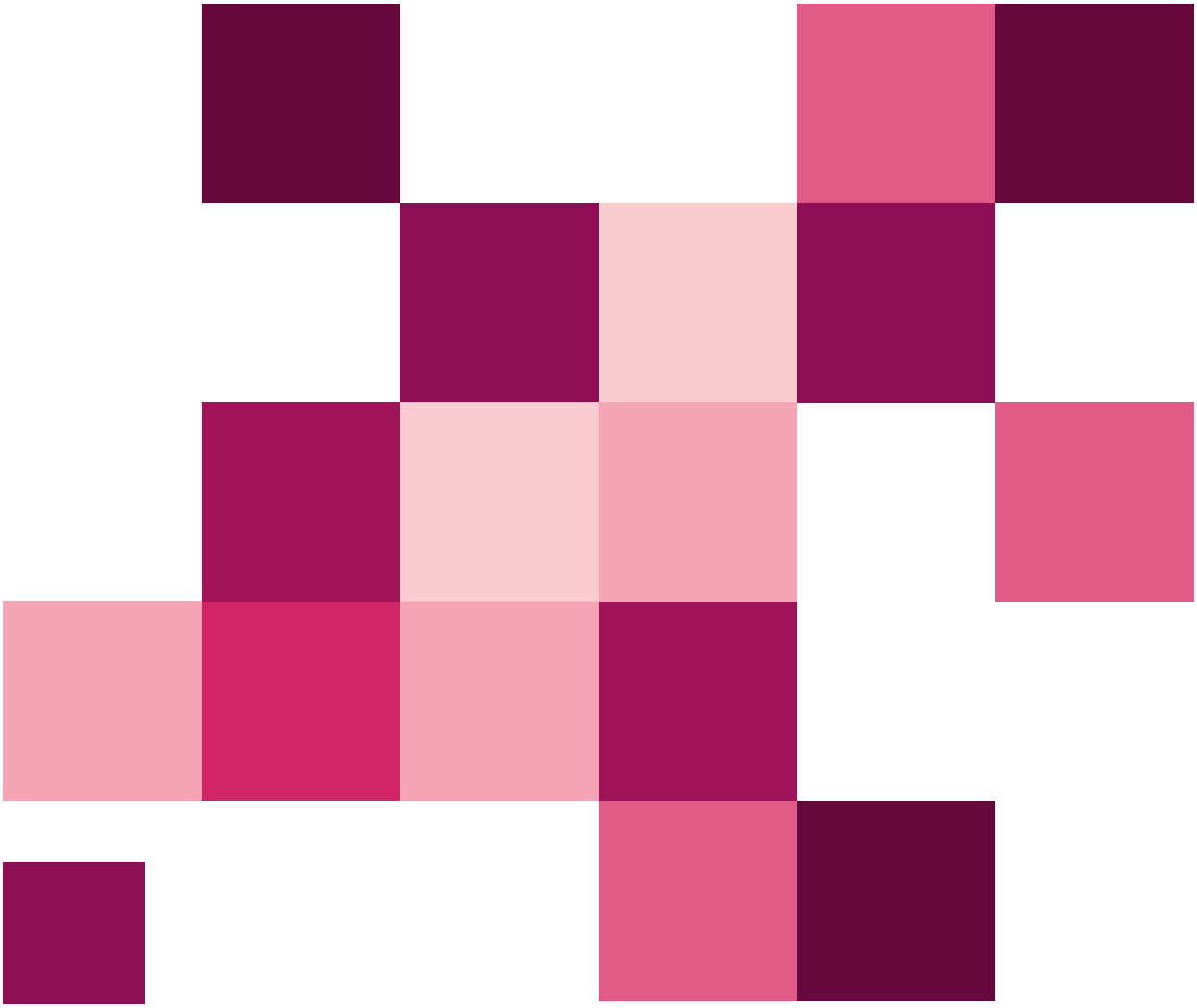
development initiatives



LNOB assessment Nepal: Data landscaping in Simta municipality

Report

June 2023

Contents

Introduction

Leave no one behind (LNOB) is the central transformative promise of the 2030 Agenda. It compels development actors to consider the furthest behind first and to tackle the discrimination and exclusion that drive the inequalities people experience. Within Development Initiatives' (DI's) Poverty and Inequality (P&I) programme, we use our expertise in data and evidence to produce outputs that support our partners and allies to better understand who has been left behind, in what ways, and why.

