

DATA STRATEGY

Presenter

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1

Outline of the Presentation

❑ Motivation of Government Data Strategy

- E-Governance Landscape of Nepal
- Current State of Government Data Holdings
- Importance of government data strategy

❑ Government Data Strategy Initiatives

- At National Level
- At Organizational Level

❑ Data Strategy of NSS

- Statistics Act 2022
- National Strategy for the Development of Statistics (NSDS)
- Data Governance framework of NSO Nepal
- Integrated System for National Statistics

❑ Problems and Challenges

e_Governance Landscape of Nepal

ICT Initiatives

- | | | |
|--|---|---|
| <ul style="list-style-type: none">• For the 1st time computer technology was used for data processing in the Population Census of 1971• Telecommunication Act, 1996 & Telecommunication Regulation 1997• Establishment of Nepal Telecommunications Authority (NTA) in 1998• IT Policy 2000• Establishment of NITC in 2001 | <ul style="list-style-type: none">• The Electronic Transactions Act, 2006• E-Government Master Plan (eGMP) 2006• IT Policy 2010• Nepal e-Government Interoperability Framework (NeGIF) 2010• Establishment of the Department of Information Technology (DoIT) in 2013 | <ul style="list-style-type: none">• Broadband Policy 2014• IT Policy 2015• eGMP-2(2015)• Digital Nepal Framework 2019• The Privacy Act, 2018 and The Privacy Regulation, 2020• Establishment of E-governance Commission 2022• National Cyber Security Policy 2023 |
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e_Governance Landscape of Nepal: Key Milestones



- The Government of Nepal has recognized the importance of the ICT sector. It has made clear efforts to establish e-governance in the country since introducing the **IT Policy 2000**. It aimed at fostering the development and utilization of information technology (IT) to contribute to national development.
- The **ICT Policy 2015** was introduced to address the evolving technological landscape. It aims to create a holistic digital ecosystem by encompassing not just IT, but also telecommunications, internet services, digital content, and e-governance.
- There came **Digital Nepal Framework 2019**. It was built on the foundations laid by the ICT Policy 2015.
- Establishment of **E-governance Commission** in 2022 to drive the digital transformation of the government. The commission is chaired by the Prime Minister.

e_Governance Landscape of Nepal: what's the aim?

ICT Policy 2015

Vision

- To transform Nepal into an information and knowledge-based society and economy.

Mission

- To achieve the goal of good governance, sustainable development, and poverty reduction across the country through the development of the ICT sector.

Key Policy Focus Areas

Human Resource Development; ICT in education, research and development; Promotion of ICT Industry, SMEs & e-Commerce; Access, media and content development; E-Governance; Digital Infrastructure; ICT in agriculture, health, tourism, climate change, environment & natural resources; Cybersecurity and Data Protection; Digital Inclusion; and Public-Private Partnerships (PPPs)



e_Governance Landscape of Nepal: How to Achieve?

Digital Nepal Framework 2019

a strategic action plan that builds on the foundations laid by the ICT Policy 2015. It operationalizes the policy by providing specific projects, initiatives, and sector-specific strategies to accelerate digital transformation in Nepal. Essentially, it serves as the implementation roadmap for achieving the goals outlined in the ICT Policy.

