Country Report Presentation

Nepal

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Nepal

Presentation Highlights:

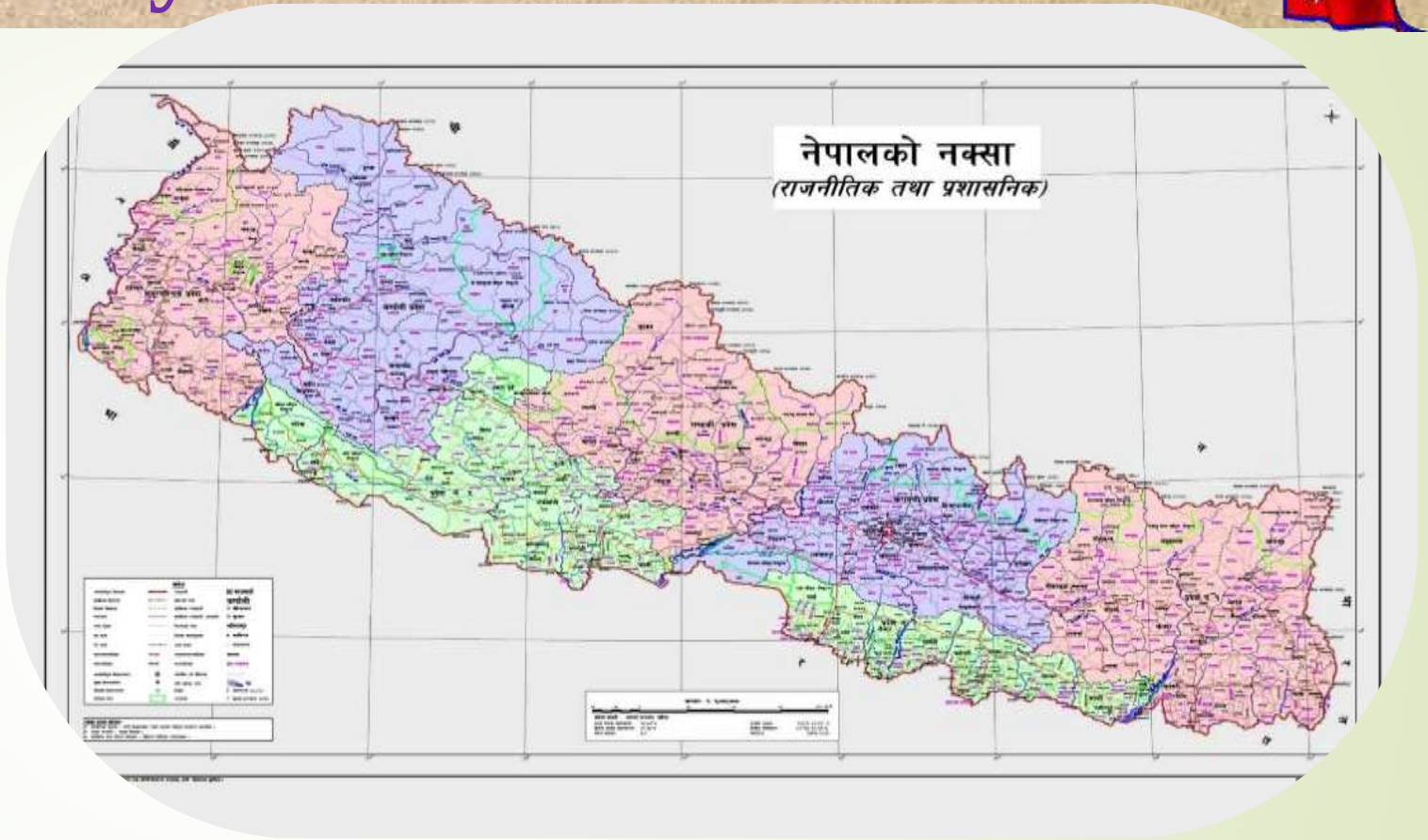
- Country Overview
- Present Status of Landlock & info-communication Infrastructure
- Current strategy of ICT & satellite navigation
- Future Strategy to bridge the digital gap

Country Overview

World(0.03%)
Asia(0.3%)
South Asia(2.82%)
Landlocked
East-West: Avg.885km
South-North: Avg.193km
East, South and West : India
North : Tibet, China
Capital: Kathmandu
Area: 147,516 km^2.
Currency: Nepalese Rupee

Federal Democratic Republic
Multiparty Governance
Provinces - 7,
Districts - 77,
Municipalities - 753

Population : 2.94 Millions
GDP: 40.15 B USD
Per Capita Income: 1399 USD



Nepal is chairing SAARC & LDCs

Geography And Diversity

Topographically 3 regions:
Mountain, Hill, Tarai (Plain)

World's 8 highest peaks among top 10 highest mountains in the world and more than 6000m are about 1300 in nos.

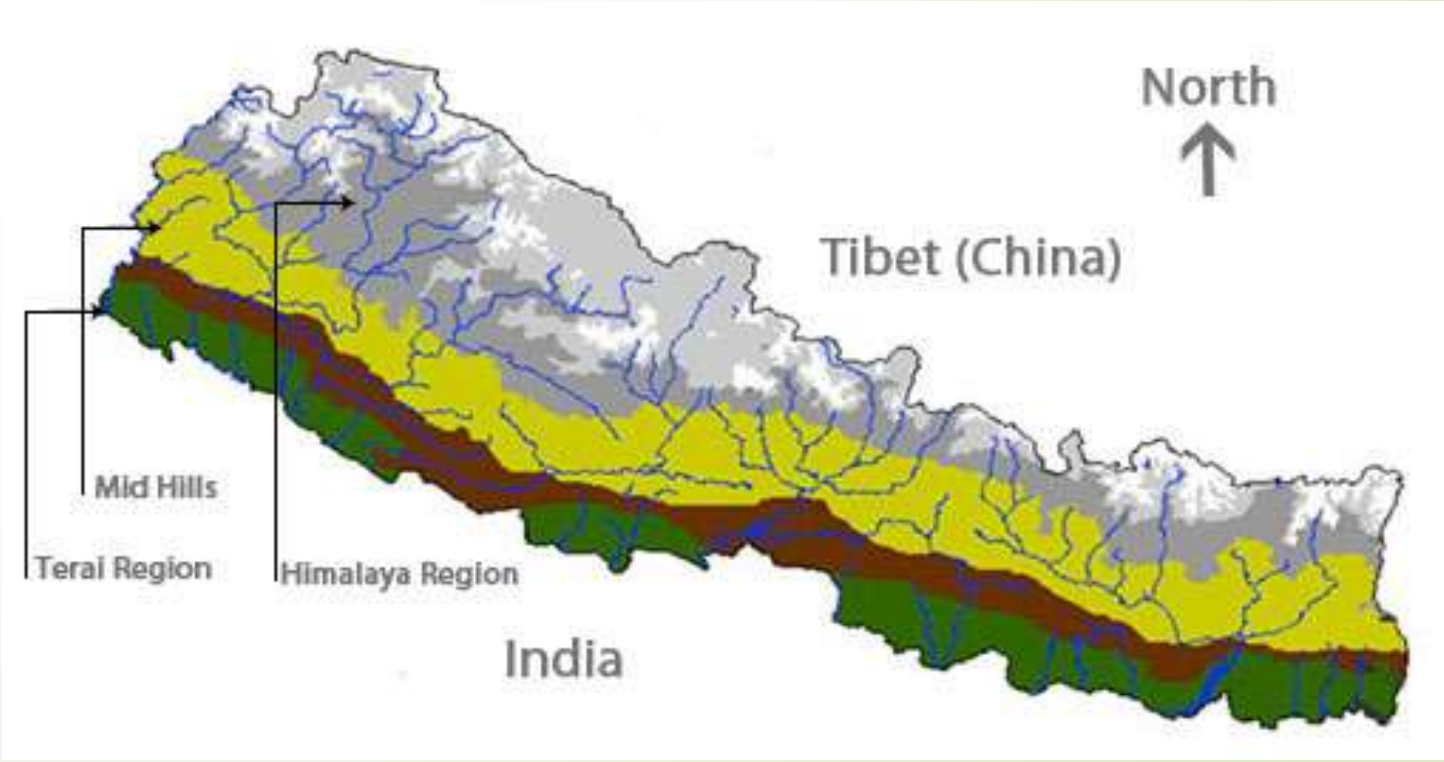
The highest point – Mt. Everest(8848.86m) and Lowest point(60m above sea level)- Kechana Kalan at Jhapa District

