ITU Asia-Pacific Regional Workshop on ICT Statistics

22 – 25 August 2017

Xi'an, China

FINAL REPORT

ITU Asia-Pacific Regional Workshop on ICT Statistics
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Final report[1]

Esperanza Magpantay, Senior Statistician, IDS
Wisit, Atipayakoon, Project Officer, ITU Regional Office for A&P
Koay Hock Eng, ITU Consultant

The **ITU Asia-Pacific Regional Workshop on ICT Statistics** was held from 22 to 25 August 2017 in Xi'an, China. The objective of the workshop was to strengthen the capacity of countries from the region to collect, produce, analyse, and disseminate quality indicators and statistics on telecommunication/ICT in a timely manner. The workshop was attended by 60 participants from 20 countries representing ministries, regulators and national statistical offices. The workshop was hosted by the Ministry of Industry and Information Technology of China with support from the Australian Government, China Academy of ICT, Xi'an University of Posts and Telecommunications, and Shaanxi Communications Authority.

The workshop focussed on the following broad areas:

- Overview of ITU's work on ICT statistics
- Sharing of country experiences
- ITU data collection methodologies, questionnaires, and data collection schedules and the role of national ICT statistics focal point
- Definitions and standards for Administrative data on Telecommunications and the Expert Group on Telecommunication/ICT Indicators (EGTI)
- Definitions and standards for ICT Household Indicators and Expert Group on ICT household Indicators (EGH)
- ICT Development index, and results of the Extraordinary meeting of the EGTI/EGH
- Global activities on ICT statistics, targets

1. Overview of ITU's work on ITU statistics

The ITU presented its work on ICT statistics, including data collection and dissemination, publications, expert groups and the World Telecommunication/ICT Indicators Symposium (WTIS). The participants appreciated in particular the publications produced by ITU, such as the:

- Measuring the Information Society Report (MISR), Yearbook of Statistics and the World Telecommunication/ICT Indicators database (WTID)
- Links to ITU free statistics and other information

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[1] More Information about the workshop including documents and pictures are available at http://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/Pages/Events/2017/Aug-aspstat2017/home.aspx.

2. Country experiences

The sharing of country experiences and challenges faced in the collection of ICT statistics are of particular value to participants. Country experiences were presented by the Philippines, Viet Nam, Bhutan, Malaysia, South Korea, and China. Experiences from China and Malaysia were shared by NSO, regulator/CAICT of MIIT. The experiences shared include mechanisms on national coordination, how data are collected, challenges faced when collecting the data and approaches taken to over the challenges identified.

A number of countries asked ITU to provide a national hands-on training (technical assistance) to enhance the availability and quality of their ICT statistics. It was suggested that countries who are planning to conduct a national ICT statistics capacity building workshop to send a request to ITU Regional Office for Asia and the Pacific who will coordinate with ICT Data and Statistics Division. The following countries requested technical assistance: Indonesia, the Philippines, India and Pakistan. The country technical assistance is subject to the availability of funds from the requesting country.

3. Definitions and standards for Administrative data on Telecommunications and the Expert Group on Telecommunication/ICT Indicators (EGTI)

The ITU Telecommunication/ICT Indicators definitions and methodologies from the ITU Handbook was used as the main reference document during the presentation and discussions of telecommunication administrative indicators. New indicators and updates to existing indicators were given emphasis during the workshop.

The ICT indicators to be collected from telecom and service providers were presented in a comprehensive manner during the workshop, providing detailed definitions and clarifying possible difficulties in collecting the data. The importance of submitting timely and complete data by telecom providers to NRA/ministry for the purposes of policy decision making needs, and submission to ITU was highlighted throughout the workshop. Around 75% of countries from the region responded to the ITU short WTI questionnaire 2017. Workshop participants reported encountering problems on timeliness of data submission by data providers, coverage and lack of database system for data collection and storage. Very few workshop participants have registered to be a member of the EGTI. The importance of having a national focal points (NFP) in the NRA/ministry was highlighted, including its roles. The NFP should ensure timely submission of comparable data to the ITU, should be member of the EGTI forum and actively participate in the discussions related to supply-side indicators.

