



NSO Perspective on Data Governance, Evidence Generation, and Way Forward

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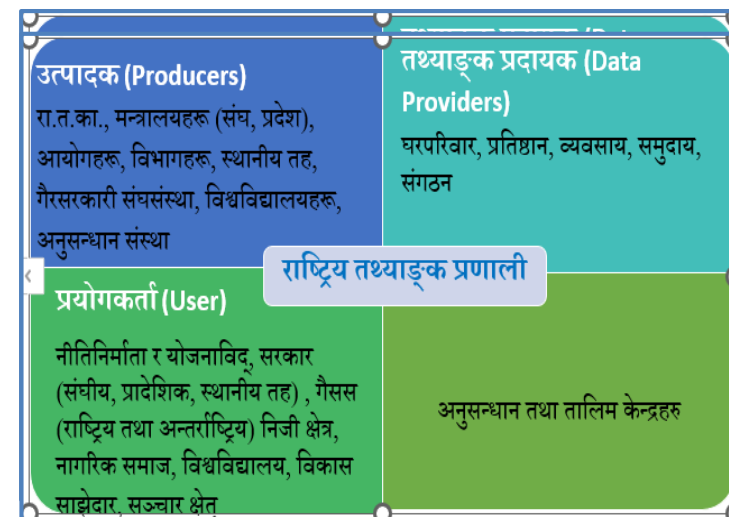
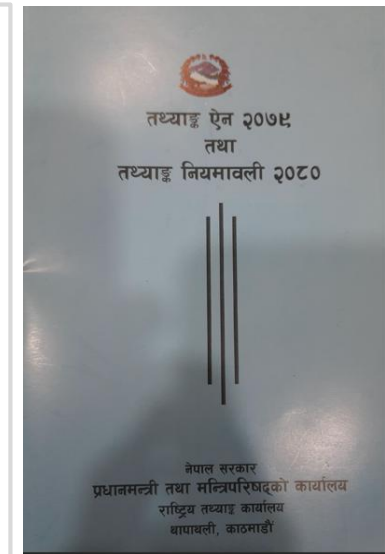
National Statistics Office

**National Summit of Health and Population
Scientists (10-12 April 2026)
Kathmandu, Nepal**

जननी जन्मभूमिश्च स्वर्गादपि गरीयसी

Nepal's Statistical System

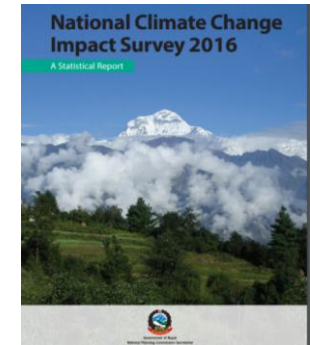
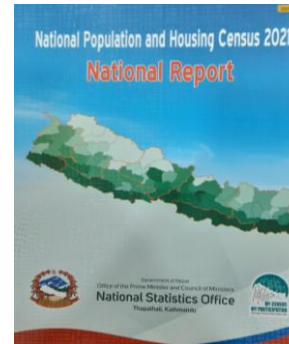
- Nepalese Statistical System is decentralized
- Constitution of Nepal has given power to all levels of governments (Federal, Provincial and Local) to do different statistical activities
- National Statistics Office (NSO) is the central agency for conducting statistical activities and responsible for producing official statistics through census/surveys and administrative sources
- Apart from NSO, other government ministries, departments, universities are also producing official statistical



Major Sources of Data

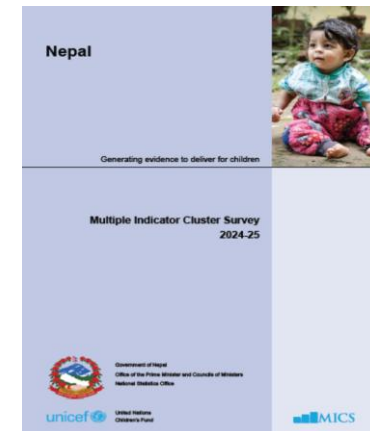
Censuses:

- Population and Housing, Agriculture, Economic, Manufacturing Establishments



Surveys:

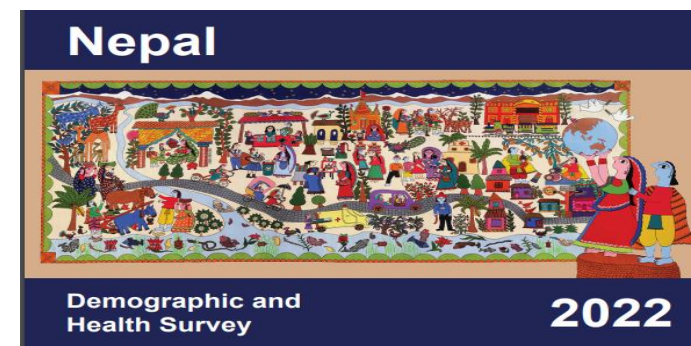
- Multiple Indicators Cluster Survey (NMICS)
- Nepal Demographic and Health Survey (NDHS)
- NLSS, NLFS, Climate Change Survey
- Other Ad hoc Surveys



Secondary data

- Administrative data of different Line ministries

Data governance is critical for modernization and reliability of NSO



Research Data Governance

Data governance is the system that decides:

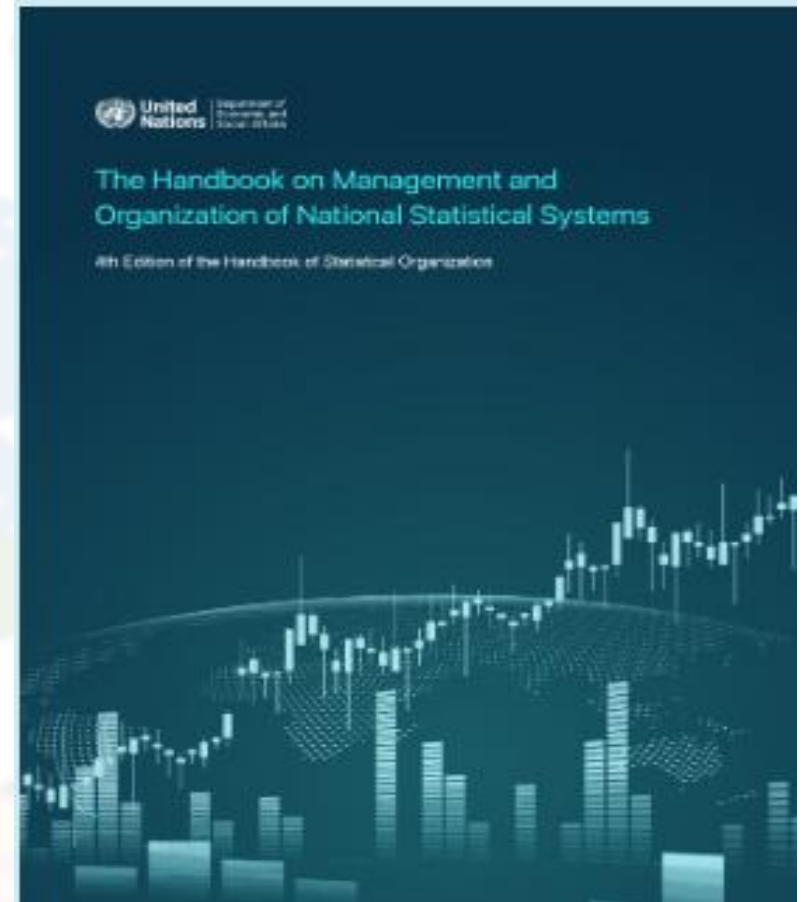
- **Who is responsible for data**
- **How data should be used and managed**

It ensures that data is:

- **Available**
- **Accurate, reliable and Secure**

It also includes:

- The **rules and policies** for handling data
- The **people, processes, and technologies** used to manage and protect data



