development
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the development data assessment

reviewing and mapping the best national data assets

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briefing paper

Introduction

Development decision-makers need to be data users. They need to know what information is available about the poorest and most vulnerable people in order to make the best choices regarding resource allocation, policy and service delivery at national and local levels of government. Data is also required to assess development progress, forming the basis for monitoring both national and global indicators, such as the Sustainable Development Goals (SDGs). To fulfill these requirements, data must be timely and reliable.

It's necessary to understand the available national data resources to help identify what data there is to support decision-making and accountability and to highlight areas for further investment into data assets. In many countries there are either significant gaps in the available data or a lack of high-quality data.

To ensure that the best data is being employed, users need to know as much as possible about the quality of the data source – this can be affected by the frequency and timeliness of collection, the coverage, relevance, comprehensiveness and openness/accessibility. Users also need to know if the data is, or can be, disaggregated, for example by age, gender, disability or location.[1] Furthermore, users need to be able assess from a single access point the data that is available, across sectors and geography, and across indicators such as poverty rates, asset ownership, nutrition and consumption.

Development Initiatives has developed the Development Data Assessment – a methodology that supports governments to identify where quality data for decision-making and policy formulation is available, where data is of poorer quality, and where there are gaps. The methodology is accompanied by a tool that allows users to investigate and interrogate the data. Both the tool (built using D3, an open-source JavaScript library) and the data behind it are public, and the tool is still undergoing development.

An earlier version of this work was piloted in Uganda, and we published the results in 2016.[2] The Development Data Assessment is now being trialled in Uganda, Kenya and Nepal.

See the contact details on the last page of this paper to find out how to get in touch for more detail on applying the Development Data Assessment methodology.

How the Development Data Assessment works

Step one

All institutions and information systems involved in the collection of primary data are identified. Key metadata relating to each source[3] is recorded, including the frequency of collection, geographical scope, level of disaggregation, accessibility, sector, coverage, sample size, data capture device, timeliness, access and the organisations that collect, fund and own the source.

Step two

Each source is then broken down into its component data series (for example, each question in a census or survey).

Figure 1: Main forms of data sources
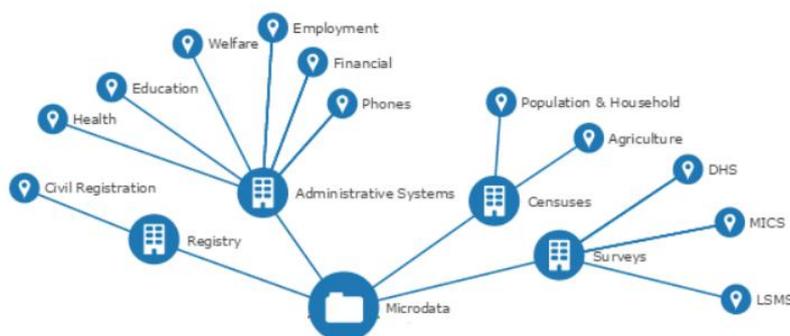
Step three

Data series are mapped against an agreed selection of indicator frameworks. Each data series is matched with indicators through an exact, close or broad relationship. These indicator frameworks can be:

- local – such as national development plan indicators and national gender priority indicators[4]
- regional – such as Africa's Agenda 2063
- global – such as the SDGs indicators.

This mapping provides the basis for analysis of data gaps, data compatibility, as well as duplications of effort. A data series can function as a measure for certain indicators from several indicator frameworks.

Step four

The metadata captured on data sources and series provides the basis for qualitative analysis of data sustainability, comprehensiveness and accuracy.

Step five

This process results in a living database, a visualisation tool allowing users to find the best data available and an annual report highlighting the changes in the country's data landscape. The database regularly updates to capture changes in data production, but also adapts as monitoring frameworks, such as national development plans, alter.

A parallel workstream maps the country's legal and policy frameworks, as well as existing funding arrangements for data infrastructures.

The visualisation tool (see the sankey diagram labelled Figure 3) means users can discover data assets that have an exact or close relationship with the matched indicators. For example, it might be used to show which data series can measure progress against 'population using safely managed water sources' (SDG indicator 6.1.1).

Moreover, the tool can be used to reveal indicators that lack sufficient data, or where data produced isn't useful for measuring development progress.

