

## SUMMARY OF THE FIRST UN WORLD DATA FORUM: 15-18 JANUARY 2017

The first UN World Data Forum convened from 15-18 January 2017, in Cape Town, South Africa. The Forum took place following the recommendation in the report, “A World That Counts: Mobilising the Data Revolution for Sustainable Development,” which was presented in November 2014 by the UN Secretary-General’s Independent Expert Advisory Group on a Data Revolution for Sustainable Development, and the subsequent decision by the UN Statistical Commission that a UN World Data Forum on Sustainable Development Data would be the suitable platform for intensifying cooperation with various professional groups, such as national statistical offices (NSOs), information technology and geospatial information managers, and data scientists among other representatives of government, intergovernmental organizations and civil society.

The Forum was organized with the guidance of the UN Statistical Commission and the support of the UN Statistics Division of the UN Department of Economic and Social Affairs (DESA) and the High-level Group for Partnership, Coordination and Capacity-Building for statistics for the 2030 Agenda for Sustainable Development (HLG). Approximately 2,000 individuals registered to attend the 73 plenary and breakout sessions that were organized under six themes: new approaches to capacity development for better data; innovations and synergies across different data ecosystems; leaving no one behind; understanding the world through data; data principles and governance; and the way forward: a Global Action Plan for data.

Representatives from NSOs, data scientists from the private sector and academia, international organizations, and civil society organizations discussed challenges and opportunities for harnessing the power of data and monitoring to contribute to the achievement of the 17 Sustainable Development Goals (SDGs), which were adopted by UN Member States in September 2015, as part of the 2030 Agenda for Sustainable Development. In addition, a number of initiatives were announced and several publications were launched during the Forum.

At the conclusion of the event, the Global Action Plan for Sustainable Development Data was launched. The Global Action Plan was prepared by the HLG and is the result of an urgent call to recognize that modernizing NSOs is essential to achieving the 2030 SDGs. The Plan sets out a framework for member countries to assess, build and strengthen NSO capacity, and is divided into six strategic areas: coordination and strategic leadership on data for sustainable development; innovation and modernization of national statistical systems; strengthening of basic statistical



The UN World Data Forum drum is handed over to representatives of the UAE, who will host the second Forum.

activities and programmes, with particular focus on addressing the monitoring needs of the 2030 Agenda; dissemination and use of sustainable development data; multi-stakeholder partnerships for sustainable development data; and mobilization of resources and coordination of efforts for statistical capacity building. This Plan is expected to be adopted by the UN Statistical Commission during its meeting in March 2017. Implementation of the Plan will be evaluated at the second UN World Data Forum, which will convene in Dubai, United Arab Emirates, at the end of 2018 or early 2019.

The following report summarizes the discussions in 28 of the plenary and breakout sessions, organized according to the six themes of the first UN World Data Forum.

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A choir sings the South African national anthem during the opening session of the UN World Data Forum

### OPENING CEREMONY

On Sunday, 15 January 2017, Risenga Maluleke, Ministry for Planning, Monitoring and Evaluation, South Africa, moderated the opening session of the first UN World Data Forum. Calling for the strengthening of ties, Xanthea Limberg, Cape Town Mayoral Committee, underlined the goal of the Forum to intensify cooperation among statisticians, policymakers, civil society actors, the private sector, academia and other stakeholders to harness the power of data for sustainable development. She pointed to cooperation and partnerships created by Cape Town's open data portal, which was launched in 2014 to enhance transparency and accountability of government actions and said the city has recently joined the board for the World Council on City Data.

Pali Lehohla, Statistician-General, Statistics South Africa, described data and statistics as a currency of trust, and said the custodianship of data and prevention of data misinterpretation and misrepresentation rests on the shoulders of statisticians. He called for thought leadership within the data community to "fearlessly eradicate" inaccurate or false statistics, and emphasized the role of data and statistics in enabling achievement of the SDGs by 2030.



Xanthea Limberg, Cape Town Mayoral Committee

Stefan Schweinfest, Director, UN Statistics Division, expressed the desire to bring more people into the data family.



Stefan Schweinfest, Director, UN Statistics Division

He said that the UN, which brings people together, is proud to sponsor the UN World Data Forum.

Wu Hongbo, UN Under-Secretary-General for Economic and Social Affairs, said the Forum is an important milestone towards ensuring the full implementation of the 2030 Agenda for Sustainable Development. He called on statisticians to provide disaggregated data to guide the implementation of appropriate

measures to achieve sustainable development.

Wu said the Forum provides a unique opportunity to strengthen linkages across data ecosystems, launch partnerships and innovation initiatives, and promote consensus for data governance. He also highlighted the launch of the Global Action Plan for Sustainable Development Data as a key outcome of the Forum.

Jeff Radebe, Minister in the Presidency for Planning, Monitoring and Evaluation, and Chairperson of the National Planning Commission of South Africa, said effective governance is almost impossible without statistics, as they provide essential information about the populace. He emphasized the importance of independence and integrity of NSOs. Radebe also noted that open government cannot succeed without open data that is freely accessible to all its citizens, and that "numbers will form the bedrock of a better life for all."

Lehohla and Radebe presented lifetime achievement in statistics awards to Katherine Wallman, former Chief US Statistician, Amina J. Mohammed, UN Deputy Secretary-General, Hans Rosling, Co-Founder and Chair, Gapminder Foundation, and Enrico Giovannini, Co-Chair of the Secretary-General's Independent Expert Advisory Group on a Data Revolution for Sustainable Development.





(L-R) **Wu Hongbo**, Under-Secretary-General, UNDESA; **Macharia Kamau**, Special Envoy for the President of the UNGA, on behalf of UNGA President **Peter Thomson**; **Michael Gerber**, Ambassador and Special Envoy for Global Sustainable Development, Swiss Federal Council; **Jacob Mamabolo**, Gauteng Department of Human Settlements and Co-operative Governance and Traditional Affairs, South Africa; **Ning Jizhe**, Commissioner, National Bureau of Statistics, China; and **Clint Brown**, Esri

## OPENING PLENARY

**HARNESSING THE POWER OF DATA FOR SUSTAINABLE DEVELOPMENT:** Opening the first panel of the UN World Data Forum on Monday morning, 16 January, Wu Hongbo emphasized the need to: find ways to work together to overcome the challenges facing the global statistical community; modernize technical capacity and collaborate at the national level; strengthen capacity of national statistics offices towards becoming data hubs that inform policies and monitor progress; disseminate data on sustainable development; build partnerships; and mobilize resources.

Calling on participants to be wary of the privatization of data in a manner that denies its application for the public good, Macharia Kamau, President of the UN General Assembly (UNGA)'s Special Envoy on SDG implementation and Climate Change, on behalf of UNGA President Peter Thomson, underlined the need to: deliver data for sustainable actions to achieve the SDGs; engage reliable providers and producers of data on SDG implementation; and use disaggregated data to address inequalities and ensure no one is left behind.

Jacob Mamabolo, Gauteng Department of Human Settlements and Co-operative Governance and Traditional Affairs, South Africa, highlighted a partnership between the Government of Gauteng and Statistics South Africa to enhance the quality and reliability of data, and to create greater transparency and accountability.

