Sustainable Data to Support the 2030 Agenda for Sustainable Development

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The 2030 Agenda includes 17 Sustainable Development Goals (SDGs), aka the Global Goals for Sustainable Development, and 169 targets.

“We resolve, between now and 2030, to end poverty and hunger everywhere; to combat inequalities within and among countries; to build peaceful, just and inclusive societies; to protect human rights and promote gender equality and the empowerment of women and girls; and to ensure the lasting protection of the planet and its natural resources. We resolve also to create conditions for sustainable, inclusive and sustained economic growth, shared prosperity and decent work for all, taking into account different levels of national development and capacities.”

17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.

76. We will support developing countries, particularly African countries, least developed countries, small island developing States and landlocked developing countries, in strengthening the capacity of national statistical offices and data systems to ensure access to high-quality, timely, reliable and disaggregated data. We will promote transparent and accountable scaling-up of appropriate public-private cooperation to exploit the contribution to be made by a wide range of data, including earth observation and geospatial information, while ensuring national ownership in supporting and tracking progress.

(emphasis added)
Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDGs) developed proposal for 229 indicators (as of November 2015); provisionally accepted by UN Statistics Commission in March 2016.

Indicators have been categorized into three “tiers” indicating readiness level with respect to implementation.

Many different groups are working to address how indicators can be further developed and implemented, and national capacity developed to support and utilize indicators in sustainable development decision making.

Tier 1: Indicator conceptually clear, established methodology and standards available and data regularly produced by countries.

Tier 2: Indicator conceptually clear, established methodology and standards available but data are not regularly produced by countries.

Tier 3: Indicator for which there are no established methodology and standards or methodology/standards are being developed/tested.
Some Organizations Supporting SDG Data and Monitoring Issues

UN Sustainable Development Solutions Network (SDSN)
- Thematic Network on Sustainable Development Data

Global Partnership for Sustainable Development Data (GPSDD)

UN Committee of Experts on Global Geospatial Information Management (UN-GGIM)
- Sixth session held in August at UN

Group on Earth Observations (GEO)
- New GEO initiative 18 (GI-18), Earth Observations in Service of the 2030 Agenda for Sustainable Development

WHO/UNICEF Joint Monitoring Programme for water supply and sanitation
GEO is moving ahead with an initiative on **Earth Observations in Service of the 2050 Agenda for Sustainable Development** as part of its new work plan.

Barbara Ryan from GEO and Lawrence Friedl from NASA will be participating in a SciDataCon Panel on **Integrating Environmental and Socioeconomic Data in Support of the 2030 Agenda for Sustainable Development**, Monday afternoon, 4:00-5:30 pm, Tower Court B.

Alignments of the Goals with specific types of Earth observations and geospatial information.
Indicator Development: Air Quality

Current World Health Organization (WHO) method:

- Concentration of PM2.5 are regularly measured from **fixed-site, population-oriented monitors** located within the metropolitan areas.

- Annual urban mean concentration of PM2.5 is estimated with **improved modelling using data integration from satellite remote sensing, population estimates, topography and ground measurements**.

- Urban/rural data: while the data quality available for urban/rural population is generally good for high-income countries, it can be **relatively poor for some low- and middle income areas**. Furthermore, the definition of urban/rural may greatly vary by country.

- Grid-size: The grid size used for the model is 0.1° x 0.1° (10 x 10 km close to the equator, but smaller towards the poles). This resolution may cause limitations when considering local situations.

- The model produces a calibration equation for each country using country level data as a priority, with regional data being used to supplement local information for countries without ground monitoring data. It is acknowledged that the **estimates for data-poor countries may be relatively imprecise** and this imprecision can result in apparently abrupt changes in air pollution levels at borders with data-poor countries.

http://apps.who.int/gho/indicatorregistry/App_Main/view_indicator.aspx?iid=4674
Potential Improvements in Air Quality Indicator

- Improved PM2.5 data from satellites and other sensors
- More consistent delineation of urban/rural areas
- Improved estimation of population exposure in both urban and rural areas
- Disaggregation of exposure by age, gender, etc.
- Validation through crowd sourcing, drones, etc.
Integrated Approaches to SDG Data and Indicators Are Essential

“The interlinkages and integrated nature of the Sustainable Development Goals are of crucial importance in ensuring that the purpose of the new Agenda is realised. If we realize our ambitions across the full extent of the Agenda, the lives of all will be profoundly improved and our world will be transformed for the better.” (Transforming Our World)

- Each SDG needs other SDGs to succeed
- Data related to SDGs must therefore be consistent and interoperable
- Core data on population, settlements, and infrastructure are central to all SDGs, to data disaggregation, and to near-real time SDG monitoring

Data systems need to be in place **soon**, since they are essential to ensuring that sustainable development investments are effective, efficient, equitable, and timely to support SDG achievement by 2030.

The **private sector** will have access to their own disaggregated data even if the public sector does not!

**Partnerships** with the private sector and academia can facilitate responsible practices, spur innovation, attract investment in data systems, reduce barriers to access, and support decision making in a range of sectors.

The **scientific and statistics communities** should collaborate on improving data integration, modeling, quality, access, and use in an era of rapid change in both people and planet.
Potential Roles for WDS in Supporting the 2030 Agenda and SDG Data Needs

- Development of specific roles in supporting **implementation of one or more SDG indicators**, working with national statistical offices, relevant UN agencies, and other stakeholders

- Development of a community-wide approach to **integrated data on population, human settlements, and infrastructure** to support SDG data needs
  - *Come to Mapping Population sessions at SciDataCon, Monday, 11-15:30*

- Potential for **big data approaches** to support new indicators, data disaggregation, data integration, etc.

- Coordination of **scientific guidance and advice** on quality, uncertainty, interpretation, and application of indicators

- Provision of **interactive data/indicator access and tools**, in support of national and international indicator and decision support systems

- Possible **data stewardship role** in ensuring long-term accessibility and transparency of SDG-related data and documentation, working with relevant UN and other bodies

- Contribution to **UN World Data Forum** (15-18 January 2017 in Cape Town)
  - *Contact me at bchen@ciesin.columbia.edu if interested!*
Thanks!

- Mapping Population Distribution and Human Settlements: Pushing Boundaries and Expanding Applications
  - Session 1, Monday, 11:30-13:00, Tower Court B
  - Session 2, Monday, 14:00-15:30, Tower Court B

- Integrating Environmental and Socioeconomic Data in Support of the 2030 Agenda for Sustainable Development
  - Monday, 16:00-17:30, Tower Court B