

STATISTICAL SITUATION ON INFORMATION SOCIETY MEASUREMENT in MONGOLIA

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LADIES and GENTLEMEN!

First, I would like to express My THANKS to organizers this workshop, and who given us technical assistance and a chance to participate this workshop.

Second, This workshop are on time, that objective what we will be discuss during this time is very important.

This workshop will allow statisticians as well as policy makers to discuss the need for data on information society developments, and share best practices in ICT measures.

A. Information system and ITU measurement indicators methodology and definition standards are important

1. The report of the Partnership on Measuring Information and Communication Technologies for Development is transmitted to the Commission in accordance with a request of the UN Statistical Commission at its 35, 36 and 37-th sessions. During these sessions, the Commission considered the issue of information and communication technology (ICT) statistics as part of the agenda. After the 35-th sessions consideration of several documents, the Commission inter alia emphasized the need for a coordinated effort to further develop indicators for ICT, and expressed the need for capacity-building in the area, in particular in developing countries.

The present report, which is a joint contribution of several international agencies involved in the statistical measurement of information and communication technologies, presents an overview of work currently under way in the international community in the area of information and communication technology statistics. It will first give a brief overview of the global Partnership on Measuring Information and Communication Technologies for Development, including its objectives and activities. It will then present the outcome of a global stock-taking exercise on official ICT statistics at the national level. That will be followed by an overview of core ICT indicators currently under consideration by the international community covering such areas as basic infrastructure and access, households, businesses, the information and communication technology sector and education.

You know, that the first phase of the World Summit on the Information Society, held at Geneva in December 2003, a number of key international

stakeholders involved in the statistical measurement of information and communication technologies joined forces to create the global Partnership on Measuring Information and Communication Technologies for Development.

National statistical offices in statistically advanced countries are invited to contribute to Partnership activities and provide expertise and advice to offices in developing countries as well as transfer knowledge **in such areas as methodologies and survey programmes.**

The **Partnership aims** to accommodate and develop further the various initiatives regarding the availability and measurement of ICT indicators at the national, regional and international levels. It provides an open framework for coordinating ongoing and future activities and for developing a coherent and structured approach to advancing the development of ICT indicators globally, in particular in developing countries. The **objectives of the Partnership** are

(a) to achieve a common set of core ICT indicators, to be harmonized and agreed upon internationally, which will constitute the basis for a database on ICT statistics;

(b) to enhance the capacities of national statistical offices in developing countries and build competence to develop statistical compilation programmes on the information society, based on internationally agreed indicators; and

(c) to develop a global database on ICT indicators and make it available on the Internet.

2. A second phase of the Partnership is envisaged from November 2005 to the first half of 2008. The objective of the second phase is to disseminate and expand the work on measuring ICT, thus increasing ICT data availability at the international level. This objective will be achieved by further developing the capacity-building activities of the first phase and extending training programmes to new beneficiary countries. The international database on ICT indicators will be developed further.

In July 2004, a global exercise taking stock of ICT indicators was initiated in various regions through a metadata questionnaire on the current status of information society statistics, which was sent to national statistical offices in developing countries. The objectives of the exercise were

(a) to take inventory of existing and planned ICT indicators, questionnaires and methods of collecting statistics;

(b) to collect information that could lead towards standardized definitions and a set of commonly accepted ICT core indicators;

(c) to identify best practices and needs of national statistical offices in order to prepare technical assistance and an exchange of knowledge.

The questionnaire was divided into four sections: general questions on ICT statistics; ICT statistics in household surveys; ICT statistics in business surveys; ICT statistics in others sectors, such as industry and trade, education or Government.

The summary was complemented by an overview of the status of information society statistics in OECD member countries. A final report on the outcome of the survey was presented in 2005.

By the survey results:

- almost half of those countries in Asia and the Pacific and Central Asia and selected European countries used a specific ICT definition.

- three quarters of the national statistical offices financed the collection ICT indicators through their regular budget, and a similar percentage of the offices indicated that they produced publications about or containing ICT statistics.
- also, regarding *ICT household indicators* (NSO) level of demand was high or very high. The most common indicators were the presence of electricity, radio, fixed telephone, mobile phone, television, computers and Internet.
- and slightly more than half of the national statistical offices indicated a high or very high demand for ICT indicators collected through *business surveys*. The most common ICT business indicators were the presence of fixed telephone and mobile devices, the presence and number of computers, and Internet access.

Also Mongolian statistics on ICT has same trends as above survey results. By the survey results we need to improve the methodology and definition for ICT indicators, to define the source which is able to collect and to great reliability.

3. One of the main objectives of the Partnership is to define a set of core ICT indicators, which would be agreed upon by all countries and harmonized at the international level. The results of the metadata survey provide important inputs to this exercise, as they help to identify what countries currently consider as basic ICT indicators.

