**12th World Telecommunication/ICT indicators Symposium (WTIS)**

**24-26 November 2014**

**Tbilisi, Georgia**

**DRAFT Conclusions and recommendations**

**Presented by the Chair**

1. The 12th World Telecommunication/ICT Indicators Symposium (WTIS) was opened by the Prime Minister of Georgia, Ministers and ITU elected officials, followed by a Ministerial Roundtable on the post 2015 development agenda and future priorities for ICT for development (ICT4D) policy. Other topics featured during the Symposium included big data for development and the future of ICT measurement; measuring competition, regulation and affordability of ICT services; current and future work on telecommunication/ICT indicators and on ICT household indicators, including reports by the Expert Group on Telecommunication/ICT Indicators (EGTI) and the Expert Group on ICT Household Indicators (EGH); and data quality, big data and open data.
2. A special session on international coordination of ICT measurement was held at the occasion of the 10th Anniversary of the Partnership on Measuring ICT for Development.
3. For the first time, the ITU Measuring the Information Society Report was launched at WTIS during a special launch ceremony. A session dedicated to the discussion of the results of the report took place, followed by a panel debate on the ICT Development Index (IDI).
4. Based on the WTIS presentations and discussions, the following conclusions and recommendations are made.
5. **The post 2015 development agenda and future priorities for ICT for development (ICT4D)**
6. The Ministerial Roundtable highlighted that the post 2015 development agenda will be the most important force shaping the future for development, as well as the future information and communication technologies for development (ICT4D) priorities. It highlighted a mismatch between new development priorities and the current ICT4D debate, which requires re-thinking and should be adapted to the new trends of the post 2015 development agenda, with a focus on sustainable and inclusive development.
7. Panelists recognized that future development projects need to recognize ICTs not simply as a tool amongst others, but rather as a platform that inherently transforms development into digital development. To this end, citizens need to be digitally empowered, become the owners of ICTs, and be equipped with the necessary digital skills.
8. The panel discussion emphasized that ICT development levels continue to vary greatly between and within countries and that policies, particularly in developing countries, and must deliver sustained and equitable ICT infrastructure (in particular broadband) and access, to ensure that eventually all citizens, including in rural and remote areas, can benefit from ICTs as a platform.
9. The WTIS demonstrated that the post 2015 development agenda acknowledges the importance of measurement for policy making, including through its call for a data revolution. A future monitoring framework should take advantage of big data, and equip data users with the necessary skills to analyze big data. Impact measurement is important to gather empirical evidence on progress made through ICTs. ICT measurement priorities also need to adapt to monitor future ICT4D priorities and need to continue to track digital inclusion.
10. **Big Data for development and the future of ICT measurement**
11. The session illustrated that big data offer significant possibilities for producing new ICT indicators and for providing new data that can be relevant for international and national development policies, social and economic planning, and emergency and disaster relief programmes.
12. The ICT sector is a major source of big data. This includes, among others, data from telecommunication operators, such as mobile phone data; data from social network service providers; and ICT equipment providers, such as network and mobile device manufacturers. Data available on the web offer important insights into geographic and other inequalities related to ICT and the global digital divides. The Telefonica example of Ebola has illustrated vividly how mobile phone data can be used by policy makers in the case of disease tracking and the coordination of relief efforts.
13. The international and national statistical community should take an active role in exploring the use of big data for official statistics. The session highlighted a number of good examples of how National Statistical Offices (NSOs) have embraced big data for their statistical work. The United Nations Global Working Group on Big Data plays an important role in this regard, by providing strategic guidance as well as concrete and practical examples of big data sources. ITU should participate in these activities and explore the potential of using big data for measuring the information society. Consideration should be given to engaging in partnerships with private sector companies and other stakeholder to join forces in the production of new, high-quality, policy-relevant data.
14. Participants highlighted a number of issues that need to be taken into consideration when starting to use big data. These include data privacy and confidentiality, human and financial resources, as well as methodological considerations which can impact on the quality of the data. Furthermore, the representativeness of big data needs to be carefully assessed before data are disseminated for use by policy makers and other stakeholders.
15. **Measuring competition, regulation and affordability of ICT services**
16. The panellists presented evidence from academic research as well as country experiences confirming that affordability of ICT prices remained a determining factor for ICT uptake, particularly among low-income sectors of the population, and that competition and regulation played a key role in shaping prices and therefore they could be enablers of ICT uptake.
17. The panellists highlighted that market analyses, which are at the core of regulation, required detailed data to explore the effects of regulatory remedies on competition and, ultimately, on prices. Data are also vital for evidence-made decisions on spectrum management, digital inclusion programmes and other policy initiatives that have an impact on prices.
18. The Symposium recognized data gaps that prevented better quantitative assessments of the impact of regulatory and policy initiatives, as well as the need for more analytical studies on the data already available to inform policy-makers, particularly in developing countries.
19. The Symposium highlighted the importance of producing statistics to evaluate the impact of regulatory measures. Data should cover the whole ecosystem, including supply-side data, such as detailed data on ICT prices, and demand-side data, such as granular data obtained from ICT household surveys.
20. **Current and future work on Telecommunication/ICT Indicators**
21. The Symposium welcomed the growing participation of experts in ICT statistics in the work carried out by the Expert Group on Telecommunication/ICT Indicators (EGTI). Delegates also welcomed the collaboration between EGTI and the Expert Group on ICT Household Indicators (EGH) to discuss the issues that are relevant to both groups.
22. The Symposium acknowledged the work carried out by EGTI in 2014 under the chairmanship of Iñigo Herguera, from Spain, and endorsed the outcomes of the 5th EGTI meeting held on 17-18 September 2014 in Geneva. The Symposium agreed to start collecting from 2015 data on M2M subscriptions, coverage of LTE and other advanced mobile-broadband networks and separate fixed-broadband subscription data for organizations. The Symposium also agreed to replace the indicator on international Internet bandwidth with two indicators more precisely defined: “Lit/equipped international Internet bandwidth” and “Used international Internet bandwidth (traffic)”. In view of the growing importance of bundled telecommunication services and the data already collected by some countries, the Symposium accepted the indicators on bundled telecommunication services proposed by EGTI and encouraged countries to collect these data. The Symposium further agreed that ITU should discontinue the data collection of the indicators identified by EGTI as no longer relevant at the international level.
23. Taking into consideration the development opportunity that m-banking services represent, the Symposium acknowledged the importance of monitoring these services. The Symposium also highlighted that anonymised raw location data, as well as other operator micro data, could be used to produce societal statistics.
24. In view of the items for future discussion proposed by EGTI, WTIS agreed that EGTI should work on the following topics in the next working period: revision of the 2011 ITU Handbook for the Collection of Administrative Data on Telecommunications/ICT; additional sources for administrative data (big data, OTT); indicators on fixed-broadband services in public and private organizations (carry over); sub-categories of mobile broadband subscriptions (carry over); subscription data on advanced mobile-broadband technologies (carry over); and indicators on m-banking services. The Symposium welcomed the proposal from the UNESCO Institute for Statistics (UIS) to improve the IDI skills sub-index and agreed that EGTI should further examine it.

