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Capacity-Building Workshop on Information Society Measurements:
Core Indicators, Statistics, and Data Collection
Beirut, 7-10 June 2005

PARTNERSHIP ACTIVITIES OF ESCWA

Briefing Paper
Information and Communication Technology Division (ICTD)

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ESCWA - الإسكوا

تضطلع لجنة الأمم المتحدة الاقتصادية والاجتماعية لغربي آسيا (الإسكوا) بالدور الرئيسي ضمن منظومة الأمم المتحدة لتحقيق التنمية في غربي آسيا. وتعمل اللجنة على تشجيع التعاون الإقليمي بين أعضاءها كوسيلة لتحفيز التنمية الاقتصادية والاجتماعية والتقنية في المنطقة. وتتشكل الإسكوا من ثلاث عشرة دولة، وهم: البحرين، مصر، العراق، الأردن، الكويت، لبنان، عمان، فلسطين، قطر، المملكة العربية السعودية، الجمهورية العربية السورية، الإمارات العربية المتحدة، واليمن.

The United Nations Economic and Social Commission for Western Asia [ESCWA] serves as the main development agency within the United Nations system for Western Asia. The objective of ESC WA is to accelerate the pace of economic, social, and technological development in the region through the promotion of regional cooperation among its thirteen [13] *member countries: Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, and Yemen.*

This paper was prepared by Hesham A. Auda, ICTD. *The paper is reproduced in the form in which it was received.*

FOREWORD

Reliable statistical data and indicators regarding societal e-readiness and use and impact of ICT help policy makers formulate strategies for ICT-driven economic growth and social development. To this end, the heads of state and governments have approved a plan of action (PoA) during the first phase of the World Summit on the Information Society [WSIS], held in Geneva in December 2003. The PoA has called for all countries and regions to develop tools that provide statistical information on the progress made towards the Information Society [IS]. It has also required that priority be given in setting up coherent and internationally comparable indicator systems, taking into account different levels of development.

In recognition of the need for improved data and indicators on the IS, a global initiative for building "Partnership on Measuring ICT for Development," has been launched in the 11th United Nations Conference on Trade and Development [UNCTAD XI] in Sao Paulo, in June 2004.[1] The objective of the Partnership, in which ESCWA and the other United Nations regional commissions play a key role, is to bring interested stakeholders in the statistical measurement of ICT to work together to close the data gap at the international level, in particular in developing countries. Specifically, the Partnership has three basic objectives, namely:

- Develop core sets of common ICT indicators and indices relevant to various stakeholders. These core indicators will be harmonized and agreed upon internationally and will constitute the basis for a database on ICT statistics;
- Enhance the capacities of national statistics offices [NSOs] in developing countries and build competence to develop statistical compilation programs on the information society; and
- Develop a global database on ICT indicators and to make it available on the Internet.

The objectives of the Partnership are interlinked. They aim at devising appropriate variables, enhanced measuring mechanisms, and supporting instruments needed to evaluate and monitor the evolution of the IS regionally and in comparison with other countries and regions globally.

The United Nations regional commissions have done a lot towards fulfilling the objectives of the Partnership. The NSOs of ESCWA member countries adopted a list of core ICT indicators during the Roundtable on "Information Society Indicators and Profiles for Western Asia," held in Beirut, during 4-5 October 2004. The Economic Commission for Africa [ECA] adopted a list of core ICT indicators of its own, while the Economic Commission for Latin America and the Caribbean [ECLAC] proposed a set of core questions for household and business surveys. The lists of core ICT indicators of various organizations involved in ICT indicator building in all regions of the world were considered for harmonization in a WSIS Thematic Meeting on "Measuring the Information Society," held in Geneva, during 7-9 February 2005. The outcome of the meeting was a list of forty-two [42] core ICT indicators under four [4] categories: infrastructure and access, access and usage for households and individuals, access and usage for businesses, and the ICT sector, that all countries might consider collecting. The agreed-upon list was recognized in the 36Th session of the United Nations Statistical Commission, held in New York, during 1-4 March 2005.

In addition to adopting a list of core ICT indicators during the Roundtable, the NSOs of ESCWA member countries acted to form a Regional Technical Working Group [RTWG] on ICT Indicators with the aim to:

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[1] The main entities forming the Partnership are: ITU, OECD, UNCTAD, UIS, ECA, ECLAC, ESCWA, ESCAP, World Bank, UN ICT Task Force, and NSOs. EUROSTAT later joined the Partnership in the February 2005 WSIS Thematic Meeting on "Measuring the Information Society" in Geneva.

- Facilitate dialogue between all stakeholders in the Arab countries, concerned with the collection of data related to measuring ICT indicators, in order to standardize the ICT definitions, the required data for the calculation of each indicator, and the methodology used;
- Participate in the development of an Arab list of core ICT indicators for measuring and monitoring the main areas of the IS;
- Convey the Arab views in international forums and conferences on statistics and measurements related to IS indicators;
- Specify the needs of NSOs and other bodies working in the field of statistics and measurement of IS indicators, and formulate the necessary capacity-building plans for strengthening their capabilities, including training of technical staff, and securing the financing needed for the implementation of special censuses for data collection, compilation, analysis, and dissemination; and
- Develop database specifications, to constitute guidelines for building regional and international ICT indicators databases.

The RTWG on ICT Indicators communicates online on matters regarding indicator development and regional activities.

Subsequently, the 6th session of ESCWA Statistical Committee, held in Beirut during 6-8 October 2004, ratified both outcomes of the Roundtable, adopting the list of core ICT indicators, and establishing the RTWG on ICT Indicators. It further required that government statistical offices in ESCWA member countries would be the principal source for the collection, processing, and production of these indicators. In addition, upon the recommendation of the representatives of the NSOs of ESCWA member countries attending the Roundtable, the objectives of the Partnership were made subjects of dedicated projects within a program on measuring the IS in the ESCWA Regional Plan of Action [ERPoA] for the WSIS that was submitted to the Second Regional Preparatory Conference for the WSIS, held in Damascus, during 22-23 November 2005.

Finally, ESCWA has undertaken the initiative to build a regional database of ICT indicators and indices relevant to Arab countries and consistent with international trends. The main purposes of the regional ICT indicators database can be stated as:

- Identify and record the basic characteristics of the IS in the Arab World for benchmarking with other countries and regions globally;
- Utilize the database as a decision making and planning tool for developing the IS in the Arab World; and
- Enhance Information Society-directed research by making available to researchers a wealth of information and acquired knowledge related to these areas.

ESCWA views the global database on ICT indicators as a collection of regional components including its own. An ESCWA report "Foundations of ICT Indicators Database" presents its perspective on building the regional database.