DI's LNOB assessments have been developed to apply a systematic methodology that:

1. Identifies and reviews relevant existing data.
2. Analyses that data to answer a locally relevant and targeted policy question.

During 2022 and 2023, four assessments were conducted in Kenya, Uganda, Benin and Nepal. Each assessment had a distinct focus that was identified and developed with local partners.

The LNOB assessment in Nepal sought to understand data and data infrastructure at the municipal level, considering how data can be used to inform local decision-making to tackle poverty and inequality. This approach was applied in two municipalities: Tulsipur and Simta.

This report presents the first part of the LNOB assessment in Simta. It is based on DI's data landscaping approach and assesses the range, quality and utility of existing data that can potentially inform issues relating to poverty and inequality in the municipality. It also assesses and makes recommendations about the underlying factors that could strengthen Simta's data ecosystem and enable improved and accessible evidence to be available in the future.

In November 2022, DI and Backward Society Education (BASE) held a co-creation workshop in Simta, which was attended by representatives from Simta's municipal government. In the co-creation workshop, stakeholders identified priority research questions and discussed the methodological approach. Based on this, DI and BASE adapted DI's general analytical framework for data landscaping in line with the set parameters. The team then conducted desk-based reviews of grey literature and face-to-face key informant interviews (KIIs) between December 2022 and January 2023. KIIs were conducted with 18 representatives from nine different departments of the local government. A final dissemination workshop was held in Simta on 22 March 2023 with a total of 27 participants representing various organisations.

Part 1 of this report describes the quantity and quality of data included in the data inventory. Part 2 describes how this data is used in the municipality, Part 3 reviews the

strength of the poverty and inequality data ecosystem as a whole, beyond the properties of individual data sources, and Part 4 provides recommendations for strengthening the local data ecosystem.

Part 1: Simta's poverty and inequality data inventory

In Simta the study team identified nine data systems that produce information of interest to a poverty and inequality analysis: five administrative data systems, two surveys and two mixed-methods sources (i.e. unique sources that collate data from administrative systems, official surveys and censuses).

The identified systems produce data on demographics, social protection (e.g. child nutrition grants for Dalit children and senior citizens' allowance for people over the age of 70), asset ownership, employment, education (e.g. enrolment rates and scholarships), health (e.g. vaccination and nutrition), disaster risk reduction (e.g. damage to housing by flooding), disability (e.g. prevalence), and water, hygiene and sanitation (WASH). The study team was unable to identify data on dimensions of poverty relating to voice and political participation.

The study team tried to identify unofficial sources but could not.[1]

Inventories of data systems

Table 1: Inventory of five administrative data systems

Data system	What data is collected?
DRR Portal	Type of incident (e.g. fire, animal incident, storm), location of incident, number of people impacted by an incident and how (e.g. killed or injured), damage to infrastructure.
Employment Management Information System (EMIS)	Information about applicants (ethnicity and gender, etc.).
Health Management Information System (HMIS)	Information on maternal and neonatal health, nutrition, vaccination and immunisation, and more.
Integrated Education Management Information System (IEMIS)	Information on students, teachers and other staff.
VERSP MIS	Information on births, deaths, marriages, divorces and migration.

Table 2: Inventory of two mixed-method sources

Data system	What data is collected?
Disability identity Card	Classifications of disabilities
Smart Daughter Programme	Information about family members: names, addresses and place of birth, etc.

Table 3: Inventory of two official surveys

Data system	What data is collected?
Disaster Risk Survey	Type of hazards and impacts
Municipal Profile Survey	Overall household survey including demographic profile, socioeconomic profile, infrastructure, occupation, unemployment, etc.