❑ 8 sectors and 80 digital initiatives

1. Digital Foundation: Strengthening the digital infrastructure, such as broadband internet and telecom networks.

2. Agriculture: Leveraging digital tools for precision farming, market access, and improving agricultural productivity.

3. Health: Modernizing healthcare delivery through telemedicine, e-health services, and electronic health records.

4. Education: Enhancing the education system by integrating ICT into teaching and learning.

5. Energy: Ensuring smart energy management, improving grid efficiency, and promoting renewable energy.

6. Tourism: Promoting tourism through digital platforms and online services.

7. Finance: National payment gateway; mobile wallet service; single window for business & industry promotion etc.

8. Urban Infrastructure: Municipality mobile App; Intelligent Traffic Management; Intelligent waste management etc.



e_Governance Landscape of Nepal- Implementing Agencies

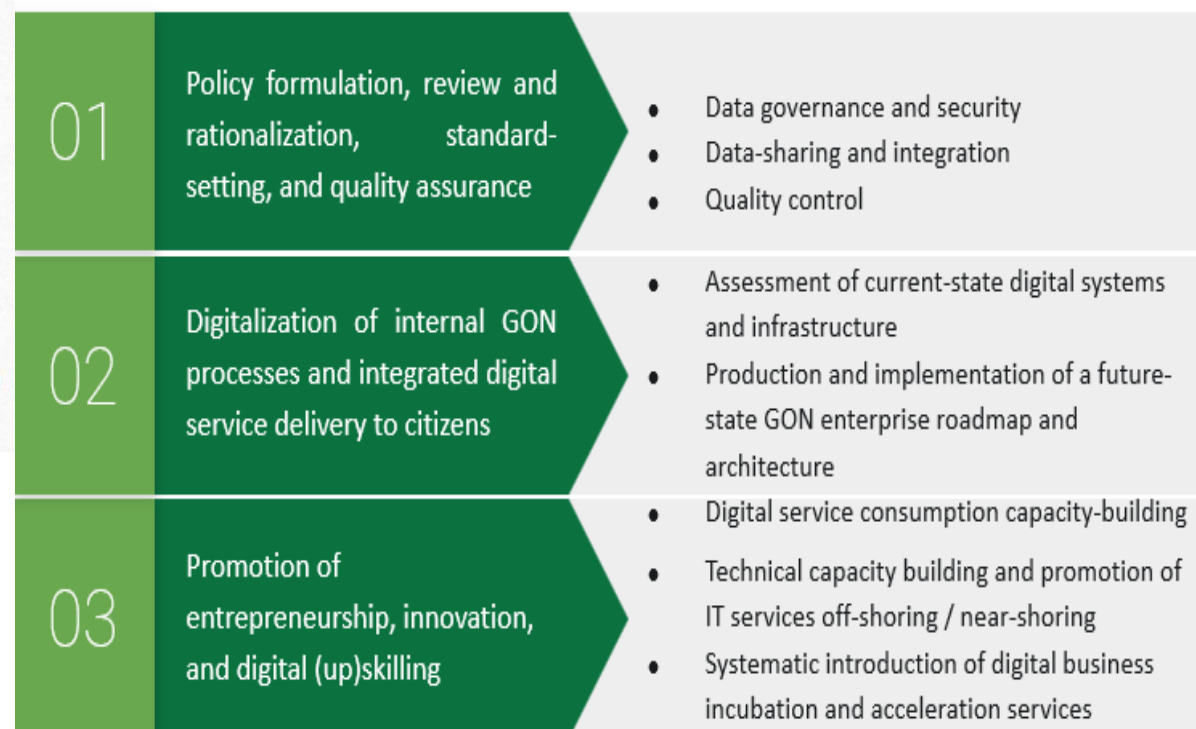
ICT Related Organization in Nepal

- Ministry of Communication and Information Technology
- DoIT (Department of Information Technology)
- OCC (Office of Controller of Certification)
- NITC (National Information Technology Center)
- Nepal Telecommunication Authority
- E-Governance Commission
- National Cyber Security Center (is in process of establishment)

Sectoral Ministries/Agencies

- Ministry of Education, Science, and Technology (MoEST)
- Ministry of Agriculture and Livestock Development (MoALD)
- Ministry of Health and Population (MoHP)
- Ministry of Culture, Tourism, and Civil Aviation (MoCTCA)
- Central Bank of Nepal

e_Governance Commission - Key Functions



e_Governance Landscape of Nepal: Key Achievements

- Nepal has made significant strides in digitizing various government services
- Some key government services that have been digitalized in Nepal:



- Online Tax Payment (Inland Revenue Department - IRD)
- Online Business Registration (Office of Company Registrar - OCR)
- Online Citizenship Certificate Application
- Digital Driving License and Vehicle Registration (Department of Transport Management - DoTM)
- Online Passport Application (Department of Passport)
- Digital Land Records and Online Land Registration (Department of Land Management and Archive)
- Social Security Fund (SSF)
- Online Labor Permit (Department of Foreign Employment)
- eProcurement (Public Procurement Monitoring Office - PPMO)
- Online Voting Registration (Election Commission)
- Online Utility Payments
- E-Ticketing for Transport Services
- Online Complaint Handling (Hello Sarkar)
- Digital Education Services
- eHealth Services
- Vital Registration system
- Nepal Police Online Services
- Customs Administration (Department of Customs)