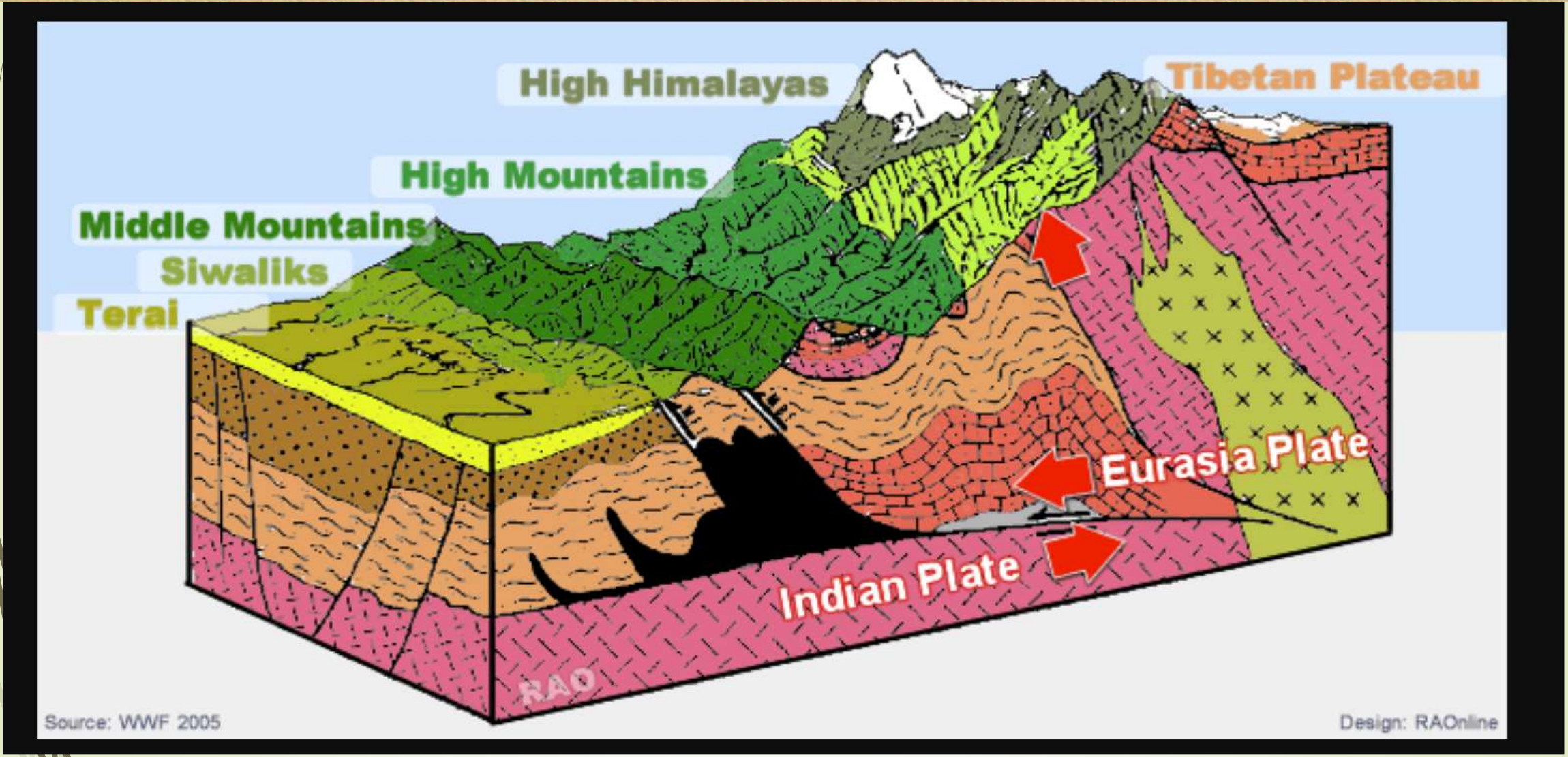
Nepali date follows Bikram Sambat (B.S.) and is 56.7 years ahead of Sun Gregorian calendar A.D.

83% hill and mountain & 17% Flat Land

Diversity in natural resources and socio-economic life

125 Ethnic Groups
124 Languages
10 Religion
Secular




High Himalayas
Tibetan Plateau
High Mountains
Middle Mountains
Siwaliks
Terai
Eurasia Plate
Indian Plate
RAO
Source: WWF 2005
Design: RAOnline

Competitive Advantages Sectors

Forest
- Coverage:45%
- National Park:12
- Hunting Reserve: 1
- Conservation Area:6
- Climate Financing

Water Resources
- Rivers :6000+
- 2nd Richest in the world
- Emerging in Hydropower sector

Tourism
- Possible Employment sector
- Average Tourists Flow: 7,34,000
- 21.7% Contribution in GDP

Agriculture
- Main Pillar of Economy
- 24% Contribution in GDP
- 54% people dependent

Remittance
- 22% Contribution in GDP
- Malaysia, Qatar, Saudi Arabia, UAE
- 111 Countries officially open