Ning Jizhe, Commissioner of the National Bureau of Statistics, China, highlighted examples of China's commitment to the SDGs, such as a pilot plan for the compilation of a natural resource balance sheet and the creation of a green development indicator system that consists of 56 indicators, including measures of energy consumption and environmental quality.

Clint Brown, Director of Software Products, Esri, discussed how geographical information systems (GIS) can provide a framework for organizing SDG data. He emphasized that GIS connects and engages citizens, communities and organizations in achieving the SDGs.

Enrico Giovannini, Co-Chair, Independent Expert Advisory Group on a Data Revolution for Sustainable Development, urged increasing the pace of collecting and analyzing data.

Gabriella Vukovich, President, Hungarian Central Statistical Office, emphasizing the importance of data quality and reliability, said wisdom should be used in planning and collecting data, and called for the promotion of principles and requirements for official statistics.

Calling on participants to contribute to the Global Action Plan, Stefan Schweinfest, Director, Statistics Division, DESA, stressed the centrality of national statistics units in SDG implementation, but underlined that these units need to interact with other stakeholders. He underscored the need for rules and principles in this new "national data architecture" to support national-level decision making.

Pali Lehohla stressed that data are a public good and called for: coordination through standardization; the separation of property interests from data manipulation; and legislative reform that takes into account the SDGs.



**Gabriella Vukovich**, President, Hungarian Central Statistical Office

## NEW APPROACHES TO CAPACITY DEVELOPMENT FOR BETTER DATA

**RETHINKING CAPACITY DEVELOPMENT: NEW APPROACHES TO CAPACITY DEVELOPMENT FOR BETTER DATA:** This session served as the main plenary for this theme, and took place on Monday afternoon. It was co-moderated by Hernán Muñoz, National Director, Statistical Planning and Coordination in the National Institute of Statistics and Census (INDEC), Argentina, and Johannes Jütting, Partnership in Statistics for Development in the 21st Century (PARIS21).





(L-R) **Michael Gerber**, Ambassador and Special Envoy for Global Sustainable Development, Swiss Federal Council; **Emmanuel Nnadozie**, African Capacity Building Foundation; **Johannes Jütting**, PARIS21; **Hernán Muñoz**, INDEC, Argentina; **Ola Awad**, Palestinian Central Bureau of Statistics; and **Oliver Chinganya**, African Centre for Statistics, UNECA

Noting that the SDGs present an opportunity to mainstream statistics into national planning systems, Muñoz underscored that without a correct governance framework, capacity interventions will likely fail. Jütting underlined the need for a fundamental change in the perception of capacity development in order to implement the SDGs, to address the data revolution and move towards more demand-driven data production systems.

Michael Gerber, Special Envoy for Sustainable Development, Switzerland, explained that implementing the SDGs will require more accurate, nuanced, innovative and collaborative disaggregated data. Lauding the inclusion of statisticians throughout the SDG process, he highlighted the increased awareness of the role of statistics among policymakers, and noted that this could help address the current data funding shortfall.

Emmanuel Nnadozie, Executive Secretary of the African Capacity Building Foundation, highlighted that the SDGs offer opportunities to develop African capacity in data and statistics, noted a decline in funding for capacity building, and called for longer time horizons and sustainable efforts in training and knowledge transfer.

Ola Awad, Palestinian Central Bureau of Statistics, underscored that work on the SDGs should carry forward lessons learned from the Millennium Development Goals (MDGs), noting that the SDGs rely more on administrative than survey data, and emphasized the need to develop and modernize methodologies to collect and work with data. She called for harmonization when working with donors to avoid duplication of efforts.

Oliver Chinganya, Director, African Centre for Statistics, UN Economic Commission for Africa, noted that among the traditional challenges of NSOs is the political will of governments, calling for awareness creation, sensitization and commitment to statistics to promote sustainable development. He pointed to “unclear funding horizons” that do not view capacity development as a process but rather as a one-time or short-term event.

In the ensuing discussion, participants considered, *inter alia*: needs-based rather than donor-driven funding for capacity development; whether capacity development is always about funding; the importance of data champions; the need to move from best practice to good-fit practices; the need for greater administrative and institutional capacity development; the need to re-engineer NSOs to deal with new challenges; and the capacity challenges presented by the SDGs to the donor community.

**DATA ECOSYSTEMS, COORDINATION AND STAKEHOLDER ENGAGEMENT:** Claire Melamed, Executive Director, Global Partnership for Sustainable Development Data, moderated this session.

Sylvie Michaud, Statistics Canada, noted that two-thirds of current information on the SDGs is produced by NSOs, whereas the remaining one-third is sourced from the private sector. She highlighted enabling factors for producing robust data, including: a committed government intent on delivering useable outputs and supporting data services through adequate financial investment; enhancing the concept of open data platforms that is transparent to all actors; and the establishment of a research data center through partnerships with 26 Canadian universities.



**Sylvie Michaud**, Statistics Canada





Participants during the session on 'Data Ecosystems, Coordination and Stakeholder Engagement'

On ensuring that data is of a high quality and standard, Davis Adieno, DataShift Senior Advisor, CIVICUS: World Alliance for Citizen Participation, suggested developing a quality assurance framework and a clearinghouse to manage data processing and eliminate the diversity of tools. He said the new sources of data, including Twitter and other social media data points, pose new challenges that the traditional roles of NSOs are not necessarily equipped to manage.

On developing a common framework, Douglas Kativu, Regional Director, Global Reporting Initiative (GRI), described the GRI's focus on transformation through transparency by using reporting as a driver to enhance Africa's competitiveness. He underlined the need to accurately define the context and quality of information, including its accuracy, timeliness, clarity, readability and reliability.

Serge Kapto, UN Development Programme (UNDP), underscored that to understand national data ecosystems, the country typology must be considered, and said countries with weak statistics capacity see less investment than those with strong capacity. He underlined that countries were not taking advantage of possible synergies across government departments in terms of data collection and called for greater support for communities that are not reported on due to political interference and other obstacles.

Philipp Schönrock, Director, Centro de Pensamiento Estratégico Internacional (CEPEI), highlighted the need for an enabling environment for "real" civil society engagement to address inequality, and suggested using data mapping to relate data sets with the SDGs in order to link needs to stakeholders and government. He recommended creating incentives for open data and encouraging data donations.

**CAPACITY BUILDING FOR MODERNIZATION OF INSTITUTIONS, GOVERNANCE AND BUSINESS PROCESSES:** Shaida Badiee, Open Data Watch, and Johannes Jütting co-moderated this session.

Lisa Bersales, Director, Philippine Statistics Authority (PSA), underlined: fostering strong institutions and using favorable laws to help fund NSOs; ensuring absorptive capacity in NSOs; and identifying champions that can help get funding and take NSOs forward.

Albina Chuwa, Director General, Tanzania National Bureau of Statistics, said that in order to modernize institutions, increasing capacity in leadership and management is key, and called for a national strategy for development of statistics.

Carlos Mendes, Instituto Nacional de Estatística, Cape Verde, noted that capacity could be increased through focusing on management, production and development; and by converging and harmonizing methodologies.

Stefan Schweinfest called for sustained capacity development in management and building frameworks, and cautioned against "getting too stuck in the data" and neglecting capacity development.

Oliver Chinganya called for needs identification at the country-level, and a commitment to achieving results in clearly defined, specific areas to ensure outcomes.