STATUS OF ICT STATISTICS IN ESCWA MEMBER COUNTRIES

Acting within the mandate of the Partnership, ECLAC in cooperation with the other regional commissions prepared a questionnaire that provides a list of questions that aim to discover the status of ICT statistics in NSOs in each region. Specifically, the stated purposes of the questionnaire were:

- *Collection of metadata on ICT statistics*:
  Taking inventory in participating NSOs about existing and planned indicators, questionnaires, and methods of collecting statistics about ICT and the Information Society;
- *Standardization of core indicators*:
  Moving toward standardized definitions and a set of commonly accepted ICT core indicators; and
- *Preparing technical assistance and knowledge exchange*:
  Identifying NSOs with best practices and others that may require technical assistance to strengthen their capacity to advance toward the incorporation of information society statistics.

Each regional commission was required to submit the questionnaire to the NSOs of own member countries, follow up to gather the responses, and analyze the responses returned. The Questionnaire together with an explanatory information note were translated to Arabic and submitted to the NSOs of ESCWA member countries. In retrospect, the process was not without a few gremlins that have diminished its effectiveness, namely:

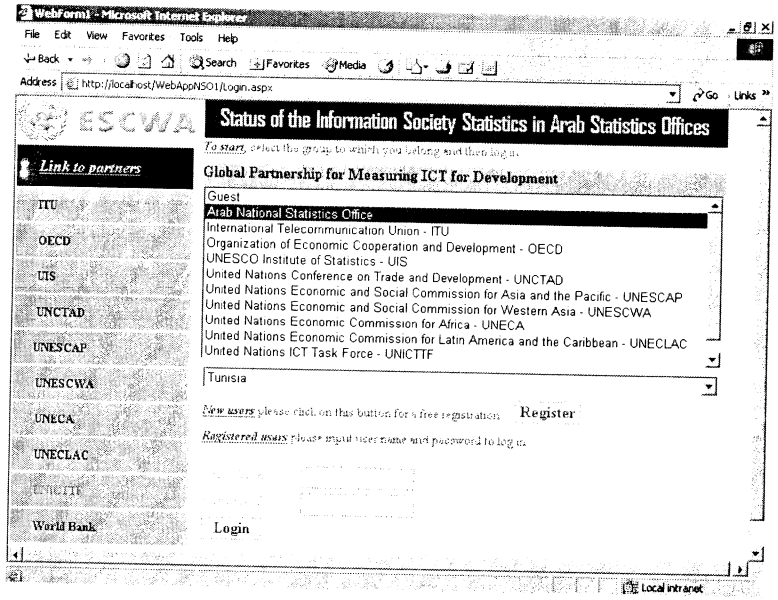
- There was no prior consultation with the NSOs to solicit their input as to the design of the questionnaire, or to alert them for what they would be getting involved into;
- It was implicitly assumed that the questionnaire, together with the explanatory note, is self-explanatory, and that NSOs would know what to do once they received it;
- It was not clear to some of the NSOs at the beginning which of their units should take up this assignment as many of the NSOs in the ESCWA region have established technology departments with specific responsibility. This resulted in wasting valuable time that was short to start with anyway; and
- It was summer, nevertheless.

On the substantive side, the outcome of the stocktaking exercise in Western Asia was not helped by the questionnaire's focus on ICT statistics for households and businesses. By summarily lumping together other areas of ICT statistics, including education, government, health, and content products and industries, at the end of the questionnaire, the questionnaire appeared to give more weight to the household and business areas than to the other ones. It is the view of ESCWA that the design of the questionnaire did not reflect the emphasis that ESCWA member countries give to collecting ICT statistics in these sectors.

Ten [10] ESCWA member countries responded to the questionnaire.[2] A web-accessed relational database was designed and implemented to hold the responses, to allow all Arab NSOs to complete their questionnaires and/or update the information, and to make it possible for the Partnership to continually monitor the status of ICT statistics in the region. The database is not yet accessible outside ESCWA. The responses gathered, and the results and conclusions drawn were presented to the Roundtable on "Information Society Profiles and Indicators in Western Asia," and attended by representatives of the NSOs of ESCWA member countries and members of the Partnership. A summary of the results, grouped by topic, is given below:

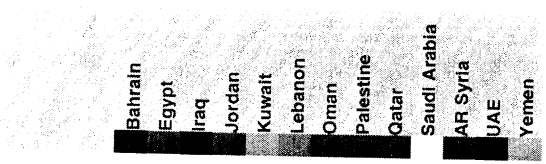
[2] Three [3] countries (Bahrain, Iraq, and United Arab Emirates) did not respond to the questionnaire.

ESCWA NSOs database



A. National ICT definition
B. Financial Resources
C. Level of demand for ICT statistics
D. Number of ICT statistics collected per country
E. Status of collection of ICT household statistics
F. Status of collection of ICT business statistics
G. Status of collection of ICT other statistics

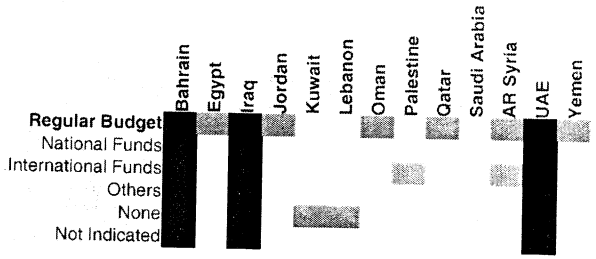
A. National ICT Definition



Yes	6
Working on It	2
No	1
Not Indicated	1
No Response	3

None of the countries responding with *Yes* gave any specifics as to the definition used.

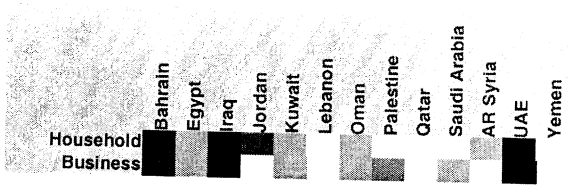
B. Financial Resources for ICT Data Collection



Regular Budget	6
National Funds	1
International Funds	2
Others	0
None	2
Not Indicated	1
No Response	3

Only two countries indicated receiving either national or international funds for ICT data collection: Palestine and the Syrian Arab Republic, of which only Palestine specified the amounts received.