Disaggregation

In order to inform a leave-no-one-behind approach, it is necessary to identify individual and group-based characteristics that may influence poverty outcomes. To enable this, data must capture variables relating to multiple dimensions of poverty, such as health or access to electricity, but also include particular variables that can allow for disaggregation by characteristics that may be associated with inequality and exclusion within a population, such as gender, age or geography.

Six of the nine data systems produce data disaggregated by geography (i.e. wards), five of the nine data systems produce data disaggregated by age (this does not include the education data available to us, as this was disaggregated by grade or year group), and five of the data systems produce data disaggregated by gender. There remains room for improvement but arguably efforts to produce data disaggregated by these dimensions have been fairly successful, as they feature in datasets produced by more than 50% of the identified data systems.

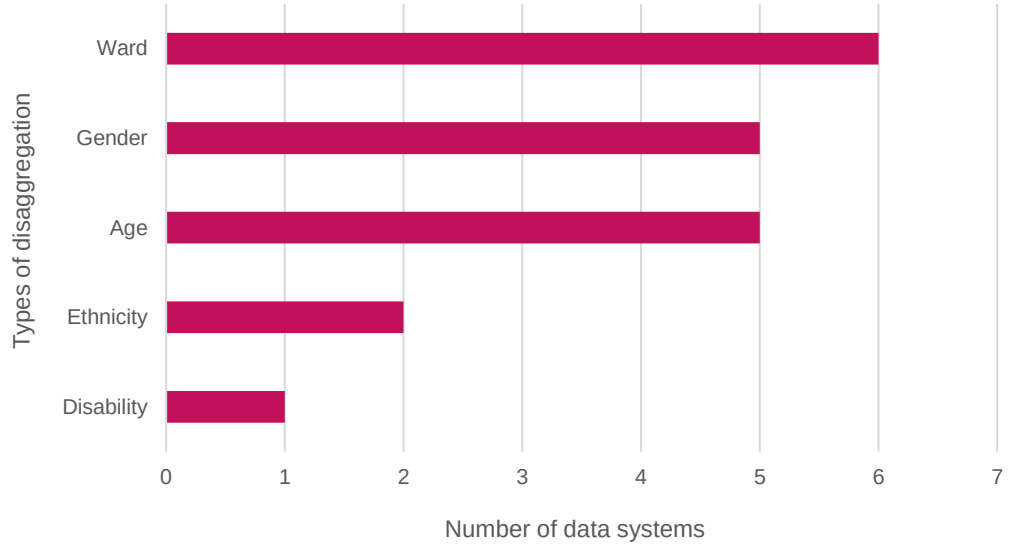
In contrast, data disaggregated by 'ethnicity' is only produced by two of the identified data systems, meaning it is absent from seven.[2] However, this is not always because systems do not collect data on ethnicity; for example, data on ethnicity is collected by the Employment Management Information System (EMIS) and the Smart Daughter Programme MIS on paper forms, but it is not uploaded to the digital system, and sits unused in storage facilities.

The type of disaggregated data collected least often is (types of) disability data. This data is only collected by one of the identified data systems.

The omissions of these characteristics (e.g. ethnicity and disability) from some datasets, prevents users from being able to use those datasets to generate insights about these dimensions via quantitative analysis (e.g. investigating how disability intersects with health), and severely limits the range of evidence available to them. Collecting and digitally storing disaggregated data across all data systems in Simta would better enable intersectional analysis.

Figure 1: There are low levels of disaggregated ethnicity and disability data in Simta's data systems

Number of data systems by type of disaggregation



Source: DI, 2023.

Frequency

Ward offices upload civil registration data (e.g. birth and death registrations) to VERSP-MIS on a daily basis, and Nepal Police also upload data to the DRR portal on a daily basis. This means users can access this information in real time.[3] Data for the HMIS is updated on a less frequent basis, but it is still satisfactorily regular; facilities collect data on paper forms on a daily basis and upload it to DHIS2 (HMIS) every month.[4]

"There is a dedicated DHIS2 user in health department. Each month, the focal person from health facilities meets and share data which is

entered in DHIS2. The data is reviewed half yearly to see if targets are met."

