



*Report on a meeting organized by  
the Sustainable Development Solutions Network and  
the International Union for the Scientific Study of Population*

**Harnessing the Data Revolution for Development:  
Issues in the design and monitoring of SDG indicators**

**Side meeting held at the Cartagena Data Festival  
Tuesday April 21, 2015**

This 90 minute meeting was organized as a panel discussion around a number of questions on the design and monitoring of the Sustainable Development Goal indicators. This note briefly summarizes the meeting and presents key points brought up by panelists and the audience.

Shaïda Badiee (Open Data Watch) was the meeting moderator, and the panelists were:

Jenna Slotin (UN Foundation)	Claire Melamed (Overseas Development Institute)
Bruce Campbell (UNFPA)	Sam Clark (University of Washington)
Haïshan Fu (World Bank)	Stephane Helleringer (Johns Hopkins University)
Johannes Jutting (PARIS21)	Lina Castro (Phillippine Statistics Authority)
Jessica Espey (SDSN)	Thomas LeGrand (IUSSP/Université de Montréal)

In addition, roughly 80 people, most from international and governmental organizations, NGOs, universities, research centers and the private sector, attended the meeting and asked questions.

The panel discussion was organized around the following set of questions:

- What should be the essential guiding principles for indicator design, and how might indicators account for future trends like population growth?
- The political process says we must “leave no one behind”, but targeting the most vulnerable will require highly disaggregated monitoring of the targets. Is this possible?
- What are the implications of disaggregation for data quality, and what will be the investments and innovations required?
- What new data sources and tools will be crucial for SDG monitoring?
- How should tools be modernized to produce higher quality, comparable data, and reconcile disparate estimates from different sources?
- Given the strong emphasis on administrative data, will household surveys continue to be relevant and how should they be modernized?
- What are the most pressing capacity requirements for low-income statistical institutions?
- As countries differ greatly in both capacity and context, is a harmonized, standardized SDG monitoring approach even feasible or desirable? If not, how should the monitoring activities be planned and implemented?

### **Key points brought up in the discussion**

Number of SDGs, targets and indicators. There is political tension around the definition and number of SDG targets, with some arguing that they should be streamlined and others stating that their large number is representative of the open SDG process. Several participants were in favor of reducing the number of SDG targets or, at least, of minimizing the number of indicators – limiting them to 100 core variables. And even then, some were skeptical that all countries would be capable of producing harmonized statistics on all indicators.

Four guiding principles for SDG indicators were proposed: (1) having a limited number of global monitoring indicators (countries can add other country-specific indicators); (2) being as simple and policy intuitive as possible; (3) being universal: broadly relevant and feasible for all countries to produce, and (4) allowing for disaggregation for the targeting of marginalized groups. In addition, there is great value in defining indicators in a way that allows for comparison with previous points in time (pre-2015), allowing for a tracking of progress over longer time intervals and for the development of more effective interventions.

A missing part of the SDG approach is population dynamics. This is not just about population size and growth, but also changes to the age structure (demographic dividend and population ageing) and mobility - urbanization and both internal and international migration. These are central aspects of the development process and they will impact on the achievement of the SDGs. Population size and growth will be in the denominators of many SDG indicators (e.g., school enrolment rates and per capita income) and, for disaggregated indicators, disaggregated population estimates will be needed. Population movements between regions and rural-urban areas must be taken into account for producing accurate subnational population projections. More generally, beyond producing indicators it is important to monitor processes that lead to desired outcomes – the outcomes that the indicators measure.

Disaggregation and indicator quality. It is critically important that efforts be made to allow for the disaggregated monitoring of targets; this time around we cannot focus just on national trends. Information on marginalized groups mostly comes from censuses and household surveys that follow well-established standards of measurement, thus ensuring the quality of the data and then of the indicators. Indicator estimates will nevertheless vary in accuracy as measured by their standard errors, and this is an important issue to keep in mind when dealing with population subgroups: statistical power falls when you disaggregate. Assessing progress over time, moreover, means determining whether an observed *change* is statistically significant (outside the margin of error), and that requires a still greater degree of precision in indicator estimates. Estimates of indicator quality (e.g., standard error) should be calculated and provided with the SDG indicators whenever possible.