The workshop recommended to identify focal points in each data provider and to implement capacity building (training) activities for the focal points. Further, it was recommended that NRAs and sector ministries have to be aware of ITU's data collection schedule and to initiate their data collection, compilation and quality assurance ahead of the ITU data collection schedule. In addition, questionnaires sent to data providers should include definition of indicators as spelt out in the ITU questionnaires. It was also suggested during the workshop that NRAs and sector ministries should collect the data on new telecom indicators, such as bandwidth and broadband traffic that will be included in the IDI next year.

To help address the lack of an online system to collect the data at the national level, countries requested ITU to help establish an online generic data collection, database storage and retrieval system. The ITU regional office in Bangkok will explore possible funding source who can help finance the project. The system can be used by countries who do not have any system in place.

4. Definitions and standards for ICT Household Indicators

During the workshop, the overview of ITU data collection of ICT household indicators was presented, along with the indicators and their definitions as listed in the ITU Manual for Measuring ICT Access and Use by Households and Individuals (Manual). It was emphasized that the Manual should be used as the main reference document for collecting ICT household indicators, taking note of updates to current edition. Overall, around 37.5% of countries from the region submitted the data through the ITU Short Household Questionnaire 2017. This low response rate was mainly because not many countries in the region have included ICT questions in their household surveys, citing problems of resources and skills to collect the data. In addition, very few workshop participants have registered to be a member of the EGH.

It was recommended that the NSO and the NRA/sector ministry should coordinate and collaborate to launch the ICT household survey. NSO should look at the technical skill aspects of sampling and deploy their statistical infrastructure, while the NRA/sector ministry can contribute their subject matter expertise and perhaps funding. In the absence of a dedicated ICT household survey, ICT questions can be integrated as a module in existing household surveys (for example living standard survey), or as additional questions in existing household surveys. Priority should be given to ICT indicators included in the IDI and the SDG Indicators Framework. The ITU Manual and new indicators added thereafter should be used as the main reference document for defining and collecting ICT household statistics. It was further recommended to continue reporting ICT statistics regularly through the ITU Household Questionnaires, particularly the ongoing HH long questionnaire 2017. National focal point (NFP) is encouraged to join the EGH, participate in the discussions and face-to-face meetings.

5. National Coordination

ICT data collection and dissemination involves a number of different stakeholders at the national level. There are best practice examples of coordination on ICT statistics in several countries presented during the workshop.

It was recommended that coordination among national stakeholders should be enhanced in order to improve the ICT data production and dissemination, and reduce data gaps. The NSO could play an active role in this regard. National coordination mechanisms should be actively pursued (e.g. inter-agency committee), which brings together regularly all stakeholders involved in ICT statistics to discuss data priorities based on policy needs, and manage and harmonize data production and dissemination.

6. National focal points

The importance of having a National Focal Point (NFP), who will ensure collection and coordination of data collection within the country, was also discussed during the workshop. It was highlighted that the NFP should be aware of international discussions, and should attend ICT indicators meetings

and discussions (including the EGH and EGTI) and should ensure that their contact details registered with the ITU are updated.

7. ICT Development Index (IDI)

The current IDI was presented and extensively discussed during the workshop. Questions related to the data used in the calculation of the current IDI were asked by participants, particularly the estimates that are used in the calculation. It was explained during the workshop that the data collected from the ITU short questionnaires in the beginning of April are used to calculate the IDI. If countries don't submit the questionnaire, latest year data are estimated using information from previous years when available. In the absence of adequate data, countries who do not submit the short questionnaires are excluded from the IDI. The importance of providing accurate and timely data for the IDI analysis was emphasized during the workshop.

The indicators to be included in IDI 2018, agreed during the Extraordinary Meeting of the EGTI/EGH conducted in March 2017, were presented, discussed and debated. Participants requested clarifications on the indicators and guidance on what to do in the absence of such data from countries. They also requested clarification on whether the IDI 2018 indicators are considered final or whether it will be further discussed in the September meetings of the EGTI/EGH and WTIS. It was clarified by ITU that the list of indicators for IDI 2018 is final, and it will not be discussed in the upcoming expert group meetings or WTIS in 2017. It was recommended that countries should collect and submit (timely) data to be included in the IDI 2018 and to make sure that efforts to collect those indicators have started already, to ensure that data can be collected in March 2018.