**5. Current and future work on ICT Household Indicators**

1. The meeting acknowledges the important work carried out by the ITU Expert Group on ICT Household Indicators (EGH), under the chairmanship of Alexandre Barbosa from Brazil, in reviewing existing, and defining new indicators to reflect changes in the access to and use of ICTs by individuals and households, and endorsed the outcomes of the 5th EGH meeting held on 15-16 September 2014 in Geneva, including a number of new indicators that will be included in the ICT household indicators questionnaire.
2. Participants highlighted that demand side data can help policy makers understand the bottlenecks for ICT uptake and use. One suggestion made during the discussions was to include a repository of model questionnaires on the various questions and topics on the EGH forum.
3. Existing indicators on mobile phone networks and subscriptions do not provide sufficient information on mobile phone ownership, actual use, uptake and the spread of mobile services. The WTIS welcomed the initiatives of ITU and GSMAi to cooperate, among others, in harmonizing indicators related to unique subscriptions, mobile users and mobile owners, and in improving current estimates for countries that do not collect ICT household indicators.
4. Measuring barriers to ICT use is a critical since it is necessary for policy makers to measure digital inclusion, to distinguish between access and use barriers, to adopt policies and to help more people to join the information society. Countries are encouraged to share experiences on collecting data on barriers to ICT use, which is one of the new topics on the EGH forum.
5. The session and subsequent discussion highlighted the need to produce data on Internet security, which is necessary to safeguard the well-being of Internet users, businesses, and other public and private entities. Countries are encouraged to review existing surveys to include the indicators and definitions on Internet security discussed in the EGH, and to consult the Eurostat model survey, which will be available in March 2015.