Surveys and censuses. Notwithstanding their value, surveys typically do not have enough respondents to allow for much disaggregation, and significantly increasing their size will be costly. In addition, some of the most important surveys focus on women of reproductive age, and their children and spouses. As such, information is limited on older people, who are often marginalized and whose numbers are rapidly growing with population aging. There is a need to get the basics right and to seriously reinvest in censuses as well as in robust administrative data collection systems across all ministries and departments of government. The size and scope of censuses allows for significant disaggregation and they provide the sampling frames used by household surveys.

New methodologies and new data. Over time, new technology will allow us to link census data to new sources of data, increasing our ability to produce a broad set of disaggregated indicators. New sources include geospatial data (including satellite monitoring and location services on mobile phones...), other types of Big Data, and also information on perceptions: what people value and how they feel their lives are changing. Attention must be paid to establishing data quality controls for new types of data and, for this, methodological advances will be needed.

Biased reporting and indicator quality. New methodological tools will help us to improve the timeliness of data, but not necessarily the quality. Different institutions have different rationales in producing data. To ensure data quality, it is essential to understand the biases that may emerge from these different incentives. Research is also needed for assessing situations where data sources overlap and which produce different estimates. What makes one person report information differently to one data source versus others, and how might one reconcile those differences?

New and improved questionnaires. There is a need to develop new approaches to provide information on topics that are not currently well captured by surveys (e.g., measuring the skills learned and knowledge gained in school as opposed to the grade level attained) and to reassess instruments to improve the quality of estimates (e.g., maternal mortality). A first possible approach for improving the situation in countries with limited data quality should be to invest in collecting the highest quality data possible in small areas, and then to examine how and why those estimates differ from the national level aggregates. Too, some marginalized groups escape from both traditional and new data collection schemes, and concerted efforts must be made to obtain information on them.

Stimulating innovation. Innovation is key for the successful production of SDG indicators. There is a need to get innovation going in the creation of data, in interoperability (merging information from different sources), and also in the visualization and use of data. Data has no value until it is used, and the more data is used, the more valuable it becomes. Activities to improve data literacy will act to increase the demand for and use of data. How can innovation be spurred? Possible approaches might include monetary incentives, increasing the awareness of researchers of the importance of these issues, and promoting knowledge sharing across

groups and experimental approaches. Efforts to spur innovation should not be viewed as simply costs, but rather as long-term investments in producing credible data and increasing the efficiency of data production and diffusion over time.

National statistical capacity and the set of SDG indicators. The SDG agenda is highly ambitious and the task of producing data on even 100 core SDG indicators (which many Member States still consider to be too few) will place huge demands on institutions in poorer countries that have weak national statistical systems. The implementation process will certainly be “messy,” especially at the start of the SDG period. In some countries at least, tradeoffs will likely be made in regard to the data to be collected and the set of indicators to be produced, especially at first. Questions of feasibility, cost and local priorities will play important roles in this. It may be useful to think of grouping indicators by geographical units or by purpose. In any case, there will surely be changes along the way in the SDGs monitoring approach and in priorities, and to the extent possible, flexibility should be built into our design.

Capacity and training. National statistical capacity is a core issue. The increased attention recently placed on strengthening institutional capacity (by [SDSN](#), Paris21, ODI, CGD and others) is a welcome development. To date, however, far too little attention has been paid to ensuring that NSOs and other parts of national statistical systems have enough well-qualified staff. Technical demographers and other competent statistical data specialists are in scarce supply in many institutions and countries, a situation that puts at risk the success of the entire data revolution. Significant investments in training (i.e., at the professional MSc level) is urgently needed for the scaling up the planned data activities over the next years in many low-income countries. In addition, very few people are well-trained in both the data field (e.g., measuring indicators) and in a substantive field (e.g., interpreting estimates), and those people will be called upon to develop the new methodologies required.

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