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| **Logo, company name  Description automatically generated** | A close up of a sign  Description automatically generated**World Telecommunication DevelopmentConference (WTDC-22)****Kigali, Rwanda, 6-16 June 2022** |
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| PLENARY MEETING | **Addendum 1 toDocument WTDC-22/33-E** |
|  | **16 May 2022** |
|  | **Original: English** |
| United States of America |
| Modification to WTDC Question 5/1 – Telecommunications/information and communication technologies for rural and remote areas |
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| **Priority area:** - Thematic Priorities, Action Plan, Regional Initiatives and SG Questions**Summary:**Proposed revisions to Question 5/1 to further focus the Rural Question on ways to bridge the digital divide in rural and remote areas by addressing the challenges and issues faced when deploying and expanding broadband networks and services in these areas. Study Group participants will also be able to focus on the future issues and challenges that extend from converged telecommunications/ICTs as well as relevant topics continuing from the last study cycle**.****Expected results**The United States invites WTDC to examine the proposal and approve these revisions to Question 5/1.**References**–WTDC-22 document 5 Annex 1 - Question 5/1 - Telecommunications/information and communication technologies for rural and remote areas  |

**Proposal**

The United States proposes to modify WTDC Study Question 5/1 with changes as presented below.

STUDY GROUP 1

**MOD** USA/33A1/1

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 achieving the objectives set by the Geneva Plan of Action of the World Summit on the Information Society (WSIS) in the era of digital transformation, and to promote attainment of the Sustainable Development Goals (SDGs) defined in September 2015, it is necessary to address the challenge of telecommunication/ICT infrastructure development and the availability of essential e-services (e.g. e-education, e-health, e-government, e-agriculture, e-commerce, etc.) in the rural and remote areas of developing countries[[1]](#footnote-1)1 , including LDCs, LLDCs and SIDSs, where more than half of the population live. These areas need broadband connectivity in general, including terrestrial and non-terrestrial high-speed, high-quality broadband network technologies. They should support the most common broadband applications required by citizens, advance digital equity and inclusion, and help achieve the SDGs.

The current and planned installation of cost-effective and sustainable telecommunication/ICT infrastructure through the deployment of new and emerging technologies such as next generation high-speed mobile terrestrial and non-terrestrial networks and fixed broadband wire and wireless transmission systems suited for rural and remote areas is an important aspect calling for further studies. Specific outcomes need to be available for the vendor community to make available broadband connectivity that supports e-services that can enhance the quality of life for inhabitants in rural and remote areas.

Infrastructure, including access to adequate power supplies, buildings and shelter, accessibility, and skilled labor make installing broadband telecommunication networks in urban and suburban areas comparatively more straightforward than in rural areas. Current and future broadband systems may benefit from certain adaptations to meet specific rural requirements in order to be more widely deployed.

In particular, terrestrial and non terrestrial high-speed broadband enabled technologies and services help promote the availability and allocation of public services for all inhabitants. Robust broadband connectivity makes it possible to electronically deliver public resources and services, such as high-quality education and medical care to residents in rural and remote areas.

However, developing countries face several challenges when planning to extend infrastructure to rural and remote areas, isolated land locked areas, and islands, to include: power shortages, difficult terrain, lack of skilled labor, insufficient access totransportation, and difficulty of installation and maintenance of networks

More detailed studies addressing the challenges of deploying cost-effective and sustainable next generation broadband telecommunication/ICT infrastructure in rural and remote areas are expected to be undertaken within the study groups of the ITU Telecommunication Development Sector (ITU‑D), 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 promoted more intensively, taking into account the sharing economy, by employing where possible emerging advanced digital broadband technologies to support various e‑application services to stimulate social and economic activities and enhance the quality of life for inhabitants in rural and remote areas. Multipurpose community telecentres (MCT), public call offices (PCO), community access centres (CAC) and e‑posts are still valid in terms of cost effectiveness for sharing broadband access and facilities by community residents, leading to the goal of provision of individual telecommunication access.