Data governance is about making sure the right people manage data properly, follow rules, and use it safely and effectively

Key Pillars of Data Governance

4 Pillars of Data Governance

Data Quality:

- Ensures accuracy, completeness, consistency, and timeliness of data

Data Stewardship:

- Defines role and responsibilities for managing data, set standards and quality

Data Security

- Protects data from unauthorized access

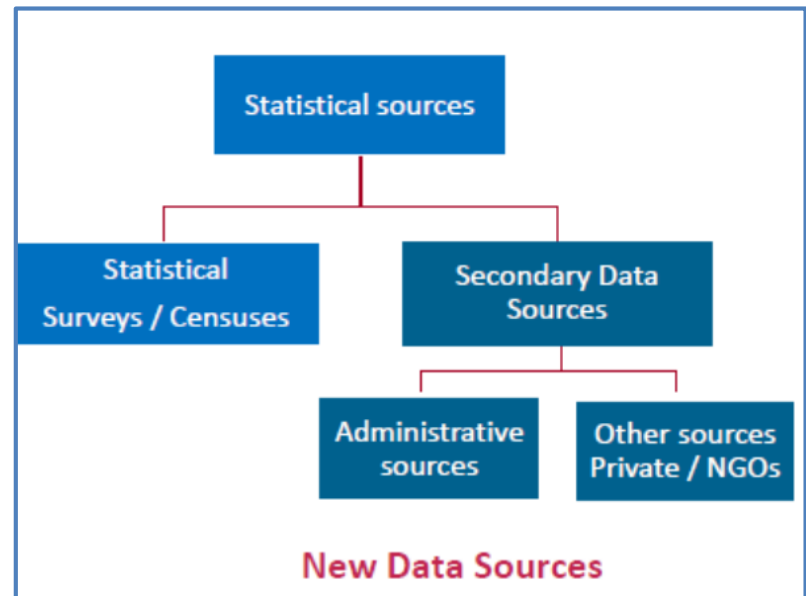
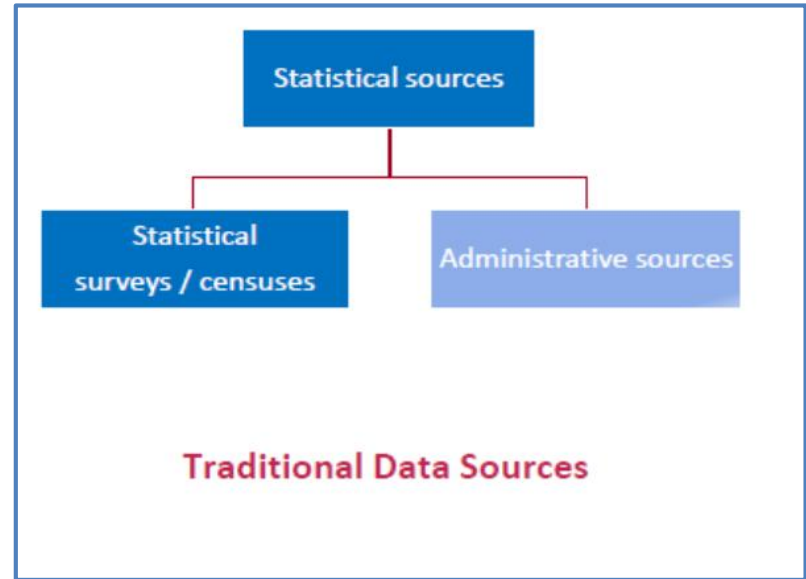
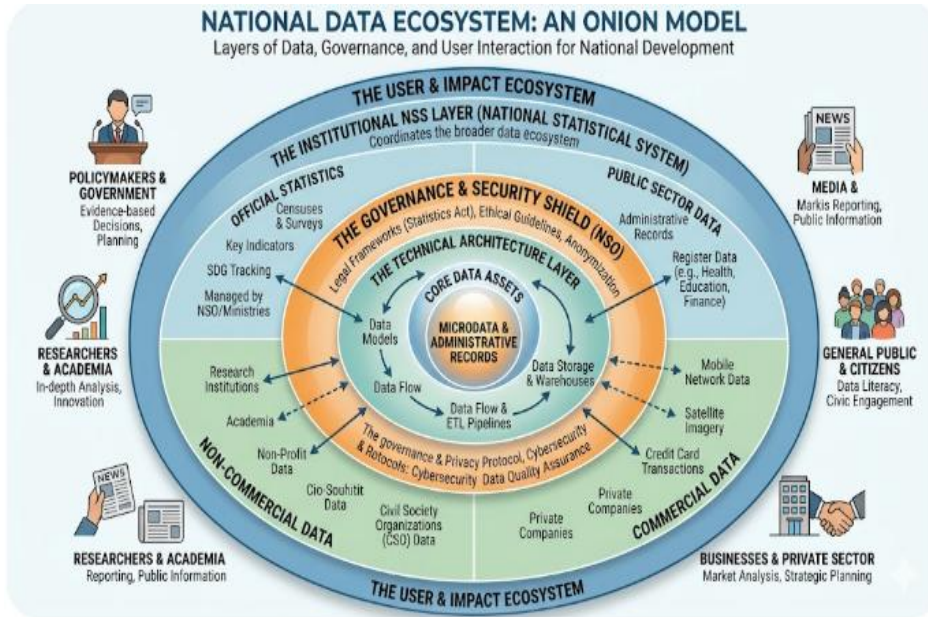
Data Management