A set of basic ICT statistical indicators necessary to measure ICT readiness and usage by individuals, households, businesses and schools. The objective of the ongoing discussion at the national, regional and international levels is to agree on a common set of core ICT indicators to be collected by all countries, which would constitute the basis for an internationally comparable database on ICT statistics. The following remarks focus primarily on indicators related to basic ICT access and usage by households, individuals and businesses. The reasons for that focus are that

(a) individuals, households and businesses are key players in an information society,

(b) there is an emerging consensus on definitions, guidelines and methodologies regarding individual, household and business ICT indicators, as reflected in various national, regional and international initiatives. For example, OECD and Eurostat have developed model household and business surveys. However, little progress has been made on other ICT-related indicators, such as government or health.

Indicators on individual and household ICT access, use and ownership have important policy implications, helping Governments to assess the status of ICT infrastructure by geography, population segment, or economic sector, to identify the demand from individuals, assess the gap caused by affordability issues and measure the impact of ICT-related policies at household levels. Basic access indicators measured per capita. Furthermore, indicators of community and public access are particularly relevant for developing and least developed countries, where individual or household access to telephones, personal computers and the Internet is still far from universal. Mobile cellular telephone coverage is another way of measuring access (percentage of the population that is covered by a mobile cellular signal regardless of subscription).

Access to radio and television broadcasting in developing countries is predominant and far higher than access to other information and communication

technologies. Therefore, it is important to compile indicators on access to broadcast networks

With regard to the disaggregation of Internet access data according to location of use, the vast majority of households in developing countries do not have personal computers or Internet access, and many users rely on other points of access (e.g. other households, work, school, library, Internet cafés). Therefore, indicators that show the location of use of the Internet have also been proposed to capture public access. Similarly, data should be disaggregated according to the purpose of Internet use (e.g. communication, information search, electronic commerce, interaction with public authorities, training and education, health purposes).

Data on ICT use can be cross-correlated with other data collected, such as income, gender, education and other demographic characteristics of the respondent, to enhance the analysis of national digital divides. Furthermore, electricity is a large barrier to ICT development in a number of developing nations, since the lack of a suitable energy source has an impact on the ability to use ICTs. In that regard, an associated household indicator on access to electricity could be useful when collecting data on ICTs.

. *Statistics on the access to and use of ICTs by businesses* and on the ICT sector are important for a number of reasons. Firstly, the statistics allow policy makers to monitor information society developments and participate effectively in related international debates, such as in the context of the World Summit on the Information Society, or of World Trade Organization negotiations.

ICT statistics enable researchers to analyse ICT developments and to inform policy makers about trends and, most importantly, about the impact of ICTs on economic and social development. Finally, business people require reliable data upon which to base investment and strategic decisions.

Statistics on the use of ICTs by businesses (a) show the usage by firm characteristics; (b) facilitate analysis of the linkage between ICT and firm productivity and competitiveness; and (c) explain why some businesses do not use ICT so policy makers can take actions accordingly to promote demand for ICT applications.

Official ICT business data is readily available in developed countries, but it is still scarce in developing countries. Although some developing countries are collecting official ICT business data as part of business surveys, few have specific surveys on the access to and use of ICT by businesses. For example, most statistical data on e-commerce are available from private providers; definitions and methodologies differ and the data are thus not comparable. Collection is often performed on an ad hoc basis, and estimates and forecasts can be unreliable. Furthermore, other ICT business indicators, including those on e-business usage, barriers and impact, are practically non-existent.

ICT business indicators should measure general access and usage of ICT (for example, number of businesses with computers, Internet access), e-commerce (online sales and purchases), and e-business processes (for example, the automation of customer care, finance, logistics or order tracking). Core ICT business indicators should be basic, business-relevant and policy-relevant, and it should be feasible for national statistical offices from developing countries to collect them. Therefore, the proposed list of core ICT business indicators includes a number of ICT readiness indicators (such as the use of personal computers and the Internet and by how many employees and the presence of a web site, an Intranet or an Extranet), and at least two indicators on usage (online sales and purchases).

Indicators related to the ICT sector, which is defined by the International Standard Industrial Classification (ISIC), Rev. 3, can be considered separately from other business indicators (see annexes I, II and IV). ICT sector data is of importance in determining the relevance of the sector to national ICT policies as well as the contribution and impact of the sector to the economy.

Core indicators on the ICT sector refer to the sector's value to international trade and to value added, and to the relevance of the ICT sector to employment, disaggregated by gender. For national statistical offices in developing countries, it should be feasible to collect such data through industry specific surveys or from governmental administrative sources (private sources are not recommended). In addition to those sources, OECD proposes core indicators on the production value of the ICT sector, on trade and on ICT patents. For most countries in the world, trade and patent data are available from existing databases).