Current State of Government Data Holdings

- National Statistics Office
- Ministry of Agriculture and Livestock Development
- Ministry of Education, Science and Technology
- Ministry of Home Affairs
- Ministry of Women, Children and Senior Citizens
- Department of Health Services
- Department of National ID and Civil Registration
- Department of Land Management and Archive
- Inland Revenue Department
- Department of Industry
- Office of Company Registrar
- Department of Transport Management
- Department of Passport
- Department of Tourism
- Department of Foreign Employment)
- Department of Customs
- Department of Hydrology and Meteorology
- Department of Irrigation
- Office of the Financial Comptroller General Office
- Election Commission
- Public Service Commission
- National Information Technology Centre
- Social Security Fund (SSF)
- Nepal Rastra Bank

Importance of government data strategy

- **Data Standardization and Interoperability:** A national data strategy will promote the standardization of data collection methods across government agencies. This will lead to better interoperability of data systems, facilitating more effective data sharing and collaboration.
- **Data Quality:** relevant, timely, and consistent statistics enabling the government to make evidence-based decisions.
- **Federal Data System:** With Nepal's ongoing efforts toward federalization, data strategy will help gather and utilize data to fulfill the demands of all levels of government.
- **Data-use culture:** a data strategy is vital for Nepal to build a data-use culture that enhances good governance, supports economic growth, and ensures sustainable development. It enables the country to address challenges such as poverty, climate change, and disaster risks more effectively
- **Data literacy:** for empowering policymakers, decision-makers, and citizens to effectively use data.

Government Data Strategies - National Level

❑ Legal and Policy Provisions

In Nepal, several legal and policy documents have incorporated components of data strategies, such as data governance, privacy, security, interoperability, and the use of data in the government sector.

- Constitution of Nepal 2015: Right to information (Article 27), Right to Privacy (Article 28)
- Right to Information Act 2007 and Regulation 2009
- The Privacy Act 2018, and the Privacy Regulation 2020
- The Electronic Transactions Act 2006 - includes provisions related to cybercrime and the security of digital data
- Statistics Act 2022
- National Cyber Security Policy 2023
- Local Government Operation Act 2017 - outlines the responsibilities of local governments including the management of local statistics.

Government Data Strategies - National Level

- **e-Government Interoperability Framework (eGIF) 2010**

provides a framework to share, collaborate and integrate information and organization processes by use of common standards. Increasingly the use of open standards to enable such interoperability is the key for success of any eGIF framework and choosing the right set of technical standards and policies that are suitable to the environment.

- **e-Government Master Plan (eGMP) 2015**

includes several elements of a data strategy, such as data governance, privacy, security, and interoperability. It provides a roadmap for the digitization of government services and the management of government data, contributing to the broader national data strategy.

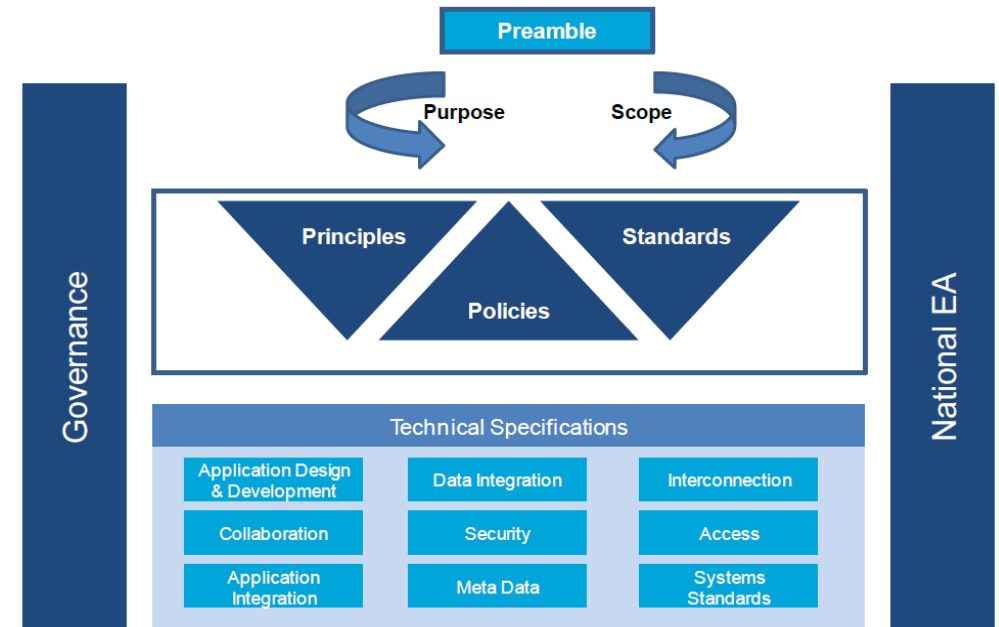
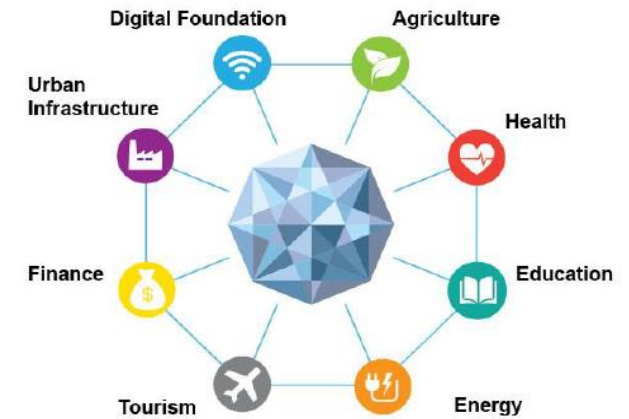