C. Level of Demand for ICT Statistics

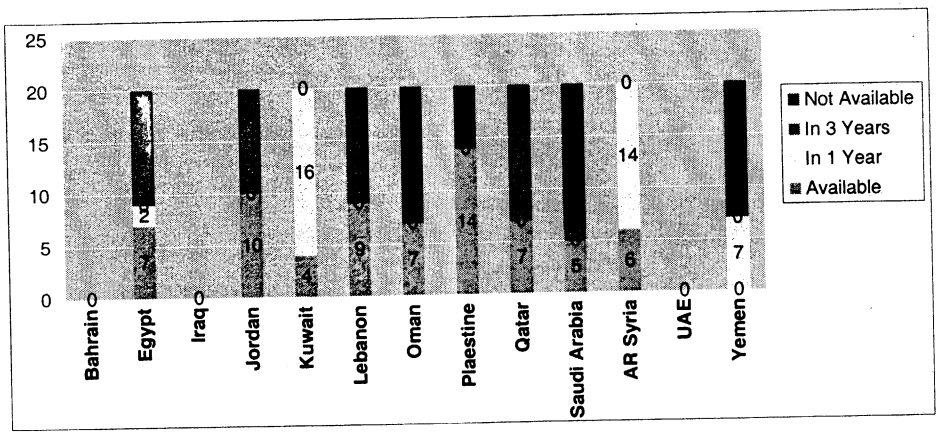


	Hh	Bu
Very High	1	0
High	4	4
Medium	3	3
Low	2	0
No Demand	0	1
Not Indicated	0	2
No Response	3	3

The level of demand for household statistics is always at the same level or higher than that for business statistics, except for Saudi Arabia.

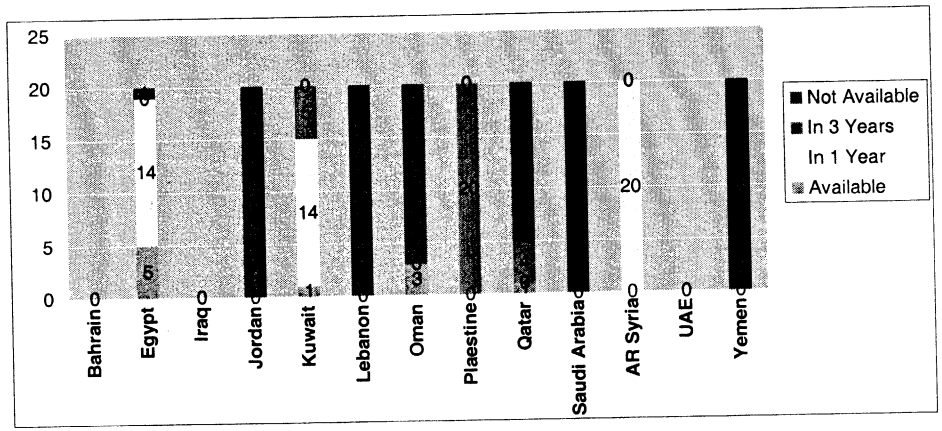
D. Number of ICT Statistics Collected

	Bahrain	Egypt	Iraq	Jordan	Kuwait	Lebanon	Oman	Plaestine	Qatar	Saudi Arabia	AR Syria	UAE	Yemen
Available		7		10	4	9	7	14	7	5	6		0
In 1 Year		2		0	16	0	0	0	0	0	14		7
In 3 Years		0		0	0	0	0	0	9	1	0		0
Not Available		11		10	0	11	13	6	4	14	0		13

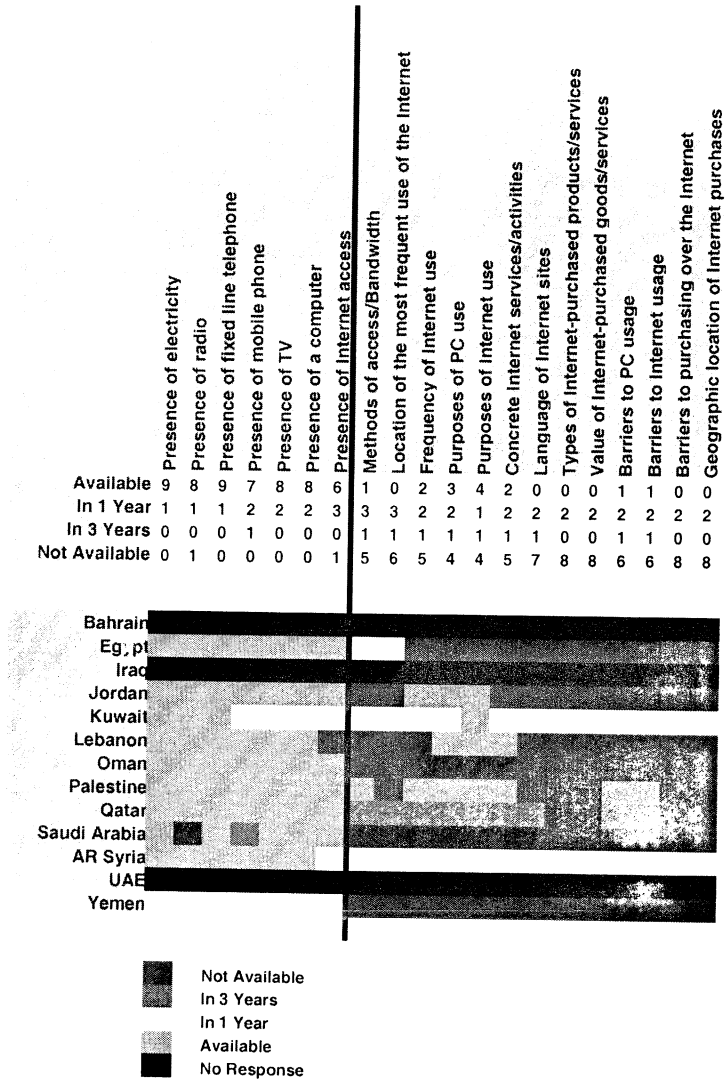


	Bahrain	Egypt	Iraq	Jordan	Kuwait	Lebanon	Oman	Plaestine	Qatar	Saudi Arabia	AR Syria	UAE	Yemen
Available		5		0	1	0	3	0	1	0	0		0
In 1 Year		14		0	14	0	0	0	0	0	20		0
In 3 Years		0		0	5	0	0	20	4	0	0		0
Not Available		1		20	0	20	17	0	15	20	0		20

