

Introduction

The *World Summit on the Information Society* (WSIS), held in Geneva (2003) and Tunis (2005), brought together governments, civil society and the business sector to discuss a broad range of subjects related to information and communication technology (ICT) for development. In the end, governments agreed on a set of commitments and actions to foster the establishment of an inclusive information society. In particular, ten targets were identified in the *Geneva Plan of Action* [ITU, 2005], along with numerous recommendations based on different action lines. The targets, to be achieved by 2015, range from connecting villages, schools, health centres, libraries and government agencies to developing content, incorporating ICTs in school curricula and providing broadcasting services to all people in the world. The action lines address issues related to — among others — ICT infrastructure, capacity building, cybersecurity, an enabling policy environment and ICT applications in agriculture, education, business or the environment. The Tunis Agenda for the Information Society [ITU, 2005] complemented the list by calling for increased financing of ICTs in the developing world as well as continued discussion of Internet regulatory issues through the newly established *Internet Governance Forum* (IGF).

In view of this broad range of topics and related programmes and policies to be implemented by national, regional and international stakeholders, assessing progress made since WSIS is a challenging task. There are several mechanisms and processes that endeavour to review implementation of the WSIS outcomes and commitments, which are discussed further below. So far, none of them has produced a systematic overview of progress made in terms of achieving the objectives, targets and goals of the Summit.

This *World Telecommunication/ICT Development Report* (WTDR) looks at the ten WSIS targets identified in the Geneva Plan of Action (Box 1). The year 2010 marks the midpoint between the Tunis phase of WSIS (2005) and the deadline for achieving the WSIS targets (2015), which is also the target date for the *Millennium Development Goals* (MDGs). This report thus provides a mid-term review of the progress made towards achieving the ten WSIS targets.

No formal monitoring process was put in place by the Summit, and no global assessment of the targets has been made to date. Similarly, there are no agreed indicators for all of the targets that countries could use for monitoring purposes. While a core list of ICT indicators has been identified by the international community (Box 2), the WSIS targets go far beyond these core indicators, covering subjects that are challenging to capture in quantitative terms, let alone to compare at the international level.

This report fills this gap and sheds some light on the issue of monitoring and evaluating the WSIS outcomes. The overall objective of this WTDR is to provide policy-makers with a comprehensive assessment of achievement of the WSIS targets to date, identify the gaps to be filled by 2015 and, based on the findings, make suggestions on the type of measures that could be taken in order to meet the targets within the time-frame.

Another goal of the report is to make policy-makers aware of the need to monitor information society targets, highlighting best international practices. The report also identifies specific quantitative indicators for tracking the targets, along the lines of the internationally agreed indicators used for tracking the MDGs.

Box 1: What are the WSIS targets?

Section B of the Geneva Plan of Action (§§ 4-7) identifies objectives, goals and targets for building an inclusive information society. It calls upon countries to establish national targets as part of national ICT strategies, which could serve as benchmarks for actions and for evaluating progress. To guide countries in setting national targets, a set of international targets were established, based on the MDGs, to “serve as global references for improving connectivity and access in the use of ICTs in promoting the objectives of the Plan of Action, to be achieved by 2015.”

The ten targets are as follows:

1. To connect villages with ICTs and establish community access points
2. To connect universities, colleges, secondary schools and primary schools with ICTs
3. To connect scientific and research centres with ICTs
4. To connect public libraries, cultural centres, museums, post offices and archives with ICTs
5. To connect health centres and hospitals with ICTs
6. To connect all local and central government departments and establish websites and e-mail addresses
7. To adapt all primary and secondary school curricula to meet the challenges of the information society, taking into account national circumstances
8. To ensure that all of the world’s population have access to television and radio services
9. To encourage the development of content and put in place technical conditions in order to facilitate the presence and use of all world languages on the Internet
10. To ensure that more than half the world’s inhabitants have access to ICTs within their reach.

Section E of the Geneva Plan of Action (§ 28) calls for realistic international performance evaluation and benchmarking to follow up implementation of the objectives, goals and targets agreed at WSIS. The only indicators that were specified are community connectivity and gender-specific indicators. No indicators directly linked to the targets (or any other outcomes) were identified, and no recommendations were made on the process of evaluation or tracking of the targets.

