



ITU Training Course on Measuring ICT Access and Use by Households and Individuals

Final Report

Amman, Jordan

30 May – 3 June 2011

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ITU Training Course on Measuring ICT Access and Use by Households and Individuals

Amman - Jordan

Final Report

1. General aspects

The objective of the **ITU Training Course on Measuring ICT Access and Use by Households and Individuals**, held in Amman, from 30 May to 3 June 2011, was to improve the capacity of national statistical offices and other government agencies dealing with ICT statistics in Arab countries to produce internationally comparable statistics on ICT access and use by households and individuals. The training was part of the regional project titled “**ICT Indicators and Capacity building for ICT measurement in the Arab Region**”.

The course was organized jointly by ITU (ICT Data and Statistics Division and the Arab Regional Office) and the Arab Institute for Training and Research in Statistics (AITRS), who hosted the event. The course was part of the joint ITU-UNCTAD-AITRS training on Measuring ICT Access and Use in Households and Businesses held from 30 May to 9 June 2011. The training was divided into two parts: the ITU training course was delivered during the first week (30 May - 3 June), followed by the UNCTAD training course the second week (5 June - 9 June).

The ITU training course was divided into the following five modules (see agenda in Annex 2):

- Module H-1: Introduction to household ICT statistics. Survey planning and preparatory work
- Module H-2: Statistical standards and topics. Data sources and collection techniques
- Module H-3: Questionnaire design. Household Survey design
- Module H-4: Data processing. Data quality and evaluation
- Module H-5: Data Dissemination

Financial support to the ITU training was provided by the project on ICT indicators from the ITU Regional Office in Cairo and by AITRS.

2. Participation

The course was attended by 26 participants, primarily from national statistical offices but also from ICT ministries and regulatory authorities, from the following 15 economies: Comoros, Egypt, Iraq, Jordan, Lebanon, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria and Yemen (see list of participants in Annex 3). Two of the participants from Jordan were consultants to AITRS.

All participants had previously had some experience in statistics, household surveys and/or ICT measurement and although the course included both ICT producers and users, it was rather homogeneous. The overall level of statistical knowledge and motivation of the participants allowed the majority of them to follow the course actively and benefit from it. The participants are expected to be able to use the knowledge acquired during the training to help produce more and better ICT demand side data in their countries. Arabic/English interpretation was provided, which facilitated the participation of non-English and non-Arabic speakers.

3. Course delivery

The main instructor delivering the course was Mr. José L. Cervera, consultant to ITU. The course was also used to train three potential trainers – Mr. Bouchkhar from Morocco, Mr Qalalwa from Palestine and Mr Al Khayari from Oman - who will be able to deliver the training, or provide advice to other countries in the region, in Arabic. To assess their content knowledge and presentation skills, each one of the three trainees delivered small parts of the training. ITU delivered an introduction to ICT measurement, the introduction to the ICT training course, an overview of the definitions of the core list of ICT household indicators, as well as an outline of the ITU data collection and dissemination activities. The course is designed to be highly interactive and includes group discussions, group exercises, as well as tests and evaluations for each of the five modules, all of which were managed and facilitated by ITU with support from Mr. Bouchkhar, who also reviewed the Arabic version of the tests.

The course was delivered in English with interpretation into Arabic. This was the first time the course was delivered simultaneously in two languages. The quality of interpretation was very good. Among the participants, some were fluent in English, while others participated only in Arabic. This experience showed that it is possible to use the tool of interpretation when needed, although it implies an extra effort of concentration for participants, trainer and facilitators. Providing the manuals and tests to the interpreters in advance would make their work significantly easier.

4. Overview of the training course outcome

The course was well received by the participants. The majority evaluated the content and the quality of the support material, as well as the methodology of the course as good, according to the final evaluation. In particular, participants appreciated the group discussions, the group exercises and the possibility to share experiences among countries. A number of participants suggested that in future trainings more time could be dedicated to national experiences.

The training emphasized not only the importance of ICT statistics but also the need for collaboration between policy makers and data producers and it is expected that this training will strengthen the relationship between these entities, particularly in countries where cooperation is currently weak. This is further expected to allow more countries in the region to produce more and better ICT demand-side statistics.