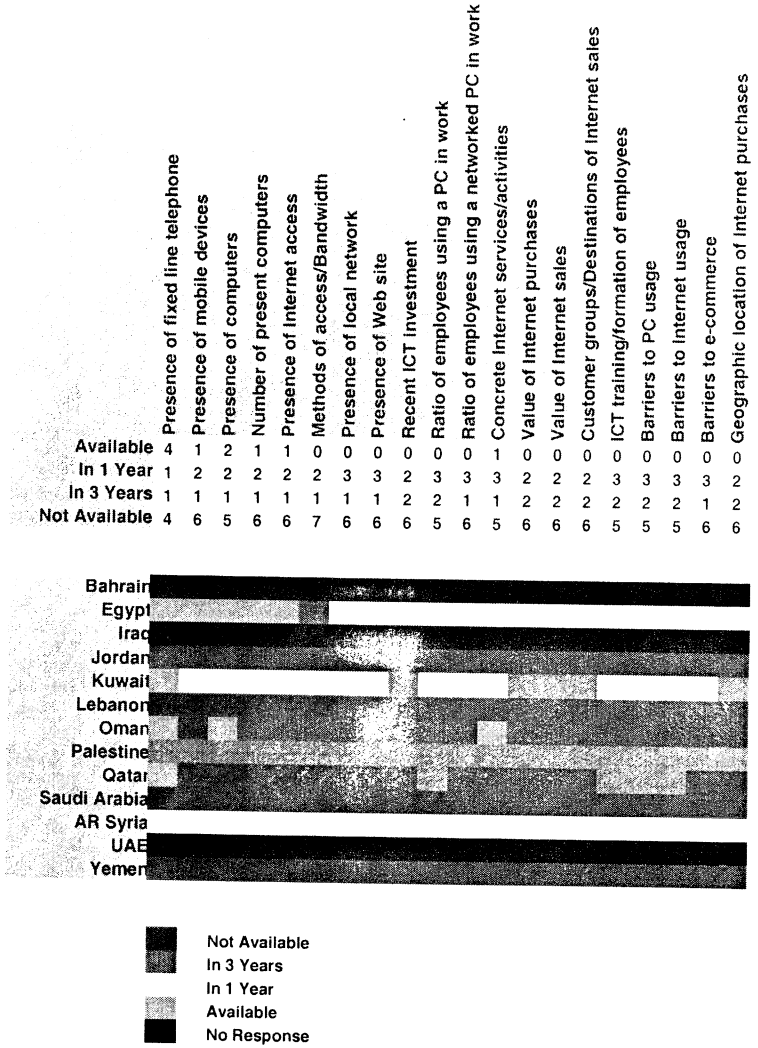
No Response



E. Status of Collection of ICT Household Statistics



F. Status of Collection of ICT Business Statistics



G. Status of Collection of Other ICT Statistics

Of the respondents, eight [8] countries provided no information, with Oman indicating that collection of those other ICT statistics does not exist, while Palestine and Egypt provided information as follows:

- The Central Bureau of Statistics, Palestine, collects ICT statistics on education, in collaboration with the Ministry of Education and Higher Education. The most recent date of the Education Collection is 2004;
- The Central Agency for Public Mobilization and Statistics [CAPMAS], Egypt, collects ICT statistics on infrastructure for the IS, ICT content products, and ICT content industries within the "National Plan for Information and Communications," in collaboration with the Ministry of Communications and Information Technology.

Reflections on the Responses by ESCWA Member Countries

Examination of the results shown establishes some facts regarding the status of collection of household and business statistics in ESCWA member countries, and perhaps a reflection on the status of the IS in the region.

As it can be seen from the country-ICT indicator color-coded map for household statistics, the [blue] line of activity of NSOs coincides with the line separating static (readiness) from dynamic (usage) indicators. No such happenstance is evident in the case of business statistics. In fact, aside from Egypt, no other country collects more than two business readiness indicators, with seven countries indicating no collection of data for these indicators. The effort for collecting usage indicators is minimal for household statistics, about nonexistent for business indicators. It is essential that NSOs carry on with – for some, augment – their plans for collecting data for household and business ICT indicators.

Comparison of the color maps for the national ICT definition and the level of demand for ICT statistics shows strong correlation between the existence of national ICT definition and the level of demand for household statistics, and weaker correlation for business statistics. The strong correlation affirms the significance of the existence of policies/regulatory frameworks as a readiness indicator, especially in the case of societies that do not have established or accumulated traditions in the field of ICT. The weaker correlation is further evidence of the non-readiness of the business sector in ESCWA member countries.

The United Arab Emirates and Bahrain, the first and second ranked Arab countries with Digital Access Indexes [DAIs] of 0.64 and 0.58 in 2002[3], respectively, did not respond to the questionnaire. Their responses presumably would have improved the overall picture, but might not have altered the conclusions drawn above.

The scant amount of information given for collecting ICT statistics in education, science and technology, and culture sectors should not be construed as an indication of the significance, or lack of thereof, ESCWA member countries give to collecting ICT-related statistics in these sectors. Much of the statistics sought are collected by the respective ministries and can be found in administrative registries.

The stocktaking exercise was a worthwhile effort that could not have been possible without the leadership of the Partnership and the effective participation of many stakeholders worldwide. With the experience gained, and the recognition of the importance of gathering information on the status of ICT statistics collection for policy formulation and monitoring on the part of many of the countries that participated in this exercise, it is important that this process be repeated, perhaps with updated questionnaire that includes the other areas of ICT statistics, in particular those in education, government, health, and content products and industries. Online solution could be implemented to allow for continual follow-up and update, improve response rates, and facilitate the work of NSOs.

[3] *World Telecommunications Development Report on Access Indicators for the Information Society – Executive Summary*. ITU, December 2003.

ICT INDICATORS FOR THE ESCWA REGION

Needless to say, any list of indicators chosen should have a global core that preserves compatibility with international efforts and allows its region to contribute to the global indicator lists. At the same time, the global core of indicators must be supplemented with indicators that address the specific needs of the region.

The list of core ICT indicators for the ESCWA region is shown below. The list is comprised of a global core and a regional supplement; each contains readiness and intensity indicators. The regional supplement favors indicators specific to policy and regulatory frameworks [2], digital local content [2], and government [3]. It also includes an auxiliary indicator in the set of readiness of households and individuals; namely, the cost of a PC relative to average individual income. More indicators can still be added to the regional supplement should need arises. Otherwise, the regional supplement can be complemented with national lists that include indicators of interest to ESCWA member countries.

Two columns in the table show comparisons with the lists of the Organization of Economic Cooperation and Development [OECD] and ECA. The lists of ESCWA and OECD match well [25 out of 31] outside the areas of education, policies/regulatory frameworks, local content, and government. Comparison with the list of ECA bears a great significance since ECA includes 10 Arab countries. Allowing for variations in expressing some indicators, 29 out of 43 indicators in the ESCWA list can be found in the ECA list. It should be noted that the ECA list is a larger list of 62 indicators, including indicators in the areas of agriculture, health, and security that have no match in the ESCWA list.