Interviewee employed in Simta's health department, 2022

Conversely, data for the IEMIS is collected and uploaded to the digital system on a much more infrequent basis. Data is collected once at the beginning of the academic calendar and once again at the end; it is uploaded to the system by the school with support from the rural municipality (which also verifies it at the same time).

Data is collected via the Municipal Profile Survey on an even less frequent basis: every five years. The infrequent scheduling is due to the costs of carrying it out. Therefore, despite the survey's capacity to produce high-quality statistics, surveys are not administered regularly enough to be relied on as the main source of evidence for local decision-makers.

Data collectors

Training people to work with data means they are less likely to make mistakes that can reduce data reliability.

Most interviewees report that at the municipal level there is a satisfactory number of dedicated staff who are trained to work with data. Conversely, interviewees report that there are not enough dedicated and trained staff to work with data at the ward level; administrative data systems (such as HMIS or VERSP MIS, etc.) capture data at the ward level, and, therefore, if too few people at this level are trained, the reliability of the data being captured is reduced. The health department, which has the strongest level of human resources at the ward level, still reported shortfalls.

Federal departments do conduct periodic training in the municipalities to increase civil servants' capacities to work with data. Additionally, the Data for Development (D4D) Program, which is funded by the UK government and run by the Asia Foundation, has conducted training programmes to strengthen data literacy in the municipality. Similar investments need to be provided more regularly and to a wider group of stakeholders at the municipal level, and – more pressingly – to the wards.

Metadata

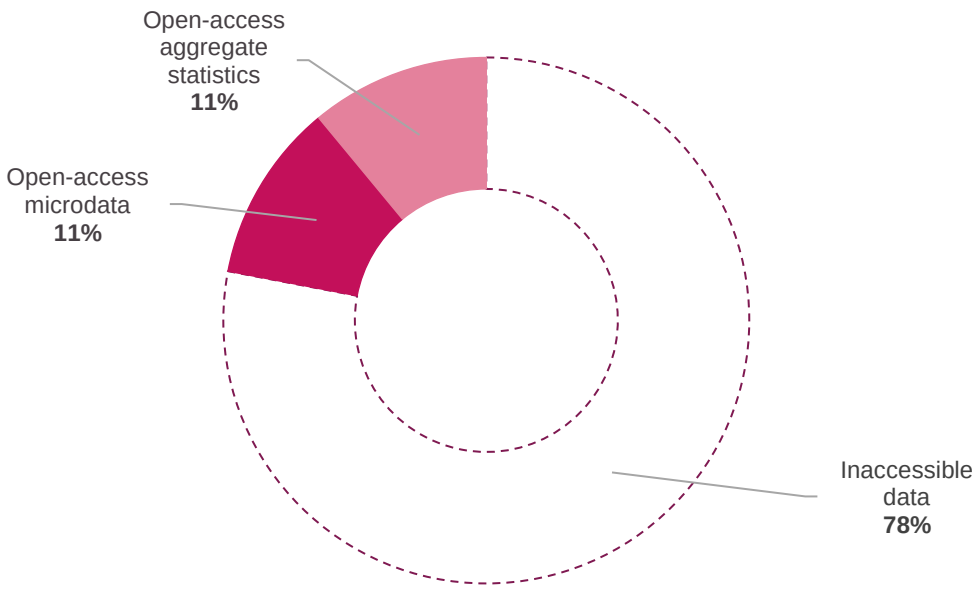
Complete metadata allows actors to understand the data they are working with more promptly and thoroughly, and this encourages data use. Metadata is commonly made available alongside datasets produced by five of the nine data systems included in the inventory. The other four data systems only provide partial or no metadata alongside the datasets they produce. For example, metadata that accompanies disability data does not include the exact date it was initially recorded, nor who collected it. There is a chance that this information is recorded in the paper registers, but it is not digitised.