National Emblems

Branding of Nepal

Country of Himalayas

Branding of Nepal

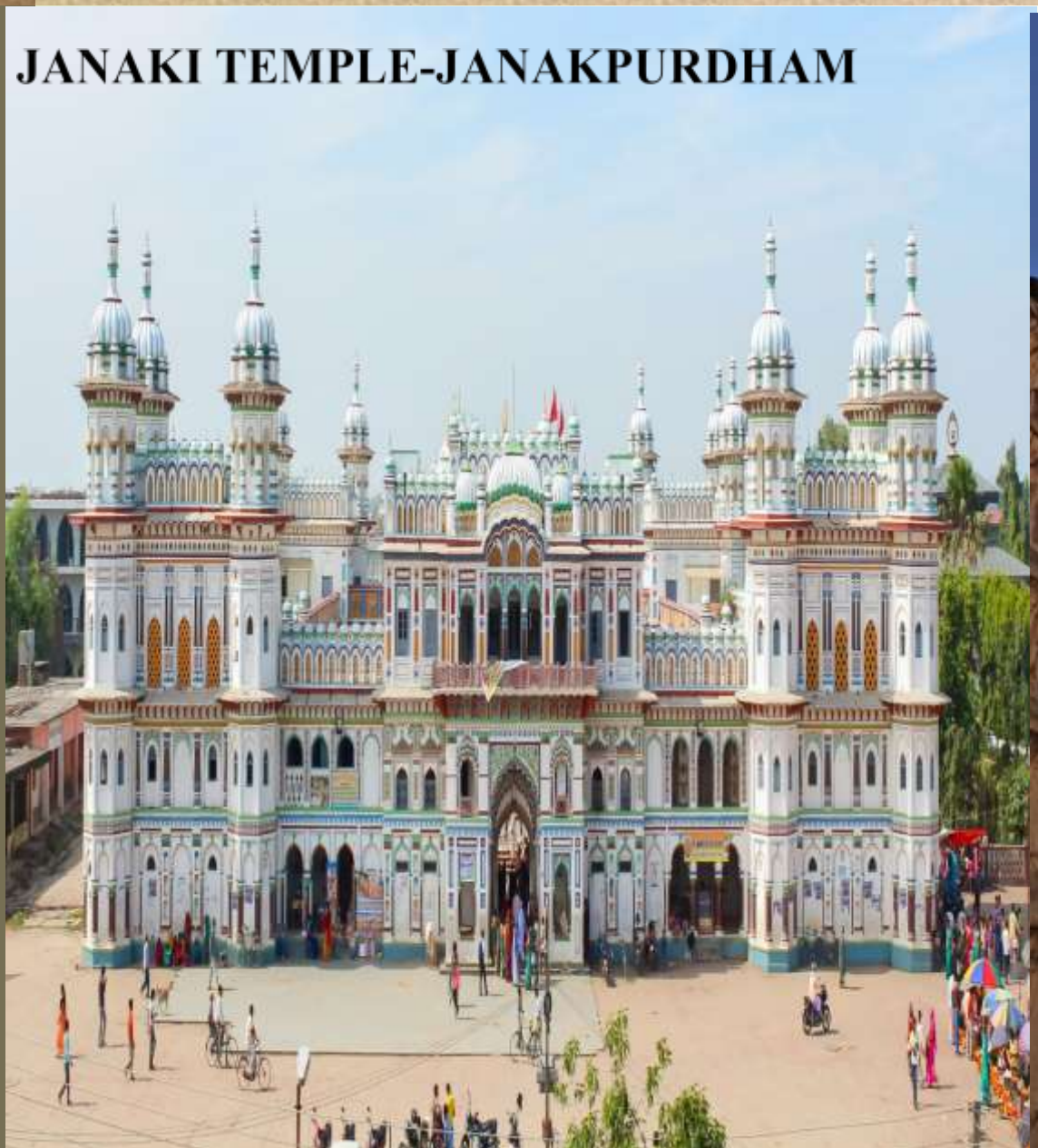
Birth Place of Lord Buddha

Branding of Nepal

Land of Cultural Heritages

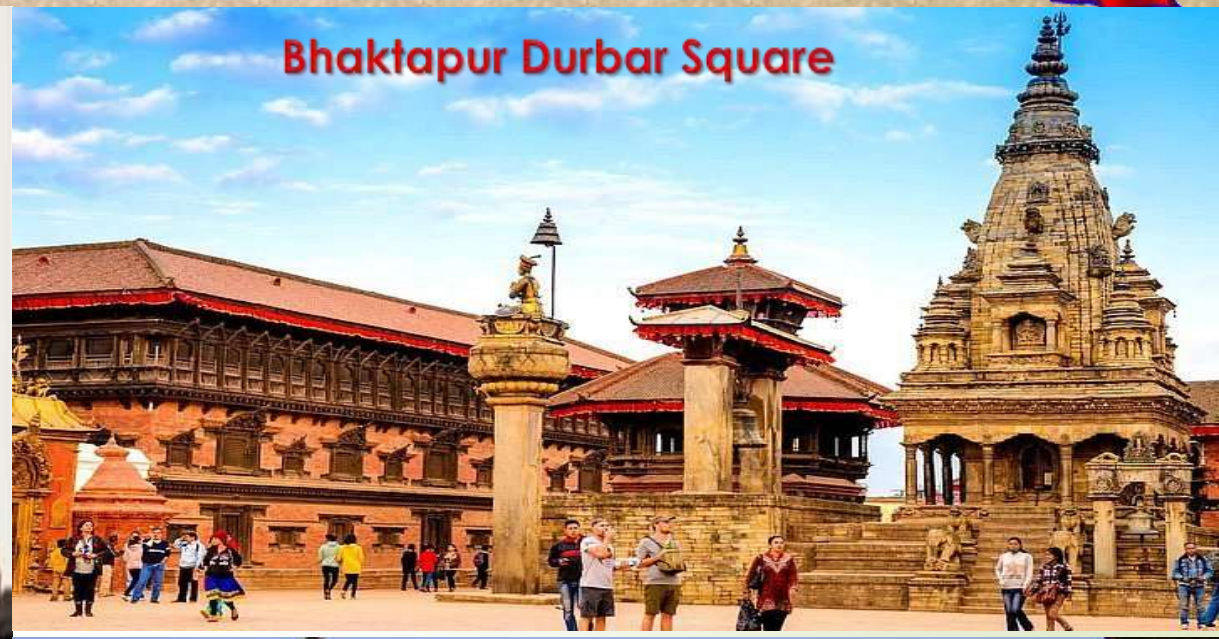
Branding of Nepal

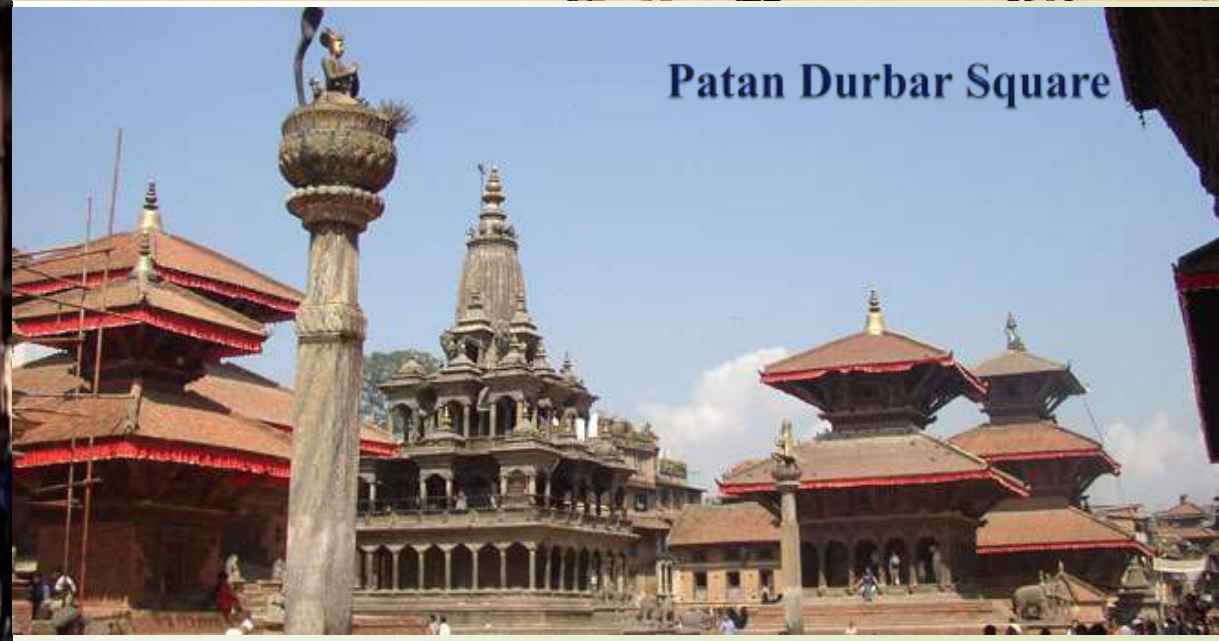
Land of Cultural Heritages



Branding of Nepal

Land of Cultural Heritages





Living Goddess

Branding of Nepal

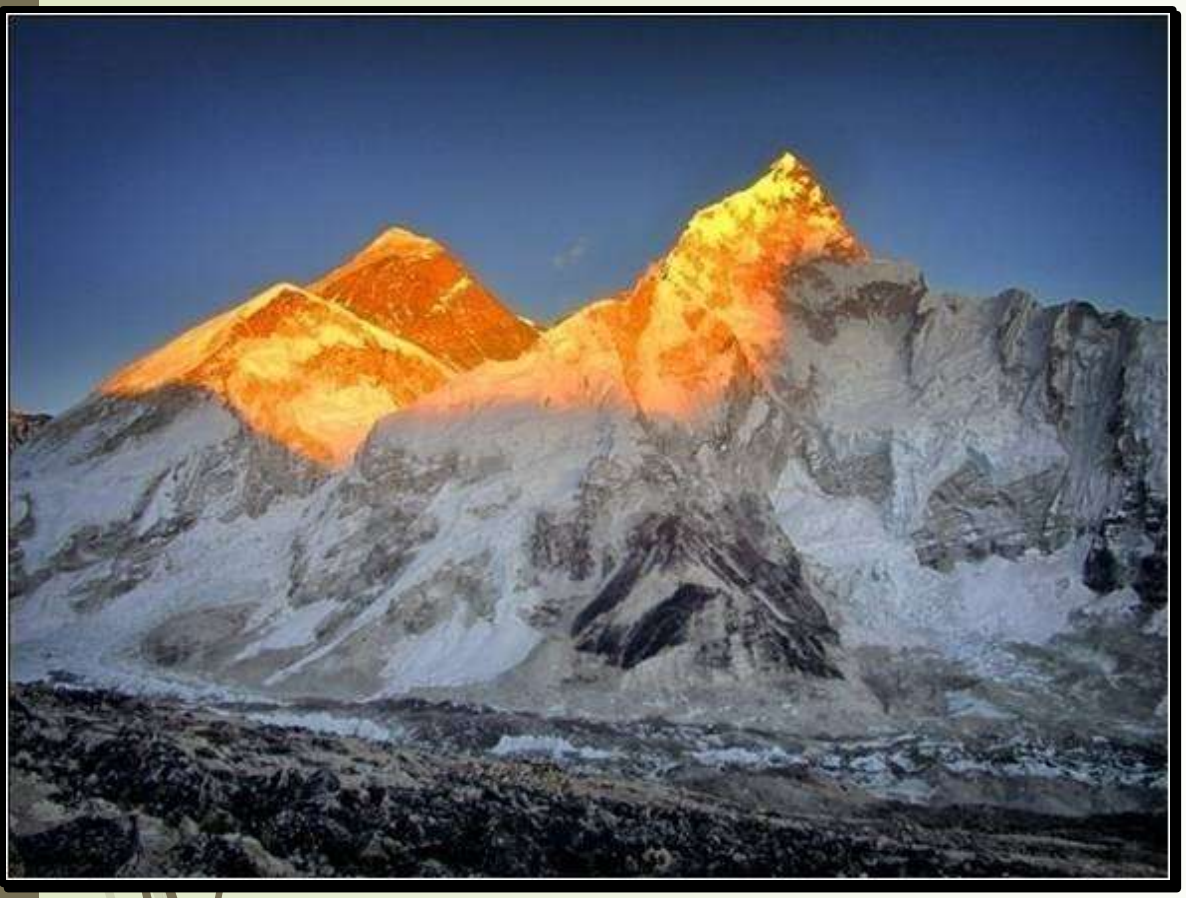
Tilicho lake- at the highest altitude of 4919 Meters

Branding of Nepal

Worlds Top 8 Among Top 10 Hills in Nepal

Branding of Nepal

Mount Everest First Climb



Mount Everest, the highest peak on earth, lies on the Nepal-China border

The New Zealander Sir Edmund Hillary and Tenzing Norgay Sherpa climber reached the summit at 11:30 am local time on 29 May 1953 via the South Col Route .At the time, both acknowledged it as a team effort by the whole expedition. They were the first climbers to reach the summit of Mount Everest

Landlock country & Connectivity

- Access of sea from India 1127 KM, Kolkata & Bhishakhapatan
- Access of sea from China 3300 KM Tenjin , can use 5 port

Cross Boarder Connectivity

- Air connectivity bilateral agreement with 41country, 29 airlines giving service
- Train Connectivity, Janakpur- Jayanagar (India)
- Road connectivity, India 15 & china 2
- Optical Fiber Connectivity, India-China
- Transmission connectivity, India, Bangladesh & china (initial stage)

International Bandwidth buying with Singapore, India & China

Regulatory Framework

Policies

- Long Term Policy of Information and Communication Sector, 2003
- ICT Policy
- Satellite Policy
- Telecommunication Policy
- Radio Frequency Policy
- Broadband Policy
- Clean Feed Policy .
