ITU WORLD TELECOMMUNICATION/ICT INDICATORS LONG QUESTIONNAIRE REVIEW

SUB-GROUP DRAFT REPORT

July, 2022

This report has been prepared by ITU Sub-group designed by the ITU Secretariat in accordance with agreements adopted during 12th Meeting of the ITU Expert Group on Telecommunication / ICT Indicators (EGTI), which took place in Geneva, Switzerland, on 13-15 September 2021

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1. Introduction

During the 12th Meeting of the ITU Expert Group on Telecommunication / ICT Indicators (EGTI), which took place in Geneva, Switzerland, on 13-15 September 2021, EGTI members agreed to create a sub-group to review indicators collected in the ITU World Telecommunication/ICT (WTI) Long Questionnaire[1] (hereafter WTI LQ), with the aim to find a balance between stakeholder needs for detailed, comprehensive, timely, high-quality data measuring different dimensions of digital development and the response burden on Member States.

The EGTI Meeting also agreed that in the context of the same work, the sub-group should re-visit how the number of households covered by a certain technology of fixed broadband is measured, given that discrepancies were noticed in the data due to the approach of collecting number, rather than the share of households covered.

This report is the result of several meetings of the subgroup during the months of May to June 2022 and is aimed to serve as a guidance to EGTI members to decide whether indicators should be kept on the WTI LQ, drop or modify to comply with the objective of conduct an accurate and helpful measurement of digital development among ITU members.

The work of the sub-group was coordinated by Ms. Cinthya Arias (Sutel, Costa Rica) with the valuable help of Costa Rica team related to indicators collection. The sub-group was open to all interested EGTI members, and country experts from several regions with different income levels.
Experts involved with the sub-group belong to the following organizations: INACOM (Angola), Botswana Communications Regulatory Authority (Botswana), ANATEL (Brazil), SUTEL (Costa Rica), INDOTEL (Dominican Republic), Communications Authority Kenya (Kenya), Telecommunications Regulatory Authority (Oman), Pakistan Telecommunication Authority (Pakistan), ANACOM (Portugal), CITC (Saudi Arabia), KAIT (South Korea), Tanzania Communications Regulatory Authority (Tanzania), INTT (Tunisia), Uganda Communications Commission (Uganda) and ZICTA (Zambia), as well as independent experts from the Complutense University of Madrid, Spain and from Malaysia.
This sub-group was actively supported by ITU Secretariat.

2. Objectives of the WTI LQ working subgroup

The terms of reference established two general objectives for the sub-group:

   a. The mandate to assess if each indicator should be dropped or kept on the WTI LQ.
   b. The mandate to re-visit the indicators measuring the coverage of households by different fixed-wired network, by network broadband technologies.

In accordance with the previous, the sub-group established the following specific objectives for its work:

Approach taken:

To comply with the mandate to assess if each indicator should and propose either to drop or kept on the WTI LQ, the team:

   a. Reviewed the rate of responses registered for each indicator during the last 3 years.

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[1] Annex 1 includes a general description of the WTI LQ.

b. Identified if there are some specific behaviors associated with the rate of response for each indicator.
c. Reviewed the rationale and relevance[2] of each indicator for measuring digital development of countries and data availability in recent years; and
d. Identified & evaluated indicators with low rate of responses and analyzed possible reasons for that to define if the indicator should be dropped or kept on the LQ considering possible reasons to explain why they are not reported[3].

To comply with the mandate to re-visit the indicators measuring the coverage of households by different fixed-wired network, by network technologies, the team:

a. Reviewed the rational and relevance[4] of each indicator for measuring digital development of countries and data availability in recent years.
b. Reviewed and compared the methodology proposed at the beginning of the collection of this indicator and compared with the comments received among members about coverage of households by different fixed-wired network, by network technologies.