Rachael Beaven, Department for International Development (DFID), UK, shared successes in DFID's collaboration with development partners and highlighted challenges, including integrating new technologies into existing data systems, and the need for new funding from non-traditional funding sources.





Session on 'Capacity Building for Modernization of Institutions, Governance and Business Processes'

Ruth Levine, Global Development and Population programme, William and Flora Hewlett Foundation, called for a greater demonstration of the value that will be realized from investments in statistics, and urged NSOs to focus on creating data that is responsive to user needs.

Julio Santaella, President, National Institute of Statistics and Geography (INEGI), Mexico, described Mexico's NSS (Número de Seguridad Social) 2016-2040 Vision, which places an emphasis on capacity building, and pointed to the Digital Map of Mexico as a standard and basic tool that is free for use by the public.

Jütting noted the shift in capacity building from purely technical, to including the softer and broader skills in people management. On possible building blocks for the capacity development revolution, he noted that the narrative needs to: change for producers, users and donors; promote data; and encourage results based, collaborative financing.

In the discussion, participants considered, among others: the role of regional institutions in fundraising for NSOs; who measures the capacity being transferred from international technical experts to local actors; cost-recovery measures to support open data; the need for transformational change; and the importance of including users in capacity development and of driving an open data revolution.

**MEANS OF IMPLEMENTATION – FINANCING, COLLABORATIONS AND COMMITMENTS:** Hernán Muñoz and Johannes Jütting co-moderated the session. Muñoz called on panelists to share ideas for cooperation models for North-South and South-South collaborations. Jütting drew attention to the new Advanced Data Planning Tool (ADAPT), an innovative planning tool for statistical offices to adapt to new demands and changing data practices.

John Pullinger, National Statistician, UK, called for greater ambition, faster processing rates to keep up with the data revolution, and merging capacity building and data literacy. He also called for demand-side capacity building, and stressed the need for the UK NSO to work with DFID to enhance international outreach efforts.

Carol Coy, Director-General, Statistical Institute of Jamaica, noted the rapid changes taking place in the data world, and called



Carol Coy, Director-General, Statistical Institute of Jamaica

on NSOs to adapt to these changes and consider the SDGs as a springboard from which to launch stronger collaborative efforts and long-term partnerships with different actors. She also underscored that NSOs need to engage in institutional strengthening.

Marte Torskenaes, Norad, stressed that big data will help development agencies make smarter choices in the implementation of the SDGs, noting that data will assist both donors and development partners alike to rethink their modes of doing business. Calling for development agencies to find ways to make their data accessible to the public, she underlined the importance of data integration into all systems.

Neil Fantom, Open Data Initiative, World Bank, recommended aligning data funding to political issues, citing SDGs on poverty eradication and maternal mortality as government priorities that led to increased data collection and funding. He called for investing in data scientists to work with statisticians, and leveraging and expanding partnerships to create more synergies.

Fessou Lawson, Statistical Capacity Building Division, African Development Bank (AfDB), underscored the need for establishing win-win partnerships between private corporations and governments for data sharing and cooperation, and overhauling or adapting regional and national statistical offices to incorporate big data and cloud technologies.

Philipp Schönrock called for South-South and South-North cooperation in sharing technological experiences in the data world and underscored the need to harness data in the fight against inequality, by drawing on a wide range of actors, including academia.



In the discussion, participants noted that leaving no one behind in the implementation of the SDGs will require vast amounts of usable data; highlighted lessons learned on the improvement of data quality, including the power of open data; further discussed the need for data traceability at the farm and agribusiness level; and underlined the need to restructure National Strategies for the Development of Statistics (NSDSs) in light of new partnerships with the private sector in implementing the SDGs. They also considered: the brain drain of government statisticians and data scientists; the global partnerships within the UN and the partnerships outside the UN in SDG implementation; and the challenges of including the “missing millions.”

Summarizing the key outcomes from the capacity-building thread, Jütting and Muñoz: recommended identifying key recipients for capacity development and appropriate timeframes for building capacity; underscored the importance of guidelines for partnerships and cooperation; and called for strengthening NSOs to measure governments’ performance so they can address SDGs.

**NATIONAL EXPERIENCES WITH COORDINATION AND ESTABLISHMENT OF A MECHANISM FOR NATIONAL REPORTING:** This panel was moderated by Francesca Perucci, Chief, Statistical Services Branch, UN Statistics Division, and Philipp Schönrock.

Lisa Bersales reflected on the experience of the Philippines on national reporting. She noted that many new sources of data are available, allowing the production of data without the involvement of the NSO, and that the multi-stakeholder approach is both the answer and the challenge.

Ben Paul Mungyereza, Executive Director, Uganda Bureau of Statistics, said a SDG technical working group has been established, prioritizing indicators common to both the national

planning framework and the SDGs. Mario Roset, Executive Director, Wingu, said his organization promotes initiatives such as DataShift, which engages citizens in Latin America in collecting and analyzing development data.

Reflecting on the issue of trust, Roset cautioned against trusting official national statistics, citing falsification of inflation data in Argentina. Mungyereza noted that, in his country, national statistics are trusted because they are produced independently and with equal access. Bersales underscored that data must be validated to be trusted. She explained that national statistics in the Philippines are complemented by trust ratings provided by the private sector and civil society.

Panelists discussed involvement with civil society in national reporting. Bersales noted that, as data are further disaggregated, there is a greater need to collaborate with civil society. She also highlighted that some citizen-generated data are very specific to certain communities. Roset described examples in which CSOs in Argentina have helped fill in gaps in poverty data that are not collected by the government, such as numbers of slums in the country. Mungyereza noted that civil society is viewed as a partner in national reporting.

During the discussion, participants inquired about, *inter alia*: whether the legal statutes governing NSOs affect their ability to collaborate with other actors to collect statistics; whether existing mechanisms can be used for the preparation of national reports or if this activity requires new mechanisms; how trust with the media could be fostered; and ways to enhance reporting on the SDG implementation process and not just outcomes. Bersales highlighted the ADAPT programme as a resource to help with the latter, and added that the NSO will create a dashboard called SDG Watch and civil society will develop a shadow report. Mungyereza highlighted the importance of consultation



Session on ‘National Experiences with Coordination and Establishment of a Mechanism for National Reporting’

as well as finding the best source for the required data. Roset emphasized that civil society organizations are willing to collaborate with NSOs and called for including journalists in these dialogues to enhance reciprocal understanding.

### **INNOVATIONS AND SYNERGIES ACROSS DIFFERENT DATA ECOSYSTEMS**

#### **THE FUTURE OF DATA PRODUCTION:** This

Wednesday morning plenary served as the main plenary for this theme and was moderated by Haishan Fu, Director, Development Data Group, World Bank.

Andrew Tatem, Director, WorldPop project and Flowminder, described how WorldPop quantifies population movements for malaria eradication, by using mobile operator data for high resolution global mapping of population distributions and characteristics, and dispersal of diseases and their vectors through global transport networks. He said one of the greatest modern challenges in the world of data is integrating data sources and combining heterogeneous levels of information across the globe.

Mark Ryland, Chief Architect, Amazon Web Services, said that cloud computing services can be compared to other major utilities like electricity, and has revolutionized the efficiency of technology users by providing massive server capacities in innovative new ways. He linked this revolution to the open source revolution, noting that there are now cheap, reliable and state-of-the-art cloud services existing in the same ecosystem with freely available sophisticated analytical tools. He drew attention to unintended consequences of the data revolution such as weather data that captures bird migration patterns.

