

RECOMMENDATION ITU-D 19

Telecommunications for rural and remote areas

The World Telecommunication Development Conference (Dubai, 2014),

recognizing

a) that the following Recommendation resulting from the ITU-D study period 1998-2002 has provided guidance on a number of issues concerning telecommunications/information and communication technologies (ICTs) in rural and remote areas:

– RECOMMENDATION ITU-D 17, Sharing of facilities in rural and remote areas (January 2002);

b) that Focus Group 7, on rural telecommunications, addressed technological options, service potential and financing mechanisms for the provision of telecommunications/ICTs in rural and remote areas;

c) that the Telecommunication Development Bureau (BDT), through the "Connect a School, Connect a Community" initiative, has developed public policy recommendations and best practices for the development of ICTs in indigenous communities, and that therein, based on relevant cases of countries worldwide, it notes the importance of creating conditions for the provision of telecommunication services in those areas, through projects that are organized around achieving economies of scale and run by the communities themselves,

noting

a) that Focus Group 7 paid particular attention to the role of micro-finance institutions (MFI) in promoting access to ICT services and application by supporting small entrepreneurs;

- b) the excellent results of the study period 2006-2010, which consolidate experiences worldwide on the successful provision of telecommunications/ICTs to rural and remote areas, based, *inter alia*, on information submitted to the case library and on e-discussions on the issues identified by the Rapporteur Group¹;
- c) that experiences all over the world with emerging technologies deployed in rural and remote areas providing broadband, wired transmission media and wireless transmission media indicate rapid decrease of costs and increase of range and capacity, and that all these developments make connecting rural areas a feasible option;
- d) that backhaul wireless solutions play a key role in extending broadband service delivery and coverage for rural and remote areas;
- e) that the deployment of IP-based platforms serving wide areas can make a range of developmental services and applications such as education, health, agriculture, etc. available to the rural population;
- f) that, in remote and rural areas, spectrum use might be improved by the use of new spectrum-access approaches;
- g) that these developments make it possible for telecommunication/ICT services and applications to be provided by small and medium enterprises, local governments and non-governmental organizations in rural and remote areas with appropriate business models;
- h) that technical expertise and adoption capacity are important factors to plan, implement and operate such facilities;
- i) that in rural and remote areas of developing countries, low incomes and lack of literacy and computer literacy limit the number of people who can have Internet access in their homes: These communities need public ICT facilities which can be used for communication, delivery of services and various capacity building activities, and there is a role for small entrepreneurs, local governments, schools and post offices in this process;

¹ The case library for Question 10-2/2 can be consulted at http://www.itu.int/ITUd/study_groups/SGP_2006-2010/events/Case_Library/index.asp. The address of the e-discussion web page is: <http://www.itu.int/ituweblogs/ITUd-SG2-Q10/>.

- j)* that the provision of ICT services and applications by small entrepreneurs in rural and remote areas has the potential to create employment, and these ventures can be supported by financial institutions and receive support from various government schemes;
- k)* that a well planned maintenance and operation programme in order to keep the infrastructure and associated equipment, including terminal equipment, in good working condition is an essential aspect of the support structures in rural areas;
- l)* the excellent collaboration between BDT and the Universal Postal Union in promoting the use of post offices as vehicles for the provision of access to telecommunication/ICT services and applications in rural and remote areas;
- m)* that energy supply is a basic bottleneck for the spread of telecommunications/ICTs in rural and remote areas, and that innovative uses of solar power, mini-hydro power and windmill power sources, sometimes in combination, are being successfully employed in many countries to provide reliable energy sources for mobile base stations,

considering

- a)* that the provision of telecommunications, ICT services and applications can make significant contribution to the quality of life of the population living rural and remote areas;
- b)* that stimulation of demand for telecommunications/ICTs through proactive government policies is a key to realizing their benefits;
- c)* that the accumulation of experiences worldwide on community access institutions (telekiosks, multipurpose community telecentres, multimedia centres) points to the need for proactive and supportive government policies to simulate demand of the services available;
- d)* that the availability of information should be reinforced by the upgrading of skills and provision of capital in order that information is properly utilized;
- e)* that access to telecommunications/ICTs for all will maximize social welfare, increase productivity, conserve resources and contribute to safeguarding human rights,

recommends

- 1 that developing countries should include the provision of telecommunications/ICTs in rural and remote areas in their national development plans;
- 2 that, in planning infrastructure development in rural and remote areas, it is important to assess all available technologies in the market, taking into consideration the regulatory environment, geographical conditions, climate, costs (capital expenditure and operational expenditure), maintainability, operability, sustainability, etc., based on the results of the site survey and community needs;
- 3 that community access to ICT facilities and services is particularly important in rural and remote areas: business models which can achieve financial and operational sustainability can be operated by local entrepreneurs supported by a variety of initiatives, and these facilities, where necessary, should also be supported by universal service funds as an essential component of rural communications;
- 4 that it is important to encourage the use of post offices to provide telecommunication/ICT services, owing to their communicative presence in the lives of the population in rural areas;
- 5 that local institutions should be involved in planning and implementing ICT facilities;
- 6 that enhancing local technical expertise and adoption are important for successful implementation of ICT services and applications in rural and remote areas, and attention should thus be paid to training, exchange of information and sharing of maintenance facilities in order to achieve sustainability and viability;
- 7 that adoption of broadband technology should be encouraged;
- 8 that keeping equipment in good working condition through effective preventive maintenance programmes is an essential part of making telecommunications in rural areas viable and should be encouraged, while guarding against making developing countries a dumping ground for obsolete technologies;
- 9 that it is important to take steps to ensure continued reliability of equipment in rural environments, such as developing an appropriate maintenance and operation strategy and encouraging training for technical staff;

10 that it is important to consider small and non-profit community operators, through appropriate regulatory measures that allow them to access basic infrastructure on fair terms, in order to provide broadband connectivity to users in rural and remote areas, taking advantage of technological advances;

11 that it is also important that administrations, in their radio-spectrum planning and licensing activities, consider mechanisms to facilitate the deployment of broadband services in rural and remote areas by small and non-profit community operators;

12 that, given that lack of energy supply is a major bottleneck in the provision of telecommunications/ICTs in rural and remote areas, and taking into consideration environmental issues, renewable energy sources should be used whenever feasible;

13 that, since the high cost of backhaul investment is another bottleneck in the provision of telecommunications/ICTs in rural and remote areas, new regulatory frameworks on shared infrastructure and accelerated licensing processes could help in developing these networks;

14 that collaboration among governments, industry, local agencies and international organizations is desirable in the development of low-cost ICT infrastructure, including renewable energy sources and terminals for the provision of telecommunications/ICTs in rural and remote areas, and should be pursued;

15 that Member States shall promote the best alternatives for the deployment of cost-effective backhaul solutions for broadband access networks in rural and remote areas.