- Mass Communication Policy

Acts

- Radio Act 1957 .
- National Broadcasting Act 1993
- Telecommunication Act 1997 A. D.
- Consumer Protection Act
- The Electronic Transaction Act, 2008

Regulations

- National Broadcasting Regulation 1995
- Radio Communication (License) Regulation 1992
- Telecommunication Regulation 1997 A. D.

ICT, Telecommunication and Broadcasting Related Organization

Ministry of Communication and Information Technology (MOCIT) :

- Spectrum Management
- Broadcasters (Radio & Television)
- Telecom Operators
- IT Sector
- Press & Media
- Foreign Film Shooting & Film Censor

Department of Information and Broadcasting:

- Broadcasting Services/Regulate online news paper & press card

Department of Information Technology:

- IT Services

Nepal Telecommunication Authority:

- Telecommunication Services
- Rural Telecommunication Development Fund (RTDF)
- Fixed/Mobile Services

Telecom Operator:

- Nepal Telecom (Government Owned): Fixed/ Mobile Services/FTTH (Public Services)
- Ncell (Private): Mobile Services

Department of Information Technology :

- Data Center and government IT regulation and services

Overview of ICT Sector in Nepal

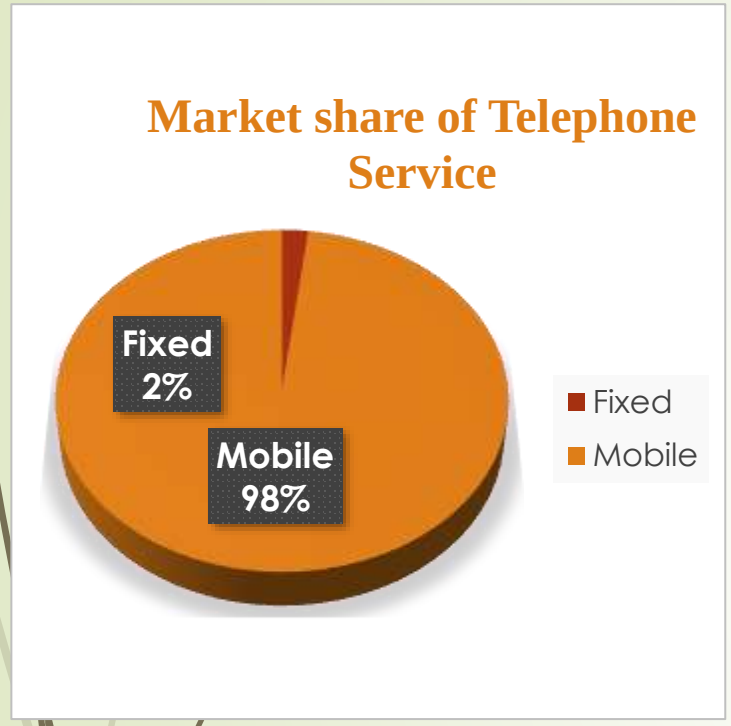
- ICT sector includes software development, hardware manufacturing, telecommunication, and digital services.
- It contributes to job creation, innovation, and entrepreneurship.
- According to the Census 2021 of Nepal:
  - 73.15 % of households have ordinary mobile phones, followed by 72.94 % of households with smart mobile phones, television 49.37%, and internet facility 37.72%
  - Population involved in Economic Activity as ICT Industry:- Total: 52,145
    - Male: 39,032, Female: 13,113
    - Urban: 47,355, Rural: 4,790