Most participants were well aware of the importance of collecting relevant and comparable ICT statistics to measure the information society. Some countries have already had some experience in collecting some or all of the indicators of the core list of indicators on ICT access and use by households and individuals. However, most countries with data collection experience continue to face data quality issues, which were addressed during the course. Some countries are in the process of expanding their ICT data collection and are planning a specific ICT survey, or an ICT module that will be attached to an existing household survey. For these countries, the timing of the training was very good since it will allow them to adapt their data collection to international standards, and to produce internationally comparable ICT data.

A major technical issue concerning indicators on access to, and use of ICTs by individuals is the quality of the statistical infrastructure for household surveys. Some countries in the region do not have up-to-date master household sample frames and do not carry out household surveys. And some rely on economic support of international organisations to carry out household surveys.

Moreover, some participants recalled the difficulty of collecting face-to-face information, especially in countries where visits of interviewers at home are not well accepted (and therefore replaced by non-probability, quota sampling in public places).

Most countries in the region that have collected some ICT indicators have done so by including a small number of ICT-related questions in the questionnaires of existing household surveys such on living conditions, employment, etc., or of the population census.

5. Evaluation of the course by participants

This section provides the results of the evaluation of the course carried out by the participants. Results are shown separately for the final overall evaluation of the course, and for each module.

5.1. General evaluation of the course

Topics covered in the final evaluation included the content of the course in view of the coverage of the topic, the depth of the technical level and the accuracy of the information delivered. It also assessed the quality of the support material, the methodology, the organisation, the duration and the number of participants. Participants were also asked to make general suggestions for improving the course. The scale used for this evaluation ranges from “very good” to “very poor”. Details of evaluation and answers are provided in Annex 1.

Content evaluation:

The content of the course was evaluated in terms of three components. The first was the coverage of the topic, which was evaluated as “very good” by the majority of the participants (60%), evaluated as “good” by 20% and “adequate” by 20%. The technical level was assessed as “very good” by 25%, assessed as “good” by 45% and “adequate” by the remaining 30%. “Accuracy” received an appraisal of “good” by half of the participants, while 25% evaluated it as very good, and another 25% as adequate. Participants recommended to include more practical examples and in particular, to show experiences from countries in the Arab region.

Support material:

The support material includes the ITU Manual for Measuring ICT Access and Use by Households and Individuals and the presentation slides used to deliver the five modules. Forty-five per cent of the participants evaluated the Manual as “very good” while another 45 % rated it as “good”. The remaining ten % qualified it as adequate. Regarding the slides, 40 % evaluated them as “very good” and 45 % as “good”. Some participants had difficulties to follow the slides in English in spite of the interpretation. Some also criticized the quality of the Arabic version/translation of the Manual, which needs to be revised for the next version of the Manual. The revision could be done by a small group of statisticians from the different Arab countries so as to ensure that the terminology, which in some cases varies between countries, is adapted.

Methodology:

Most participants evaluated the methodology as “good” (55%) and “very good” (30%). They praised the usefulness of group discussions, exercises and tests,

which are an integral part of each of the course modules, and expressed their interest in having more practical exercises.

Organisation:

The organisation of the course was qualified as “good” by 40% and as “very good” by 30% of the participants.

Duration:

Most of the participants (65%) considered the duration of the course adequate (long enough), while 20% considered it too long and 15% too short.

Number of participants:

Most participants (90%) considered the number of participants “adequate”.

General suggestions:

Among the **suggestions for change and improvement** of the course, participants suggested to emphasize the specific needs of the Arab countries. The course should also be reviewed to reflect any changes in terms of ICT technologies. A review of the indicators, in particular, is needed to allow countries to collect meaningful data so as to be able to formulate ICT policies and strategies. Participants also recommended improving the Arabic translation of the Manual.

Some participants suggested that ITU review countries’ survey questionnaires in cases where countries had doubts about the ICT access and use indicators. ITU’s support would help countries to make sure that the core indicators and their related standards are used.