It is also important to consider broadband demand creation and affordability programmes for the adoption of broadband and e-services specifically for people living in rural and remote areas. They face unique challenges that differ from those living in non-rural areas and need access to affordable broadband technologies and services. Government incentives, subsidies and other financing mechanisms are necessary. Work on the effective use of tools such as Universal Service Funds, innovative business and investment models and other best practices is also crucial.

# 2 Question or issue for study

There are still many challenges to deploying and expanding terrestrial and non-terrestrial high-speed broadband infrastructure to include space-based technologies 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 environments in rural and remote areas are rapidly integrating into the new digital economy. Therefore, it is important to update the study of broadband connectivity for rural and remote areas and to adapt to the new social environments emerging for rural inhabitants of developing countries including LDCs, LLDCs and SIDSs, in respect of the following items:

– Techniques and sustainable solutions that can impact on the provision and availability of broadband infrastructure in rural and remote areas, with emphasis on those that employ the up-to-date technologies designed to lower infrastructure capital and operating costs, assist convergence between services and applications.

– Difficulties in developing or deploying broadband infrastructure in rural and remote areas.

– Difficulties facing broadband satellite, next generation mobile networks and fixed digital transmission systems for rural deployment in developing countries, and the requirements to be satisfied by such systems.

– Needs and policies, mechanisms and regulatory initiatives to reduce the digital divide between rural and urban areas by increasing broadband access.

– Quality of the services provided, and the cost effectiveness, degree of sustainability in different geographies and sustainability of the techniques and solutions.

- The devopment of relevant and advantageous applications and broadband enabled tools that meet the specific needs of local communities in rural and remote areas to increase the demand for broadband technologies and services.

– Financing mechanisms including Universal Service Funds.

– Integration and implementation of new telecommunication/ICT technologies/services in rural and remote areas (especially in education, health and agriculture).

– Increasing availability of telecommunications/ICTs that provide enhanced connectivity at progressively lower costs, lower energy consumption and lower levels of GHG emissions specifically for rural and remote areas.

– Terrestrial and non-terrestrial high-speed broadband access and e-services and application support significant economic and social benefits and digital equity and inclusion in rural and remote areas around the world. Therefore, it is important to strengthen the research of the driving effect of e-services in the next study cycle as to the following points:

1. integration of rural e-services (especially smart applications for e-learning, e-health, e-agriculture, e-commerce) in rural and remote areas, into national strategies;
2. promotion of e-services such as rural e-commerce, online education and telemedicine to fully realize the important role of telecommunications/ICTs in rural economic and social development;
3. encouragement of the development of new e-services and digital telecommunication/ICT solutions for the socio-economic development of rural and remote areas, and promotion of innovation and digital transformation in rural and remote communities.

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– 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:

– Environmental sustainability in deploying the infrastructure and necessary robustness of telecommunication/ICT infrastructure;

– Maintenance and operational aspects to provide quality and continuous service;

– Programmes and practices to generate an increase in demand for ICT/IoT devices and services in rural and remote areas;

– Strategies on the integration of telecommunications/ICTs in education in rural areas;

– Methods for increasing demand by educating communities onthe benefits of broadband services and technologies in rural and remote areas;

 Strategies to promote Small and Medium Enterprises (SMEs), profit and non-profit, in accordance with national regulations, to provide telecommunication/ICT 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 2/2, 4/2 and 5/2, are highly relevant. Likewise, the studies shall take into account cases related to people with specific needs, indigenous communities, isolated and poorly served areas, LDCs, small island developing states (SIDS) and landlocked developing countries (LLDCs), and highlight their specific needs and other particular situations which need to be considered in developing broadband digital facilities for these areas.

# 3 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 deployment of broadband infrastructure in rural and underserved areas.

# 4 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.

# 5 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.

# 6 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.

# 7 Target audience

| 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 |

# 8 Proposed methods of handling the Question

Within ITU-D Study Group 1.

# 9 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.

# 10 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.

# 11 Other relevant information

As may become apparent within the life of the Question.

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