- Manages the entire data lifecycle, from collection to dissemination, and sets standards for data architecture, storage, and integration



National Data Ecosystem

NATIONAL DATA ECOSYSTEM: AN ONION MODEL
Layers of Data, Governance, and User Interaction for National Development



Key issue: Access and use of admin. and other data sources such as

- Mobile phone data
- Data from media, e-commerce and internet services providers,
- Data based on Earth observation and remote sensing
- Data of private companies
- Citizen Generated Data

Nepal Governance Profile

- नेपालको संविधान
- तथ्याङ्क ऐन, २०७९
- तथ्याङ्क नियमावली, २०८०
- राष्ट्र बैंक ऐन, २०५८
- स्थानीय सरकार सञ्चालन ऐन, २०७४
- तथ्याङ्क विकासका लागि राष्ट्रिय रणनीति दोश्रो, २०८१/८२-२०८५/८६
- सोह्रौँ योजना, २०८१/८२-२०८५/८६
- नेपाल सरकार कार्यविभाजन नियमावली, २०७४



- नेपालको संविधानमा अनुसूची ६ र ९
- तथ्याङ्क ऐन २०७९ को दफा १५
- प्रदेश तथ्यांक ऐन (लुम्बिनी प्रदेशमा बनेको)



प्रदेश राजपत्र	
प्रदेश नं. ५, प्रदेश सरकारद्वारा प्रकाशित	
खण्ड ३) जुटवल, कल्याण, बैराह २४ गते, २०७६ साल (अतिरिक्त ११)	
भाग १	
प्रदेश सरकार	
आन्तरिक मामिला तथा कानून मन्त्रालयको सूचना	
नेपालको संविधानको धारा १७६ बमोजिम प्रदेश नं. ५ को प्रदेश समालोचनाको तल तल्लिए बमोजिमको ऐन सर्वसाधारणको जानकारीको लागि प्रकाशन गरिएको छ ।	
सन् २०७६ सालको ऐन नं. ९	
प्रदेश नं. ५ तथ्याङ्क सम्बन्धमा व्यवस्था गर्न बनेको ऐन	

- नेपालको संविधानमा अनुसूची ८ र ९
- तथ्याङ्क ऐन २०७९ को दफा १५
- स्थानीय सरकार संचालन ऐन, २०७४ को दफा ११ (ड)



Confidentiality

- नेपालको संविधान: धारा २८
- तथ्याङ्क ऐन: दफा १०
- ऐनले कानून विपरित गोपनियता भङ्ग गर्ने, उपलब्ध गराउनु पर्ने सूचना उपलब्ध नगराउने वा अन्य यो ऐन विपरित कार्य गर्ने जो कोहिलाई कानूनी कारवाहीको व्यवस्था गरेको छ ।