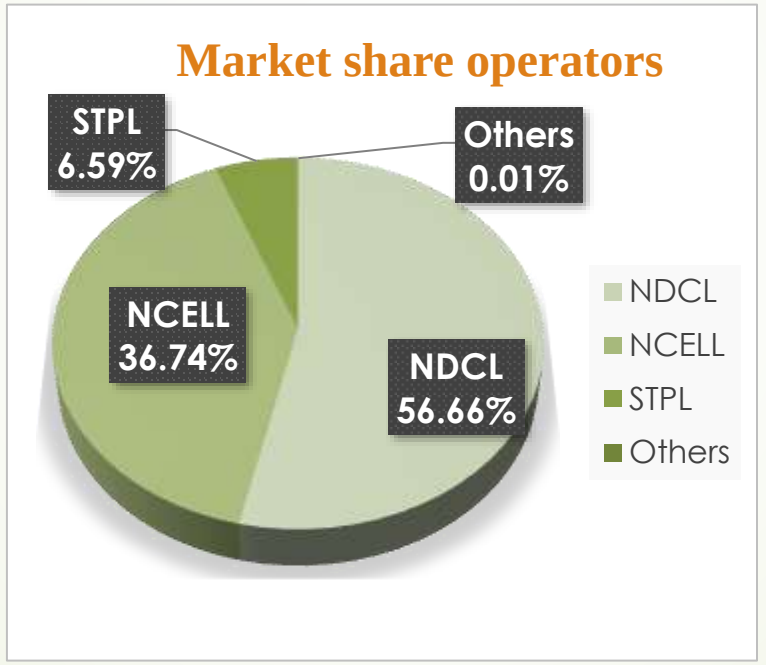
- In F/Y 2078/79, ICT industries contribute about 84 billion NRs to the gross domestic product (GDP) of the country i.e. about 3.71 % of the total GDP. (Source: CBS)
- The major players and stakeholders in the ICT sector in Nepal are government agencies, private sector companies, and academic institutions.
- Key challenges facing the ICT sector in Nepal, such as inadequate infrastructure, limited access to funding, and a shortage of skilled manpower.

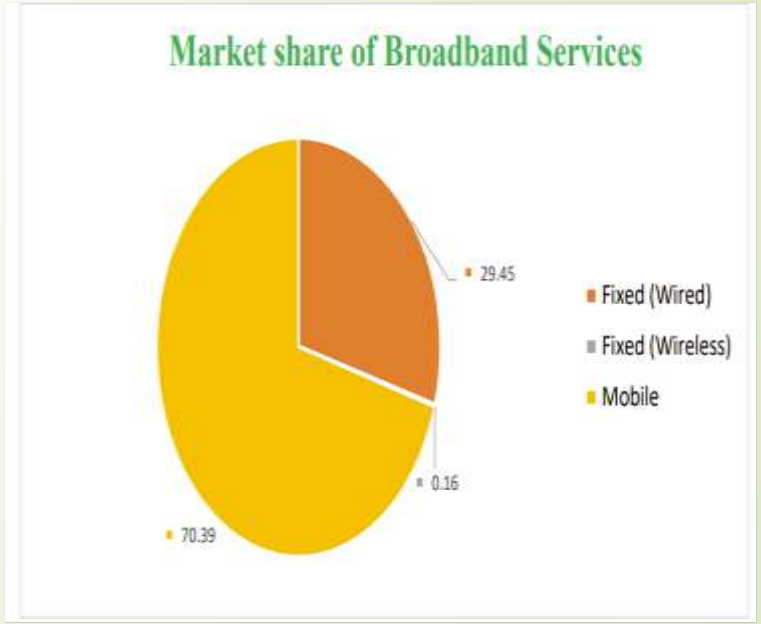
Info-Communication Infrastructure Status

- Number of ISP licensed: 131
- Number of ISP in operation: 63 (major 10)
- Basic Telecommunications Service provider: 1
- GSM Cellular mobile service provider: 2