WSIS follow-up and implementation

Since the conclusion of the Summit at the end of 2005, the primary focus of attention (at both national and international levels) has been implementation of the WSIS outcomes, in particular the topics identified under the various action lines (Action Lines C1 – C11). Several mechanisms have been put in place to this end.

a) The Tunis Agenda identified several international organizations to facilitate the implementation of specific action lines.¹ The facilitation process started after the conclusion of the Summit, with annual meetings of “action line facilitators.”² In 2009, the action line facilitation meetings were organized for the first time under the umbrella of the WSIS Forum, in order to ensure coherent presentation and discussion of recent developments in the information society and of implementation of the WSIS action lines. The *International Telecommunication Union* (ITU) has played a key role in hosting and facilitating the annual meetings and the WSIS Forum.

b) The *United Nations Group on the Information Society* (UNGIS) meets annually, to coordinate implementation of the WSIS outcomes among UN agencies. It was mandated by the Tunis Agenda (§ 103). The group, which has been co-chaired by ITU, the *United Nations Educational, Social and Cultural Organization* (UNESCO) and the *United Nations Development Programme* (UNDP), and, recently, the *United Nations Conference on Trade and Development* (UNCTAD), is planning a number of joint activities until 2015.³

UNGIS member organizations follow up on the implementation of WSIS outcomes in their respective areas of work and within their intergovernmental frameworks.⁴ ITU has been given a key role in the implementation of several of the WSIS action lines, and the work programme of ITU’s Telecommunication Development Sector (ITU-D) reflects a large number of topics addressed by the Geneva Plan of Action.⁵

c) The Geneva Plan of Action (§ 28) proposes that a website be launched to collect best practices and success stories. Accordingly, ITU initiated the WSIS stocktaking databases, a compilation of (several thousands of) ICT-related

activities and projects carried out by governments, international organizations, civil society and businesses. The Tunis Agenda encouraged the continuation of the ITU stocktaking database (§ 120), which was updated in 2008, the next edition being planned for 2010.⁶

d) A formal follow-up of the WSIS outcomes was mandated, to be overseen by the *UN Economic and Social Council (ECOSOC)* (Tunis Agenda, § 105). At its 2006 session, ECOSOC instructed the *UN Commission on Science and Technology for Development (CSTD)* to be “the focal point in the system-wide follow-up, in particular in the review and assessment of progress made in implementing the outcomes of the Summit.”⁷ Since then, CSTD has reviewed progress at its annual sessions, and it gathers contributions from international organizations for the UN Secretary-General’s annual *Report on WSIS implementation and follow-up*.⁸

WSIS monitoring and evaluation

The above-mentioned post-WSIS mechanisms illustrate that the international community is deploying great efforts to advance the development of the information society by implementing and facilitating relevant policies and programmes. While there are several reporting mechanisms in place, they are primarily qualitative in nature, such as reviewing progress in the implementation of action lines, or collecting country and case studies and information on ongoing projects. Little attention has been paid to quantitative assessment or review of achievements based on comparable cross-country, statistical indicators. Yet policy implementation requires that results be monitored, so as to assess whether the policies have been successful.

A number of provisions of the WSIS outcome documents address the subject of quantitatively reviewing, monitoring and evaluating progress:

The Geneva Plan of Action (§ 28) calls for the establishment of comparable indicators, including community connectivity and gender-specific indicators; the regular publication of a composite index; monitoring of the digital divide; and the assessment of universal accessibility to ICTs.

The Tunis Agenda takes this a step further by providing a set of suggestions related to the “periodic evaluation” of the WSIS outcomes (§§ 112-120). In particular, it acknowledges the work of the *Partnership on Measuring ICT for Development* (Box 2) in developing a core list of indicators and building statistical capacity in developing countries for monitoring their information societies. The Tunis Agenda also requests the UN General Assembly to conduct an overall review of implementation of the WSIS outcomes in 2015.

Although some stakeholders (notably the members of the *Partnership*) have actively addressed the important issue of measurement, only a few countries have carried out a regular evaluation of progress made in their information societies. While some basic ICT data are widely available (for example, the number of fixed telephone lines, radios, TVs, mobile subscriptions), more is needed to assess the WSIS goals and targets, as well as the implementation of action lines.

The WSIS targets are not only very broad, but also do not include measurable indicators, which makes monitoring something of a challenging proposition and international comparisons almost impossible. For example, six of the targets refer to “connecting” villages, schools, governments, and so forth with ICTs, without however specifying what is meant by “connectivity with ICTs” (e.g. telephone, Internet, computer, ...), who should be connected (e.g. teachers, students, ...) and what the connectivity should achieve (e.g. increased knowledge, transparency, health, productivity and/or efficiency, ...). While the most basic connection could be a telephone connection, in today’s world Internet — and preferably broadband — is often viewed as the most important type of connection worldwide, in particular with reference to the information society.

To address these challenges, this report interprets the targets, by defining some of the terminology used, and proposes a number of indicators for benchmarking that could be collected by countries before 2015, when a final evaluation should be made. Besides access to ICTs (“connectivity” in the simplest meaning of the term), in order to maximize their impact it is critical that ICTs be actually *used* in practice by various stakeholders (people, public and private institutions). Therefore, for several of the targets, the report proposes ICT usage indicators, plus indicators related to content and applications.