As has already been mentioned, All lists, including those of ESCWA and ECA, were considered in the February 2005 WSIS Thematic Meeting on "Measuring the Information Society" in Geneva. The meeting was attended by more than 270 delegates from 87 countries, intergovernmental organizations, NGOs and civil society. The outcome of the meeting was a list of forty-two [42] core ICT indicators under four [4] categories: infrastructure and access, access and usage for households and individuals, access and usage for businesses, and the ICT sector, that all countries might consider collecting. The agreed-upon list was recognized in the 36Th session of the United Nations Statistical Commission in March 2005. The Partnership list of core ICT indicators is given below.

ESCWA recognizes that the current proposal is not intended as a final list, as it falls short of the expectations of many of the national delegates, United Nations regional commissions, including ECA and ESCWA, and some members of the Partnership. Specifically, absent from the list are indicators in significant sectors of the information society, in particular *education*, *culture*, *science and technology*, *health*, *public administration/government*, *labor*, and *agriculture*. In fact, the list may still have to undergo periodic reviews and changes. As definitions, computing methods, and data collection methodologies are developed for the proposed list of indicators; as countries gain experience with measuring the IS; and/or as policy needs evolve, further changes to the proposed list are bound to happen.

To this end, ESCWA has called on the UNESCO Institute of Statistics [UIS], International Labor Organization [ILO], World Health Organization [WHO], Food and Agriculture Organization [FAO], and other specialized international and United Nations agencies to provide the leadership needed to develop lists of core IS indicators in their respective fields of expertise, and in accord with their mandates. To streamline the process, ESCWA has suggested that any new lists are taken up directly by the United Nations regional commissions for approval, and are added to the current list with the support of at least two of them.

Global Core

						OECD	ECA			
Readiness	Basic Infrastructure ad Access	1	Main fixed telephone lines per 100 population	ITU		■	■	عدد خطوط التليفون الثابت لكل مئة (١٠٠) شخص	١	البنية الأساسية والنفاذ للجهور
		2	Mobile telephone subscribers per 100 population	ITU		■	■	عدد خطوط التليفون المحمول لكل مئة (١٠٠) شخص	٢	
		3	Residential fixed line telephone monthly subscription costs	ITU		■		التكلفة الشهرية لاشتراك خط التليفون الثابت للاستخدام المنزلي	٣	
		4	Local fixed line call costs for three minutes	ITU				تكلفة المكالمة الداخلية (٣ دقائق) بخط التليفون الثابت	٤	
		5	Business telephone monthly subscription costs	ITU		■		التكلفة الشهرية لاشتراك خط التليفون الثابت لقطاع الأعمال	٥	
		6	Mobile telephone subscription costs	ITU		■		تكلفة الاشتراك بخط التليفون المحمول	٦	
		7	Local mobile call costs for three minutes	ITU				تكلفة المكالمة الداخلية (٣ دقائق) بخط التليفون المحمول	٧	
		8	Televisions per 100 population	ITU, UIS			■	عدد أجهزة التلفزيون لكل مئة (١٠٠) شخص	٨	
		9	PCs per 100 population	ITU		■	■	عدد الحاسبات لكل مئة (١٠٠) شخص	٩	
		10	Internet hosts per 10,000 population	ITU, ISC		■		عدد الحاسبات المضيفة للإنترنت لكل مئة (١٠٠) شخص	١٠	
		11	Internet subscribers per 100 population		ISP Surveys	■	■	عدد مشتركي الإنترنت لكل مئة (١٠٠) شخص	١١	
		12	International bandwidth per capita	ITU			■	نصيب الفرد من سعة الإنترنت العالمية	١٢	
		13	Broadband Internet subscribers per 1000 population	ITU			■	عدد المشتركين في خدمة الإنترنت العريضة لكل ألف (١٠٠٠) شخص	١٣	
	ICT Sector	14a	Proportion of male workforce in the ICT sector		Business Surveys	■	■	نسبة الذكور من إجمالي القوى العاملة في قطاع تكنولوجيا المعلومات والاتصالات	١٤أ	قطاع تكنولوجيا المعلومات والاتصالات
		14b	Proportion of female workforce in the ICT sector		Business Surveys	■	■	نسبة الإناث من إجمالي القوى العاملة في قطاع تكنولوجيا المعلومات والاتصالات	١٤ب	
		15a	Proportion of ICT imports of total imports	COMTRADE		■	■	نسبة قيمة تكنولوجيا المعلومات والاتصالات المستوردة من إجمالي الاستيراد	١٥أ	
		15b	Proportion of ICT exports of total exports	COMTRADE		■	■	نسبة قيمة تكنولوجيا المعلومات والاتصالات المصدرة من إجمالي التصدير	١٥ب	
		16	Proportion of value added in the ICT sector of total value added		Business Surveys	■	■	نسبة القيمة المضافة في قطاع تكنولوجيا المعلومات والاتصالات من القيمة الشاملة المضافة	١٦	
Intensity (Usage)	Household	17	Household Internet access cost per month	ITU	Household Surveys	■		التكلفة الشهرية للنفاذ إلى الإنترنت	١٧	الأسر
		18	Proportion of households with internet access		Household Surveys	■	■	نسبة المنازل التي تتصل بالإنترنت	١٨	
		19	Proportion of households with a PC		Household Surveys	■	■	نسبة المنازل التي تقتني الحاسب	١٩	
		20a	Proportion of male individuals accessing the Internet by primary access point (Disaggregated by age)		Household Surveys	■		نسبة الذكور الذين يستخدمون الإنترنت بواسطة نقطة اتصال مباشرة/أولية (مقسم وفق العمر)	٢٠أ	
		20b	Proportion of female individuals accessing the Internet by primary access point (Disaggregated by age)		Household Surveys	■		نسبة الإناث اللاتي يستخدمن الإنترنت بواسطة نقطة اتصال مباشرة/أولية (مقسم وفق العمر)	٢٠ب	
		21	Proportion of individuals using the Internet by activity			■		نسبة الأفراد الذين يستخدمون الإنترنت (مقسم وفق النشاط)	٢١	
	Business	22	Proportion of businesses with PCs		Business Surveys	■	■	نسبة مؤسسات الأعمال التي تستخدم الحاسوب	٢٢	قطاع الأعمال الاستخدام
		23	Proportion of businesses with Internet access		Business Surveys	■	■	نسبة مؤسسات الأعمال التي تتصل بالإنترنت	٢٣	
		24	Proportion of businesses with Web site		Business Surveys	■	■	نسبة مؤسسات الأعمال التي لديها موقع على الإنترنت	٢٤	
		25	Proportion of employees using PCs		Business Surveys	■	■	نسبة الموظفين الذين يستخدمون الحاسوب	٢٥	
		26	Proportion of employees using the Internet		Business Surveys	■	■	نسبة الموظفين الذين يستخدمون الإنترنت	٢٦	
		27	Proportion of businesses receiving orders over the Internet		Business Surveys	■	■	نسبة مؤسسات الأعمال التي تستلم طلبيات عبر الإنترنت	٢٧	
		28	Proportion of businesses placing orders over the Internet		Business Surveys	■	■	نسبة مؤسسات الأعمال التي ترسل طلبياتها عبر الإنترنت	٢٨	
		29	Proportion of businesses with intranet		Business Surveys	■	■	نسبة مؤسسات الأعمال التي لديها شبكة معلومات داخلية	٢٩	
		30	Proportion of the value of orders received over the Internet of the total value of orders		Business Surveys	■	■	نسبة قيمة المعاملات التجارية عبر الإنترنت من القيمة الإجمالية	٣٠	
	Education	31	Enrolled student to PC ratio in primary and secondary schools		Ministry of Education		■	نسبة الطلاب المسجلين في المدارس الابتدائية والثانوية إلى عدد الحواسيب فيها	٣١	التعليم
		32	Proportion of primary and secondary schools having Internet access for students for class room instruction		Ministry of Education		■	نسبة المدارس الابتدائية والثانوية التي تتصل بالإنترنت وتوفر الوصول لتلامذتها لأهداف الدراسة	٣٢	
		33a	Proportion of male students enrolled in tertiary education in ICT or ICT-dominated field of the total number of students	UIS	Ministry of Higher Education		■	نسبة الذكور من إجمالي عدد الطلاب المسجلين في التعليم العالي في مجال تكنولوجيا المعلومات والاتصالات أو مجال مشبع به	٣٣أ	
		33b	Proportion of female students enrolled in tertiary education in ICT or ICT-dominated field of the total number of students	UIS	Ministry of Higher Education		■	نسبة الإناث من إجمالي عدد الطلاب المسجلين في التعليم العالي في مجال تكنولوجيا المعلومات والاتصالات أو مجال مشبع به	٣٣ب	
		34	Proportion of ICT-qualified teachers in primary and secondary schools of the total number of teachers		Ministry of Education		■	نسبة المدرسين ذوي الكفاءة في ميدان تكنولوجيا المعلومات والاتصالات من إجمالي عدد المدرسين في المدارس الابتدائية والثانوية	٣٤	
		35	Proportion of tertiary education institutions with e-learning courses of the total number of tertiary education institution		Ministry of Higher Education		■	نسبة مؤسسات التعليم العالي التي توفر مناهج التعليم الإلكتروني من إجمالي عدد مؤسسات التعليم العالي	٣٥	