Figure 0-1: NeGIF Meta Model

Government Data Strategies - National Level

■ Digital Nepal Framework 2019

includes elements of data strategy, particularly related to data-driven decision-making, e-governance, and digital infrastructure development. The framework emphasizes the importance of data in areas like agriculture, health, education, and governance, aligning with national goals of leveraging data for development.



E-governance Blueprint

• Pillar 1 Clear Governance framework for digital government

- Breakup data silos
- Establishment of Data Protection Authority

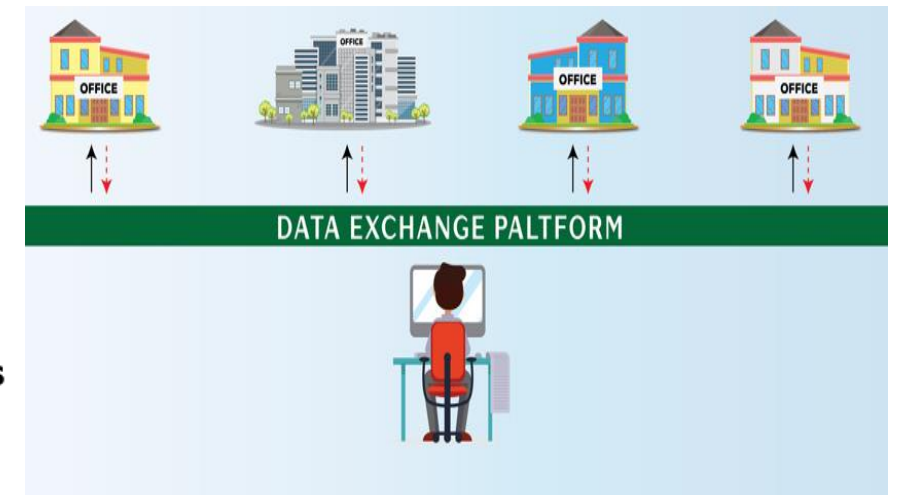
• Pillar 2 Update legal and regulatory framework

- Only once policy
- Zero-Legacy Policy
- Legal Establishment of Data Ownership and Data Custodianship Principles
- National Data Strategy

Pillar 3 Continuous development of digital enablers.

- Consolidation of fragmented identifier landscape
- Establishment of a Data Exchange Platform & Identification of Pilot Projects

Pillar 4: Develop digital literacy and skills



Government Data Strategies - National Level

❑ Institutional Arrangements

▪ **Ministry of Communications and Information Technology (MoCIT)**

MoCIT is the key government body responsible for overseeing the development of information and communication technologies in Nepal. It plays a critical role in formulating policies related to data governance, cybersecurity, and digital infrastructure.

▪ **National Information Technology Center (NITC)**

NITC is responsible for managing government data centers, promoting e-governance initiatives, and ensuring the security of government networks. It plays a crucial role in implementing data management and security policies. It also facilitates data sharing among different government agencies.