ICT Trends: Telecommunication

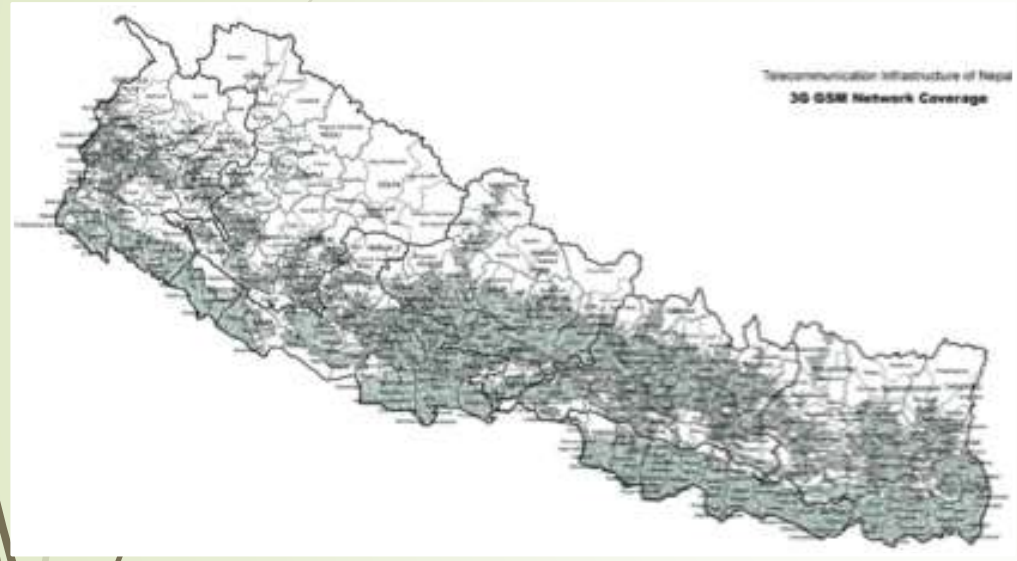




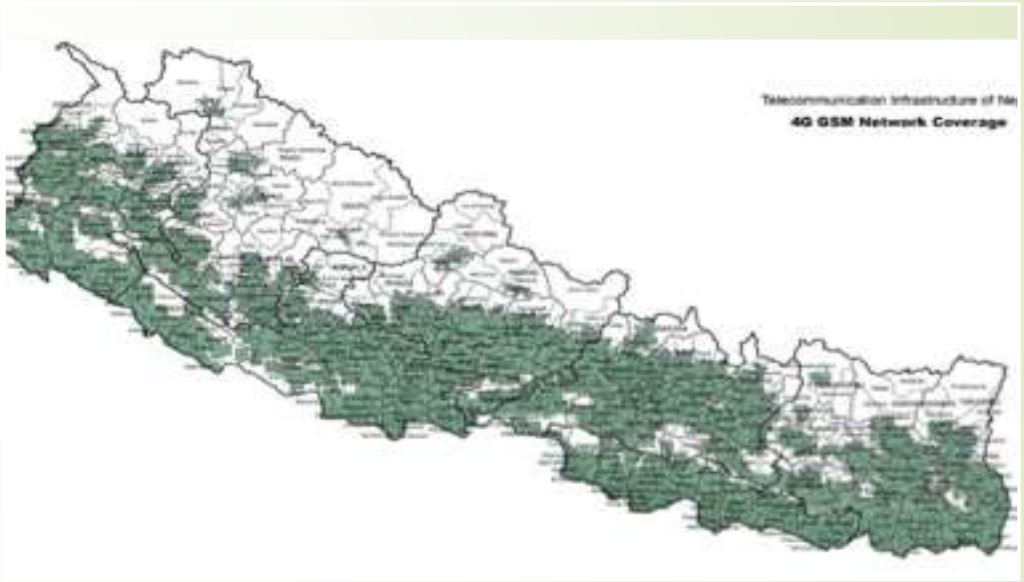


Total Broadband Penetration: 133.14%

Network Coverage



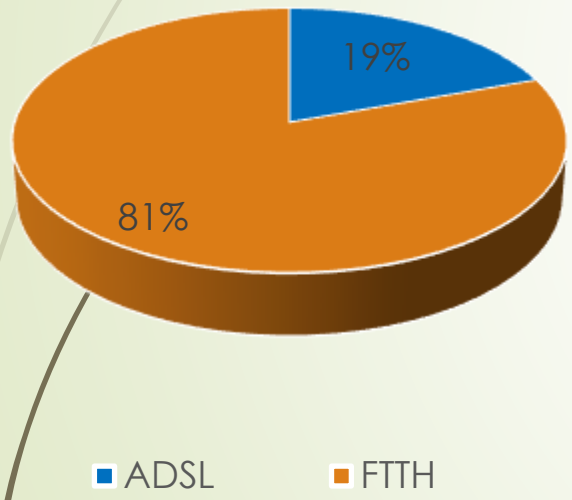
3G



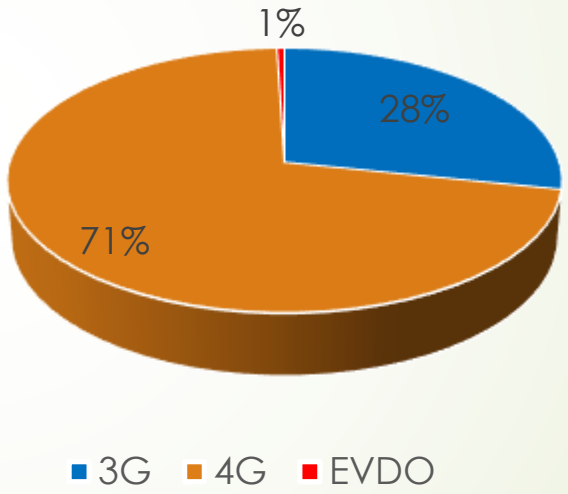
4G

Broadband Services

Fixed Broadband (Wired)



Mobile Broadband



Broadband Access Network Connectivity using RTDF
(Source: NTA)

Description	No. of Site Completed				
	Local Gov. Office	Ward Office	Secondary School	Health Center	Total
Total Estimated Sites in 18 Package	708	5,933	5,318	4,249	16,208
No. of Broadband Connected sites	708	5,933	5,318	4,249	16,208
Broadband Connected sites on the basis of Contracted Package	100%	100%	100%	100%	100%

Transformative Projects

Communication Highway along Mid-Hill highway and connecting district headquarters

S.N.	Details	Package 1	Package 2	Package 3	Total
1	Provinces	Koshi, Madhesh and Bagmati	Gandaki and Lumbini	Karnali and Sudurpaschim	7 Provinces
2	Length of Fiber as per contract (KM)	2179	2160	1992	6331
3	Completed length of Fiber as of now (KM)	1367	-	330	1697

ICT Trends: Broadcasting

Services	Number of Licenses
Television	242
FM	1183
IPTV	16
Cable TV	14
Signal Distribution	8
DTH	1
Satellite Radio	10
Signal Downlink	141
DTTB	7
Franchise Program	3
MMDS	2

Satellite Based Services and Their Bandwidth

- Nepal Telecom:
  - -75 sites use satellite to provide cellular backhaul.
  - - 6 MHz in C-Band and 89.2 MHz in Ku- Band(China Sat-10) for domestic services like Cellular backhaul, Internet and NGN with small data rate.
- Ncell Pvt. Ltd.
  - 24 MHz of satellite bandwidth is leased from PCCW global (HK) limited for transmission mode for 14 sites and redundancy to a couple of data centers.
- Smart Telecom Pvt. Ltd. :13 MHz BW
- Nepal Satellite Telecom Pvt. Ltd. : Satellite BW of 11.42 MHz in Ku-band (China Sat-10 Satellite)used for BSC- BTS connectivity.
- STM Telecom Sanchar Pvt. Ltd. : 4 MHz of satellite bandwidth
- Mercantile Communications Pvt. Ltd.: 2.8 MHz of BW (exclusively for VSAT services).
- Around 435 MHz satellite B/W being used by the broadcasting industry (FM radio, TVs and DTH)

ITU SLOT ALLOCATION FOR NEPAL

- Nepal assigned 50 degree east and 123.3 degree east orbital slots by the ITU.
- MoCIT manages Radio Frequency Spectrum including the Satellite Orbital Resource allocated to Nepal by the ITU.
- The 50 degree east orbital slot includes 12 channels in the band 11.7-12.2 GHz in space to earth direction and 14.5-14.8 GHz in earth to satellite direction.
- The 123.3 degree east orbital slot includes 500 MHz in ku-band (10.7- 10.95 GHz, 11.2-11.45 GHz in space to earth direction and 12.75-13.25 GHz in earth to satellite direction.)