Molly Jackman, Public Policy Research, Facebook, highlighted approaches to generating new data sources from Facebook for the public good, including aggregating Facebook user information, through a partnership with the UN Children's Fund (UNICEF), to address the Zika virus in Brazil and "taking the pulse" of the population on various issues. She also highlighted initiatives involving a 33-country small business

survey used to drive policy change and generating population density maps to better understand communities and address socio-economic issues.

Philip-Thigo, Senior Advisor, Office of the Deputy President in Kenya on Data and Innovation Strategy, noted that Kenya has gone beyond traditional statistics and the scientific community, using citizens as a source of a data, and engaged with local universities to collaborate on data innovations. He said that, while the development of national roadmaps traditionally were in the government's domain, there is now a shift in thinking to be more open and include civil society and the private sector.

Emanuele Baldacci, CEO and Director of Methodology, EuroStat, underlined the need for NSOs to be innovative and to continue to evolve with changing needs of users and increased sources of useful data and new technology.

On partnerships and collaboration, panelists highlighted public-private partnerships, inter- and intra-organization and cloud-based cooperation, and national policies keeping pace with accommodating and fostering innovation and technology changes. Participants posed questions related to: transforming the public sector to share data responsibly; dealing with budget constraints of the public sector to innovate in the data space; improving information sharing about evolving partnerships and institutions; collaborating among large UN bodies and private companies, with NSOs; and protecting private data from abuse by the private sector.

**BIG DATA INNOVATIONS:** Robert Kirkpatrick, Director, UN Global Pulse Initiative, highlighted that three data revolutions are underway, on: measurement and generation of data; management and use of these data; and building accountability into responsible data use. He noted trade-offs between risk and the public good associated with use of private data.

Paula Hidalgo-Sanchis, Pulse Lab Kampala, highlighted applications of big data, including through the use of real-time satellite data analysis, public radio-signal mining, GPS tracking data, anonymous banking data and social media data.



(L-R) **Haishan Fu**, Development Data Group, World Bank; **Andrew Tatem**, Director, World Health Products and Flowminder; **Molly Jackman**, Facebook; **Philip Thigo**, Office of the Deputy President, Kenya; **Mark Ryland**, AWS; and **Emanuele Baldacci**, EuroStat





Panel speakers during the session on 'Big Data Innovations'

Daniel Runde, Director, Project on US leadership in Development, CSIS, highlighted the challenge of scaling up pilot projects, and stressed the importance of political will, asking the right questions and making funding available. Enda Ginting, Executive office of the President of Indonesia, noted the need to prove to governments that a different way of looking at challenges can deliver different results.

Arif Husain, World Food Programme (WFP), said a new satellite of the European Space Agency can cover the globe in five days, which will revolutionize agricultural production estimates. He stressed the need to: turn big data into knowledge; work on the rules and regulations for using this data; and work on methods to analyze this data, including through machine learning. Mallory Solder, United Parcel Service (UPS), said the private sector has significant data sources but sharing it requires incentives and partnerships, and added that the data should be part of the partner's competitive edge.

Juan Murillo Arias, BBVA Data & Analytics, stressed the need for data standards and investment, noting that the social corporate responsibility model will not deliver all of the desired data.

Benjamin Kumpf, Bureau for Policy and Programme Support, Development Impact Group, UNDP, highlighted the Guide to Data Innovation for Development to support non-data scientists in using big data for SDGs and to support policy development. Rebecca Furst Nichols, Data2X, UN Foundation, highlighted ways data are used to identify: the relative poverty levels of women and girls compared to men and boys, and mental health indicators within big data.

Sriganesh Hakanathan, Big Data for Development, LIRNEasia, and John Quinn, UN Global Pulse Lab, spoke about partnerships, increasing awareness of the insights from data analytics, and reducing costs for data access by leveraging private sector demand for data. Bitange Ndumo, Associate Professor, University of Nairobi Business School, urged national statistics divisions not to resist the "disruption in data" that is occurring, but to adapt to the changes. He called for new policy frameworks for Africans to harness big data, and for promoting data philanthropy and acceptance for big data use in civil society.

#### USE OF ADMINISTRATIVE DATA FOR STATISTICS:

Stefan Schweinfest moderated this session, which explored how data from administrative systems can be used as input into statistics production and to improve the coverage and timeliness of statistics.

Jørgen Elmeskov, Director General, Statistics Denmark, identified three steps for getting started using administrative data: establish the legal and institutional framework for using administrative data in this way and get buy-in from register owners; begin with one or a few statistics that do not require linking across data sets; and link data across registers. He said the political call for leaving no-one behind begs for using administrative data in this way, and the opportunity to do so should be seized.

Lisa Bersales said the Philippines' legal framework provides an example for ideal access to administrative data. She noted that current discussions include an assessment of the long-term costs for providing statistics and said retaining good staff represents the greatest challenge.

Ola Awad reviewed the State of Palestine's experience and highlighted lessons, including working closely with administrative data sources to promote ownership through a participatory process, and focusing on unifying the methodologies.

In the ensuing discussion, delegates considered the reasons why administrative data are not already being incorporated into national statistics on a larger scale. Challenges noted included political factors, the lack of appropriate technology to process administrative records, and the time needed for preparing administrative data for measuring progress on the SDGs by 2020.

#### INTEGRATING GEOSPATIAL AND STATISTICAL INFORMATION: LEVERAGING THE DATA ECOSYSTEM:

Moderating the session, Stefan Schweinfest drew attention to the UN's Global Geospatial Information Management (UN GGIM) division, which has been working on integrating statistical data into GGIM.

Timothy Trainor, Chief Geospatial Scientist, US Census Bureau, highlighted the geospatial information-related work of the UN Expert Group on the Integration of Statistical and



(L-R) **Stefan Schweinfest**, Director, Statistics Division, UNDESA; **Timothy Trainor**, Chief Geospatial Scientist, US Census Bureau; **Derek Clarke**, Chief Director, National Geo-spatial Information, South Africa; **Craig Mills**, CEO, Vizzuality; and **Sharthi Laldaparsad**, Statistics South Africa

Geospatial Information, and the work of the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) on geospatial information. He suggested considering the aggregation of relevant data before looking at geographical disaggregation. He called for strong partnerships to ensure the merging of statistical and geospatial data is meaningful and relevant to the policymakers.

Craig Mills, Vizzuality, noted that people who “dance with lies” are getting better than those who “dance with the truth,” and described his organization’s work as one of distracting people with truth. He emphasized the importance of the decisions and non-decisions that go into any design process, and said the goal should be to find ways to make it easier for analysts to find the data they need and to incorporate it into their workflow.

Introducing the Global Statistical Geospatial Framework produced by the UN Expert Group on the Integration of Statistical and Geospatial Information, Sharthi Laldaparsad, Statistics South Africa, presented on the geospatial and statistics data revolution, identifying geospatial and statistical information as part of the data paradigm shift. She discussed national policy examples on the use of geospatial and statistical information including: tracking rural-urban migration through expanded building plans in cities; and increasing Value Added Tax revenues in cities.

