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| **TDAG Working Group  on the future of Study Group Questions (TDAG-WG-futureSGQ)**  **3rd Meeting, Virtual, 3 December 2024** | | A close up of a sign  Description automatically generated |
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|  | **Document TDAG-WG-futureSGQ/12-E** | |
|  | **29 November 2024** | |
|  | **English only** | |
| Vice-Chair, ITU-D Study Group 1 | | |
| Initial thoughts on future of ITU-D Study Group 1 Questions | | |
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| **Summary:**  This document provides initial thoughts on new and revised study items for the ITU-D Study Group 1 Questions, as shared by each of the Management Teams of the questions concerned and consolidated by the Coordinator on the referred study group for the discussion of the future of questions. The result of the consolidation is brought as an initial input for the work of the TDAG Working Group on the future of Study Group Questions (TDAG-WG-futureSGQ).  **Action required:**  Participants are invited to use this document as an input for the discussions of the TDAG Working Group on the future of Study Group Questions (TDAG-WG-futureSGQ).  **References:**  WTDC Resolution 2 (Rev. Kigali, 2022) | | |

# Introduction

ITU-D Study Group 1 held its latest meeting from November 4th to 8th, 2024, where the topic of the future of the study Questions was discussed in the plenaries of the Study Group and by each of the Rapporteur Group Questions as well.

For information, ITU-D Study Group 1 appointed Mr Hirayama (vice Chair, Brazil) as the Coordinator for the Future of Study Group Questions, and he, in that capacity, brings to the attention of this TDAG working group the discussions up to now.

The future of the questions discussions has been initiated, with at least one study Question having shared revised terms of reference (ITU-D Question 5/1) and the other ones invited to consider submitting inputs on the revised terms of reference in the next study group meeting and future topics/items of study just after the meeting, which would be then consolidate and submitted to the TDAG WG Future of Study Group Question.

Some questions did send their inputs to the SG1 Coordinator, Mr Hirayama, and the consolidated inputs are provided in this contribution. This work in on-going and can be updated in the future as discussions mature at the final meeting of the ITU-D Study Group 1 to be held from 28 April to 2 May 2025.

Therefore, this document provides initial thoughts on new and revised study items for the future ITU-D Study Group 1 Questions, as shared by each of the Management Teams of each of the Questions concerned and consolidated by the Coordinator on the referred study group for the discussion of the future of questions, as an input for the work of the TDAG Working Group on the future of Study Group Questions (TDAG-WG-futureSGQ).

# Initial ideas on new and revised items of study for ITU-D Study Group 1 questions

**ITU-D Question 1/1**

No information at this stage.

**ITU-D Question 2/1**

Initial thoughts of the management team of ITU-D Question 2/1:

* Focus the question’s items of study on new and emerging broadcasting/audiovisual content distribution systems, services, and applications, including OTTs and other distribution platforms, such as satellite and cable networks.
* Aggregate study of spectrum planning, digital broadcasting and the usage of the digital dividend, to cover new topics and interests from developing countries.
* New topics of study for the question:
* Strategies, policies and regulation for Digital Services, in the context of audiovisual content distribution;
* New broadcasting technologies, emerging services and capabilities, including regulatory, economic and technical aspects;
* Next generation broadcasting and audiovisual content distribution systems, including IP-based technologies;
* The deployment of new services and applications for audiovisual content distribution platforms, such as UHDTV, AR/VR, interactive applications, metaverse, among others.

**ITU-D Question 3/1**

No information at this stage.

**ITU-D Question 4/1**

In accordance with ITU-D Question 4/1 meetings and the decision of management team meeting, here is the list of new topics for Q.4/1, as an initial and informative stage:

1. Digital Currencies,
2. Economics of Metaverse,
3. Digital Taxes,
4. National aspects of spectrum economics (Spectrum fees and auctions),
5. Social Return of Investment (SRoI).

**ITU-D Question 5/1**

As proposed by [Document 422](https://www.itu.int/md/D22-SG01-C-0422/en), contribution from Zimbabwe, the ITU-D Question 5/1 would have the following new and revised items of study:

**Need for further studies**

It became clear during the study, that some of the aspects under study, require further study, while gaps requiring fresh studies were noted. The combined aspects requiring study include the following:

* Harnessing the complementarity of Terrestrial and Non terrestrial networks
* Modern technologies designed to lower infrastructure capital and operating costs and support convergence between services and applications.
* How Artificial intelligence can improve rural infrastructure and access
* Challenges in creating or building broadband digital infrastructure in rural and remote areas.
* Needs and policies, mechanisms and regulatory initiatives to reduce the digital divide between rural and urban areas by increasing broadband digital access.
* The benefits of AI and challenges of AI Adoption in rural and remote areas
* Harnessing AI to enhance digital literacy and skills in rural communities
* Improvement of Quality of the services in rural and remote areas
* Business models for sustainable deployment of networks and services in rural and remote areas, taking into consideration priorities based on economic and social Integration and implementation of ICT services in rural and remote areas, including new and emerging technologies.
* Policies relating to and Development of local content

**ITU-D Question 6/1**

Initial thoughts of ITU-D Question 6/1:

The overarching theme for this Question would be Meaningful and sustainable Digital Transformation based on consumer trust and safety. Our mantra is that availability, accessibility and affordability must be supported by measures towards awareness and safety for connectivity to be effective in achieving the SDGs.