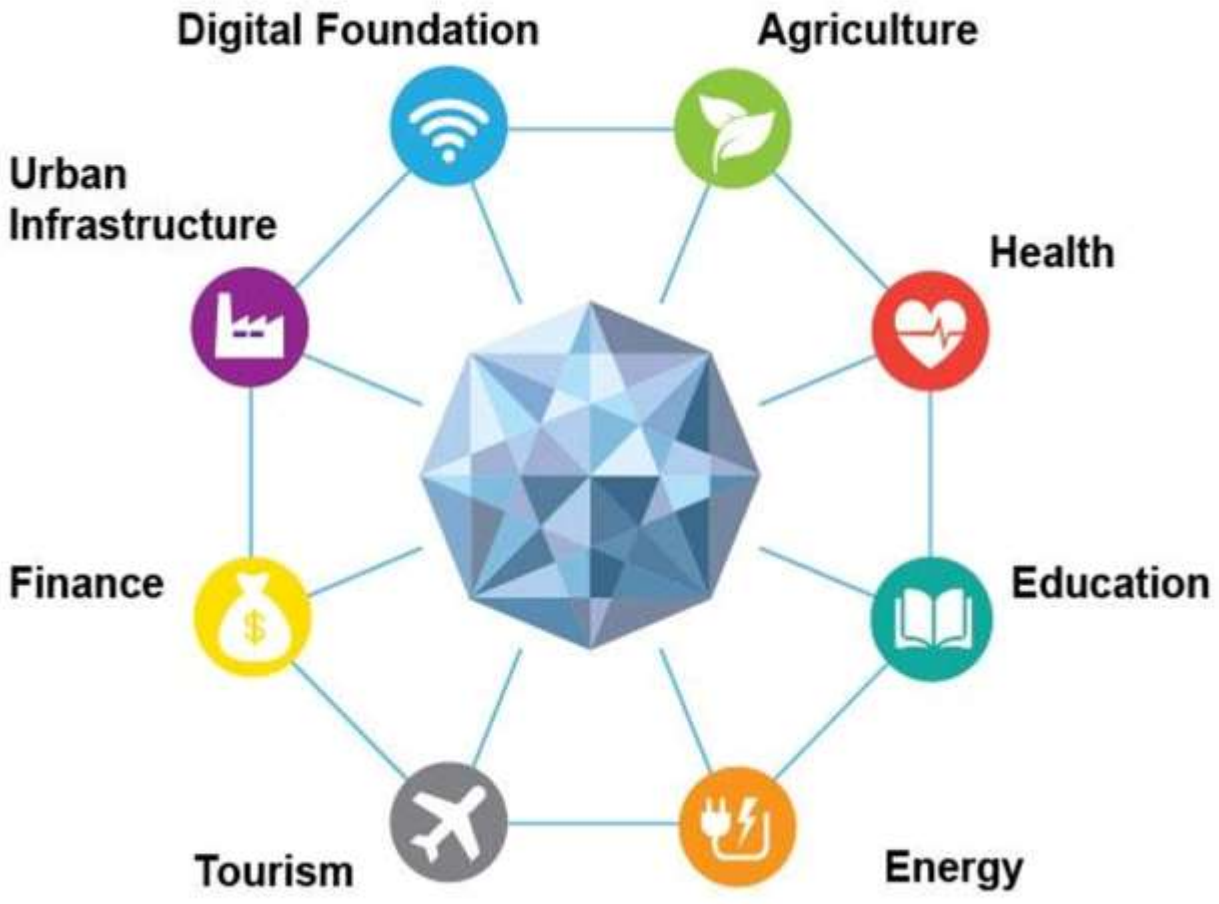
Satellite Policy 2020

- Nepal has Formulated a satellite policy 2020
  - To launch own satellite
  - To use the satellite for National Security, Disaster Management Service and Navigation
  - To provide broad band and broadcasting services to remote and Least Developed rural area.
  - Operation and management of this will be done by NTA until a new organization will be formulated.

Work Progress in Satellite Launching of Nepal

- "**A consultancy service for development of policy for regulation and security, business modality, operation modality of satellite**" has been awarded.
  - Turksat-TT4 (JV)
  - Business Modality has been completed.
  - Designing is under process.

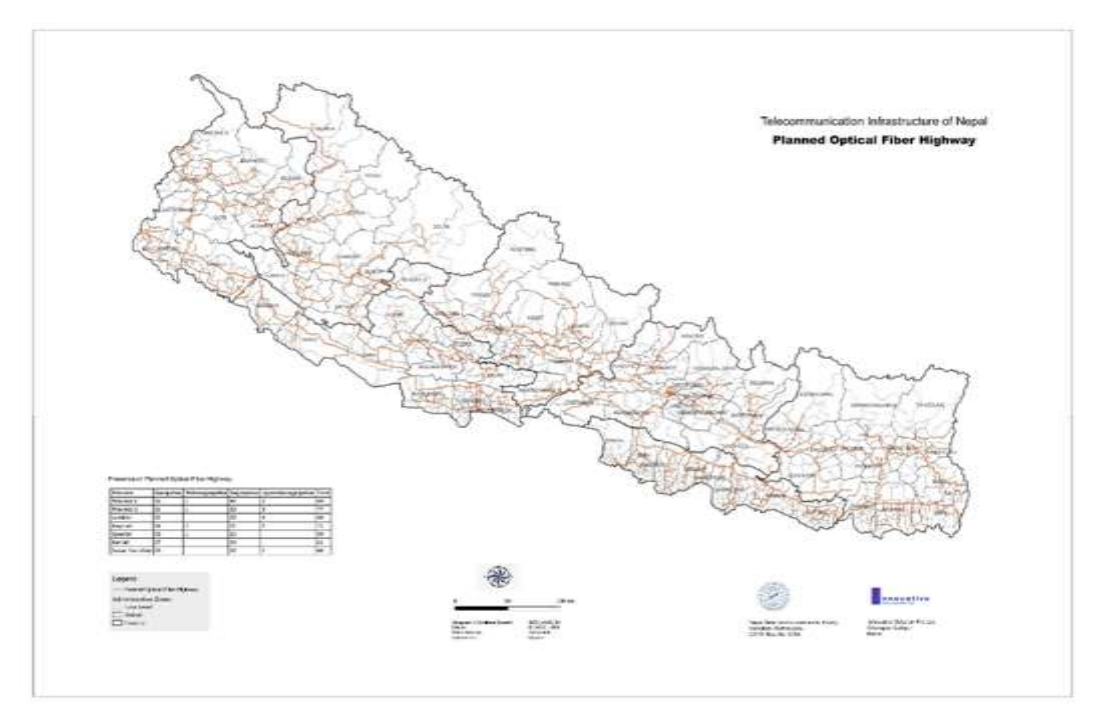
Strategy to Bridge Digital Gap: Digital Nepal Framework



Digital Nepal Framework, 2019

- Blueprint that provides how digital initiatives can contribute to economic growth, find innovative ways to solve major challenges, identify opportunities
- Encompasses
  - One nation
  - Eight sectors
  - 80 Digital Initiatives
- Digital transformation
  - Digital Connectivity
    - Ensuring quality of digital connectivity
    - Ensuring reliability and quality of digital services
  - Digital Skills and
  - Digital Governance

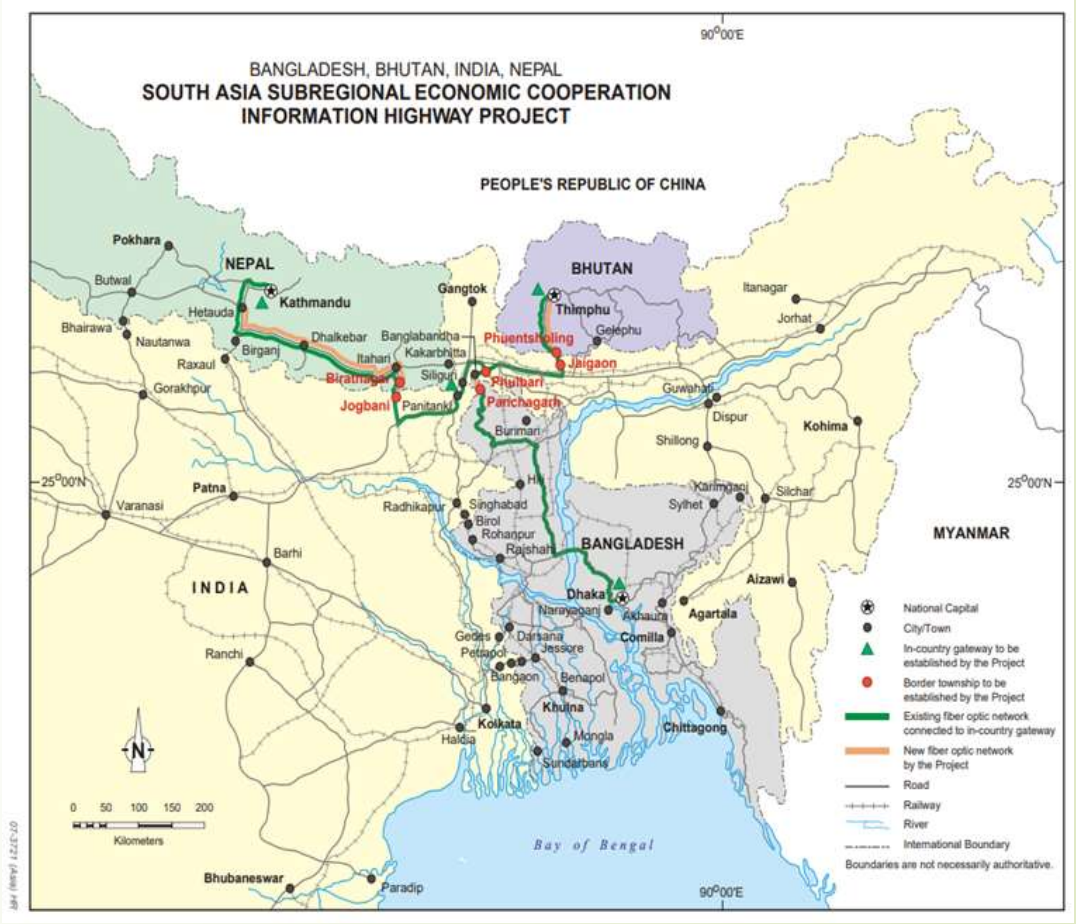
RTDF for Building Optical Fiber Backbone in Nepal