Derek Clarke, National Geo-Spatial Information, South Africa and UN-GGIM Africa reminded participants that people-data also relate to a place and location, and showed an example of how combining geospatial data with illiteracy figures revealed how population density and topography influence different literacy rates across a country.

On work underway to combine geospatial data with SDGs, Trainor noted work to combine Tier 3 SDG indicators with geospatial data in efforts to elevate their profile. On access to data, Mills underscored that people working in data often do not understand government structures and how to work with them. Laldaparsad and Schweinfest highlighted the Global Statistical Geospatial Framework guidelines.

## LEAVING NO ONE BEHIND

### COUNTING PEOPLE TO MAKE PEOPLE COUNT: THE NEED FOR BETTER DATA TO ENSURE THAT NO ONE IS LEFT BEHIND:

This panel served as the main plenary for this theme and took place on Tuesday afternoon. It was moderated by Judith Randel, Development Initiatives, who reiterated the need for disaggregated data to ensure that no one is left behind.

Saying that to empower people will involve “making what is invisible, visible,” John Pullinger highlighted the need for more data on domestic violence and child sexual abuse, and called on the data community to be part of the implementation of political decisions like those relating to Brexit.

Yusuf Murangwa, Director General, National Institute of Statistics of Rwanda, noted the country’s investment in civil registration. He cited the disparity between the number of registered births and the procurement of vaccines based on “guesswork,” which he noted was a dangerous practice and a waste of resources.

Haishan Fu underscored that: in order to get the right data, this must be recognized as a pursuit of rights and making governments efficient and accountable; in order to have the right data to achieve the 2030 Agenda, there is a need for the right data systems to guide and monitor implementation; and open data is needed to ensure that no one is left behind.

Bupe Musonda, Ministry of General Education, Zambia, presented on the Data Must Speak initiative in partnership with UNICEF, which is a tool to enhance accountability at all sub-national levels of education through monitoring and feedback mechanisms.

Patricia Conboy, Head of Policy, HelpAge International, underlined the need to have a “life-course approach” to setting and measuring targets, noting that age caps in statistics can lead to bias in measuring progress towards the SDGs.

Mosharraf Hossain, ADD International, noted that data empowers people with disabilities, but the data must be reliable and disaggregated; and called on people living with disabilities to be counted as such in order to be part of implementing the SDGs.





Panel speakers during plenary on Counting People to Make People Count: The Need for Better Data to Ensure that No One is Left Behind

Sofia García García, SOS Children's Villages, noted that the data revolution not only needs to improve data collection systems, but also needs to proactively search and identify "those we are not even aware that we are leaving behind."

Francis Kariuki, Lanet District, Kenya, shared his experience as the "Twitter Chief" to enhance community neighborhood-watch campaigns, and also collect data about the SDGs. He said that the neighborhood-watch cluster leaders collected SDG data, which highlighted the pitfalls of inaccurate data in planning for SDG implementation.

Tony German, P20 Initiative, outlined the P20 as an initiative focusing on the most vulnerable and those most likely to be left behind, explaining that it advocates for using data that are disaggregated by quintile, gender, geography, age and disability. Hervé Ludovic de Lys, UNICEF South Africa, explained that the initiative focuses on the most vulnerable and those most likely to be left behind, and that it advocates for using data that is disaggregated per quintile by gender, geography, age and disability.

Enrico Giovannini, Co-Chair, Independent Expert Advisory Group on a Data Revolution for Sustainable Development, noted that income distribution data lags two or three years behind GDP data, which distorts analyses. He challenged participants to change their lives by establishing a "No One Left Behind" task force in their respective national statistical offices.

During the discussion, participants: called for: disaggregation of data to the lowest governance level; urged the rethinking of the collection of survey data; considered integrating data from human rights monitoring into NSOs; and discussed the problem of double counting in population censuses due to porous borders.

**STRENGTHENING CAPACITY FOR HEALTH-RELATED STATISTICS IN THE SDG ERA: THE HEALTH DATA COLLABORATIVE:** Attila Hancioglu, Chief, Data Collection Unit, Data and Analytics Section, UNICEF, moderated the session, introducing the Health Data Collaborative (HDC) partnership.

Pali Lehohla noted that the death-related data collected have been disaggregated along various lines. He underlined the need for national statistics offices to work with other ministries to ensure the most relevant data are collected in a timely fashion.

Alistair Robb, World Health Organization, drew attention to the World Health Assembly resolution calling for partnerships with the statistics community to improve local decision making on the health-related SDGs, and urged building institutional capacities to analyze, interpret, communicate and use data for action, and to scale up digital health innovations driven by the public health agenda.

Philip Thigo, Office of the Deputy President, Kenya, spoke on the Kenya HDC partnership, outlining its objectives, including that it provides a platform to agree on a high-level roadmap to ensure political will, and also on a roadmap involving multiple stakeholders. He highlighted quick wins of the HDC, including the improvement of: data analytics, quality of care, civil registration and vital statistics (CRVS), and inter-operability of systems.

Maletela Tuoane-Nkhosi, World Bank, presented on strengthening CRVS through innovative approaches in the health sector, and drew attention to the Bank's Global Financing Facility for every woman and every child, which mobilizes smart, scaled and sustainable financing to end preventable deaths.

In the ensuing discussion, participants considered, *inter alia*: the need for statisticians to engage with the private and research sectors; the need for disaggregated data based on age; the disconnect between policymakers and statisticians; successes in increasing health coverage; and the possibility for open data in the health sector, which is bound by privacy considerations.



Alistair Robb, World Health Organization





Panel speakers for the session on 'Recent Initiatives to Improve Capacity on Migration and Refugee Statistics'

**RECENT INITIATIVES TO IMPROVE CAPACITY ON MIGRATION AND REFUGEE STATISTICS:** Frank Lasklo, Global Migration Data Analysis Centre, underlined knowledge and data gaps in international migration figures, noting that census data is often lacking and is insufficient. He called for increasing data on migration, and highlighted the International Organization for Migration's migration global knowledge repository, which provides advice and guidance to member states.

Kimberly Roberson, UN High Commission for Refugees (UNHCR), underscored the high level of uncertainty in humanitarian and migrant data, noting that development of migration SDG data is needed. She highlighted the Expert Group on Refugee and IDP Statistics (EGRIS) Handbook on Collecting Statistics, which aims to address this capacity gap.

Announcing the establishment of a local migration data forum, Sandile Simelane, Statistics South Africa, highlighted the country's main data sources on migration and asylum seeker statistics, including the official population census and household surveys, and administrative data from the Department of Home Affairs obtained with recent community surveys in 2016. Sabrina Juran, UN Population Fund (UNFPA), presented

on an international study on data collection concerning international migrants using population censuses, applauding the near universal coverage, demographic and socio-economic characterization and potential uniformity in data of population censuses. In follow-up to the study, she emphasized the need for advocacy on the importance of censuses in measuring international migration; ensuring inclusion of core questions in censuses; and exploiting other data sources, among other recommendations.

The panel addressed questions on climate change refugees, trustworthiness of meta-data and cross-border data sharing to improve refugee data reliability.

#### THE "MISSING MILLIONS" AND DATA

**COLLABORATIVES:** Samantha Custer, Policy Analysis Unit, AidData, and Rick Rinehart, Global Alliance for Children, co-moderated the session.