Regional Supplement

					OECD	ECA		
Readiness	**Household**						الأســـــرة	الجاهزية
	1	Cost of PC relative to average household/individual income	ITU	Household/Business Surveys			١ نسبة تكلفة الحاسب لمتوسط دخل الأسرة/الفرد	
	Policies/Regulatory Frameworks						السياسات والأطـــر التنظيمية	
	2	Existence of official ICT policy and related strategies in one or more sectors		Government Surveys		■	٢ وجود سياسة رسمية لتكنولوجيا المعلومات والاتصالات واستراتيجيات متعلقة بها في قطاع اقتصادي أو أكثر	
	3	Number of active or completed government-sponsored initiatives in ICT with national scope		Government Surveys			٣ عدد المبادرات الفاعلة المكتملة المتعلقة بتكنولوجيا المعلومات والاتصالات على النطاق الوطني	
Intensity (Usage)	**Local Content**						المحتـــوى المحـــلي	استخدام
	4	Number of Arabic/Arabized software applications written locally		Business Surveys		■	٤ عدد التطبيقات البرمجية المطورة باللغة العربية أو المعربة محليا	
	5	Volume (number of web pages) of local data available online		Government/Business Surveys			٥ حجم المعلومات (عدد صفحات الإنترنت) المتوفرة محليا	
	Government						الحكومـــــة	
	6	Proportion of government agencies with online interactive services		Government Surveys		■	٦ نسبة المؤسسات الحكومية التي توفر خدماتها بشكل تفاعلي ومباشر من خلال الإنترنت	
	7	Volume (in megabytes) of governmental information available online		Government Surveys			٧ حجم المعلومات (بالميجا بايت) المتوفرة لدى المؤسسات الحكومية من خلال الإنترنت	
	8	Proportion of online government services of a total number of services		Government Surveys		■	٨ نسبة الخدمات الحكومية المتوفرة من خلال الإنترنت	

		مؤشرات البنية الأساسية والنفاذ	
Infrastructure and Access		**مؤشـرات أسـاسية**	
Basic Core			
A-1	Fixed telephone lines per 100 population	عدد خطوط التليفون الثابت لكل مائة (١٠٠) شخص	A-1
A-2	Mobile cellular subscribers per 100 population	عدد خطوط المحمول لكل مائة (١٠٠) شخص	A-2
A-3	Computers per 100 population	عدد أجهزة الحاسب لكل مائة (١٠٠) شخص	A-3
A-4	Internet subscribers per 100 population	عدد المشتركين في خدمة الإنترنت لكل مائة (١٠٠) شخص	A-4
A-5	Broadband Internet subscribers per 100 population (fixed and mobile)	عدد المشتركين في خدمة الحزمة العريضة للإنترنت لكل مائة (١٠٠) شخص	A-5
A-6	International Internet bandwidth per population	نصيب الفرد من عرض الحزمة الدولية للإنترنت	A-6
A-7	Proportion of population covered by mobile cellular telephony	نسبة السكان في المناطق التي لديها خدمة الاتصال بالتليفون المحمول	A-7
A-8a	Internet access tariffs (20 hours per month), in US$	تكلفة النفاذ للإنترنت (٢٠ ساعة شهريا) بالدولار الأمريكي	A-8a
A-8b	Internet access tariffs (20 hours per month) as a percentage of per capita income	تكلفة النفاذ للإنترنت (٢٠ ساعة شهريا) بالنسبة لمتوسط دخل الفرد	A-8b
A-9a	Mobile cellular tariffs (100 minutes of use per month), in US$	تكلفة استخدام خدمة التليفون المحمول (١٠٠ دقيقة شهريا) بالدولار الأمريكي	A-9a
A-9b	Mobile cellular tariffs (100 minutes of use per month) as a percentage of per capita income	تكلفة استخدام خدمة التليفون المحمول (١٠٠ دقيقة شهريا) بالنسبة لمتوسط دخل الفرد	A-9b
A-10	Proportion of localities with public Internet access centres (PIACs) by number of population (rural/urban)	نسبة المراكز العامة للنفاذ إلى الإنترنت لعدد السكان بالحضر /الريف/البادية	A-10
Extended Core		**مؤشـرات إضـافية**	
A-11	Radio sets per 100 population	عدد أجهزة الراديو لكل مائة (١٠٠) شخص	A-11
A-12	Television sets per 100 population	عدد أجهزة التليفزيون لكل مائة (١٠٠) شخص	A-12

