Fourth Meeting

Saint Petersburg, Russian Federation

14–15 December 2015

Policy Brief on
Data Revolution for Better Lives for All

SAB/4/INF/6

Background

In their report to the United Nations Secretary General (UNSG), the High Level Panel of Eminent Persons on the Post-2015[1], called for a "***data revolution** for sustainable development, with a new international initiative to improve the quality of statistics and information available to citizens.*" The report emphasized the need to empower all people, including the most vulnerable and marginalized, with information, so as to find out whether they are receiving essential services.

Subsequently, an Independent Expert Advisory Group (IEAG) was established by the UNSG to propose ways to improve data for achieving and monitoring sustainable development. Their report[2] highlighted two big global challenges for the current state of data, namely "*the challenge of invisibility (gaps in what we know from data, and when we find out) and the challenge of inequality (gaps between those who with and without information, and what they need to know make their own decisions).*"

As a result, at the UN Summit in September 2015, the world leaders adopted the 2030 Agenda for Sustainable Development[3] which recognizes, *inter alia*, the critical role of data and the need for the data revolution that leaves no one behind.

Readily available high quality data will indeed be essential for measuring and achieving the 17 Sustainable Development Goals (SDGs) defined by the new agenda. Harnessing the power of the data revolution will not only allow to monitor progress, and identify gaps, but also to inclusively engage all relevant stakeholders in closing these gaps and in advancing the best possible evidence-based solutions for the ones most in need.

In view of the growing recognition of the importance of data for the new global development agenda, the UNSG requested his Scientific Advisory Board (SAB) to provide him with recommendations on the data revolution for sustainable development. In response, this policy brief is intended to summarize SAB's recommendations in this regard and to highlight the key principles and general criteria that need to be taken into account to ensure that the data revolution truly serves as a tool for improving the lives of all people.

Key Challenges and Opportunities

Data revolution should serve to advance sustainable development and to improve the lives of all people. As noted by the High Level Panel of Eminent Persons, this means that data gathered will need to be disaggregated by gender, geography, income, disability, and other categories, to make sure that no group is being left behind.

With this premise, it will be essential that ***the data revolution reduces, rather than entrenches, the data divide between rich and poor***. Also, since those with access to data and information will have more power in this new world than those who do not, ***enhancing equity in access to data and the use of data among countries*** is a fundamental requirement for the data revolution to contribute to sustainable development.

Moreover, the analysis and use of data from all sources should ***go beyond statistics and correlations*** to the processing and management of information that establishes causality and process-oriented data. It will indeed be unfortunate to have correlation supplant our

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[1] United Nations, 2013. A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development

[2] United Nations, 2014. report A World That Counts: Mobilizing The Data Revolution for Sustainable Development.

[3] A/RES/70/1 Transforming our world: the 2030 Agenda for Sustainable Development

understanding of causation and model based analytics. Such a balanced approach will be needed to ensure that the SDGs are driven by the best available science, supported by processed data, with established cause and effect.

Since the data will be obtained multi-modally (written, audio and video streams for instance, with different technologies and from multiple sources, systems should be established for the categorization and **assessment of data quality, provenance, and time-criticality**.

The approaches to **the sharing of big data/information** should draw from the rich experience acquired from techniques developed for the analysis and sharing of meteorological data, as well as the sharing of biodiversity, public health and agricultural production data. These are exemplars of areas in which successful methods have been developed for the sharing of big data/information by multiple organizations across the world.

As we pursue these goals, we must find ways of **engaging information technology in ways that bridge the digital divide, while proving access for all.** Hence, the focus should be on inclusive approaches that focus on knowledge that is derived from scientific observations of all types and from all the available sources.

The implementation of the SDGs requires a **creative problem-solving approach** of understanding the local social, ecological and economic conditions and devising actions appropriate to local contexts. Through **democratic and inclusive platforms**, communities can identify knowledge needs and propose innovating solutions. The tools for widespread data-generation, management and use are already available to communities, including indigenous peoples. Such community-based accountability and monitoring systems will be indispensable for implementing SDGs, biodiversity conservation and climate change action in the next 15 years.

Recommendations

In light of the above, we, the members of the UNSG Scientific Advisory Board recommend the following:

▪   To address the most critical issue of the data divide, strategies for the **dissemination and use of data/information by all people** should be developed and integrated in the sustainable development strategies at all levels.

▪   At the same time, the data revolution provides an opportunity for much more inclusiveness and transparency of societies and for harnessing people's views globally. To this end, it will be key to use this breakthrough opportunity for **creating adequate data infrastructure and policies**, including on privacy, data access, data integrity, and the control of the quality of data and repositories of data.

▪   **Big data/information collection and analytics road maps should be developed** by a multi-stakeholder team that should include representatives of governments, development agencies, the private sector, academia and civil society organizations. These road maps, which are important to keep evolving, should also clearly identify the metrics for assessment, as well as the milestones for the implementation of the analytics processes.

▪   With the collection of big data and data analytics, **privacy issues** are often very important to address. Modern techniques of data privacy should be used to anonymize data and to protect the identity of respondents. Further, the **benefits accruing from the data analytics** need to be disseminated to the stakeholder communities of respondents for their further use.

▪   ***Guidelines*** should be developed for the characterization and use of rich or sparse data, using lessons from, for example, the fields of meteorology, public health and demographics, which have long experience in developing such methodology. Their successful experience and expertise should, therefore, be integrated into a multi-stakeholder team that should be convened by the United Nations to manage the sharing of big data/information.

▪   Data revolution should also ***integrate the contributions of indigenous and local knowledge, as well as that of citizen science***. The integration of these different types and sources of data/information contributes to peoples' understanding of the problems at hand and the building of the knowledge base to identify and implement solutions.

▪   Training programmes should be enhanced to ***build the necessary capacity*** for the widespread use data/information systems for sustainable development. These could include: on-line training programmes; real-time training programmes, and train-the-trainer programmes. There are existing organizations and institutions, both within and outside the UN system, that should be invited to play a leading role in this arena.