**6. Data quality, big data, open data**

1. The session welcomed ITU’s efforts to develop a quality assurance framework for ICT statistics and recommended that the framework also be presented to the UN Statistical Commission. The growing recognition of the importance of ICT statistics for social and economic development, and the discussions on big data, are imposing new challenges for ICT data quality and make it necessary to establish clear quality guidelines. While most national statistical organisations (NSOs) have adopted some kind of quality frameworks, most national regulatory authorities (NRAs) have not. Another suggestion of the meeting was to request the UNSC to recommend that all countries adopt the ITU ICT data quality assurance framework for the Partnership’s core list of ICT indicators.
2. The emergence of open data policies and efforts to use big data to complement official statistics poses new questions of data quality and it is important to identify and develop new and adopt existing standards to maintain the quality of official ICT statistics.
3. The WTIS highlighted the long-term benefits of open data, which include transparency, accountability, efficiency, innovation, civic participation and engagement. For countries to successfully adopt and implement open data policies, it is important to have a high-level policy commitment, and to institutionalize open data processes.
4. Besides recognizing the close relationship between data quality, open data and big data, the discussions highlighted the compatibility of open data and big data, but stressed the importance of continuing work in the area of data confidentiality, and of finding a balance between protection and utilization of personal data. Another challenge that most countries are likely to face is the lack of data scientists to work with big and open data sources.

**7. International Coordination of ICT Measurement – 10th Anniversary of the Partnership on Measuring ICT for Development**

1. The Symposium applauded the excellent work carried out by the Partnership on Measuring ICT for Development during the last ten years in improving the availability of internationally comparable ICT statistics. In particular, the meeting acknowledged the achievements made by the Partnership in defining core ICT indicators, in providing capacity building through trainings and workshops, and in producing internationally agreed standards and methodologies. The meeting also recognized the work done by the Partnership in monitoring progress towards the achievements of the World Summit on the Information Society (WSIS) outcomes, goals and targets.
2. However, challenges remain in many developing countries in producing timely, quality and comparable demand side data. The meeting highlighted that funding is needed to support the conduct of surveys in developing countries, and emphasized the importance of working with donor agencies and other partners. The meeting further emphasized the importance of national coordination between the different stakeholders, including data users, to ensure that priority areas of measurement are identified, and resources are efficiently used in the production of ICT statistics.
3. Participants identified new areas that the Partnership should work on in the future. These include analysing the impact of ICT by linking micro data collected from surveys that include ICT questions with other surveys conducted by the NSOs, in raising awareness of using available ICT data to formulate targeted policies, and in defining indicators to monitor international goals and targets, in particular those related to the post 2015 development agenda.
4. The meeting encouraged the Partnership to continue working together in helping developing countries improve the data availability of ICT statistics.

**8. Measuring the Information Society Report 2014**

1. Participants welcomed the presentation of the Measuring the Information Society Report 2014 and the insights it provided on recent information society developments, countries’ ICT development status (as measured by the ICT Development Index), ICT prices and the role of competition, and the role of big data for ICT monitoring and for development.
2. The Symposium recognized that the Report provides relevant methodologies and examples for the analysis of ICT data, and highlighted that they were useful for showing how available ICT data could be used to produce relevant information to inform policies and regulation. The Symposium took note of the analysis presented in the Report on the relationship between ICT Development and selected the Millennium Development Goals, such as in the area of poverty reduction, and the need for further analysis to study this relationship.
3. A number of suggestions were provided on future aspects and analysis that could be considered in the report, including on the presentation of price data, digital natives, the effect of investment on regulation and prices, improving the ICT skills component of the IDI, and new technology trends.

**9. Panel discussion on the ITU ICT Development Index (IDI)**

1. WTIS recognized that the IDI remains the key international benchmark for countries to assess their ICT developments and to evaluate progress, highlight shortcomings and help countries in setting policies and goals. Sound, relevant and up-to-date statistics are crucial to track and evaluate the information society and for evidence-based policy making.
2. To drive ICT uptake and use and to help countries to fully benefit from the potential of ICTs, the panel debate highlighted some concrete medium- and long-term policies that countries can adopt and advocate. These include creating a highly competitive ICT market, developing a strong ICT sector and developing ICT skills and investing in human capital. The discussion also emphasized the importance of the private sector in driving a vibrant information society, which depends on the roll-out of infrastructure, including high-speed broadband networks, and the delivery of innovative services.
3. The panel highlighted the importance of ICT developments for social and economic development and that the investment in, and specific policies aimed at, driving ICT uptake and use have important positive spill-over effects on countries’ economy, on job creation, and to drive social development. It further emphasized that the public sector has an important role to play as a driver of innovation and to adopt new technologies and services, including through the adoption of e-government services.
4. One of the key challenges that countries continue to face is to ensure equal and inclusive access to ICTs, to and to bring high-speed and high-quality services to all parts of the population. Access in rural and remote areas continues to lack behind and more efforts must be made to bring the benefits of ICTs to these areas and population groups.

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**COMMENTS TO BE SENT TO** [**INDICATORS@ITU.INT**](mailto:INDICATORS@ITU.INT) **BY 12 DECEMBER 2014**

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