Box 2: The Partnership on Measuring ICT for Development and WSIS⁹

Following the Geneva Summit in December 2003, the *Partnership on Measuring ICT for Development* (hereinafter the *Partnership*) was launched at UNCTAD XI (held in Brazil) in June 2004. Its members, at that time, were the three founding members (UNCTAD, ITU and OECD); the UNESCO Institute for Statistics (UIS); four UN Regional Commissions (UNECLAC; UNESCWA; UNESCAP; and UNECA); the UN ICT Task Force (whose mandate expired at the end of 2005); and the World Bank. Eurostat officially joined the *Partnership* in February 2005 and the UN Department of Economic and Social Affairs (UNDESA) in May 2009.

During the initial phase of the *Partnership*, emphasis was placed on building awareness at the national and international levels of the importance of ICT measurement for policy-making, and on developing agreed standards and methodologies to enhance the production of internationally comparable ICT statistics. The *Partnership* was an active contributor to the WSIS Tunis preparatory meetings and the Summit itself. This included the organization of a WSIS thematic meeting (February, 2005) resulting in the first core list of agreed ICT indicators; a series of regional ICT measurement events; and written inputs to the discussion and preparation of the WSIS outcome documents (Tunis Agenda). During the Tunis Summit, a parallel event was organized by the *Partnership*, to present the agreed core list of indicators to policy-makers, together with an accompanying methodological publication [Partnership, 2005a]; to debate the importance of measuring the information society for ICT policy-making and development; and to launch a publication providing an overview of the status and availability of ICT indicators worldwide [Partnership, 2005b].

As a result of this work, the Tunis Agenda recognized the need for ICT measurement (§§ 112-119), and made specific reference to the *Partnership* (§§ 114-115):

“114. The development of ICT indicators is important for measuring the digital divide. We note the launch, in June 2004, of the Partnership on Measuring ICT for Development, and its efforts:

- a) to develop a common set of core ICT indicators; to increase the availability of internationally comparable ICT statistics as well as to establish a mutually agreed framework for their elaboration, for further consideration and decision by the UN Statistical Commission;*
- b) to promote capacity building in developing countries for monitoring the information society;*
- c) to assess the current and potential impact of ICTs on development and poverty reduction;*
- d) to develop specific gender-disaggregated indicators to measure the digital divide in its various dimensions.*

115. We also note the launch of the ICT Opportunity Index and the Digital Opportunity Index, which will build upon the common set of core ICT indicators as they were defined within the Partnership on Measuring ICT for Development.”

Following the Tunis Summit, the core list of ICT indicators was further refined and presented to the UN Statistical Commission (UNSC) in 2007 [Partnership, 2007], which endorsed the list and encouraged the *Partnership* to update it, especially with regard to measuring the use of ICT in education and in government — two areas that figure prominently in the WSIS targets; the contribution of ICT to economic growth and social development; and barriers to use of the technology. A revised core list was presented by the *Partnership* to UNSC in 2009, and published in 2010 [Partnership, 2010].

Six years after its inception, the *Partnership* is recognized as a key international player in the area of ICT statistics. Members of the *Partnership* regularly report on progress made at meetings of the WSIS Forum, CSTD, UNGIS and action line facilitators, as well as at other events and conferences not directly related to WSIS.

ITU has been an active member of the *Partnership* from the very beginning, and is part of its Steering Committee (along with UNCTAD and ECLAC). For more information about the *Partnership* and its activities, see <http://www.itu.int/ict> and <http://measuring-ict.unctad.org>.

Important ICT developments have taken place in recent years (especially since the Geneva phase of the Summit) which were not anticipated at the time of WSIS. The most striking example is the rise of mobile telephony and its associated applications. The emergence of Web 2.0 and user-created content on the Internet are also shaping today's development of the information society. On the technology side, the launch of new standards in the mobile sector, the convergence of technologies (such as broadcasting and telecommunication) and the steady expansion of high-speed communication infrastructure have significantly changed the way ICTs are accessed and used, and their economic and socio-economic impact is ever increasing. Indeed, today the Internet is largely recognized as a general-purpose technology, and broadband is regarded as a basic infrastructure, in the same way as electricity, water or

roads. Many citizens even consider the Internet as a “fundamental human right,” and some countries have started to put in place legislation stipulating that access to the Internet is a human right for their citizens.¹⁰ Such developments need to be taken into consideration when reviewing the WSIS targets and their achievement, and appropriate adjustments to the targets need to be made.

Methodology for preparing the report

Given the broad range of subjects covered by the WSIS outcome documents and the targets, this WTDR has been drafted in close collaboration with other UN agencies and stakeholders, in particular UIS (Targets 2 and 7), the World Health Organization (WHO) (Target 5) and UNDESA (Target 6). Representatives from civil society, especially the *Networks and Development Foundation* (FUNREDES), have provided substantive inputs to the chapter covering Target 9.