Open data

In Simta, the only data that is openly available online is through the DRR portal, and from its Municipal Profile Survey, 2075 BS (2018/19) in the form of summary statistics (not microdata). If more data from different sources was made available online, it would allow a variety of users to engage with it for different reasons. Open data could benefit the general public (e.g. people working for civil society organisations (CSOs), non-governmental organisations (NGOs) and private businesses, etc.), as well as enabling increased data sharing between municipal departments.

Figure 2: The majority of data in Simta is not openly accessible

Proportions of open-access and inaccessible data in Simta



Source: DI, 2023.

Discrepancies in disaster data

There are some discrepancies in the disaster risk reduction data depending on the source. For example, the numbers quantifying damage to buildings, schools and agricultural farmland for the same time period are different in the municipality's report (2022), the data the municipality submitted to the district office, and the data published via the DRR portal. These kinds of variations raise significant concerns about the reliability of the data being produced. Doubts about reliability erode the trust potential users have in the data, and, in turn, low levels of trust can cause potential users to be hesitant about using data.

Part 2: The use of poverty and inequality data in Simta

Poverty and inequality data is used for a number of purposes in Simta. For example, data is used to design skill-training programmes for persons with disabilities and single women; to distribute scholarships to female students; to design budgets and plans in the health department; and to distribute various social security payments.

> **"The health department makes decisions based on evidence and data. They organise meetings with the management committee and discuss the challenges and problems which are then discussed with the planning department."**

Interviewee employed in Simta's health department, 2022

However, interviewees told us that data use in Simta could be extended (e.g. Simta's municipal chairperson suggested data-led advocacy initiatives are required to promote the socioeconomic development of marginalised groups), despite these examples of current data use. The primary reasons why data is not used to its full potential are:

- A lack of interest in evidence-informed decision-making
- A lack of digitisation
- Inaccessible data
- Distrust in the quality of some data
- Low levels of data literacy.[5]

Part 3: The foundations of Simta's poverty and inequality data ecosystem

Governance and management

Issues with the foundational components of Simta's local data ecosystem are unpacked in the following subsections of this report. Some analysis relates entirely to poverty and inequality, whereas the focus of other analysis is more general but equally significant.

Municipal policy on local data

Simta has a fairly comprehensive 'Data Management Policy', 2079 BS (2022/23).[6] It outlines protocol on the protection and management of municipal data, and the use of data to inform decision-making. It also covers data standardisation, storage, ownership, open data and public awareness.

Moreover, Simta also has a 'Work Distribution Manual' 2074 BS (2017). This manual delegates many responsibilities relating to data collection and management to municipal departments; a number of these responsibilities intersect with poverty and inequality. For example, it stipulates that poverty alleviation and employment promotion are the responsibility of the economic division, including the ICT-based collection and management of poverty data.

It is clear that Simta's government has laid a decent policy foundation for the collection and management of local data. However, interviewees report that few people in the municipality know about the policies. Therefore, the next step is to mainstream the policies into the day-to-day activities of the local departments.

ICT infrastructure

Modern information systems are digital and rely on electricity, so there are obvious negative consequences if there is no supply of electricity (or if it is intermittent).

In Simta, parts of the municipality do not have a supply of electricity. In fact, only ward six is completely electrified, whereas there is no electrical supply to wards two and nine at all.[7] As previously stated, administrative data systems (e.g. the Vital Event Registration and Social Protection or VERSP MIS) capture data at the ward level, therefore a ward with no electricity has to use paper forms (which they pass on to municipal offices to input

data digitally), and the benefits of full digitisation are lost (e.g. a reduced risk of anomalies due to restricted fields of input).

Furthermore, modern information systems also rely on internet connectivity. In Simta, ward-level internet connectivity is very weak, and issues with it also extend to municipal-level offices. In 2022, the chairperson of the municipal government stated that electrifying all the wards in the municipality and extending internet connectivity to them is a priority of the local government.[8] However, significant improvements have not yet been achieved.