Jenna Slotin, Policy and Strategy, Global Partnership for Sustainable Development Data, noted the challenge of CRVS, and called for reaching "the furthest behind first," which requires specific data and information to change mindsets.

Merel Krediet, Lumos, introduced her organization's work on providing community-based solutions to the institutionalization of children, and highlighted the financial and technical resources needed to move beyond awareness-raising to addressing the challenge of counting the children in orphanages and other institutions.

Rinehart noted his organization's mission to reduce the number of "invisible" homeless children and those outside of healthy family care, and to create dialogue to expand the data revolution to include these marginalized children.

Davis Adieno, Senior Advisor, Data, Accountability and Sustainable Development for CIVICUS: World Alliance for Citizen Participation, underlined that the missing millions are not "sitting and waiting to be helped," stressing the need to strengthen the capacity of communities without letting governments off the hook in terms of service provision for all.



Panel speakers of the session on 'The "Missing Millions" and Data Collaboratives'



Rebecca Firth, Humanitarian OpenStreetMap Team (HOT), noted the number of places in the developing world that do not appear on maps, and HOT's work in providing mapping services through merging official and unofficial data sources.

Phyllis Macfarlane, World Association of Opinion and Marketing Research (ESOMAR) Foundation, and Paragon Partnerships, said ESOMAR leverages private sector market research and qualitative and ethnographic analysis experience, and called for investing in changing people's negative perceptions of homelessness as a first step to addressing the challenge.

In the discussion, participants considered, *inter alia*: the importance of engaging policymakers; the need for political will to disaggregate data to include indigenous peoples; the dehumanization of the phrase "missing millions"; categories of the "missing millions" including those missing due to mobility, those deliberately left out due to political affiliations, and those who choose to remain in the shadows including some elites; resource mobilization for data collection on the "missing millions"; and the urgency of moving beyond searching for partnerships to implementing the SDGs through using science-based models and tools.

**NATIONAL MONITORING PLATFORMS FOR SDG DATA:** This session was moderated by Claes Johansson, UNICEF. Ola Rosling, Gapminder Foundation, highlighted the data and visualizations from the Gapminder website, and the benefits of using an open source format and data sets and tools that are compatible across different platforms.

Kris Oswalt, Community Systems Foundation, noted that survey data is useful to monitor and validate decisions over time, but cannot offer real-time data for decision making. He highlighted that strong, descriptive administrative data from public institutions could reduce the need for survey data, which are not always available.

On the UN Educational, Scientific and Cultural Organization's eAtlas for Education, Desmond Spruijt, Mapping Worlds, described how to combine different data sets to track SDG 4

(Quality education), capturing all the different dimensions per indicator. On Maps Alive, using census results and published deaths, he said they combined these data sets as a general introduction to an uneducated audience through adding imagery, to develop a topical presentation where data and other presentations are in balance.

Enrique Ordas, INEGI, Mexico, presenting on an application used to measure Mexico's progress in reaching SDG 9 (Industry, innovation and infrastructure), highlighted the importance of having a data application that was user-driven, and aimed at supporting collaborative work on data collection.

Clifford Okembo, Esri Eastern Africa, presented on the Esri tool to visualize and monitor the SDG indicators. He noted the advantage of having political will with the Deputy President's office coordinating work on the SDGs and adopting Esri as its technology office.

On lessons from the private sector on the level of investment needed for technology development, Rosling noted that to optimize their investments, they create in-house teams to compete in finding the best solutions. He also recommended using agile, rather than rigid development roadmaps that can adapt as the solutions reveals itself. From Esri's perspective, Okembo said a clear roadmap is preferred, and that choices on technology and data sets depend on developers' preferences. Desmond Spruijt underlined making data more useful to people so that it caters to their needs, such as the type of data a teacher would need to teach SDGs to their classrooms.

During the discussion, participants commented on the importance of governments and users taking ownership, while moving towards greater independence from the developers of data applications. Panelists identified critical actions over the next year, including: forging the right partnerships; defining roadmaps; developing frameworks that protect users and developers alike; understanding the linkages between the different SDGs; ensuring close relations between the public and private sectors and politicians; and focusing on individual SDGs while bearing the whole framework in mind.



Panel speakers during the session on 'National Monitoring Platforms for SDG Data'



Participants during the session on 'Data Literacy: What, Why and How?'

## UNDERSTANDING THE WORLD THROUGH DATA

**DATA LITERACY: WHAT, WHY AND HOW:** This session was moderated by Helen MacGillivray, Queensland University of Technology, and President-elect, International Statistical Institute (ISI). Delia North, Dean and Head of School of Mathematics, Statistics and Computer Science, KwaZulu-Natal University, spoke on future users of statistics literacy, urging the breaking down of universities as silos of knowledge and calling for greater collaboration between academia, the private sector and governments to achieve common goals.

Arulsivanathan Naidoo, Statistics South Africa, discussed the importance of including spatial analyses in traditional statistics, highlighting several examples of how GIS aid analyses of socio-economic trends, and describing the work of the Centre for Regional and Urban Innovation and Statistical Exploration (CRUISE) at the University of Stellenbosch.

Blandina Kilama, Policy Research for Development, Tanzania, noted that her organization trains both researchers and research users, including the media and civil society, highlighted the challenges of explaining poverty mapping to politicians and policymakers, and underscored that getting credible information requires both sufficient time and funding.

McGillivray spoke on the importance of education across all levels and disciplines in enhancing data literacy. He emphasized the importance of taking part in data collection for training future professionals, highlighting the opportunity to use real, complex, multi-variable datasets.

In the ensuing discussion, participants considered, *inter alia*: the importance of data literacy at the grassroots-level; methods of assessing data-literacy levels of users; the interplay between the need for broader, holistic scientific literacy; and using data literacy to counter "fake statistics."

## STATE OF THE ART IN DATA VISUALIZATIONS AND DASHBOARDS TO SUPPORT THE 2030 AGENDA:

In this session, moderated by Aditya Agrawal, Global Partnership for Sustainable Development Data, panelists presented on ways of visualizing data and its analysis to provide evidence towards informed decision-making processes.

Fanie le Roux, Moyo Business Advisory, presented on the



**Fanie le Roux**, Moyo Business Advisory

non-profit work of the Tableau Foundation, including: mission grants, through partnering with non-profit organizations to find data-driven solutions to global challenges; data fellowships, through working with network organizations in building data capabilities of non-profit organizations; providing two-year licenses for small non-profit organizations to address the SDGs and its implementation; and the volunteer network of Tableau experts or Service Corps that help non-profit

organizations improve their use of data.

Rafik Mahjoubi, AfDB, presented the Africa Information Highway, which serves to link countries through the Open Data Platform in supporting data collection, management and dissemination, to facilitate data exchange in Statistical Data and Metadata eXchange and to provide support to national governments' policy-making processes.

On driving change through visualization and using the New York interactive dashboard as an example, Craig Mills stressed the need to look at the triggers in data changes and using this to influence change, and emphasized that it should be as easy as possible to connect existing data.



Alexandra Silfversolpe, Data Act Club, presented on the Ending Rural Hunger project, a toolkit to assess countries' global efforts to end hunger by 2030 (SDG2), and on an online platform containing data on needs, policies and resources across 116 countries with the aim of merging these results with an assessment of how 29 developed countries' policies and aid efforts contribute to the end of rural hunger.