The training highlighted that there are major differences in statistical capacity, household statistics practices and human, technical and financial resources within the Arab region. To address these differences, specific technical workshop and trainings could be offered to countries with similar needs and level of statistical capacity.

5.2. Evaluation of the modules

Each day, an evaluation of each of the five modules was conducted. Participants were requested to evaluate the following aspects of each module:

- Comprehensibility of the presentation and presenter
- Relevance of the module to their work, now or in the near future
- Value of group exercise in reinforcing learning
- Usefulness of supporting material: Manual and presentation slides

Similar to the final overall course evaluation, the scale used ranged from “very good” to “very poor”.

Participants were also asked which parts of the module they liked most/least, and to provide recommendations in order to improve each module.

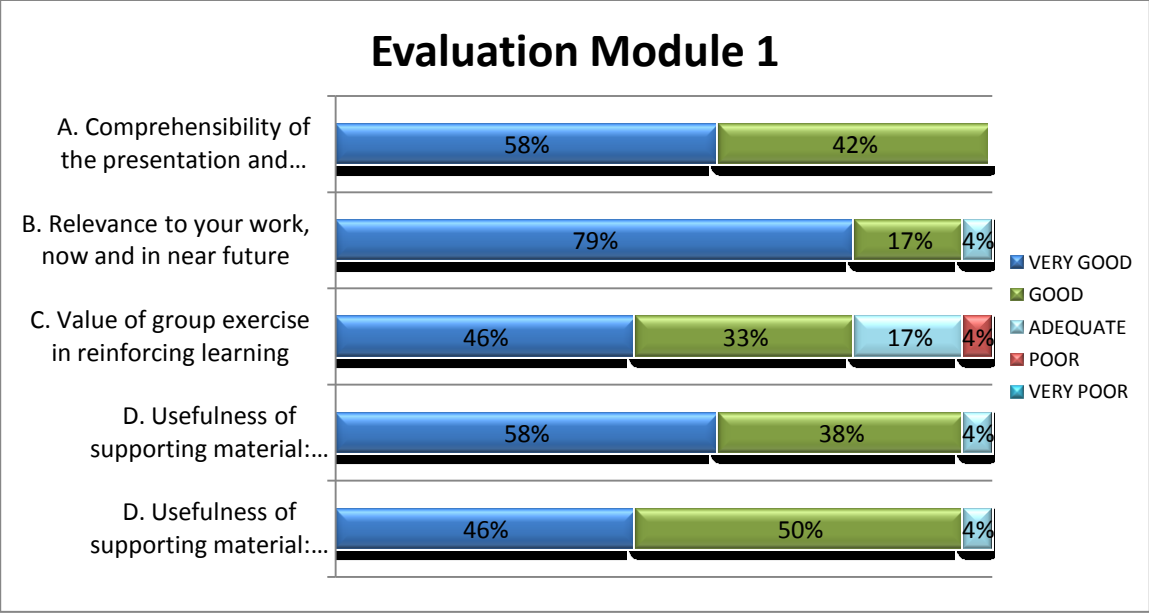
Module 1: Introduction to household ICT statistics. Survey planning and preparatory work

Most of the participants agreed that this module was very relevant for their work, either currently or in the near future (see graphic). In general, most participants liked the content of the module; many indicated that the survey planning was the part they found most useful. Concerning the value of the group exercise in reinforcing learning, 79 % of participants rated it as good or very good, the others rated it as adequate or poor, especially since they felt that not enough time was given to complete the exercise.

Among the suggestions made by participants were: to include more specific country examples, and allow more time for discussion in order to benefit from the experiences of others.

These have been indeed suggestions made in previous trainings and should be considered for the next revision of the Manual and the training material. A particular suggestion for organizers was to gather information on the challenges faced by countries carrying out household surveys when the statistical infrastructure is not adequate, or when the data collection is problematic. For these cases possible solutions and recommendations could be made and examples and practical experiences could be highlighted in the Manual.