3. Description of the work done prior to the final decisions of the subgroup

WTI LQ working sub-group executed the following activities:

a. Define Sub-group premises: Sub-group stablished a set of premises that worked as a guide for decisions, including premises regarding the indicators recently added to the WTI LQ that consider the ICT ongoing monitoring across countries. Consider and define a set of indicator´s relevance criteria to find a balance between stakeholder needs for detailed, comprehensive, timely, high-quality data measuring different dimensions of digital development and the response burden on Member States.
b. Filtering job made by sub-group members: as a first step, each member of the sub-group was required to answer two simple questions for each of the 88 indicators included in the WTI LQ: Continue collecting and Not continue collecting, and for the second option, members of the sub-group were asked to indicate reasons for doing it[5]. Also, this step was essential to define a group of 44 indicators[6] to focus on.
c. Ad-hoc questionnaire: With the support of the ITU Secretariat, the sub-group elaborated an ad-hoc questionnaire that was circulated to EGTI Members between May 25, 2022 and June 02nd, 2022. This was an important step for consulting Members during the process. The objective of the ad-hoc questionnaire was to collect opinions about the relevance, use and data collection challenges on the 44 indicators previously selected to be evaluated. The following are the main characteristics of the ad-hoc questionnaire:
    • Comprises 11 questions divided into four sections
    • The first section aims to identify whether or not the indicator is collected on each country and, if not, identify the reasons.
    • The reasons for not collecting each indicator were grouped as follows:

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[2] Sub-group established some criteria to define relevance
[3] Among reasons the sub-group considered that some indicators included on LQ has been added recently to the questionnaire. The sub-group also defined some other possible group of reasons.
[4] Sub-group established some criteria to define relevance
[5] This work helped the subgroup to identify difficulties faced by Members to collect indicators and some other elements considered as obstacles or reasons that make it pointless to collect them.
[6] The specific Indicators considered on the ad-hoc questionnaire are detailed on Annex 2.

- ✓ Reasons related to difficulties to measure or collect data[7]
- ✓ Reasons related to technological or demand side issues[8]
- ✓ Other reasons[9]
- The second part aims to identify the different uses pear each indicator in each country if they collect it or plan to collect it.[10]
- The third part aims to find out each country opinion on whether or not each indicator should be kept in the ITU LQ, and if not, to find out the reasons why they indicate it.[11]
- The fourth section aims to qualify each indicator according to the level of importance or relevance for its compilation according to 5 factors:
  - ✓ Market relevance
  - ✓ Policy Relevance
  - ✓ International Comparison
  - ✓ Technological development issues (prospective)
  - ✓ High demand indicators for industry, regulatory and academic purposes.
- The sub-group received answers from 62 countries.

This work helped the sub-group to identify groups of indicators with low relevance and proposed to be dropped from the WTI LQ and the opposite group of indicators with high relevance and proposed to be kept, and the combination alternatives between those two criteria (see Annex 3).

d. Other activities: In addition to the previously described tasks, the subgroup also carried out another group of tasks that contributed to the discussion to arrive at the final decisions that were proposed. Those tasks were: Database Descriptive Analysis (3 years of country responses)[12]. For more details see Annex 4.

Sub-group also conducted a regional behavioral analysis. The work was done considering the 3 years of responses received by each indicator of the whole WTI LQ. The use of this data base aims to elaborate a correlation analysis among countries and regions rate of responses. There were found some common patterns in the response levels among regions in the indicator groups (Annex 5).

4. Final decisions

It is important to mention the challenge faced during the work of the sub-group because although the objective was to obtain comparable and homogeneous indicators to monitor the evolution of the sector worldwide, the truth is that each member state has different realities in terms of its development. So, this process helped us better understand these differences.

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[7] Includes: Operators do not provide data to regulator although they have it internally because there is no legal authority to require it; Operators cannot provide the data because their platforms do not allow that data extraction; The National Authority or primary source of data cannot provide it because their platforms or resources don not allow that data extraction; It involves high-cost activities that organizations asked cannot allow.

[8] Includes: Indicator is no longer relevant for monitoring the market due technological changes or the characteristics of the service, and Service is not available in the country.

[9] Includes Indicator does not provide elements for comparisons between countries and Other.

[10] Includes: Monitor the market, Regulatory decision; Policy decision; Provide information to information users (academy, governments institutes or ministries, others), and other uses.

[11] Includes: Reasons related to difficulties to measure or collect data (high cost, methodology issues); Reasons related to technological or demand side issues; it is considered that the indicator do not provide elements for international comparisons; There is another indicator that provide similar information; Other.

[12] The results obtained show a 53% rate of general response, including all indicators. 28 indicators (32%) have a response rate over 70% whereas 60 indicators (68%) have a response rate under 70%. In addition, there are differences among set of indicators: International roaming, Quality of service and Internet are the groups with the lowest rate of responses. Revenue, Traffic and Fixed broadband by technology/speed are the groups with the highest rate of responses.