Charles Brigham and Richard Kaufholz, Esri, discussed ways to tell the data story through maps, using live tweets on SDGs and crowdsourcing, and spoke on how to transform transport through travel patterns, types of transport people use, and their access to public transport. Brigham stressed the need to build bridges between different dashboards, and to extend the reach of web GIS applications, platform diagnostics, native dashboards and developer toolkits for partners.

Rebecca Firth described her organization's use of visualization to: encourage 20,000 dedicated crowdsourced volunteers to provide environmental and other data in the Democratic Republic of Congo; and make data meaningful to government agencies participating in Indonesia's disaster preparedness strategies.

During the discussion, participants posed questions on disaggregation of data on marginalized groups such as indigenous communities, ensuring accuracy and availability of live data feeds, and data tools and reaching the right people with these.

**CAPTURING THE 21ST CENTURY THROUGH DATA AND ALGORITHMS:** Daniel Runde moderated this session. Ola Rosling noted efforts to reduce ignorance and to give people a better-informed world view. He emphasized that even though significant global development progress has been made, the public's world view and public knowledge do not reflect reality, but said schools are better able to create a more fact-based world view than the media.

Pali Lehohla presented migration and mortality statistics in South Africa, and demonstrated how these data can be used to build narratives on the aggregated behavior of different racial groups in the country. He noted that statisticians must add value by demonstrating how politics affect narratives and, in turn, help steer the narrative to implement the SDGs.

Emmanuel Letouzé, Director and Co-Founder, Data-Pop Alliance, discussed the concept of open algorithms and noted several examples of their use for sustainable development. He described the Open Algorithm project (OPAL) formed through a global partnership, which serves as a forum through which open algorithms can extract key development data.



Anna Jellema, World Wide Web Foundation

Anna Jellema, World Wide Web Foundation, said that, while data can help achieve the SDGs, the benefits are greater when people participate and are involved in designing, collecting and using data. She noted that, while the majority of socially-relevant data belong to citizens, the data are controlled by the private sector. She called for large investments in digital

data literacy, and opening up government data to the commons, noting that only 10% of government data are fully open.

On questions of trust, panelists emphasized the value of: effectively communicating progress that has been made in development; building a more fact-based society; and making data and statistics more open-source, to permit the broader society to interrogate and contribute to data sources.

During the discussion, participants spoke about the role of natural science communities in the social statistical landscape and the need to measure denial. They also raised concerns about: a potential "tyranny" of experts taking over decision-making processes; the opportunity costs of investments in data; the importance of enabling people to interrogate different versions of reality; the relationship between open data and data privacy; the urgency of responding to challenges in data gaps; and the multiple values of investments in natural science.

**USING PHOTOS AS DATA TO UNDERSTAND HOW EVERYONE LIVES:** Anna Rosling Rönnlund, Gapminder, introduced "Dollar Street ([www.dollarstreet.org](http://www.dollarstreet.org))," which is the largest systematic image bank to document home life for people with a variety of income levels around the world. The website currently contains photos from 250 homes in 50 countries. For each home, 135 items are photographed, including beds, food and toilets. Rönnlund demonstrated how to use the photo bank to compare households at various income levels within and between countries, and noted that most differences depend on income levels rather than countries. She said they are aiming to add videos and increase the collection to 1000 homes from 200 countries, and are planning to add similar collections for schools, religious sites, and markets.

Jeroen Smits, Global Data Lab, described the International Wealth Index (IWI) methodology to capture and categorize household wealth information, using total household assets and home characteristics rather than income level as the wealth indicator.



Participants raise their hands during a live survey of the session on 'Capturing the 21st Century Through Data and Algorithms.'



Participants during the session on 'Data Journalism'

**DATA JOURNALISM:** This session was co-moderated by John Bailer, Vice-President, ISI, and Pedro Silva, ISI.

Apart from Silva, all panelists participated via video. Bailer noted that the idea of news and numbers is not new, highlighting work on visually communicating data to the public including through the podcast Stats and Stories.

Trevor Butterworth, Editor, STATS.org, stressed the importance of helping journalists understand the kinds of questions to ask data generators in order to fully understand, and thus interrogate, scientific and statistical research. He drew attention to the creation of a network of statisticians in the US to assist journalists with interpreting data, and noted that, in instances where there is data that supports a popular policy position, there is greater coverage of this data by journalists even where it has not been thoroughly interrogated.

Stressing the need to know one's audience, Rebecca Freja Goldin, Director, Statistical Assessment Service (SAS), described her involvement in supporting journalists through training them to understand and analyze data. She shared that successful SAS interventions occur when journalists invest adequate time to understand the numbers, but lamented that sometimes journalists are unable to understand even basic concepts behind data.

Brian Tarran, Editor, Significance Magazine, described his work with statisticians to elucidate on their work, noting that although there are guidelines, trying to explain the theory to



Pedro Silva, ISI

the public can be difficult. He suggested drawing analogies that are relatable in order to explain theories, but admitted that this is not always successful. He pointed to platforms that train people to understand statistical information and data, such as the Significance Magazine column "Ask A Statistician."

Sir David John Spiegelhalter, Statistical Laboratory, University of Cambridge, shared his work in risk communication and in developing balanced information for policy options. He highlighted risk communication literature, underscoring that as with any empirical research, to draw conclusion on efficacy, risk communication requires testing on real people. He noted that journalists have been open to criticism and usually correct reports where statistics and science have been incorrectly interpreted.

Idrees Kahloon, Data Journalist, The Economist, highlighted the challenge of presenting statistical data to the public and stressed the importance of describing the uncertainties, highlighting the US election where some journalists chose which numbers to use without considering the uncertainties and whether sample sizes could be considered representative of the whole.

In the discussion, participants considered, *inter alia*: the need to revise the descriptions of chance, moving away from the 1 in 100 model; the importance of understanding the sampled populations; key skills for journalists working with data, including visualizing statistical, mathematical and scientific data, and understanding absolute versus relative risk; alternative data sources to count people who may not be counted; and the need to "rewire" the human brain to understand statistics from a young age.





Panel speakers for the session on 'Human Rights in the Work of Statisticians: Integrating Human Rights with Data Collection and Dissemination'

## DATA PRINCIPLES AND GOVERNANCE

### HUMAN RIGHTS IN THE WORK OF STATISTICIANS: INTEGRATING HUMAN RIGHTS WITH DATA

**COLLECTION AND DISSEMINATION:** Erica Potts, Office of the United Nations High Commissioner for Human Rights, moderated this session.

Birgitte Feiring, Danish Institute for Human Rights, noted that 92% of SDG targets are linked to international human rights instruments and labor standards, and highlighted the opportunity to use existing institutional tools to monitor progress on the SDGs. She called on national statistical offices to provide disaggregated data, design and coordinate comprehensive ecosystems of data, and create partnerships to ensure quality, credibility and comparability of human rights and citizen-generated data.

Niels Ploug, Director of Social Statistics, Statistics Denmark, noted the need for fair and transparent processes for participation of relevant population groups in data collection and transparency in the operations of data collectors. He further mentioned the importance of data being equally accessible to both government bodies and the public.

Brad Petry, Victorian Department of Justice and Regulation, Australia, discussed lessons learned from improving the data collected on indigenous peoples, emphasizing the importance of ensuring good levels of buy-in for data collection, understanding the limitations of data including administrative data, and the fundamental role of data collectors in the statistical system.