China presented the results of the provincial IDI, which they had calculated to analyse the development of ICT at the sub-national level, using the ITU IDI methodology. China proposed that similar initiatives can be done in other countries. Indonesia also shared their experiences in calculating provincial IDI, with the objective to measure the digital divide that exist between the different provinces in the country. China further presented their research on compiling the Internet Development Prosperity Index in the light of the rapid internet industry development in China. The presentations were appreciated by participants.

During a round table discussion, Chinese operators provided overview of their operations, highlighting the progress made in the country, particularly related to new areas including IoT, cloud computing, AI and big data. In addition, selected countries (Bangladesh, Iran and Korea) shared their views on the improvement of IDI. Experts from these countries indicated their appreciation of the IDI and recognized that it is a useful tool that can be used to benchmark ICT developments across and between countries. Experts from mobile operators suggested indicators that could be included in the future (such as IoT, big data, e-commerce, and AI). The workshop was informed that at this stage it is too early to include those indicators, as there are no internationally agreed/defined indicators that could be used to measure them. Experts from the mobile companies were encouraged to start measuring those future trends and to share their experiences in the ITU expert groups for consideration in future discussion topics.

8. Big Data

An update on ITU pilot project on big data for measuring the information society was presented. The experience from the Philippines, one of the pilot countries, was also presented. The topic attracted high attention among participants. Some countries, China and Indonesia, expressed interest in joining the second phase of the project.

9. Conclusion

The workshop was highly appreciated by participants, as demonstrated by the evaluation results. 65% of the participants evaluated the workshop content and delivery as excellent while the remaining 35% said it was good. The workshop provided a unique opportunity to participants to learn the specific technical details related to the indicators collected by ITU. The workshop was very interactive with a high-level engagement of participants. It illustrated the need for regularly conducting regional or country technical workshops, as many participants were not familiar with the definitions and standards and since staff in national offices and regulators change frequently.

There was a good participation from NSOs which shows their interest in collecting ICT demand side data based on household surveys. Their participation will foster national coordination on ICT measurement and could help promote ICT statistical data collection by including the topic in their national strategies for statistical development (NSDS).

There are significant data gaps in Pacific Island countries. Two countries from the Pacific (Fiji and Papua New Guinea) participated in the workshop. More efforts have to be done in the Pacific to help increase the level of data availability in those countries.

30 August 2017

WORKSHOP AGENDA

ITU Asia-Pacific Regional Workshop on ICT Statistics

22-25 August 2017

VENUE: Xi'an, China

Day 1: ICT Statistics – Overview and Indices Introduction	
9:00-9:30	**Welcome Remarks** • Huang Yejing, Director, Dept of ICT, MIIT, China • Gao Cailing, Director, Shaanxi Communication Authority, China • Fan Jiulun, President, Xi'an University of Posts and Telecommunications • Wisit Atipayakoon, Programme Officer, ITU
9:30-9:45	**1. Introduction and rationale** 1.1 Introduction and objective of the workshop 1.2 Rationale for collecting high-quality and internationally comparable ICT statistics: national policy-making, market signaling, international benchmarking, international commitments (e.g. SDG indicators etc.) *Speaker: Esperanza Magpantay, Senior Statistician, ITU*
9:45-10:15	**Group photo and coffee break**
10:15-11:15	**2. Overview of ITU's work on ICT statistics** 2.1 Collection and validation of global administrative and household ICT statistics 2.2 Development of internationally comparable ICT indicators 2.3 Dissemination of ICT trends and analysis *Speaker: Esperanza Magpantay, Senior Statistician, ITU*
11:15-12:30	**3. National ICT data collection and challenges** 3.1 Country experience – Alana Ramos, DICT, Philippines 3.2 Country experience – Pham Hong Khiem, MIT, Viet Nam 3.3 Country experience – Sonam Phuntsho, BICMA, Bhutan 3.4 Country experience – Norisan Mohd Aspar, Department of Statistics, Malaysia 3.5 Country experience – Bi Xinhua, National Bureau of Statistics, China 3.6 Country experience – Choy Yee Wong, MCMC, Malaysia 3.7 Country experience – Seung Keon Kim, KAIT, Korea *3.8 Discussions* *Moderator: Hock Eng Koay, ITU Consultant*
12:30-14:00	**Lunch break**
14:00-15:00	**4. Understanding composite indices** 4.1 What is a composite index? 4.2 What can a composite index tell us? 4.3 What can't a composite index tell us? 4.4 Constructing a composite index: good practices *Speaker: Hock Eng Koay, ITU Consultant*
15:00-16:00	**5. The ICT Development Index (IDI)** 5.1 Conceptual framework: access, use and skills 5.2 Current list of indicators 5.3 Value versus rank: absolute versus relative change 5.4 Results of the 2017 Extraordinary Meeting: revised list of indicators and way forward *Speaker: Esperanza Magpantay, ITU*
16:00-16:30	**Coffee break**
16:30-17:00	**6. Internet Prosperity Index Research Report** *Speaker: SUN Ke, Deputy Director, China Academy of Information and Communications Technology, China*
17:00-17:30	**7. China's Provincial ICT Development Index (IDI) Research Report**