▪ **E-Governance Commission**

Established to accelerate the digital transformation of government services; to formulate policies and strategies related to e-governance; and to promote digital literacy

Government Data Strategies - Organizational Level

Several government organizations in Nepal have taken steps to develop and implement data strategy initiatives, aiming to improve data management, accessibility, and utilization. Here are a few examples of such initiatives at the organizational level

❑ Department of Health Services (DoHS)

Health Data Strategy

- **IHMIS Roadmap (2022-2030):** DoHS has developed an Integrated Health Management Information System (IHMIS) to collect, analyze, and disseminate data related to healthcare services, disease outbreaks, and health outcomes across the country. The roadmap outlines the strategic vision and action plan for strengthening the health data ecosystem in the country.
- **HMIS Data Analysis and Use Directives 2013** for district-level program manager.
- **Early Warning and Reporting System (EWARS) Guideline 2016:** EWARS is designed to complement the HMIS by providing timely reporting for early detection of selected vector-borne, water and food borne diseases with outbreak potential.
- **capacity-building for its health data workforce.**
- **Collaborations with International Health Organizations:** collaborate with World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) to improve health data management and use.

Government Data Strategies - Organizational Level

❑ Ministry of Agriculture and Livestock (MoALD)

Agricultural Data Strategy

- ❑ **Agriculture AMIS:** The MoALD has introduced an Agriculture MIS to centralize data collection and analysis related to crop production, livestock, and market prices.
- ❑ **Farmer Registration Management System:** The ministry has also implemented a national farmer registration program aimed to create a comprehensive database of farmers across the country. This allows the government to better target agricultural subsidies, support programs, and disaster relief efforts.
- ❑ **Collaboration with International Partners:** The MoALD collaborates with organizations like the Food and Agriculture Organization (FAO) and the Asian Development Bank (ADB) to enhance data quality and management systems, particularly in areas such as climate-resilient agriculture and sustainable land use.
- ❑ **Statistical Information on Nepalese Agriculture – Annual publication that provides agricultural Production data (crop, vegetable, fruits, and livestock), area and yield, agricultural trade etc.**

Data Strategy of National Statistics System (NSS)

❑ The statistical system of Nepal is operated in a **decentralized** manner both **horizontally** and **vertically**. NSS of Nepal was formally started with the first census of Nepal completed in 1911.

❑ The Constitution of Nepal

Statistical Powers of Three Levels of Government

[Schedule-5]: Federal Power – Central statistics (national and international standards and quality)

[Schedule-6]: State Power – State Statistics

[Schedule-8]: Power of Local Level- Collection of Local Statistics and Records

❑ Statistics Act 2022

A National Statistical System shall be established as an integrated system of statistics collected by the Office, government agencies, and public institutions in accordance with this Act and prevailing laws.

Data Strategy of National Statistics System (NSS)

Statistics Act 2022 and Statistics Regulation 2023

The National Statistics Act 2022 of Nepal includes provisions related to various components of a data strategy that are essential for the effective governance, management, and utilization of official statistics. Key components covered by the Act include:

1. Data Governance

- ✓ **National Statistics Office (NSO)** as the data steward responsible for the management and coordination of the NSS. This includes ensuring the standardization, reliability, and coordination of statistical activities across government institutions.
- ✓ The Act establishes the **National Statistics Council** to oversee and guide the NSS.
- ✓ **Survey Approval System**
- ✓ **Designated Statistics System**
- ✓ **National Statistics System Development Plan:** NSDS I (FY 2018/19 - 2022/23), NSDS II (FY 2024/25 – 2028/29)

Data Strategy of National Statistics System (NSS)

Statistics Act 2022 and Statistics Regulation 2023

2. Data Collection and Management

- ✓ NSO as the *main producer* and other government agencies as *other producers of official statistics*.
- ✓ The rules for data collection, storage, dissemination, and use.
- ✓ Code of ethics, roles, and responsibilities of data producers, providers, and users.

3. Data Quality Assurance

- ✓ The Act provisions for maintaining data quality through the adoption of national and international standards. It emphasizes setting standards on administrative record forms, data collection, processing, analysis and publication, sampling methodology, and metadata documentation.
- ✓ Implementation of Quality Assurance Framework.
- ✓ Advance Release Calendar
- ✓ Metadata dissemination

4. Data Sharing and Accessibility

- ✓ Provision of microdata dissemination
- ✓ Developing an Integrated National Data Portal

5. Capacity Building: The Act promotes the development of human and technical capacity within the NSO and other government agencies for improved data management and utilization.