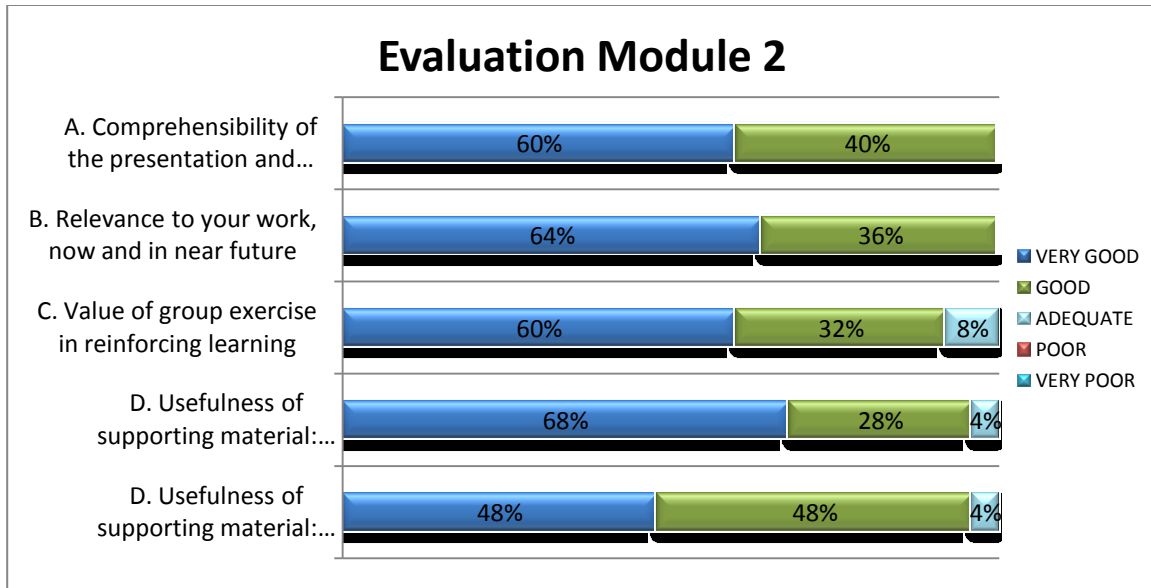
During the training course, references are frequently made to some general manuals on household surveys, especially those prepared by the UN Statistical Division. Reading some of the material could be part of the required preparation for the course.



Module 2: Statistical standards and topics. Data sources and collection techniques

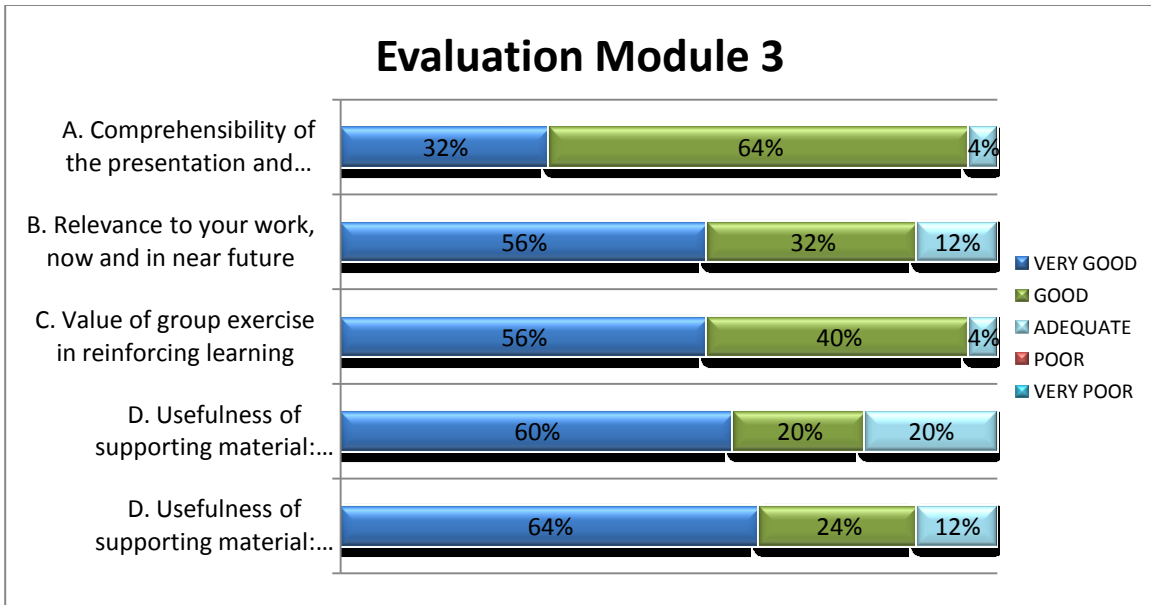
All aspects of this module were in general evaluated as very good and good. Despite interpretation, some of them had problems to follow the slides, which were only available in English. The most popular topics were the data sources, that is, the type of surveys in which ICT data can be collected, and also the ICT core indicator definitions. What participants like least in this module was that some parts of the discussions were not focused enough.