1. How can we gather and use consumer behavioural insights to help regulators, A. understand consumer decision-making and design better regulations to protect in the digital age? B. Engage with service providers to collaborate on consumer information, awareness and safety by design C. Educate consumers about their rights and how to navigate risks. D. Focus on children, women, and the elderly to keep them safe online and help them engage effectively with the digital world.
2. How can we identify unique requirements of skilling aimed at consumer awareness and safety in using ICT services enabled by the age of new and emerging technologies?
3. Create a toolkit on better regulatory design for consumer protection and awareness creation based on the experiences of members and workshops as the main deliverable besides the report. Focus on teaching consumers to keep their Personally Identifiable Information safe from misuse.
4. Gather evidence of the impact of good regulation (that protects consumers as a complement to digital connectivity initiatives) on enhancing the take-up of digital transformation initiatives. E.g. the success of Digital Public Infrastructure in India is based on good regulation apart from excellent technological design.
5. Focus on experience sharing and capacity building to enable regulators to assess and mitigate any potential adverse impact of new and emerging technologies like generative AI on safety in consumers' online experience from the viewpoint of helping retain their trust in digital transformation.

**ITU-D Question 7/1**

With reference to the **future of the ITU-D Question 7/1**, co-rapporteurs of the questions proposed that members consider the idea of amending the title of the question for the next study cycle into **ICT accessibility for inclusive digital ecosystem** to reflect the mainstreaming of ICT accessibility throughout all areas of digital transformation ensuring inclusivity to everyone regardless of their age, gender, ability and/or geographical location.

**Annex 1 PROPOSED NEW TERMS OF REFERENCE FOR ITU-D QUESTION 5/1**

**MOD**

QUESTION 5/1

# Telecommunications/information and communication technologies for rural and remote areas

1. **Statement of the situation or problem**

In order to continue to contribute to the achievement of the objectives set by the Geneva Plan of Action of the World Summit on the Information Society (WSISand , as well as assist in the attainment of the Sustainable Development Goals (SDGs) , it is necessary to address the rural urban digital divide through digital infrastructure development coupled with access digital services for all. This entails making available the benefits of various e-services (e-education, e-health, e-government, e-agriculture, e-commerce, etc.) in the rural and remote areas of developing countries[[1]](#footnote-2) , including LDCs, LLDCs and SIDS, where more than half of the world's population live. Solutions that involve both terrestrial and satellite broadband connectivity to support network technologies that enable the use of common broadband applications required by citizens for digital transformation is now priority.

The installation of cost-effective and sustainable digital infrastructure, through the deployment of emerging technologies suitable digital services for rural and remote areas, is an important aspect calling for further studies, and specific outcomes need to be available for the vendor community to make available broadband Internet connectivity to support up-to-date e-services for the quality of life of inhabitants in rural and remote areas.

Existing network systems are primarily designed for urban areas, where the necessary support infrastructure (adequate power, building/shelter, accessibility, skilled manpower to operate, etc.) for setting up a broadband telecommunication network is assumed to exist. Hence, current and future systems need to be more adequately adapted to specific rural requirements in order to be widely deployed.

It is also important that service providers pay specific attention to high speed internet connectivity availability and the availability of relevant e applications

Shortage of power, difficult terrain, lack of skilled manpower, poor road access and transportation, and the difficulty of installing and maintaining networks ,though currently receiving a lot of attention, need to remain under study until no rural or remote area is left behind.

Rural and remote inhabitants also need to benefit from Artificial Intelligence

More detailed studies addressing the challenges of deploying cost-effective and sustainable next- generation broadband ICT infrastructure and digital services, as well as emerging technologies, in rural and remote areas are expected to be undertaken by ITU-D study groups, taking into account the global perspective in the era of digital transformation and social innovation.

Therefore, the WSIS target "Connect villages with telecommunications/ICTs and establish community access points" should be taken a step further through efforts to bring last mile connectivity to the village units and other rural and remote and ensuring that villagers have appropriate equipment and gadgets to access and utilise digital services.

It is also important to consider broadband demand creation and affordability programmes for the adoption of broadband and e-services by people in rural and remote areas. Government incentives, subsidies and other financing mechanisms are necessary. Work on the effective use of Universal Service Funds and best practices is also needs to continue.