ICT indicators related to education can help to assess certain aspects of universal access to education at all levels as well as of the use of ICTs to achieve some of the international goals on education and development. High-quality, crossnational data and indicators on ICT in education will also help to monitor the progress towards achieving such goals. Data on ICT in schools can help policy makers take informed policy decisions on investing in ICT for education or implementing measures to improve learning outcomes through the use of ICT.

There exist a number of internationally sponsored and periodically administered surveys, each of which collect some limited information on ICTs within schools and provide a preliminary overview of the situation for many countries.

The National Statistical Office of Mongolia do collect some basic administrative data related to infrastructure and availability of ICTs within schools from which a core set of indicators can be built and analysed.

The ongoing international debate on ICT indicators has identified specific core indicators related to education and has addressed the question of ICT use for educational purposes in household surveys. Core indicators should measure the student-to-computer ratio in primary and secondary schools, the proportion of schools having Internet access for students, or the proportion of students enrolled in tertiary education in an ICT field. Further ICT indicators related to education could be a part of supplementary indicators to be collected at another level.

For the implementation of the ITU objectives first need to improve the methodology and to clarify measurement indicator's definitions. Mongolian statistics has some problems on the ITU statistics, by methodology and by the source of data. And also need to us some technical assistance.

B. Capacity building requirements NSO, Mongolia for the improvement ITU statistics

The capacity building assistance (including the exchange of experiences with experts and other statistical organizations) in the production of Information and Communication Technology (ICT) statistics are very important by the following area in NSO Mongolia:

- involve in trainings on set of statistical indicators on ICT use and introduction of methodologies for estimating those indicators, exchange experience, and recruit experts; and

- get technical assistance to conduct comprehensive and sample survey on ICT use of household, population, and business organizations, and production and services of ICT sector.

Specified the assistance:

1. For the designing of the questionnaire, sampling frames, sample design, interviewing, training of field staff and data analysis, dissemination for the sample survey to:

- ICT in households
- ICT in business
- ICT sector and products

2. Unfortunately, Mongolia has the low teledensity especially in rural areas and a few computers and Internet users, thus depriving citizens of what in most parts of the world is accessible by a mouse click or the touch of a keyboard. For the country to be competitive, this situation must change drastically. Consequently, the government is adopting an Information and Communication Technology Policy.

This policy aims to establish information society and the foundation of knowledge based society in Mongolia by enhancing extensive application of ICT in all society sectors. By 2012 Mongolia becomes one of the top ten ICT developed countries in Asia.

The main indicators on information and communication technology development are defined according to recommendation made by International Telecommunication Union.

Moreover 4 indicators were determined as criteria for target 18 ‘n cooperation with the private sector, make available the benefits of new technologies, especially information and communications’ of goal 8 ‘Develop a global partnership for development’ of the MDG. Currently Mongolia **is not able to estimate** accurately and completely the indicators of MDG and E-Mongolia such as number of personal computers per 1000 person and number of internet users per 1000 person and other indicators on ICT development.

Observing from other countries’ standards, a national statistical office is conducting sample surveys aimed at information on individuals and households, and individuals and households of information and communication technology at certain intervals and updates their results. Mongolia has not yet carried out the survey on use of information and communication technology and needs to conduct this type of survey to accurately evaluate implementation of the above goals and program. Also it is one of the pressing issues that the statistics of new and developing ICT sector should be systemized.

MAIN INDICATORS OF INFORMATION AND COMMUNICATION TECHNOLOGY DIVISION OF MONGOLIA

| | 2002 | 2003 | 2004 | 2005 |
|---|----------|----------|----------|-----------|
| <i>Number of telecommunication office</i> | 379 | 357 | 357 | 357 |
| <i>Number of post office</i> | 377 | 377 | 374 | 378 |
| <i>Communication services revenue, mln. tog, at current prices</i> | 38 707,2 | 92 430,7 | 99 933,8 | 128 393,3 |
| <i>Number of telephone lines*, thous.piece</i> | 135,5 | 145,3 | 152,6 | 160,5 |
| <i>Number of telephone lines, per 1000 population</i> | 55 | 58 | 61 | 63 |
| <i>Number of transition and relay TV stations</i> | 647 | 648 | 792 | 796 |
| <i>Number of wired- radio outlets, thous.piece</i> | 113,0 | 93,8 | 78,1 | 73,6 |
| <i>Number of TV sets,thous.piece</i> | 200,0 | 220,0 | 290,0 | 320,0 |
| <i>Number of cabel television users</i> | 46 278 | 53 228 | 64 130 | 77 277 |
| <i>Number of cellular mobile telephone subscribers,thous.person</i> | 256,8 | 319,4 | 445,1 | 570,9 |
| <i>Number of wireless telephones* (WLL)</i> | 14 033 | 18 408 | 21 078 | 23 003 |
| <i>Satellite subscriber</i> | 173 | 318 | 366 | 300 |
| <i>Number of internet service providers (ISP)</i> | 5 | 8 | 12 | 26 |
| <i>Internet cafe</i> | 88 | 118 | 120 | 115 |
| <i>Number of permanent internet users (subscriber) thous.person</i> | 10,0 | 11,2 | 20,4 | 22,0 |
| <i>Number of personal computer**</i> | 43 605 | 51 805 | 60 000 | 85 000 |
| <i>Number of personal computer, per 1000 population</i> | 18 | 21 | 24 | 33 |