Figure 3: A snapshot of the visualisation tool
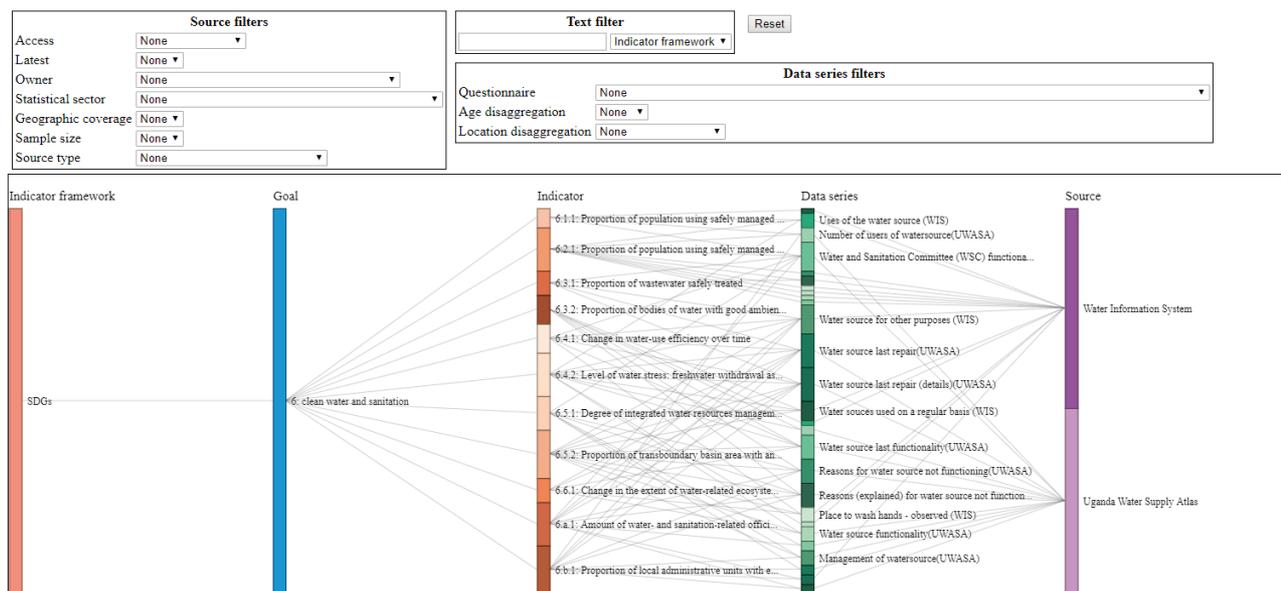
The annual report highlights changes in data production, data use, legislation, resources, development frameworks, as well as updates and impovements to the tool itself. It highlights best practices in data production and use. It captures views of key stakeholders in the national statistical system.

Who can benefit from mapping data assets?

Most obviously, governments and decision-makers (and citizens whose lives their decisions impact) can benefit in the following ways

Maximising limited resources When it comes to their data infrastructures, many governments make difficult investment choices. National statistics based on averages and estimates derived from relatively small survey samples can hide the scale of the data challenge faced by subnational planners.[5] The Development Data Assessment allows subnational and national actors to identify gaps in the development data infrastructure; these can be filled by making the present investments in data more usable through re-allocating resources to existing and evidently cost-effective data infrastructures.

Better investments in data and statistics Decisions about how and where to best invest in data can be made most effectively with an overview of the whole ecosystem. For example, decisions about new investments in data systems for people living in remote areas and/or poverty can be made easily with access to comparable metadata about similar data production processes. This tool also provides evidence for leaders to advocate for more resources into specific statistical areas.

Monitoring progress The Development Data Assessment contributes to the monitoring of the SDGs by making the most apt and high-quality data easily discoverable to see progress against indicators. The indicators are mapped against available data. For example, querying a poverty-related indicator or sector will reveal the relevant data series and data sets. This allows the data to be compared – for example across methodologies, timeliness, coverage and comprehensiveness – to ensure that the highest-quality data is used.

Interoperability Often data producers collect similar data. For example, 77% of all Multiple Indicator Cluster Survey questions can be found in Demographic and Health Survey; conversely 66% of all DHS questions can be found in MICS.[6] The Development Data Assessment helps avoid duplication of effort though better collaborations among data producers, thereby reducing costs, improving quality and enhancing best practice.

Easy to implement The assessment can be conducted in any country.

Others who can benefit

Statisticians and analysts can be sure they're using the best data available.

Data scientists can see data opportunities, gaps and quality.

Data revolutionaries can discover, implement and monitor strategies to improve data at the source.

Data collectors can use the best sources of similar data available locally to design their data-collection tools, plan for better-data management systems and reach out to similar producers to enhance data in their field of work.

Next steps

This methodology can be applied to any country. If you would like to know more, please seek further information via the contact details at the end of this report.

Endnotes

[1] IMF, 2001. *Data Quality Assessment Framework*. Available at:
http://www.imf.org/external/np/sta/dsbb/2001/supp.htm and IMF, 2015. *Enhanced General Data Dissemination System*. Available at: http://dsbb.imf.org/Pages/GDDS/Home.aspx

[2] Development Initiatives, 2016. *Uganda's data ecosystem*. Available at: http://devinit.org/post/ugandas-data-ecosystem/

[3] For the purposes of this methodology, a data source is defined as any information system that collects data, whether as a continuous (i.e. registry and administrative systems) or one-off (census or survey) process.

[4] NPA Uganda, 2016. *Review report on Uganda's readiness for implementation of the 2030 Agenda*. Available at: http://npa.ug/wp-content/uploads/2017/08/FINAL-Review-Report.pdf and NPA Uganda, 2015. *National Developemnt Plan 2015/16 to 2019/20*. Available at: http://npa.ug/development-plans/national-development-plan-ndp/

[5] Development Initiatives, 2017. *Key facts on household surveys*. Available at: http://devinit.org/post/key-facts-on-household-surveys/

[6] Lisowska, B., 2016. *Household surveys: do competing standards serve country needs?* Joined up data standards (JUDS), Development Initiatives. Available at: http://juds.joinedupdata.org/discussion-papers/paper-4-household-surveys/

Development Initiatives (DI) is an independent international development organisation working on the use of data to drive poverty eradication and sustainable development. Our vision is a world without poverty that invests in human security and where everyone shares the benefits of opportunity and growth.

We work to ensure that decisions about the allocation of finance and resources result in an end to poverty, increase the resilience of the world's most vulnerable people, and ensure no one is left behind.

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