6. Coordination and Collaboration

- ✓ National Statistics System Coordination Committee: chaired by the chief statistician.

National Strategy for the Development of Statistics – NSDS II (FY 2024/25-2028/29)

▣ Vision

- Development of an integrated, coordinated, functional, and strong statistical system

Mission

- Development of a system that supports the production, supply, and use of quality statistics required for the formulation of policies and making decisions in favor of good governance, social justice, and prosperity in accordance with the federal system.

Strategic Objectives

1. To build infrastructures necessary for the development of statistical systems of the federal, provincial, and local governments;
2. To develop an effective system to coordinate agencies engaged in statistical activities;
3. To regularly supply quality data required for evidence-based decision-making and policy formulation.

National Statistics Office

❑ Major Statistical Activities of the NSO

- Production of National Account Statistics (National and Provincial Level) – Quarterly and Annual
- Production of price and production Index – Quarterly and Annual
- National Population and Housing Census (since 1911), every ten years
- National Census of Agriculture (from 1961), every ten years
- National Economic Census (2018), every five years
- Various Surveys
 - Nepal Living Standards Survey (in principle every five years)
 - Nepal Labor Force Survey (theoretically every five years)
 - Nepal Multi-Indicator Survey (Five Five Years)
 - National Industrial Survey (every five years)
 - Distributive Trade Survey



Population Statistics



Poverty, Living Standard
& Labour Force Statistics



Gender & Social Statistics



Environment Statistics



National Account
Statistics



Price Statistics

National Statistics Office: Functions, Duties and Powers

- (a) To prepare and submit to the *Council* a draft of policy, plan and strategy relating to statistics,
- (b) To work for proper development, management, and promotion of the National Statistics System and to establish inter-agency coordination,
- (c) To prepare and implement operational action plans relating to censuses, surveys and other sectoral statistical activities for statistics to be collected by the Office,
- (d) To provide necessary statistics to the Government of Nepal, Provincial Government and Local Level for plans formulation and policy determination,
- (e) To perform tasks relating to standardization and validation of data,
- (f) To protect statistical records,
- (g) To make arrangement for publication and distribution of statistics,
- (h) To act as a Central Statistics (data) Bank,
- (i) To receive and link statistics collected by the Province and Local Level into the National Statistics System.
- (j) To assist in the development of statistical systems at the Province and Local Level,
- (k) To assist in the capacity enhancement of agencies collecting statistics pursuant to prevailing laws,
- (l) To examine, monitor, inspect and supervise matters related to data collection pursuant to this Act,
- (m) To conduct studies, research and training related to statistics, and
- (n) To provide details or information related to statistics requested by the Government of Nepal or the Commissions.

Nepal: Data governance profile



Government of Nepal
Office of the Prime Minister and Council of Ministers
National Statistical Office

1. Vision and policy intent

[The Fifteenth Plan](#) has been prepared with the long-term vision of fulfilling the shared national aspiration for “Prosperous Nepal, Happy Nepali”. The plan includes initiatives (ref. Chapter 10) to improve data management systems, make data more credible and accessible, use data in policy formulation and decision making of all levels, and develop a statistical system in line with the federal structure by achieving interagency and intergovernmental coordination in statistical activities.

The [Vision of the National Statistics Office](#) is “Establishment of a coordinated, functional and sound national statistical system.”

[The National Strategy for Development of the Statistical System](#) objectives include the establishment of coordination among federal, provincial and local governments of Nepal involved in statistical activities.

The [Digital Nepal Framework](#) initiatives include the digitisation and upgrade of systems (health, education) and development of policies and regulatory framework for data security, data protection and online privacy.

2. Data Management: policies, rules & institutions

A National Statistics Council, established under the [Statistics Act, 2079 \(2022\)](#), determines the national standards and can give directions to agencies related to data collection, storage, processing and dissemination.

The Council may form inter-agency working groups on statistics as per need to maintain coordination and uniformity in methods of sectoral data collection, access to data and data management

3. Data custodians and data stewardship

The [National Statistical Office](#) (NSO) is the central agency for the collection, consolidation, processing, analysis, publication and dissemination of statistics. It is under the Office of the Prime Minister and Council of Ministers (OPMCM) of Nepal and serves as a national statistical organization of Government of Nepal. It generates timely and reliable socio-economic statistics mainly through the operation of censuses and surveys.