	Speaker: CHEN Jingqiao, Deputy Chief Engineer, China Academy of Information and Communications Technology, China

Day 2: Telecom/ICT Indicators (Definitions & Standards) and Big Data	
9:00-9:15	Interaction and discussion: recap from day 1 *Facilitator:* Wisit Atipayakoon, ITU
9:15-10:15	**8. Fixed-telephone network, mobile-cellular network and international bandwidth indicators** 8.1 Fixed-telephone indicators 8.2 Mobile-cellular indicators 8.3 International bandwidth indicators *Speaker: Hock Eng Koay, ITU Consultant* 8.4 Discussion
10:15-10:30	**Coffee break**
10:30-12:30	**9. Fixed-broadband, mobile-broadband and bundled telecommunication services indicators** 9.1 Fixed-broadband indicators 9.2 Mobile-broadband indicators 9.3 Bundled telecom services indicators *Speaker: Esperanza Magpantay, ITU* 9.4 Discussion
12:30-13:30	**Lunch break**
13:30-15:00	**10. Quality of service and traffic indicators** 10.1 Quality of service indicators 10.2 Traffic indicators *Speaker: Hock Eng Koay, ITU Consultant* 10.3 Discussion
15:00-15:30	**Coffee break**
15:30-16:30	**11. Revenue, investment, employment and Pay TV** 11.1 Revenue indicators 11.2 Investment indicators 11.3 Employment indicators 11.4 Pay TV indicators *Speaker: Esperanza Magpantay, ITU* 11.5 Discussion
16:30-17:30	**12. Big Data** 12.1 Understanding Big Data – *Hock Eng Koay* *12.2* Big Data for Measuring the Information society – *Esperanza Magpantay* 12.3 Discussion

Day 3: Household ICT Indicators (Definitions & Standards)	
9:00-9:15	Interaction and discussion: recap from day 2 *Facilitator:* Wisit Atipayakoon, ITU

9:15-10:30	**13. Getting ICT data through surveys**
	    13.1 Collaborating and coordinating for household ICT statistics
	    13.2 Getting ICT data through surveys: good practices
	Speaker: Hock Eng Koay, ITU Consultant
	
	14. Overview of household ICT indicators
	    14.1 ICT household indicators
	    14.2 Disaggregating the data by socio-demographics: why and how
	    14.3 Improving methodologies through the Expert Group on Household ICT Indicators (EGH)
	Speaker: Esperanza Magpantay, ITU

10:30-11:00	**Coffee break**

11:00-12:30	**15. Household ICT indicators included in the IDI and SDGs**
	    15.1 HH4: Proportion of households with a computer
	    15.2 HH6: Proportion of households with Internet
	    15.3 HH7: Proportion of individuals using the Internet
	    15.4 HH15: Individuals with ICT skills, by type of skills
	    15.5 HH18: Proportion of individuals who own a mobile phone
	Speaker: Esperanza Magpantay, ITU

12:30-14:00	**Lunch break**

14:00-15:30	**16. How to report your survey data to ITU**
	    16.1 Practical considerations: data collection schedule, processes and validation checks
	    16.2 Avoiding common mistakes in reporting survey data
	Speaker: Esperanza Magpantay, ITU