Among recommendations to improve the module, participants mentioned to have the slides in Arabic and to make sure that the discussion remains focused on the main topic.



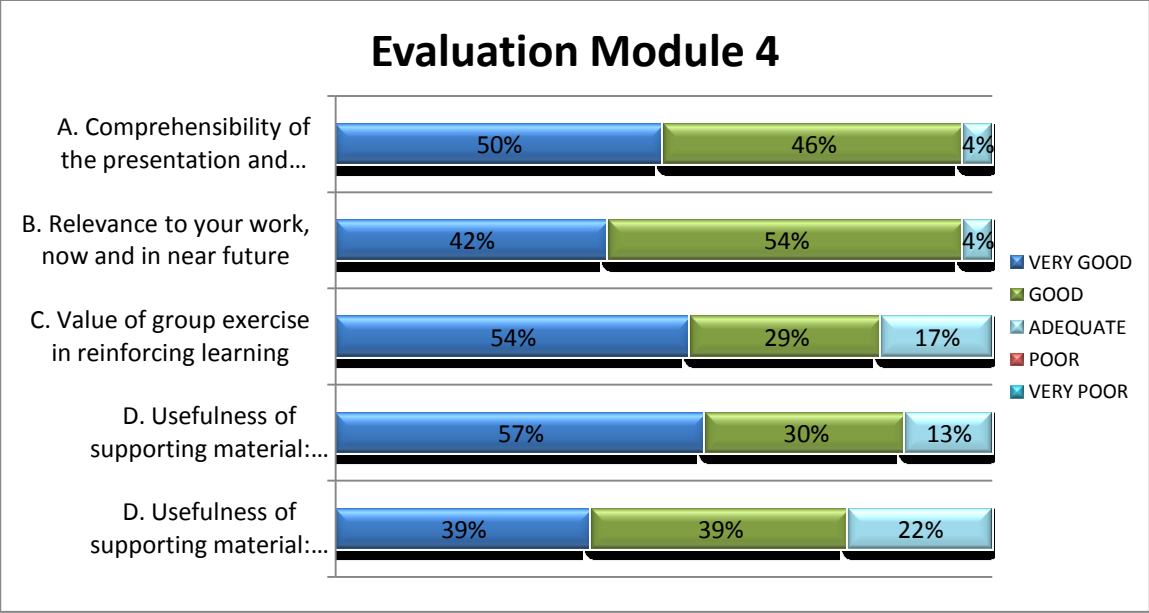
Module 3: Questionnaire design. Household Survey design

The evaluation varied across the different aspects of this module. The presentation slides were considered to be very good by almost two thirds of the participants, while some insisted that the translation of the Manual into Arabic needed some improvement. Most participants liked the part on the questionnaire design. As in previous trainings, the part on the survey design was challenging for some participants, especially those not familiar with this component of the statistics process. This highlights the need for a rigorous selection process and the need to ensure that all participants have a strong background not only in statistics but also in household survey design. The test of this Module posed some difficulties and participants requested to have more practical exercises on the survey design.



