

Strengthening ICT Policies and Applications to achieve MDGs and WSIS goals in the Asia and the Pacific

21-22 October 2009 - UNESCAP, Bangkok

Strengthening ICT Policies & Applications to Achieve MDGs and WSIS goals in: 21-22 October 09, UNESCAP

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1. Background - Telecommunication and ICT sector

- 1.1 The ICT sector has come a long way since the first telephone network in Bhutan was established in 1963.
- 1.2 Modern telecommunication system, Internet, mobile phones, satellite television and wireless networks have opened up new ways for Bhutanese to communicate, find information, get entertained and do business.
- 1.3 Fixed-line tele-density increased from 2.8% in 2002 to 5.9% in 2004 but declined to 4% in 2009. Mobile tele-density reached over 42% since the services were first launched in November 2003.

2. ICT ACCESS

- 2.1 The development of ICT in Bhutan is guided by the Bhutan ICT Policy & Strategies (BIPS), which was formulated through the involvement of all stakeholders – Government as well as private sector, and subsequently approved in 2004.
- 2.2 BIPS overall policy objective is to develop reliable, affordable & sustainable ICT infrastructure and services and provide universal connectivity.
- 2.3 The BIPS strategy covers five strategic themes – policy, infrastructure, human capacity, content and application, and enterprise.

2. ICT ACCESS

2.4 Drawing from the above strategies, the following programs have been identified for implementation during the Tenth Five Year Plan:

- a) Development of ICT infrastructure - Implementation of National Broadband Network Master Plan
- b) Development, implementation and access to online applications - Establishment of Community Information Centers (CICs) in all 205 Gewogs (administrative Blocks within Districts), and Development and promotion of various e-services applications
- c) Promoting ICT industry growth - establishment of IT Park, Support for establishment of BPOs (call centers, data centers & medical transcription facilities)

2. ICT ACCESS

d) Establishment of ICT Research & Training Center

e) Support to achieve Universal access to telecommunication and ICT services in all villages

3. Achievements so far

- 3.1 A converged regulatory framework has been established through enactment of the “Bhutan Information, Communication & Media Act” in 2006 and the establishment of Bhutan InfoComm & Media Authority as an independent regulatory body.
- 3.2 In keeping with the market liberalization policy, 2 Internet Service Providers (ISPs) were licensed in 2004 and they currently provide VSAT-based Internet and other value-added ICT services.
- 3.3 Second mobile operator licensed in 2006 through an open bidding licensing process and is providing services since May 2008.
- 3.4 Most government publications, forms, legislations and other information are now available on-line

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3. Achievements so far.....

- 3.5 ICT Units have been established in all Ministries to enhance inter-ministerial (and thereby national) coordination and application of ICT.
- 3.6 ICT equipment are exempted from import and other duties and ICT companies have been accorded tax holiday.

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4. Major ICT access initiatives

4.1 National Broadband Network Project:

The National Broadband Network Master Plan is being implemented currently as a priority project. Operation by June 2011.

4.2 Systems and e-government applications:

Of about 10 e-services applications currently being developed, Governmental Portal has been established and the Office Procedure Automation system piloted in few Ministries already.

4.3 Community Information Centers:

54 Community Information Centers (CICs) are in operation or being established. 20 are planned during 2009-10 using the Universal Service Fund. Further plans to establish CICs in all 205 administrative blocks (*Gewogs*) within 2013.

4. Major ICT access initiatives.....

4.4 Rural communications:

195 out of 205 administrative Blocks are connected to the national telecommunication network providing fixed-line telecommunication services.

Government target of achieving universal Mobile connectivity is June 2011, and government subsidy has been provided.

4.5 Implementation of the National ICT HRD Master Plan:

Although a comprehensive National ICT HRD Master Plan has been formulated to address the requirement of human resource for the ICT sector in the country, its implementation is yet to begin owing to lack of fund.

4.6 Establishment of IT Park Project

Works for development of IT Park has been awarded and it is expected to be ready by second half of 2011.

4. Major ICT access initiatives.....

4.7 Internet connectivity to Schools

23 Higher Secondary Schools have been provided Internet lease-line connectivity as of 31 July 2009 using the Universal Service Fund.

Implementation status of BIPS is given in fair details in the country report

5. Main gaps and problems

As a fairly new area, ICT sector in Bhutan faces some real challenges. Extending connectivity to rural areas is not easy owing to harsh topography, scattered settlements, high cost of providing infrastructure. Specifically:

- Affordability of ICT services is a major concern owing to high cost of developing infrastructure and small domestic market
- Low utility of ICT services due to lack of local content and low computer literacy
- Competition becomes challenging since the new entrants have to compete for limited pool of customers

5. Main gaps and problems.....

- Rapidly changing technology impose huge cost to the service providers and affordability
- Limited pool of ICT expertise and skills
- Lack of foreign investment
- Very low diversification of ICT businesses, largely dominated by hardware vendors
- Weak regulatory capacity
- ICT usage is relatively low among the country's population, and the gap between urban and rural population is visible. Even in the urban areas, Internet usage is confined to Government offices and bigger business houses.

6. Access - technological and infrastructural problems

6.1. Absence of common ICT and Telecom infrastructure deter new entrants to enter this market.

6.2 High cost of maintenance and unreliable power supply, mainly in rural areas, pose challenge to keep the equipment and services running round the clock. This is most common in the case of VSAT

7. Policy with regard to data privacy and cyber-security

Information management and Security Policy have been approved by the Government and consultations are currently on-going among different government agencies to finalize and commence its implementation.

8. Composition of national telecommunications network

The telecommunication transmission network is mainly comprises of:

- 34Mbps and 155Mbps 7/8GHz microwave radio and digital switching systems at the more populous Dzongkhag (District) headquarters and urban centers, and spur routes

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