Value added in the ICT sector (as a percentage of total business sector value added)
ICT3	ICT goods imports as a percentage of total imports
ICT4	ICT goods exports as a percentage of total exports

<sup>1</sup>. Since electricity is not specifically an ICT commodity, but an important prerequisite for using ICT, it is not included in the core list, but included as a reference indicator.

## ANNEX. Countries which have integrated core indicators in household and business surveys

Country	Institution	Household core indicators			Business core indicators	At least one indicator on ICT use
		Basic core equipment	Basic core equipment and use	Extended core		
Argentina	INDEC	N	N	N	Y	Y
Bolivia	INE	Y	N	N	N	N
Brazil	IBGE	Y	Y	Y	Y (CGIB)	Y
Chile	INE	Y	Y	Y	Y	Y
Colombia	DANE	Y	N (2007)	N	N	N
Ecuador	INEC	Y	Partial	N	N	Y
Paraguay	DGEEC	Y	Y	N	N	Y
Peru	INEI	Y	N	N	Y	Y
Uruguay	INE	Y	Y	Partial	Y	Y
Venezuela	INE	Y	N	N	N	N
Costa Rica	INEC	Y	Y	Y	N	Y
El Salvador	DIGESTYC	Y	Y	Partial	N	Y
Honduras	INE	Y	Y	Partial	N	Y
Mexico	INEGI	Y	Y	Y	N	Y
Nicaragua	INEC	Y	N (2007)	N	N	N
Panama	DEC, CGR	Y	Partial	Partial	Y	Y
Dominican R.	ONE	Y	Y	Y	Y	Y
Cuba	ONE	Y	Partial	Partial	Partial	Y
Barbados	BARSTATS - NCST	Partial 2003	Partial 2003	Partial 2003	Partial 2003	Y
Saint Lucia	Saint Lucian Stat	Y	Partial	N	N	Y
Trinidad and Tobago	NeCS	Partial	Partial	Partial	Partial	Y
<b>Total</b>		<b>18 (20)</b>	<b>9 (15)</b>	<b>5 (12)</b>	<b>7 (10)</b>	<b>17</b>

**Source:** OSILAC based on official information available from NSO