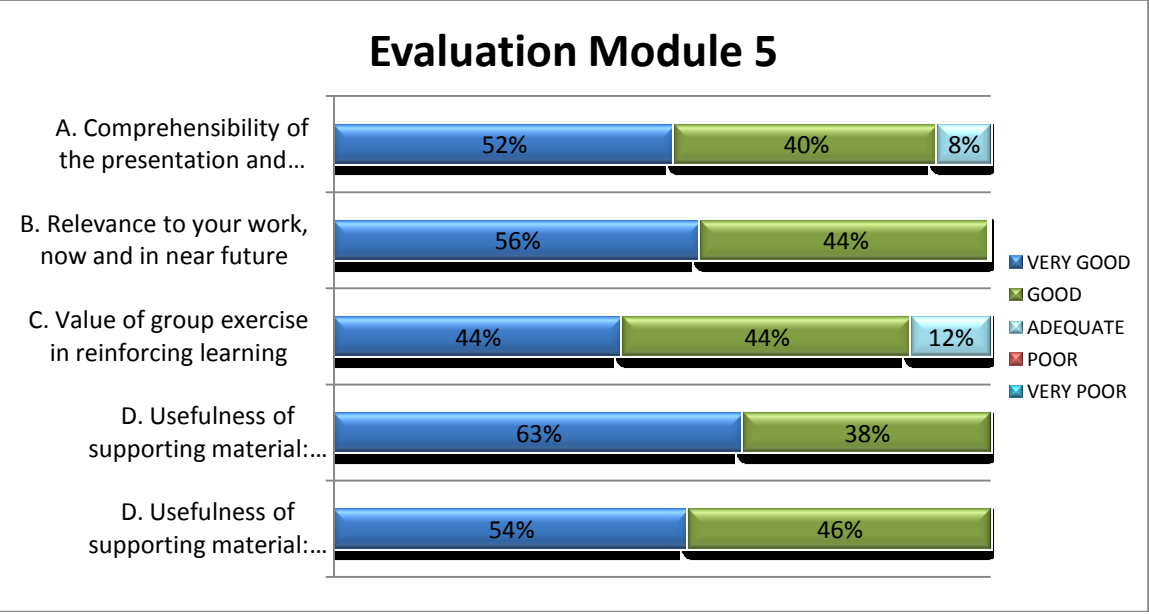
Module 4: Data processing. Data quality and evaluation

What participants liked most in this module were the issues related to data quality, especially data quality assurance frameworks and sampling and non-sampling error. This topic, which is very important to ensure the quality of statistics was new for some of the participants and stimulated high interest among most of them. In particular, participants asked to be given more time for practical exercises in the area of sampling error. This would require a relatively large number of computers for participants to use.



Module 5: Data Dissemination

Overall, participants like this module, and some highlighted that they liked the part on the metadata (which should be disseminated together with the data, but which is not yet a common practice across all countries in the region). This module is delivered in half a day and does not include any group exercises. There were no specific recommendations for improvements of this module.



6. Main findings and recommendations

The delivery of the training was timely and successful. The interest to collect, or expand the collection of ICT statistics was very high and it is to be expected that several of the countries will be able to produce a number of the ICT core indicators in the near future. The training also presented an excellent opportunity for ITU staff to gather additional information on the existence and quality of ICT statistics collected via household surveys in the region. Some countries may request further technical assistance, for example in the preparation and design of their questionnaires or ICT modules in household surveys.

Content of the Course

The content of the course is predesigned for an audience familiar with complex statistical subjects. As a prerequisite all participants were all required to be familiar with the process of producing statistics. Although the role of the Partnership is primarily to train participants on the production of ICT statistics, this training has shown that there is a need and interest from NSOs in having in-depth training to strengthen the theoretical knowledge and capacity on statistics in general.

Participants recommended including experiences from countries in the Arab region. In this regard, ITU requested countries to share their experiences so that these can be used in the next version of the Manual.

Methodology and support material

This was the first time the course was delivered simultaneously in English and Arabic and some adjustments need to be made to improve the Arabic translation of the course materials, in particular to the next revision of the Manual.

Participants recommended including more exercises and examples on how the different parts of the survey design, in particular of sampling design, are carried out in countries.

This is indeed an aspect that is very much appreciated by participants and has been already highlighted in other trainings. Participants also showed interest in having more information about practical examples on how to plan household surveys.