Note: * Including telephone lines and wireless telephone of the government telecommunication network from 2005

** Source of data: Information and Communication Technology Authority

COMMUNICATION AND POSTAL SERVICE INDICATORS OF MONGOLIA, by kind

| | 2002 | 2003 | 2004 | 2005 |
|---|-------|-------|-------|-------|
| <i>Mail, traffic, parcel, thous.piece</i> | 800,0 | 722,1 | 815,4 | 821,6 |
| <i>per 1000 population, piece</i> | 312 | 290 | 324 | 322 |
| <i>Number of newspapers, mln.piece</i> | 17,0 | 18,5 | 12,6 | 13,8 |
| <i>per capita, piece</i> | 6,9 | 7,4 | 5,0 | 5,4 |
| <i>Number of telegrams, thous.piece</i> | 163,0 | 119,9 | 108,5 | 80,3 |
| <i>per 1000 population, piece</i> | 66 | 48 | 43 | 32 |
| <i>Number of trunk calls, mln.minutes</i> | 600,7 | 600,9 | 570,2 | 427,6 |
| <i>per capita, minutes</i> | 244 | 241 | 226 | 168 |

NUMBER OF TELEPHONES LINES, by regions, aimags and the Capital

| <i>Aimags and the Capital</i> | 2002 | 2003 | 2004 | 2005 |
|-----------------------------------|----------------|----------------|-----------------------|----------------|
| GRAND TOTAL | 135 480 | 145 294 | 152 563 | 160 493 |
| | | | <i>West region</i> | |
| <i>Total</i> | 9 865 | 12 067 | 12 996 | 13 435 |
| <i>Bayan-Olgii</i> | 2 100 | 2 833 | 3 056 | 3 109 |
| <i>Govi-Altai</i> | 1 891 | 2 141 | 2 333 | 2 403 |
| <i>Zavkhan</i> | 1 749 | 2 124 | 2 337 | 2 500 |
| <i>Uvs</i> | 2 086 | 2 505 | 2 695 | 2 732 |
| <i>Khovd</i> | 2 039 | 2 464 | 2 575 | 2 691 |
| | | | <i>Khangai region</i> | |
| <i>Total</i> | 18 352 | 20 460 | 22 000 | 22 705 |
| <i>Arkhangai</i> | 1 497 | 1 605 | 1 715 | 1 707 |
| <i>Bayankhongor</i> | 1 746 | 1 971 | 2 067 | 2 092 |
| <i>Bulgan</i> | 1 784 | 2 026 | 2 130 | 2 233 |
| <i>Orkhon</i> | 7 559 | 7 981 | 9 070 | 9 127 |
| <i>Ovorkhangai</i> | 3 079 | 3 281 | 3 228 | 3 436 |
| <i>Khovsgol</i> | 2 687 | 3 596 | 3 790 | 4 110 |
| | | | <i>Central region</i> | |
| <i>Total</i> | 22 075 | 23 272 | 24 199 | 24 855 |
| <i>Govisumber</i> | 668 | 617 | 582 | 565 |
| <i>Darkhan-Uul</i> | 10 300 | 10 842 | 11 361 | 11 618 |
| <i>Dornogovi</i> | 3 713 | 3 967 | 4 164 | 4 419 |
| <i>Dundgovi</i> | 1 861 | 2 001 | 2 061 | 2 066 |
| <i>Omnogovi</i> | 1 757 | 2 027 | 2 117 | 2 138 |
| <i>Selenge</i> | 1 910 | 1 930 | 1 953 | 1 982 |
| <i>Tov</i> | 1 866 | 1 888 | 1 961 | 2 067 |
| | | | <i>East region</i> | |
| <i>Total</i> | 5 140 | 5 785 | 6 513 | 6 503 |
| <i>Dornod</i> | 2 108 | 2 413 | 2 529 | 2 436 |
| <i>Sukhbaatar</i> | 1 176 | 1 415 | 1 545 | 1 527 |
| <i>Khentii</i> | 1 856 | 1 957 | 2 439 | 2 540 |
| | | | <i>Ulaanbaatar</i> | |
| Ulaanbaatar* | 80 048 | 83 710 | 86 855 | 92 995 |

Note: * Including telephone lines of the government telecommunication network from 2005.

Thank you for your kind cooperation.