		مؤشرات النفاذ والاستخدام للأسر والأفراد	
Access and Use by Households and Individuals		**مؤشـرات أسـاسية**	
Basic Core			
HH-1	Proportion of households with a radio	نسبة المنازل التي بها أجهزة راديو	HH-1
HH-2	Proportion of households with a TV	نسبة المنازل التي بها أجهزة تليفزيون	HH-2
HH-3	Proportion of households with a fixed line telephone	نسبة المنازل التي بها خط تليفون ثابت	HH-3
HH-4	Proportion of households with a mobile cellular telephone	نسبة المنازل التي بها خط تليفون محمول	HH-4
HH-5	Proportion of households with a computer	نسبة المنازل التي بها أجهزة حاسب	HH-5
HH-6	Proportion of individuals that used a computer (from any location) in the last 12 months	نسبة الأفراد الذين استخدموا الحاسب من أي مكان خلال الـ ١٢ شهرا الأخيرة	HH-6
HH-7	Proportion of households with Internet access at home	نسبة المنازل التي تتصل بالإنترنت	HH-7
HH-8	Proportion of individuals that used the Internet (from any location) in the last 12 months	نسبة الأفراد الذين استخدموا الإنترنت من أي مكان خلال الـ ١٢ شهرا الأخيرة	HH-8
HH-9	Location of individual use of the Internet from all locations in the last 12 months: • At home • At work • Place of education • At another person's home • Free Public Internet Access Centre (specific denomination depends on national practices) • Charged Public Internet Access Centre • Others	نسبة الأفراد الذين استخدموا الإنترنت خلال الـ ١٢ شهرا الأخيرة طبقا لمكان النفاذ • المنزل • العمل • مكان التعليم (المدرسة/الجامعة/..) • منزل شخص آخر • مركز عام للنفاذ للإنترنت مجاني • مركز عام للنفاذ للإنترنت برسوم • مكان آخر	HH-9
HH-10	Internet activities undertaken by individuals in the last 12 months: • For communicating • For getting information • Purchasing or ordering goods or services • Internet banking or other financial services	نسبة الأفراد الذين استخدموا الإنترنت خلال الـ ١٢ شهرا الأخيرة طبقا لغرض الاستخدام • الاتصال (البريد الإلكتروني/..) • الحصول على معلومات • طلب أو شراء بضائع • تحصيل خدمات بنكيه ومالية	HH-10
	• For education and learning • For dealing with government organisations/public authorities • For leisure activities	• التعليم • التعامل مع المؤسسات الحكومية أو العامة • الترويح والتسلية	
Extended Core		**مؤشـرات إضـافية**	
HH-11	Proportion of individuals with use of a mobile telephone	نسبة الأفراد الذين يستخدمون التليفون المحمول	HH-11
HH-12	Proportion of households with access to the Internet by type of access from home. Response categories should allow an aggregation to narrowband and broadband, where broadband will exclude slower speed technologies, such as dial-up modem, ISDN and most 2G mobile phone access, and which will usually result in a speed of at least 256 kbit/s.	نسبة المنازل التي تتصل بالإنترنت طبقا لسرعة/عرض حزمة الاتصال تُختار وسائط الاتصال بحيث تسمح بتقسيم الإجابة إلى وسائط الحزمة الضيقة (مثل مودم DIAL-UP، ISDN، ومعظم التليفونات المحمولة بتكنولوجيا 2G) ووسائط الحزمة العريضة (سرعة اتصال لا تقل عن ٢٥٦ كيلو بت بالثانية)	HH-12
HH-13	Frequency of individual access to the Internet in the last 12 months (from any location) • at least once a day • at least once a week but not every day • at least once a month but not every week • less than once a month	نسبة الأفراد الذين استخدموا الإنترنت خلال الـ ١٢ شهرا الأخيرة طبقا لتكرار الاستخدام – مرة واحدة يوميا على الأقل – مرة واحدة أسبوعيا على الأقل، ولكن ليس يوميا – مرة واحدة شهريا على الأقل، ولكن ليس أسبوعيا – أقل من مرة واحدة شهريا على مدار العام	HH-13
Reference Indicator		**مؤشـر مرجعي**	
HH-R1	Proportion of households with electricity	نسبة المنازل المتصلة بشبكة الكهرباء	HH-R1

		مؤشرات النفاذ والاستخدام لقطاع الأعمال	
Access and Use by Businesses		**مؤشـرات أسـاسية**	
Basic Core			
B-1	Proportion of businesses using computers	نسبة مؤسسات الأعمال التي تستخدم الحاسب	B-1
B-2	Proportion of employees using computers	نسبة الموظفين الذين يستخدمون الحاسب	B-2
B-3	Proportion of businesses using the Internet	نسبة مؤسسات الأعمال التي تتصل بالإنترنت	B-3
B-4	Proportion of employees using the Internet	نسبة الموظفين الذين يستخدمون الإنترنت	B-4
B-5	Proportion of businesses with a website (or web presence where the business has control over the content)	نسبة مؤسسات الأعمال التي تمتلك موقع على الإنترنت	B-5
B-6	Proportion of businesses with an INTRANET	نسبة مؤسسات الأعمال التي لديها شبكة معلومات داخلية INTRANET	B-6
B-7	Proportion of businesses receiving orders over the Internet	نسبة مؤسسات الأعمال التي تستلم طلبيات عبر الإنترنت	B-7
B-8	Proportion of businesses placing orders over the Internet	نسبة مؤسسات الأعمال التي ترسل طلبيات عبر الإنترنت	B-8
Extended Core		**مؤشـرات إضـافية**	
B-9	Proportion of businesses accessing the Internet by modes of access. Response categories should allow an aggregation to narrowband and broadband, where broadband will exclude slower speed technologies, such as dial-up modem, ISDN and most 2G mobile phone access, and which will usually result in a speed of at least 256 kbit/s.	نسبة مؤسسات الأعمال التي تتصل بالإنترنت طبقا لسرعة/عرض حزمة الاتصال. تُختار وسائط الاتصال بحيث تسمح بتقسيم الإجابة إلى وسائط الحزمة الضيقة (مثل مودم DIAL-UP، ISDN، ومعظم التليفونات المحمولة بتكنولوجيا 2G) ووسائط الحزمة العريضة (سرعة اتصال لا تقل عن ٢٥٦ كيلو بت بالثانية)	B-9
B-10	Proportion of businesses with a Local Area Network (LAN)	نسبة مؤسسات الأعمال التي لديها شبكة حاسبات محلية LAN	B-10
B-11	Proportion of businesses with an EXTRANET	نسبة مؤسسات الأعمال التي لديها شبكة معلومات خارجية EXTRANET	B-11
B-12	Proportion of businesses using the Internet by type of activity: • Internet e-mail • Getting information • Performing Internet banking or accessing other financial services • Dealing with government organisations/public authorities • Providing customer services • Delivering products online	نسبة مؤسسات الأعمال التي تستخدم الإنترنت طبقا لنوع النشاط – استخدام البريد الإلكتروني – الحصول على معلومات – تحصيل/تقديم خدمات بنكيه ومالية – التعامل مع المؤسسات الحكومية أو العامة – تقديم خدمات للعملاء – استلام طلبيات	B-12