Cooperation at the institutional national and international level

The training showed the need for cooperation between users and producers of ICT statistics and to develop the link between the needs of the national ICT/strategy/plan and the production of ICT statistics. In this regard, it is recommended to:

- Establish an ICT working group at the national level, which should include the Ministry in charge of ICTs, regulators, telecommunication operators and national statistical offices. Such a working group should preferably operate under the umbrella of the National Statistical Council.
- Include an ICT module or an ICT survey in the multi-annual national statistical plan and to strengthen the national statistical offices' capacities to ensure a sustainable system of statistics.

In particular, participants coming from the Gulf countries, expressed their need for support concerning the constraints they face when conducting surveys, in particular to define the target population and adequate methodology to collect the data. There are two main factors which are challenging. First, these countries tend to have a large transit population working for fixed-term projects (many living in working camps or collective dwellings) and second, countries face a lack of statistical infrastructure, such as for example, adequate sampling frames and skilled interviewers. These challenges are related to the general statistical capacity of countries and not particularly to ICT statistics and therefore will need to be also by other related international bodies, such as the United Nations Statistical Commission and/or the UN population division. The training emphasized the importance of strengthening the capacities of the NSOs, which should have the required statistical infrastructure to guarantee the quality, continuity and sustainability of the data collection process.

Some countries suggested that ITU get in touch with the World Bank, which provides support for surveys in some countries of the region, so as to check on the possibility of including some ICT questions in those surveys. It was also recommended to work even more closely with ESCWA while conducting this type of trainings in the region. (ESCWA is represented in the steering committee of the ITU regional project).

The ITU regional advisor suggested that some of the existing ICT definitions need to be reconsidered and adapted to technological changes in the ICT environment, and particularly in the area of measuring the Internet infrastructure and services. This is very important to produce up-to-date and relevant ICT statistics and to a help guide policy makers and investors.

Dissemination

Besides disseminating data through different channels (printed publications, electronic files, websites), it is necessary to disseminate the methodologies and metadata, for users to have a better understanding and usage of the data.

Sharing the available information with the IHSN (International Households Survey Network) would give more visibility to the statistical work carried out by NSOs.

ITU recommendations to countries

Following the training, a number of specific recommendations were made.

In the area of **technical standards**, ITU recommends countries to:

- Consult the ITU Manual before designing any ICT household survey
- Adapt international standards discussed in the Manual
- Whenever possible, use the same classificatory variables for households and individuals that are recommended in the Manual, which in general are those already used in existing household surveys (such as age groups, education levels, employment status/occupation, rural/urban, etc.)
- Use the statistical and data collection infrastructure (survey frame, interviewers) of the national statistical office
- Select and train the interviewers in cooperation with ICT experts (regulator, telecommunication operators, Ministry of ICT)
- Share the questionnaire or module used with ITU before conducting the actual survey, of preference before conducting the pilot survey, in order for ITU to provide comments and help countries to meet the recommended standards
- Document the quality of the survey
- Initiate the process of evaluating the quality of the surveys, including the coherence of survey results with administrative data

In the area of **international cooperation**, ITU recommends countries to:

- Exchange questionnaires and methodologies with other countries
- Send any available data to indicators@itu.int, including any household access/individual use indicators that come from past households surveys
- Consult www.itu.int/ict or contact indicators@itu.int before carrying out a survey to check the latest version of the Manual and model questionnaire, definitions, etc
- Send any comments on the Arabic translation of the Manual to indicators@itu.int

Annex 1. Final Evaluation

Q1. The course was:		Number of answers	Percentage
Too long		4	20%
Long enough		13	65%
Too short		3	15%
Q.2 Number of participants:			
Too high		1	5%
Adequate		18	90%
Too low		1	5%
Q.3 The instructor performance:			
Very good		11	55%
Good		6	30%
Adequate		2	10%
Poor		1	5%
Very poor			
Q4. Content of the course:			
Coverage of the topic			
Very good		12	60%
Good		4	20%
Adequate		4	20%
Poor			
Very poor			
Technical level			
Very good		5	25%
Good		9	45%
Adequate		6	30%
Poor			
Very poor			
Accuracy			
Very good		5	25%
Good		10	50%
Adequate		5	25%
Poor			
Very poor			
Q5. Organization of the course:			
Very good		6	30%
Good		8	40%
Adequate		5	25%
Poor			0%
Very poor		1	5%

