



# Promoting access to EO and Geospatial Information

Survey Department

22<sup>nd</sup> February 2021

# Introduction

- o Established in 1957 AD with major focus on cadastral mapping
- o National Mapping Organization (NMO)
- o National Cadastral Surveying Organization
- o Responsible organization for technical task in international boundary
- o Nodal Agency for the National Spatial Data Infrastructure

# Organization Structure

Topographical  
Survey & Land  
Use  
Management  
Division



**Survey Department**

Survey Offices  
(131)

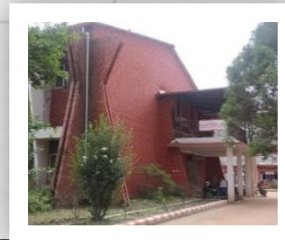
Special Survey  
Offices (5)

Digital Survey  
Office (1)

Geodetic  
Survey Division



Geographic  
Information  
Infrastructure  
Division



Cadastral  
Survey Division



## Role of Survey Department as NMO

- o Prepare standards for Surveying and mapping
- o Approve specifications and standards of the maps/data to be produced from different organizations
- o Monitor the maps/data produced from different organizations
- o Represent in different international forum as National Mapping Organization
- o Work as Secretariat of Mapping Committee formed according to the Land (Survey & Measurement) Act 1963.

## Major Activities

- o Coordination of surveying, mapping and GIS activities in Nepal with other agencies
- o Establishment of Control network
- o Establishment of National Topographical Database
- o Carrying out international boundary survey
- o Land use and Land resource mapping
- o Cadastral mapping
- o Provide Geospatial data for research and development agencies
- o Work as NSDI of Nepal

## Major Programs of this Fiscal Year

- o Topographical Map Updating (1:25000 and 1:50000)
- o LiDAR Survey of *Terai Region*
- o Horizontal & Vertical Control Point Establishments (GNSS & Precise Leveling)
- o Land Use mapping (Completion of 753 Local level by this Fiscal year)
- o Cadastral Resurvey (Digital Cadastre)
- o Nepal-India Boundary Survey
- o Gravity Survey for Geoid modeling

# Some of the Geospatial Products & Services

- o Topographical base map (Digital/hardcopy)- 1:25000 and 1:50000
- o Control points of various order
- o Cadastral maps
- o Land use zoning map
- o Administrative boundary map (Shape file)
- o Arial Photograph
- o District map
- o Political and Administrative Map
- o Land capability/System/land utilization/geological map
- o Orthophoto image 1:5000 and 1:10000
- o Population and socioeconomic atlas
- o Gravity value

Link of product and services

<http://dos.gov.np/products-and-services>





# Geospatial Data sharing

- o Administrative Boundary of Nepal (shape file – freely available)
- o Hard Copy Maps (available with some cost)
- o Other digital data (available with some cost)
- o Establishment of National Geo-portal (to provide metadata of products)

<http://nationalgeoportal.gov.np/#/>



Search...

### Administrative Boundaries

Administrative Boundaries data contains different levels of boundaries eg. National, Province, Districts, Municipalities and Rural Municipalities.

### Geodetic Control Points

Geodetic Control Points involves different order control points distributed all over the country.

### Hazard

This category contains different hazard data.

### Land Use Data

This category contains land use data prepared by survey department.

District Level Land Use ⓘ

VDC Level Land Use ⓘ

Map interface showing a region in Nepal with various overlays and a legend. The legend includes:

- Administrative Boundary**
  - Nepal
  - Province
  - District
  - Gaun/Nagar Palika
- Ortho Sheets**
  - Ortho 10k
  - Ortho 5k
- Aerial Photo**
  - ENTMP
- Topographic Sheets**
  - Grid Sheet 500k
  - Grid Sheet 250k
  - Grid Sheet 100k
  - Grid Sheet 25k 50k
  - LRMP Sheet
- Base maps**
  - Bing Satellite Image
  - OSM

## Topographic Sheets



## Geospatial Data Sharing..

- o Survey Department is receiving ZY3 image from Chinese Government freely since 2018.
- o The collaboration will continue till 2022
- o Department shares the images to Nepal Government agencies and academic institutes freely with consent from Chinese Government

## Conclusion

- o Geoportal provides information about available maps and data from different organizations
- o Sharing information helps in reducing effort and resources to produce maps/data
- o Sharing maps/data helps in eliminating redundant work of producing those maps/data
- o Survey department through National Geoportal initiated information sharing platform
- o As an NMO through Mapping Committee, department is playing role in maintaining standards in Surveying and Mapping.



**Thank You**