15:30-16:00	**Coffee break**
16:00-17:00	**17. Discussion: ICT Infrastructure and ICT Use Indicators** *Moderator: CHEN Jingqiao* *Panelists: China Mobile, China Telecom, China Unicom, Bangladesh, Iran and South Korea*

17:00-18:00	**18. Conclusion and Way Forward**
	    18.1 Conclusions and way forward – *Esperanza Magpantay, ITU*
	    18.2 Closing ceremony

Day 4: Investigation and Research	
9:00-12:00	**Investigation and research** (Visit to rural e-commerce enterprises, e-government cases, Xian Yang Smart Cities)

NOTE: *A reading list will be distributed two weeks before the workshop and participants are expected to read the materials ahead of time. Participants are also requested to bring their laptops (if available) or inform the workshop organizers if they cannot do so, at least one week before the workshop.*

List of Participants

No	Country	Title	First Name	Last Name	Designation	Organization
1	Bangladesh	Ms	Rokshana	Mhajabin	Senior Assistant Director	Bangladesh Telecommunication Regulatory
2	Bangladesh	Mr	Chandra Shekhar	Roy	Senior Maintenance Engineer	Bangladesh Bureau of Statistics (BBS)
3	Bhutan	Mr	Sonam	Phuntsho	Senior Communication Officer/Engineer	Bhutan InfoComm and Media Authority
4	Brunei	Mr	Mohammad Faizullah Syawandy	Bin Md Zaidi	Assistant Manager	
5	Cambodia	Mr	Meng	Kimhor	Deputy Director General of NIS	NIS, Ministry of Planning
6	Cambodia	Mr	Yousos	Tum	Deputy Director	Ministry of Post and Telecommunication
7	Cambodia	Mr	Rady	Koy	Chief of Administrative Office of Telecommunication Regulation	Telecommunication Regulator of Cambodia
8	Cambodia	Mr	Samlot	Sok	Official of the IT Office of Dept. Admin. Personal and Int'l Relation	Telecommunication Regulator of Cambodia
9	Cambodia	Mr	Satha	Touch	Official of Licensing Office of Dept. of Telecommunication Regulation	Telecommunication Regulator of Cambodia
10	Fiji	Mr	Jone Waika	Cagialau	Engineering Support Officer	Telecommunications Authority of Fiji
11	India	Ms	Shobha	Sharma		Economic Statistics Division
12	Indonesia	Mr	Sindhu	Permadhie		Ministry of Communication and Information Technology
13	Indonesia	Ms	Eni	Lestariningsih	Head of ICT Statistics Division	BPS-Statistics Indonesia
14	Indonesia	Ms	Aulia Astagina	Ramadhani	Head of Subdiv. of PIT, AI and PIC Multilateral Affairs	Ministry of Communications and

No	Country	Title	First Name	Last Name	Designation	Organization
						Information Technology
15	Iran	Mr	Abbas	Salmanizadeh	Director General	Communications Regulators Authority
16	Lao, P.D.R.	Mr	Chanthone	Chanthavong	Head of Statistic Division	Ministry of Post and Telecommunication
17	Malaysia	Ms	Norisan	Mohd Aspar	Statistician	Department of Statistics
18	Malaysia	Ms	Choy Yee	Wong		Malaysian Communications and Multimedia Commission
19	Malaysia	Ms	Thuraiya	Muhammad Arif		Malaysian Communications and Multimedia Commission
20	Mongolia	Mr	Mandakhzorig	Odbaatar	Officer	National Statistical Office of Mongolia
21	Mongolia	Mr	Tsend-Ayush	Narantungalag	Expert for market analysis and statistics	Communications Regulatory Commission
22	Nepal	Mr	Arjun	Ghimire	Deputy Director	Nepal Telecommunications Authority
23	Nepal	Mr	Purushottam Prasad	Khanal	Director	Nepal Telecommunications Authority
24	Nepal	Mr	Gautam Lal	Shrestha	Manager	Nepal Doorsanchar Co. Ltd.
25	Pakistan	Mr	Arif	Muhammad	Director (Economic Affairs)	Pakistan Telecom Authority
26	Papua New Guinea	Mr	Lume	Polume		National Information Communications Technology Authority
27	Philippines	Ms	Vanessa	Flaminian	Engineer	National Telecommunications Commission
28	Philippines	Ms	Alana Purificacion	RAMOS	Division Chief, Program Monitoring, Evaluation and Statistics Coordination	Department of Information and Communications Technology
29	Philippines	Ms	Sarah	Balagbis		Philippines Statistics Authority