Q6. Support material:		
Manual		
Very good	9	45%
Good	9	45%
Adequate	2	10%
Poor		
Very poor		
Slides		
Very good	8	40%
Good	9	45%
Adequate	2	10%
Poor	1	5%
Very poor		
Q7. Methodology:		
Very good	6	30%
Good	11	55%
Adequate	3	15%
Poor		
Very poor		

Annex 2. Agenda

PART A: ICT Statistics on Households and Individuals

Monday, 30 May 2011

- 8:45 - 9:00 Registration of participants
- 9:00 - 10:00 **Opening session** (ITU, AITRS, Jordan DOS)
- 10:00 - 11:00 **Introduction to the course:**
Content, objectives and methodology
Presentation of instructor and participants
- 11:00 - 11:20 *Break*
- 11:20 - 11:30 Group Photo Session
- 11:30 - 13:00 **Module H-1: Introduction to household ICT statistics. Survey planning and preparatory work**
- 13:00 - 14:00 *Lunch*
- 14:00 - 15:30 **Module H-1: Introduction to household ICT statistics. Survey planning and preparatory work (cont.)**
- 15:30 - 15:45 *Break*
- 15:45 - 17:00 **Module H-1: Introduction to household ICT statistics. Survey planning and preparatory work (cont.)**
- 17:00 - 17:30 Test and Evaluation

Tuesday, 31 May 2011

- 9:00 - 10:30 **Module H-2: Statistical standards and topics. Data sources and collection techniques**
- 10:30 - 10:45 *Break*
- 10:45 - 13:00 **Module H-2: Statistical standards and topics. Data sources and collection techniques (cont.)**
- 13:00 - 14:00 *Lunch*
- 14:00 - 15:30 **Module H-2: Statistical standards and topics. Data sources and collection techniques (cont.)**
- 15:30 - 15:45 *Break*
- 15:45 - 17:00 **Module H-2: Statistical standards and topics. Data sources and collection techniques (cont.)**
- 17:00 - 17:30 Test and evaluation

Wednesday, 1 June 2011

- 9:00 - 10:30 **Module H-3: Questionnaire design. Household survey design**
- 10:30 - 10:45 *Break*
- 10:45 - 13:00 **Module H-3: Questionnaire design. Household survey design (cont.)**
- 13:00 - 14:00 *Lunch*
- 14:00 - 15:30 **Module H-3: Questionnaire design. Household survey design (cont.)**
- 15:30 - 15:45 *Break*
- 15:45 - 17:00 **Module H-3: Questionnaire design. Household survey design (cont.)**
- 17:00 - 17:30 Test and evaluation

Thursday, 2 June 2011

- 9:00 - 10:30 **Module H-4: Data processing. Data quality and evaluation**
- 10:30 - 10:45 *Break*
- 10:45 - 13:00 **Module H-4: Data processing. Data quality and evaluation (cont.)**
- 13:00 - 14:00 *Lunch*
- 14:00 - 15:30 **Module H-4: Data processing. Data quality and evaluation (cont.)**
- 15:30 - 15:45 *Break*
- 15:45 - 17:00 **Module H-4: Data processing. Data quality and evaluation (cont.)**
- 17:00 - 17:30 Test and evaluation

Friday, 3 June 2011

- 9:00 - 10:30 **Module H-5: Data dissemination**
- 10:30 - 10:45 *Break*
- 10:45 - 12:30 **Module H-5: Data dissemination (cont)**
- 12:30 - 13:00 Test and evaluation
- 13:00 - 14:00 *Lunch*
- 14:00 - 15:00 **Final course evaluation and discussion**
- 15:00 - 16:00 **Closing remarks**
Handing out of training certificates

Annex 3. List of Participants

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