1. **Question or issue for study**

There are still many challenges to overcome for spreading terrestrial and/or non-terrestrial telecommunications/ICTs and meeting the potential for provisioning high-speed broadband in rural and remote areas. Throughout the studies conducted in the past study periods, it has been clear from the experience of many countries that technologies and strategies for rural and remote areas are various and diversified from country to country. Also, the social, economic and technological situation in rural and remote areas is rapidly moving forward to the new economy. Therefore, it is important to update the study of broadband digital connectivity for rural and remote areas and to adapt and embrace social innovation and emerging technologies for rural inhabitants of developing countries, including LDCs, LLDCs and SIDSs, in respect of the following items:

* Harnessing the complementarity of Terrestrial and Non terrestrial networks.
* Techniques and sustainable solutions that can impact on the provision of telecommunications/ICTs and availability of broadband digital infrastructure in rural and remote areas, with emphasis on those that employ up-to-date technologies designed to lower infrastructure capital and operating costs and support convergence between services and applications.
* How Artificial intelligence can improve rural infrastructure and access.
* Challenges in creating or building broadband digital infrastructure in rural and remote areas.
* Needs and policies, mechanisms and regulatory initiatives to reduce the digital divide between rural and urban areas by increasing broadband digital access.
* The benefits of AI and challenges of AI Adoption in rural and remote areas.
* Harnessing AI to enhance digital literacy and skills in rural communities.
* Improvement of Quality of the services in rural and remote areas.
* Business models for sustainable deployment of networks and services in rural and remote areas, taking into consideration priorities based on economic and social Integration and implementation of ICT services in rural and remote areas, including new and emerging technologies.

**Local content Development and relevant policies**

* 1. Encouragement of the development of new Internet applications and digital solutions for the socio-economic development of rural and remote areas, and promotion of innovation and digital transformation for rural and remote areas (in possible collaboration with Question 5/2).
* Opportunities for and challenges to access to services in locally relevant languages for indigenous people and for people with specific needs.
* Description of evolving system requirements for rural network systems specifically addressing the identified challenges of rural deployment.
* Analysis of case studies.

During the study carried out on each of these items, the following matters should also be studied and reflected in the outputs of the Question:

* Maintenance and operational aspects to provide a quality and continuous service.
* Strategies on the integration of ICT in education in rural areas.
* Relevant localization of content for rural and remote people.
* Affordability of services/devices for rural users to adopt so as to fulfil their development needs.
* Strategies to promote small and medium enterprises (SMEs), and complementary access and village connectivity networks, in accordance with national regulations, to provide telecommunication/ICTs services in rural and remote areas for promoting innovation and achieving national economic growth, in order to reduce the digital divide between rural and urban areas.

In addressing the above studies, the work under way in response to other ITU-D Questions and close coordination with relevant activities under those Questions should be taken into consideration, in particular Questions 1/1, 3/1 and 4/1 and Questions 1/2, 2/2, 4/2 and 5/2, are highly relevant. Likewise, the studies shall take into account cases related to persons with specific needs, indigenous communities, isolated and poorly served areas, LDCs, SIDS and LLDCs, and highlight their specific needs and other particular situations which need to be considered in developing broadband digital facilities for these areas.

1. **Expected output**

The output will be a report on the results of the work conducted for each item studied, together with a handbook, case study analysis reports, and one or more Recommendations and other relevant materials at appropriate times, either during the course of or at the conclusion of the cycle.

Information shall be consolidated and disseminated to the membership to enable them to organize seminars and workshops for sharing best practices on the digital deployment of broadband infrastructure in rural and underserved areas.

1. **Timing**

The output will be generated on an annual basis. The output from the first year will be analysed and assessed in order to update the work plan for the next year, and so on.

1. **Proposers/sponsors**

The Question was originally approved by WTDC-94, and subsequently revised by WTDC-98, WTDC- 02, WTDC-06, WTDC-10, WTDC-14 and WTDC-17.

1. **Sources of input**

Contributions are expected from Member States, Sector Members, Academia and Associates, as well as inputs from relevant Telecommunication Development Bureau (BDT) programmes, particularly those that have successfully implemented telecommunication/ICT projects in rural and remote areas. These contributions will enable those responsible for work on this Question to develop the most appropriate conclusions, recommendations and outputs. The intensive use of correspondence and online exchange of information, workshops and field experiences is encouraged for additional sources of inputs.

1. **Target audience**

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| **Target audience** | **Developed countries** | **Developing countries** |
| Relevant policy-makers | Yes | Yes |
| Telecom regulators | Yes | Yes |
| Rural authorities | Yes | Yes |
| Service providers/operators | Yes | Yes |
| Manufacturers, including software developers | Yes | Yes |
| Vendors | Yes | Yes |

1. **Proposed methods of handling the Question**

Within ITU-D Study Group 1.

1. **Coordination**

The ITU-D study group dealing with this Question will need to coordinate with:

* Focal points of the relevant Questions in BDT
* Coordinators of relevant project and programme activities in BDT
* Regional and scientific organizations with mandates covering the subject matter of the Question
* Other relevant stakeholders (see Recommendation ITU-D 20). As may become apparent within the life of the Question.

1. **BDT programme link**

WTDC Resolution 11 (Rev. Buenos Aires, 2017), Resolution 68 (Rev. Dubai, 2014) and Recommendation ITU-D 19.

Links to BDT programmes aimed at fostering the development of telecommunication/ICT networks as well as relevant applications and services, including bridging the standardization gap.

1. **Other relevant information**

As may become apparent within the life of the Question.

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1. These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition. [↑](#footnote-ref-2)