The data presented in this report are collected at the international level by ITU and the above-mentioned organizations. They have been supplemented by additional research on the indicators selected for each target. The report presents a mid-term review based on the latest available data, which often relate to 2008, and only some to 2009. For some targets (such as, for example, Target 9 on language diversity on the Internet, an area that is not likely to change quickly), the most recent data may go back even further.

Since many of the WSIS targets stretch beyond the currently internationally available ICT data, a questionnaire was sent to all ITU Member States between September and November 2009 (Box 3). This “*Survey on the WSIS targets*” requested quantitative information on each of the ten targets. A total of 48 countries responded to the survey. The information provided by countries is featured throughout the report.

Box 3: ITU Survey on the WSIS targets

With a view to preparing WTDR, ITU carried out a survey of its Member States in 2009. The survey requested quantitative information on each of the ten WSIS targets, although questions on indicators already collected by ITU or by other international organizations through their regular data collection processes were not included.

A total of 48 countries responded to the survey (see Annex 1 for a complete list of respondents), but not all countries replied to all questions on the different targets. An analysis of the results of the questionnaire shows that the number of replies per indicator varied between nine (on the “percentage of cultural centres with access to the Internet”) and 26 (on the “percentage of public libraries and post offices with access to the Internet”). On average, each question elicited around 20 replies, which is only about ten per cent of all countries that received the questionnaire.

This relatively low response rate points to a number of factors. First, it could be an indication that only a few countries are currently tracking the WSIS targets, given that the Summit did not identify a concrete set of indicators, nor initiate a monitoring process. Second, it could mean that even if some of the data are available within a country, they are not compiled or centralized within one government agency or ministry. This may be especially true insofar as the issues covered by WSIS span a very broad range of topics that are dealt with by different ministries and government agencies. Finally, and linked to the previous point, it should be borne in mind that the questionnaire was sent to ITU’s constituency, i.e. the telecommunication/ICT-related ministries and regulatory authorities. These institutions may not necessarily be aware of data collected by other government entities. As a result, it is likely that data which might be available in some countries are not reflected in this report.

Ten targets, ten chapters

The report features ten substantive chapters, each covering one of the WSIS targets. Each chapter includes:

- A discussion of how the target could or should be interpreted, its context, rationale and expected impact, its relevance for development of the information society and its link to the WSIS action lines. In some cases, proposals are formulated for more precise definitions of the target, or revisions of the target’s wording.

- Information on the availability of existing indicators and data that could be used to monitor the target, their advantages and shortcomings, as well as the difficulties in identifying and tracking certain indicators.
- A concrete proposal for a limited number of quantitative indicators for monitoring the target, and the rationale behind them.
- An overview of what has been achieved so far, with regional and global data and country examples, including success stories and best-practice policies.
- An assessment of gaps, and what is being done to address them; a discussion of the likelihood of reaching the target by 2015; a set of policy recommendations and measures that could be implemented in order to meet the target by 2015.

Notes

- ¹ See Annex to the Tunis Agenda for the Information Society [ITU, 2005].
- ² More information about the meetings of the action line facilitators is available at: <http://www.itu.int/wsis/implementation/>.
- ³ For further information, see <http://www.ungis.org/Default.aspx?tabid=620>.
- ⁴ For example, the ITU Council Working Group on WSIS (WG-WSIS) was created in 2002, and in November 2006 the ITU Plenipotentiary Conference requested WG-WSIS to facilitate membership input and guidance on ITU's implementation of relevant WSIS outcomes and to elaborate proposals to the ITU Council that may be necessary for adapting ITU to its role in building the information society (<http://www.itu.int/council/groups/wsis/>).
- ⁵ See ITU/BDT Doha Action Plan 2006 [ITU, 2006], § 3.2 (IV) on inclusion of the WSIS outcomes in the ITU-D activities (p. 5 and Annex 1), at: <http://www.itu.int/ITU-D/conferences/wtdc/2006/pdf/dohaactionplan.pdf>.
- ⁶ <http://www.itu.int/wsis/stocktaking/index.html>.
- ⁷ See ECOSOC Resolution 2006/46, available at: <http://www.un.org/docs/ecosoc/documents/2006/resolutions/Resolution%202006-46.pdf>.
- ⁸ See <http://www.unctad.org/Templates/Page.asp?intItemID=4239&lang=1> for further information on CSTD.
- ⁹ For further information, see [Partnership, 2008] and <http://www.itu.int/ITU-D/ict/partnership/index.html>.
- ¹⁰ Based on a survey of 27 000 adults in 26 countries carried out by BBC in 2010, around three-quarters of interviewees considered Internet access as a human right (see <http://newsvote.bbc.co.uk/2/hi/technology/8548190.stm>). Countries that have ruled that access to Internet is a human right for their citizens include Finland, France and Estonia.

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