It carries out different household surveys and censuses regularly to assess the socio-economic condition of the country.

Government agencies are also authorized to collect data however, agencies planning to collect or publish data (at national level) must obtain permission from the NSO

The data collected by the agencies shall be linked into the National Statistical System.

4. Data sharing, accessibility and integration

Published data is shared through the website and data portal of the data producers. The NSO also distributes microdata to users through a [microdata catalogue portal](#) comprising a collection of datasets from the NSO and Department of Health Services, Civil Registration and Ministry of Agriculture Development. The NSO has different data portals for sharing data from the population census and some other datasets.



[Open Data Nepal](#) is one example of a civil society initiative which aims to make Nepal's data permanently accessible online.

[National Data Profile](#) (NDP) is a database system that aims to provide easy access to key official statistics of all three layers of government.

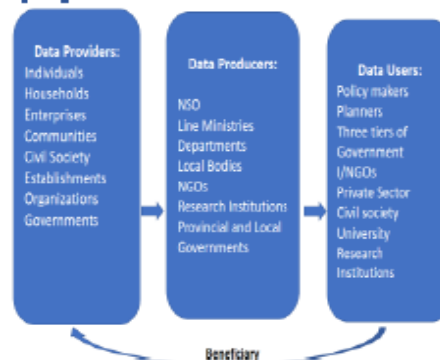
In 2022-3, the National Statistics Office of Nepal participated in a [project on strengthening the capacity to implement data integration approaches for official statistics](#). The project involved a practical exercise of integrating multiple data sources and included capacity development activities.

5. Data sharing, risks & mitigation

Article 28 of the [Constitution of Nepal, 2072 BS](#), explicitly outlines the right to privacy.

Privacy in Nepal is regulated by the Statistics Act 2079 (2022), the Privacy Act 2075 (2018), and the Individual Privacy Regulation 2077 (2020) ('Privacy Regulation').

The [Statistics Act, 2079 \(2022\)](#) has a strict provision that records only be used for statistical purposes and that individual information obtained by the data collector in course of data collection shall not be used elsewhere or made available



Integrated System for National Statistics

- Along with the practice of a federal system of government in Nepal, three levels of government are formed and functioning, namely federal, state and local level. It is a situation where the governments of all three levels are carrying out various activities according to their respective plans, policies and programs within the constitutional jurisdiction. Therefore the achievement of the task carried out by all the three levels of government is the overall achievement of the state. However, it is difficult to measure the overall achievement of the government due to the lack of integrated records of the concrete results obtained from the programs conducted by various agencies at different levels of the state. In this background, according to the decision of the **National Coordination Council** (chaired by the Prime Minister) dated *2023 June 18*, a study team under the leadership of the chief statistician of the NSO was formed to propose an integrated system of national statistics. The report has been submitted to the secretariate of the Council, Office of the Prime Minister and Council of Ministers.
- Integrated System of national statistics means a robust mechanism based on information technology developed to integrate data into an accessible platform the statistics and indicators necessary to understand the performance result of the government and the country's overall situation. The main purpose of this system is to develop a common and integrated source of government data.

Problems and Challenges

- **Lack of Comprehensive Data Governance Framework:** Nepal lacks a centralized data governance framework, including a national data strategy or policy that clearly outlines data collection, sharing, privacy, and security protocols. This results in fragmented efforts across different government departments.
- **Fragmented Data Systems:** Government agencies often operate in silos, leading to fragmented data collection and storage systems. The absence of standardized data formats and systems hinders the effective integration and use of data across different government sectors.
- The laws and structures necessary to carry out statistics activities have not yet been established at the provincial and local levels.
- Lack of coordination between federal agencies, provinces and local levels in the production and management of sectoral statistics.
- At the local level, data production and management face significant challenges due to the absence of dedicated programs and budgets and a specific structure or unit responsible for statistical work at this level.
- At all three levels, there is a lack of skilled manpower to work on statistics and information technology
- Data strategy have not yet been prioritized.
- Problem of consistency and reliability in the available data
- There is a lack of basic data required for formulating policies and plans at the provincial and local level
- infrastructure such as electricity, internet, and computers for data management based on information technology have not reached all the wards
- There is a lack of information and knowledge among the users about where to find the available data and how to get it. Also, there is a lack of tendency to search for data.
- The existing integrated portal of statistics (National Data Profile) has not been fully implemented