- अनुमति लिनु पर्ने, अनुमति लिनु नपर्ने,
- अनुमति दिन नमिल्ने, तथ्याङ्क प्रमाणित गराउनु पर्ने,
- कसूर तथा सजाय सम्बन्धि व्यवस्था

- अनुमति लिने विधि तथा प्रक्रिया, समिति सम्बन्धी व्यवस्था, विदेशी संस्था सम्बन्धी व्यवस्था, अनुमति नम्बर, अभिलेखीकरण सम्बन्धी व्यवस्था, तथ्याङ्क प्रमाणीकरण सम्बन्धी व्यवस्था

NSO Role in Changing Data Ecosystem

- **From Data Collector to Data Steward:** Traditionally, NSO was focused more on producing static reports, but in the new ecosystem, the NSO is the **custodian** of data quality, standards, and ethics.
- **Beyond Surveys:** Moving away from relying fully on census and survey toward **Administrative Data**
- **Data Integration:** NSO to act as a central agency connecting:
 - **Civil Registration & Vital Statistics (CRVS):** Real-time birth/death data.
 - **Electronic Medical Records (EMR):** Clinical data for research.
 - **Citizen-Generated Data:** Providing feedback and reporting community health issues.
 - **Big Data:** Satellite imagery for environmental health or mobile data for migration

Existing Situation: Key Issues and Challenges

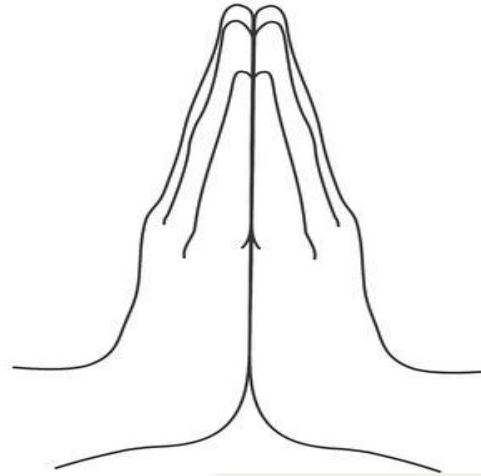
- **Fragmentation:** Different sectors maintain parallel systems (e.g., MoHP's DHIS2, MoE's EMIS) that are not interoperable.
- **Limited ICT Infrastructure :** NSO and line ministries face challenges with network connectivity, cloud storage, cyber security and inadequate IT infrastructure.
- **Shortage of Skilled Workforce:** There is a skills gap in software development, data integration, statistical programming as well as limited capacity in data science, machine learning, GIS, and data anonymization

Existing Situation: : Key Issues and Challenges

- **Lack of Interoperability and Standards:** Different data systems are built on incompatible standards, making data exchange and integration difficult.
- **Lack of Standards and Guidelines:** Novel data sources often lack statistical metadata, proper documentation, and consistent definitions
- **Legal and Ethical Concerns:** The use of non-traditional sources may infringe on privacy rights and ethical data use principles without appropriate governance
- **Lack of Trust and Acceptance:** Data users (e.g., policymakers, researchers) may distrust novel sources due to unclear methodologies

The Way Forward: Strategic Transformation

- **Interoperability:** Investing in APIs and data-exchange platforms that allow different government systems to "talk" to each other automatically.
- **Develop QA Frameworks:** Adopt regionally harmonized quality frameworks (e.g., the ESCAP Data Quality Assurance Framework or Eurostat's ESS guidelines) to assess and document data from novel sources
- **Capacity Development:** Invest in training of staff in data science, coding, remote sensing, machine learning, and data integration techniques
- **Data Stewardship and Governance:** Establish formal data sharing agreements and ethical protocols with public and private data holders.



Thank You !

जननी जन्मभूमिश्च स्वर्गादपि गरीयसी