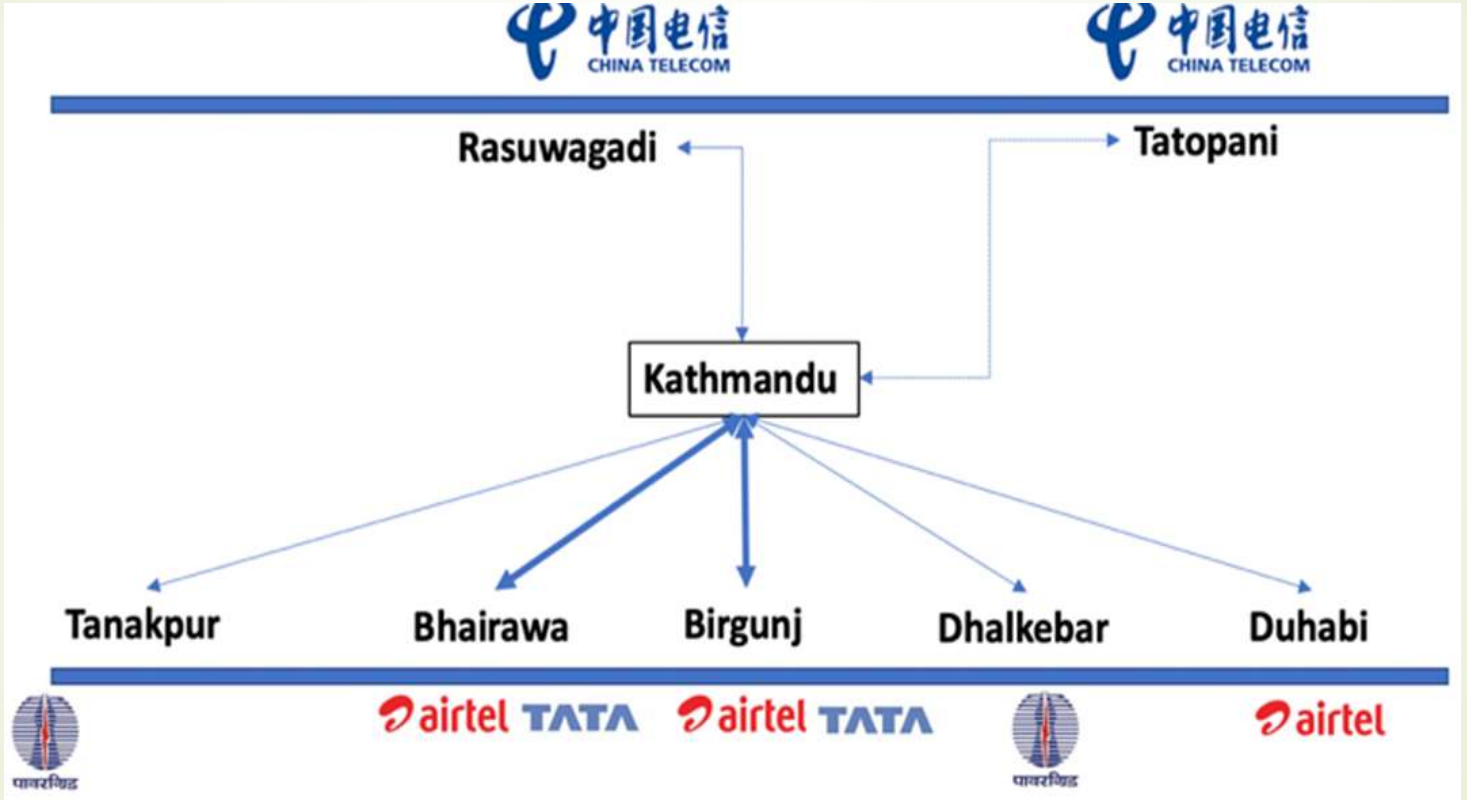
- RTDF: Rural Telecommunication Development Fund (2% of Annual Gross Revenue from licensees)
- Utilizing the RTDF, NTA is going to build Optical Fiber Backbone along the Mid-Hill Highway connecting all District Headquarters and Adjacent Municipalities.
- Total length:~6300 Km
- Progress till date: 1671 Km

SASEC Information Highway in Nepal

- SASEC stands for South Asia Sub-regional economic co-operation.
- SASEC information highway spans integrated optical fiber network among South Asian countries Nepal, India, Bangladesh and Bhutan.
- ADB grants of $4.7 million to Bhutan and **$9.0 million to Nepal**, and a loan of $3.1 million to Bangladesh from Special Funds resources will finance 70% of the project cost. The governments of the SASEC countries will finance $7.2 million, or 30%. The total project investment is $ 24 million.
- It had 4 components:
  - Component 1 - SASEC Regional Network
  - Component 2: SASEC Village Network
  - Component 3: SASEC Research and Training Network
  - Component 4: Project Implementation Support



Existing Scenario of Import of International Bandwidth



International Port for Internet

Major Development in ICT

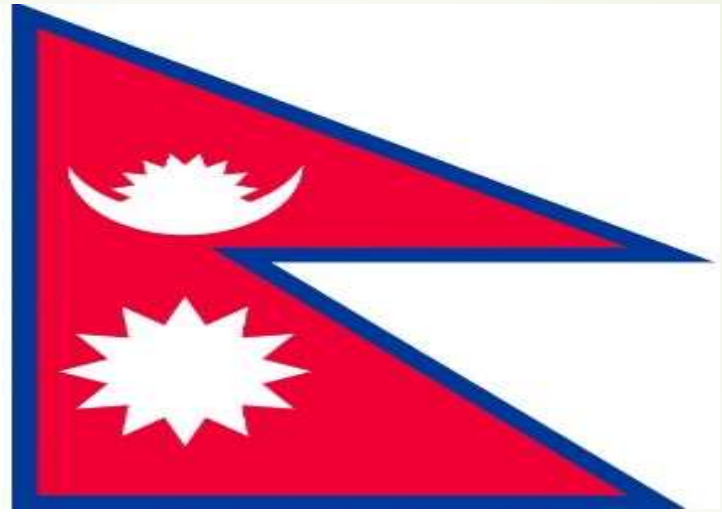
- National Identification System
- Line Ministry Budget Information System
- Electronic driving license and vehicle registration system
- Nagarik App
- Broadcasting and Radio License Management System(BRLMS)
- Government Integrated Office Management System(GIOMS)
- Passport online Application System
- National Electronic Procurement (e-GP) System
- Computerized Government Accounting System (CGAS)
- Sub-national Treasury Regulatory Application (SuTRA)
- E-Sewa, Khalti, Phone-pay, Connect IPS
- Smart Meter (396.5 – 399.5 MHZ with bandwidth 3 MHz)
- Weather Alert System

Challenges

- Control the increasing abuse of social network in the context of increasing use of social media.
- Timely use the latest technologies in ICT sector.
- Cope with the increasing number of cybercrimes.
- Promote industries based on ICT by making them competitive.
- Increase investment in research and development.
- Deliver services to scattered settlements.
- Facilitate telecom infrastructure sharing.
- Geographic challenges

Opportunities

- **Constitutional guarantee** to complete press freedom and right to communication and information.
- Increasing importance of the concept of digital Nepal envisioned in the **Digital Nepal Framework: 1-8-80.**
- Expanding use of ICT in the overall development of the education sector**; increasing investment from the private sector in ICT.**
- Attraction among youths to work in the sector.
- Creation of additional employment opportunities**.**
- **Recognition of ICT as a driver of economic development.**



नमस्ते

Thank you for your kind attention!!