

A COUNTRY REPORT: Nepal

ITU/MIC International Satellite Symposium 2015

Satellite Regulation, Market, Technology Trends and Industry Opportunities

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NEPAL AND THE WORLD

Where is it?



Introduction and Background

- Birth place of Lord Buddha
- Nepal is a Landlocked Country
- Area:1,47,181 sq. Km.
- Latitude: ~ 26°N - 30°N
- Longitude: ~ 80°E – 88°E
- Plain, Hilly & Mountainous Region
- 59 Ethnic Groups
- Population: 2,66,20,809 (26.6 M)
- Home to Mt. Everest (Sagarmatha)
- 8 highest peaks out of 10
- Terrain: (60-8848)m

National ICT Administrations

- **Ministries:** MoIC, MoST
- **Regulator:** NTA
 - Regulates Telecommunication Services.
- **MoIC:** Covers -Frequency Management, Postal Services, Telecommunications, Broadcasting, Press & Information, Film Development.
- **MoSTE:** Formulate, Coordinate, implement, monitor and evaluate policies, plans, strategies, programs and projects in Science, Technology & Environment Sectors.

RULES AND REGULATIONS

- **Radio Act (1957):** empowers the government to make rules with respect to radio machines
 - Radio Communication (License) Regulation (1992)
- **Telecom Act (1997):**
 - provides for the creation of the Radio Frequency Policy Determination Committee. Its purpose is to determine policy relating to radio frequencies and spectrum allocation. The spectrum management related front the Radio Frequency Policy Determination Committee formulated and brought into force Radio Frequency (Assignment and Pricing) related Policy of the Telecommunications Service 2012
 - Telecommunication Regulation (1997)
 - National broadband policy that has been approved recently

Latest ICT Statistics

- **Tele-Density:**
 - Voice: 75.46%
 - Data/Internet services: 24.51%
- **Licenses Issued:**
 - Basic Telecommunications Service: 3
 - Basic Telephone Service: 1
 - GSM Cellular Mobile Service: 2
 - Network Service Provider: 10
 - **VSAT Users: 27**
 - Internet (With E-mail) Service: 43
 - **GMPCS Service: 2**
 - Rural Telecom Service: 1
 - Limited Mobility Service: 83
 - International Trunk Telephone Service: 3
 - **VSAT Users (Rural Area): 10**
 - Internet (With Email) Service in Rural Area: 5

Latest ICT Statistics

- **Broadcasting Licenses:**
 - So far, more than 600 FM radio licenses issued.
 - More than 450 FM radio stations are operational.
 - Terrestrial TV Broadcasting: 14 Licenses
 - **Satellite TV Broadcasting: 17 Licenses**
 - **DTH Broadcasting: 7 Licenses, 1 Operational**
 - **Cable television: 40 licences**
 - Cable TV network Operators: 800

Satellite Program of the Country

- **Regime #1: Related to 12 GHz Broadcasting Satellites:**
 - Info on the satellites networks NPLSAT-44E and NPLSAT-50E was received by the ITU Bureau on 1 July, 1997 as adopted by WRC-77.
 - The Bureau wrote to the Nepal, MoIC on 21 Jan, 2002 requesting the info required for processing of the NPLSAT-44E and NPLSAT-50E satellite networks.
 - ITU then sent a follow-up fax message for the ministry on 26 Feb, 2002.
 - No reply received by the Bureau,
 - Bureau then wrote to the Ministry saying that submission relating to these networks will be considered upon receiving of complete information.

This part is based on: TSRP - FMDS-2, Final Report 2004, Version 3.0- Spectrocan (since no other documentations were found in the Ministry: MoIC, Nepal).

Planned Satellite Network: contd...

- NPLSAT networks were not entered into the ITU database (may be because information were considered to be incomplete)
- WRC-2000 did not include NPLSAT-44E or NPLSAT-50E in the list.

Regime #2: Related to 6/4 GHz and 13/11 GHz fixed satellites of Appendix 30B.

- Nepal has a fixed-satellite orbit position plan at 123.3E.
- This allotment could be used to implement a Nepalese domestic satellite to carry voice, data, and television traffic.
- Such a satellite might not be cost-effective in meeting Nepal's telecommunications and broadcasting requirements.

Merits and Possible Applications

- Cover mass geographical coverage
- No Last mile issues
- High availability Proven service to traditional markets of Telephony,
- Broadcasting
- Backhauling
- Redundancy in telecom Network
- Telecom services during disasters Rapid deployment
- As a complement to terrestrial network
- interactive digital multimedia broadcasting

Issues and Challenges

- We lack consistent set of national radio regulations to govern Satellite Industry.
- We lack expertise that is needed for proper coordination in the ITU regarding the usage of Satellite Orbital Slots.
- We lack expertise on space technology and policies related to space technology

Ongoing Activities

- Following studies are being conducted regarding satellite and its use in Nepal
 - Establishment of organizational structure for technical, administrative works and coordination with ITU
 - To prioritize and emphasize the use of orbital slot and space technology
 - To facilitate to coordinate International organizations regarding satellite orbital slot and space technology
 - To develop human resources and technical experts regarding satellite orbital slot and space technology

Ongoing Activities...

- To study the status of the satellite slot, the footprint of the satellite, available frequency band and bandwidths, internal use of the bandwidth, possibility of bandwidth available to other countries for lease
- render professional services for assessing, planning, procurement implementation, mechanism for the utilization of Orbital Slots either by launching satellite or leasing to other satellite provider.

Conclusion and Recommendations

We feel necessary that ITU provide consultancy/expert services to the LDCs regarding the uses of Satellite Orbital Slots for:

- Conducting feasibility studies
- Preparing Detailed Project Report
- ITU Filings and Frequency Coordination etc.
- For RFP preparations, Managing procurement process, Bid evaluation, Contract Negotiation etc.

**THANK YOU FOR YOUR TIME
AND
NAMASTE**