ICT Sector		مؤشرات قطاع تكنولوجيا المعلومات والاتصالات	
Basic Core		مؤشـرات أسـاسية	
ICT-1a	Proportion of male workforce of the total workforce involved in the ICT sector	نسبة الذكور من إجمالي العاملين في قطاع تكنولوجيا المعلومات والاتصالات	ICT-1a
ICT-1b	Proportion of female workforce of the total workforce involved in the ICT sector	نسبة الإناث من إجمالي العاملين في قطاع تكنولوجيا المعلومات والاتصالات	ICT-1b
ICT-2	Value added in the ICT sector (as a percentage of total value added)	نسبة القيمة المضافة في قطاع تكنولوجيا المعلومات والاتصالات من القيمة الشاملة المضافة	ICT-2
ICT-3	ICT goods imports as percentage of total imports	نسبة قيمة تكنولوجيا المعلومات والاتصالات المصدرة من إجمالي التصدير	ICT-3
ICT-4	ICT goods exports as percentage of total exports	نسبة قيمة تكنولوجيا المعلومات والاتصالات المستوردة من إجمالي الاستيراد	ICT-4

CAPACITY-BUILDING IN THE ESCWA REGION

The work of the Partnership has so far focused on fulfilling its first objective: namely, the harmonization of the lists of core ICT indicators that are developed regionally, and by specialized international organizations in their respective fields of expertise, and in accord with their mandates.

The second objective of the Partnership is to enhance the capacities of NSOs in developing countries with the aim to build competence to develop statistical compilation programs on the information society, based on internationally agreed upon indicators. The Partnership project document[4] specifically cited the following deliverables as immediate goals to accomplish in the first phase of its operation that ends with the WSIS Tunis in November 2005:

"Deliverables:

- At the end of 2005, a number of selected beneficiary developing countries will have the capability to implement programmes for the collection of ICT statistics and indicators, the results of which will be comparable at the international and regional level.
- Regional statistical working groups will promote discussions about the development and collection of ICT statistics, in order to allow countries to better identify and promote their interests in international forums dealing with information society indicators. This will also pave the way for identifying needs for capacity building and further cooperation. Close relations with national statistical offices and other interested partners, through continuous regional networking, will assure that the specific needs and challenges of developing countries are adequately considered.
- A training course for information society statistics will have been developed and validated in selected countries.
- A guiding manual on information society indicators will have been prepared, for dissemination among practitioners in developing countries and to be presented at WSIS Tunis."

As already has been mentioned, a RTWG on ICT indicators for Western Asia was set up. The working group played an important role in presenting the views of ESCWA member countries with regards to list of core ICT indicators submitted for adoption during the February 2005 WSIS Thematic Meeting in Geneva, and continues to communicate online on matters regarding indicator development and regional activities.

ESCWA has also carried out capacity-building missions to help implement programmes for the collection of ICT statistics and indicators. In response to an invitation by the Central Agency for Public Mobilization and Statistics [CAPMAS], Egypt, the Information and Communications Technology Division [ICTD] in ESCWA participated in the "Regional Workshop on the General Census of Population, Housing, and Establishment – 2006," held in Cairo, during 18-20 April, 2005, and presented a discussion paper that included an analysis of the Census forms with regards to the inclusion of ICT indicators. The discussion paper suggested minimal modifications to the Census forms that will lead to the collection of data that allows the computation of 19 indicators (in addition to 5 indicators that can be obtained from Ministry of Communications and Information Technology, regulatory agencies, and telecommunications operators) out of the 42 indicators agreed-upon in the February 2005 WSIS Thematic Meeting on "Measuring the Information Society" in Geneva.

ESCWA is now holding a workshop on capacity building for the statistical measurement of the IS. The workshop is organized by ESCWA, ITU Arab Regional Office, and the Arab Institute for Training and Research in Statistics.

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[4] *Partnership on Measuring ICT for Development*. Project document, 11 June 2004.

The workshop is the first to be held on capacity building for the statistical measurement of the IS in Western Asia and the Arab region. Generally speaking, the objective of the workshop is "to help countries acquire the expertise to determine their own data needs and priorities; to collect these data; to interpret and use them effectively; to undertake research, problem solving and problem formulation; and to sustain these capacities."[5] Specifically, the purpose of the workshop is to introduce the participants to the process of developing indicators with relevance to policy making and decision support, with regards to monitoring progress, measuring output, and assessing impact; to familiarize them with available indicators and basic definitions, data collection methods, and data management and information dissemination devices; and to help with the formulation of national and regional capacity building plans

The workshop brings together practitioners from Arab NSOs, and Arab information and telecommunications ministries, regulators, and operators. Participants are expected to be middle/top tier managers and researchers with expert level knowledge in statistics and/or telecommunications disciplines. The workshop is attended by experts from a number of international and regional organizations, including members of the Partnership. The workshop is concluded with an expert group meeting on the last day of the meeting to chart a course for capacity-building in the region.

A major outcome of the workshop is the development of basic definitions and methodologies for computing the core ICT indicators in the Partnership list, as was urgently requested by the country delegates attending the Geneva thematic meeting. Specifically, ITU methodological annex on basic access and infrastructure indicators and the OECD methodological annexes on household and individual ICT use indicators and on ICT sector indicators are discussed from an Arab perspective. This task is helped by the makeup of the workshop that is based on the fact that definitions and methodologies interlink ICTs and statistics. Participants whose expertise is in ICTs will benefit from the inputs by the NSOs participants on methodologies, and the NSOs participants will benefit from the inputs provided by the ICTs group on definitions and technical matters. An ESCWA methodological manual for Western Asia and the Arab region that draws on the outcome of the workshop is envisaged.

[5] UNESCO Institute for Statistics Annual Report 2003-2004 (UIS/INS/04-01).