Cross-departmental coordination

Whether in the form of a commonly followed data-sharing protocol or through a coordinating body, at present, there are no formalised approaches to cross-departmental data coordination in Simta. Departments often work in silos and, for the most part, even an informal data-sharing culture has not emerged.[9]

As per the 'Work Distribution Manual', Simta should have established a 'Department of Planning, Monitoring and Data', which theoretically should encourage and formalise data sharing between departments (see Box A1 in the Annex for more details). However, currently this exists only on paper and not in practice.

The negative consequences of underdeveloped coordination mechanisms are not lost on municipal officials. For example, the lack of guidelines for sharing and using data between departments was understood in the project workshop to be partly responsible for discrepancies in the data obtained from different data sources. Also, the exclusion of ethnicity from various digital systems was partially blamed on there being no standardised processes for uploading data from registers into Excel sheets.

Budget

The study team was unable to identify spending earmarked for data-related activities in any public budgets in Simta, apart from the Department of Education allocating 200,000 Nepali rupees (approximately US$1,500) to train officials to use the Integrated Education Management Information System (IEMIS) and build ICT capacity. Increasing investment in data-related activities in the municipality, especially on those which intersect with poverty and inequality, can lead to more informed decision-making, targeted interventions, and evidence-based policies to address systemic disparities and uplift marginalised communities.

Part 4: Recommendations

This section outlines top-level policy recommendations based on the findings detailed in parts 1–3.

Data sources:

- Ensure data on ethnicity, which is collected on paper forms, is input into digital systems.
- Explore the possibility of collecting routine education data through administrative systems more frequently (the Integrated Education Management Information System or IEMIS is managed at the federal level, so this will require innovative solutions).
- Train key ward-level officials in basic statistical concepts and the specific digital systems they use.
- Ensure complete metadata is collected and published by the four remaining data systems not currently using it.
- Publish more data on the municipality's website or through other online platforms.
- Ensure consistent disaster data is accurately shared across sources.

Data use:

- Identify and train key staff so they have the skills to conduct basic data analysis.
- Identify what data key users need and prioritise its publication through online platforms.
- Hold workshops with key officials to promote the value evidence-informed decision-making has in policymaking and public service provision.

Data governance and management:

- Mainstream the 'Data Management Policy' and 'Work Distribution Manual' into the day-to-day activities of municipal departments and ward offices.
- Complete the full electrification of ward offices and establish a stable internet connection in the municipality and at ward level.
- Establish the 'Department of Monitoring, Planning and Data' to design and implement a data-sharing protocol for municipal departments to use.
- Increase the allocation of spending on data-related activities.

Annex

Table A1: Data systems and processes

System	Who collects data?	How often it is collected?	What data is collected?	Where is the data input into the digital system and by who?	Who uses the data?
Disability Identity Card	Staff in ward offices and the Department of Women, Children and Social Development	Ad hoc	Types and classifications of disabilities	Ward and municipal offices	Ward offices, the Department of Registration and the Department of Planning
Disaster Data	Disaster Management Committee and Nepal Police	Ad hoc	Types of hazard and impacts	Nepal Police	Ward offices, municipal departments, the District Disaster Management Committee, and the Ministry of Home Affairs (federal)
DRR Portal	Nepal Police	Daily	Information on geographic location, loss of lives and	By police officers	Local Emergency Operations Centre and the Municipal Disaster Management Team

			property, and damage to buildings and infrastructure		
Employment Management Information System (EMIS)	Employment coordinators in ward offices	Once a year in February/March	Information about people applying for an employment programme (e.g. ethnicity, gender, etc.)	Staff at the municipal Department of Employment	Ministry of Employment, Labour and Social Security (federal), and the municipal Department of Employment
Health Management Information System (HMIS)	Health post staff, community health unit volunteers, and focal people from the Department of Health	Data is collected on a daily basis and uploaded to the digital system monthly	Maternal and neonatal health, nutrition, vaccination, immunisation, plus more	Health workers and administrative staff at ward and municipal levels	Health posts, municipal health centres, and the Department of Health Services (federal)
Integrated Education Management Information System (IEMIS)	Headteachers and focal people from the Department of Education	At the beginning and end of the academic year	Information on students, teachers and other staff	In schools by headteachers	Schools, central, provincial and local governments, and the District Education Coordination Unit