No	Country	Title	First Name	Last Name	Designation	Organization
30	Philippines	Ms	Sotera	de Guzman	Supervising Statistical Specialist	Philippines Statistics Authority
31	Philippines	Ms	Carole	Blanco	Chief Statistical Specialist	Philippines Statistics Authority
32	R.O. Korea	Dr	Seung Keon	Kim	Vice President	Korea Association for ICT Promotion
33	R.O. Korea	Ms	Sein	Jung	Principal Researcher	Korea Association for ICT Promotion
34	Sri Lanka	Ms	Amali Dinusha	Abeysekera		Telecommunications Regulatory Commission
35	Thailand	Ms	Suphanida	Satjasai	Statistician	National Statistical Office, Ministry of DE
36	Vietnam	Mr	Khiem	Pham Hong	Senior Officer of Dept. of Planning - Finance	Ministry of Information and Communications
27	Vietnam	Mr	Quynh	Nguyen Tien	Official	Viet Nam Telecommunication Authority
38	ITU	Mr	Wisit	Atipayakoon	Project Officer	ITU
39	ITU	Ms	Esperanza	Magpantay	Senior Statistician	ITU
40	Malaysia	Mr	Hock Eng	Koay	ITU consultant	ITU
41	ITU	Mr	Vorrapot	Boonsongjai	Photographer	ITU
LOCAL PARTICIPANT LIST						
1	China		HUANG Yejing		Director	Department of ICT Development, Ministry of Industry and Information Technology
2	China		XU Ming		Chief Clerk	Department of ICT Development, Ministry of Industry and Information Technology
3	China		XU Baitao		Director	Bureau of operational monitoring coordination, MIIT
4	China		GAO Jingjie		Clerk	Bureau of ICT administration, MIIT

No	Country	Title	First Name	Last Name	Designation	Organization
5	China		BI Xinhua		Deputy Director	National Bureau of Statistics
6	China		Jinqiao	CHEN	Deputy Chief Engineer	China Academy of ICT
7	China		Ke	SUN	Deputy Chief	China Academy of ICT
8	China		Mingzhu	WANG	Engineer	China Academy of ICT
9	China		Yunsong	YUE	Engineer	China Academy of ICT
10	China		Hui	SHENG	Assistant Engineer	China Academy of ICT
11	China		Jing	CHU	Engineer	China Academy of ICT
12	China		Xiaohui	CHEN	Assistant Engineer	China Academy of ICT
13	China		Ying	WANG	Engineer	China Academy of ICT
14	China		Zhengxia	GONG	Engineer	China Academy of ICT
15	China		Cailing	Gao	Director	Shaanxi Communications Authority
16	China		Yichi	YU		Shaanxi Communications Authority
17	China		Hongbo	WANG		Shaanxi Communications Authority
18	China		Jiulun	FAN	President	Xi'an University of Posts and Telecommunications
19	China		Jiamin	GONG	Vice President	Xi'an University of Posts and Telecommunications
20	China		Hong	ZHANG	Director	Xi'an University of Posts and Telecommunications
21	China		Yonghong	LI	Deputy Director	Xi'an University of Posts and Telecommunications
22	China		Shuangyang	ZHOU		Shaanxi Branch of China Unicom
23	China		Linjin	MA	Secretary general	Shaanxi Communications Industry Association

No	Country	Title	First Name	Last Name	Designation	Organization
24	China		Lina	WU		China Unicom
25	China		Shipeng	LIU	Project Manager	China Mobile
26	China		Di	ZHU		Shaanxi Branch of China Mobile
27	China		Zhou	ZHOU		China Telecom
28	China		Dan	LI		China Telecom
29	China		Yue	ZHANG		Shaanxi Branch of China Telecom
30	China		Yingbin	ZHANG		Shaanxi Branch of China Telecom