The sub-group analyzed the information and opinions related to each of the 44 indicators discussed. At the end the final proposal is to reduce number of indicators in WTI LQ by 9 indicators in the short term, and a possibility to revisit 7 more in the medium term.

The final proposal for EGTI is the outlined below. Reasons and discussion around each indicator can be seen in the Annex tables. The proposal is:

- ✓ Directly drop 1 indicator:
  - o i147t: Service activation time for fixed broadband service (in days)
- ✓ Keep "On Hold" 7 of the 44 indicators analyzed. This concern quality of service and international roaming indicators adopted by EGTI in the past 3 years and collected in 1 survey wave, for which there is insufficient data and data collection experience to allow a comprehensive assessment. Those indicators should be the next ones to be analyzed once ITU have more information on Members responses and on challenges faced about their collection.
  - o i147ul: Average upload Throughput for Fixed Broadband, in bits
  - o i146mwul: Average Upload Throughput for Mobile Broadband, in bits
  - o i133crm: Number of countries with which there is a country-level roaming agreement
  - o i133rm: Number of countries with which there is an operator-level roaming agreement
  - o i147f: Fault Resolution Period for Fixed Broadband Service, in hours
  - o i147l: Packet Latency for Fixed Broadband, in milliseconds
  - o i146mwl: Packet Latency for Mobile Broadband, in milliseconds
- ✓ Keep directly 19 of the 44 indicators analyzed.
  - o i146mwdl: Average Download Throughput for Mobile Broadband, in bits
  - o i1332wmf: Total international incoming telephone traffic, in minutes
  - o i1333wm: Total international outgoing telephone traffic, in minutes
  - o i132ti: SMS sent
  - o i4213_2x: Subscriptions to fixed-broadband and fixed-telephone bundles.
  - o i4213_3x: Subscriptions to fixed-broadband, fixed-telephone and pay-TV bundles.
  - o i1336wm: Roaming by foreign subscribers (inbound roaming), in minutes
  - o i1334wma: Roaming by home subscribers abroad (outbound roaming on CLRAs), in minutes
  - o i81: Annual investment in telecommunication services
  - o i965IP: IPTV subscriptions
  - o i965oth: Other TV subscriptions
  - o i965s: Satellite-TV subscriptions
  - o i965cab: Cable-TV subscriptions
  - o i51: Full-time equivalent telecommunication employees
  - o i51f: Persons employed by all telecommunication operators, female
  - o i146d: Mobile-cellular dropped call ratio (%)
  - o i146u: Mobile-cellular unsuccessful call ratio (%)
  - o i741: Revenue from mobile networks
- ✓ Keep it but flag the need for methodological refinements for data collection or reporting 3 indicators:
  - o i112pt: Fixed-telephone numbers ported
  - o i271pt: Mobile-cellular numbers ported
  - o i841f: Annual foreign investment in telecommunications
- ✓ Simplification of 14 indicators of the 44 analyzed. This implies to reduce them to 8, and means an indirect reduction of 8 indicators on WTI LQ. Indicators concerned (see proposed change in Annex):
  - o i131m: Domestic fixed-to-fixed telephone traffic, in minutes
  - o i1313wm: Fixed-to-mobile telephone traffic, in minutes

- o i1335wm: Incoming international traffic to mobile network, in minutes
- o i132mi: International incoming fixed-telephone traffic, in minutes
- o i132m: International outgoing fixed-telephone traffic, in minutes
- o i1332wmf: Outgoing mobile traffic to fixed networks, in minutes
- o i1333wm: Outgoing mobile traffic to international, in minutes
- o i4213cv: Number of households covered by a fixed wired network
- o i4213cv_cab: Number of households covered by cable TV networks
- o i4213cv_dsl: Number of households covered by digital subscriber lines networks (excluding VDSL/VDSL vectoring)
- o i4213cv_vdsl: Number of households covered by digital subscriber lines networks (VDSL/VDSL vectoring)
- o i4213cv_fttp: Number of households covered by Fiber-to-the-premises networks
- o i4213cv_o: Number of households covered by other fixed-wired networks
- o i4213cv_pstn: Number of households covered by the traditional public switched telephone network

It is important to notice that sub-group considered in each case reasons to drop or to keep or simplify each indicator considering Pros and Cons. For discussion and to enrich arguments from other ITU members during the consultation phase of this document, the sub-group include on each case both groups of arguments. This is presented in the Annex 6.