Municipal Profile Survey	Municipality office	Every five years	Multi-sectoral household survey	Department of Information	Municipal-level departments
Smart Daughter Programme	Staff in ward offices and the Department of Women, Children and Social Development	Ad hoc	Information about female family members (name, address, place of birth, etc.)	Ward and municipal offices	Ward offices, the Department of Registration, and the Department of Planning
Vital Event Registration and Social Protection (VERSP MIS)	Registration staff in ward offices	Daily	Information on births, deaths, marriages, divorces and migration	Ward and municipal offices	Ward offices, municipal government departments, the Department of National ID and Civil Registration (federal), and the Central Bureau of Statistics (federal)

Table A2: Municipal data-related responsibilities as per the Local Government Operations Act (2017)

Areas	Data-related functions and duties
Local data and records compilation	• Creating and implementing policies, laws, standards, and regulations related to local data. • Collecting and managing local data.

	• Registering births, deaths, marriages, divorces and migration.
Local records management	• Formulating and implementing policies, plans and standards for local records management. • Applying IT in local records management.
Livestock	• Managing data on local livestock and implementing a management information system.
Unemployment	• Collecting and processing unemployment data and establishing a management information system. • Managing records on domestic and foreign labour.
Disaster management	• Managing local disaster data.
Social security and poverty alleviation	• Creating and implementing local policies, standards and legislation for social security and poverty alleviation. • Managing social security-related data and information. • Identifying households in poverty and implementing an information management system.
Landless squatter management	• Identifying landless squatters and implementing an information management system.

Box A1: Data-related responsibilities of the Department of Planning, Monitoring and Data

- To prepare guidelines, acts, rules and standards for data collection, management and use.
- To establish an information and records department.
- To record vital events through the use of information technology, and manage records.

- To collect, process, archive and disseminate local statistics (including on demography, economy, social protection, social and cultural issues, physical infrastructure, public revenue, employment and human development).
- To prepare a municipal profile.
- To share data and coordinate data-related activities with provincial and federal bodies.
- To collect and record other municipal departments' data.
- To profile local resources.

Notes

[1] Obtaining unofficial data in small localities is notoriously difficult without pre-existing relationships with local organisations. Therefore, the study team not being able to identify any unofficial poverty and inequality data in Simta does not necessarily mean there is not any.

[2] 'Ethnicity' and 'caste' are used interchangeably across the different data systems. We decided to use ethnicity because slightly more systems used this term.

[3] VERSP-MIS data suffers from some time lag caused by families/guardians reporting events to ward offices after the specified time limit (i.e. 35 days).

[4] DHIS2 is the software used to run HMIS.

[5] For example, the participants in the project workshop expressed concern about the reliability and validity of the data produced by the Municipal Profile Survey. They suggested the process was not consultative, and that in the future there is a need to involve organisations such as BASE and DI.

[6] The Local Government Operations Act (2017) permits local governments to create policy.

[7] In wards one, five, seven and eight, electricity is only available in ward offices and in a few settlements, and in wards three and four electricity is only available in ward offices.

[8] Open Knowledge Nepal and Development Initiatives, Connecting local data ecosystems, 2022. Available at: http://www.d4dnepal.org/wp-content/uploads/2023/03/D4D-IMDS-Report_final.pdf

[9] Yet, this does not mean there are not a few isolated examples of data being shared. For example, the Department of Women, Children and Social Development (DWCSD) shares data with the Department of Vital Registration in order for the latter to distribute social security allowances.

Development Initiatives (DI) applies the power of data and evidence to build sustainable solutions.

Our mission is to work closely with partners to ensure data-driven evidence and analysis are used effectively in policy and practice to end poverty, reduce inequality and increase resilience.

While data alone cannot bring about a better world, it is a vital part of achieving it. Data has the power to unlock insight, shine a light on progress and empower people to increase accountability.

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