Mohamed Shafie Ameermia, Commissioner, South African Human Rights Commission, noted the ability of the Commission to hold the government accountable for delivering human rights, emphasizing the need for accountability within specific timeframes.

Isabel Schmidt, Statistics South Africa, highlighted key challenges and opportunities in integrating human rights with data collection, including the need for embracing new tools for spatial analyses without compromising privacy. She also stressed the need to safeguard research ethics and to expand grassroots participation in defining the measurement agenda, supplying data and participating in the dissemination process.

Alan Miller, Global Alliance of National Human Rights Institutions (GANHRI), highlighted the value of partnerships, noting that NSOs focus on outcome indicators while

a human rights approach pays attention to indicators related to the structure and process, to measure the commitment and efforts of a state to implement its obligations, targets and goals.

### OPEN DATA: FROM PRINCIPLES TO PRACTICE:

Laura Bacon, Principal, Policy, Omidyar Network, emphasized that while open data alone cannot achieve the SDGs, the SDGs cannot be solved without open data. She noted that open data empowers citizens, solves problems, creates opportunities and improves governance. She underscored the need for data principles in order to set standards, improve implementation and assist in monitoring, and called for a merger between the open data and statistical communities to set principles and standards.

Ania Calderon, Coordination of National Digital Strategy, in the Office of the President, Mexico, noted that open data principles help guide and set up partnerships. She said that the real challenge lies in how these principles are implemented and operationalized, which requires political will, including high-level adoption of the International Open Data Charter.

Fernando Perini, the International Development Research Centre (IDRC), discussed the International Open Data Conference (IODC), which developed action plans for international cooperation on the open data agenda.

He noted that international networks to advance open data to address issues such as the Global Open Data for Agriculture and Nutrition (GODAN), and public procurement, such as Open Contracts, have made significant strides in linking global objectives and local projects affecting citizens.

Perini said the International Roadmap on Open Data, which summarizes IODC 2016 and includes the second action plan, was launched during the UN World Data Forum.

Barbara Ryan, Director, Intergovernmental Group on Earth Observations (GEO) Secretariat, noted that GEO focuses on earth observations in, on or around the earth, and seeks to ensure that earth observations inform policymaking. She emphasized



Fernando Perini, IDRC

that open data has value because of its benefits for research and innovation, education, capacity development, effective governance and policymaking, social welfare, and economic growth.

Jeni Tennison, CEO, Open Data Institute, emphasized the value of openness and characterized data as “infrastructure” upon which many decisions are based without even realizing it. She suggested thinking about the roles that different members of society play in relation to open data, noting that governments are enablers by setting standards and bringing people together, but are not necessarily data providers.

In the ensuing discussion, participants raised the questions of dealing with data confidentiality and quality, how to engage students and education institutions in open data, and how to make open data accessible in a systematic manner. Panelists noted that open data principles can only “go so far” and must be translated into practice, and discussed the importance of data privacy impact assessments.

**CELEBRATING WOMEN IN DATA:** This session, moderated by Katherine Townsend, Africa Open Data, showcased some data-related innovations developed by women in Africa, mostly aimed at improving the lives of women and girls.

Erika Wiese, Innovation Portfolio Manager, The Innovation Edge, shared early childhood development research and presented on her organization’s innovations to support principals and teachers of pre-school centers to track attendance, trends and quarterly data.

Fezeka Mavuso, Bandwidth Barn in Khayelitsha, shared her experiences of providing support in innovation and technology capacity building to the entrepreneurs of Khayelitsha, an informal settlement outside Cape Town. She said the biggest challenge to the inhabitants of the informal settlement is the lack of basic computer literacy, access to technology to combat and communicate crime, and information about transport services.

Robyn Farrah, Kick Ass Technology – Obviously (KAT-O), presented on Women in Tech Cape Town, an initiative focused on providing women in under-privileged areas around Cape Town with technological and data skills to start and run small businesses.

Tracy-Anne Sikeniana, Charney Essack, Chelsea Lewis and Azraa Vally, Code for Cape Town, presented on technological innovations, including promoting the benefits of pursuing careers in coding and programming for high school girls, using data and statistics for water management and dam levels in South Africa, developing an app that helps young girls keep track of their menstrual cycle to avoid school disruptions, and applications to find public transport.

Michelle Matthews, Cape Innovation and Technology Initiative, shared experiences from a research project commissioned by a local communications company on how micro enterprises, specifically run by women, use mobile technology to run their business. She described the data kit developed as a result of the research that is used to build the capacity of small businesses through sharing solutions to common challenges among micro enterprises.

Margaret Labanya, Director General Bureau of Statistics, South Sudan, shared some of her country’s struggles, particularly for women and girls living in conflict, and said that statistics and constant data collection reflecting women’s lives through mapping and stories will eventually bring about the change needed.

Yeama Thompson, Information Commissioner, Southern Sierra Leone Right to Access Information Commission, described some of the technological innovations driven by women in Sierra Leone, and said open and disaggregated data can change the lives of African women through mapping their activities. She shared experiences from the country’s first Open Data Festival in April 2016.

Townsend concluded by sharing global woman-focused technological innovations, including the DREAMS Partnership and DataLab Kenya, and urged participants to attend the Africa Open Data Conference taking place in Accra, Ghana, from 17-21 July 2017.

**PRIVATE SECTOR DATA FOR THE SDGS – BRINGING THE BEST OF MINDS TO SOLVE A DATA AGGREGATION CHALLENGE:** Philipp Schönrock moderated the panel.



Panel speakers for the session on ‘Celebrating Women in Data’





Participants during the session on 'Private Sector Data for the SDGs – Bringing the Best of Minds to Solve a Data Aggregation Challenge'

Douglas Kativu discussed the work of GRI as a bridge between business and government contributions to the SDGs. Initiatives he described included the SDG Compass, which guides the private sector in measuring their contributions to the SDGs, and Measure What Matters, which links SDGs with implementation and corporate reporting.

Hermanus Rietveld, Coordinator SDGs, Statistics Netherlands, emphasized the need for alignment among statistics and business communities in achieving the SDGs, while acknowledging the challenges of different accounting principles and limited data availability. He called for enhanced cooperation and the identification of complementarities and synergies in data needs between statistics and business communities. He highlighted the publication, 'Transform Your World,' which details the Netherlands' national SDG strategy.

Vishnee Sowamber Payen, LUX Group Sustainability and Corporate Social Responsibility Manager, presented on the CSR work done by the LUX Resorts and Hotels. On the SDGs, she noted the LUX Group and its destinations have a large impact on local environments and communities, necessitating certification and sustainable policies. Sowamber Payen explained how LUX reports on its progress in achieving the SDGs through: establishing reporting guidelines; identifying the key stakeholders; optimizing natural resources; aligning with global and local goals; and communicating the results to stakeholders and including their feedback.

During the ensuing discussion, panelists highlighted the challenges faced by the private sector in reporting and standardization. Sowamber Payen noted that many of the SDGs cannot be calculated in monetary terms and will not generate profits, and said that, for reporting, there is a need to plan and

budget in order to have adequate resources for collecting data. On standardization, Kativu highlighted that the key principle is to focus on issues of material importance to the company and its stakeholders.

### **THE WAY FORWARD: A GLOBAL ACTION PLAN FOR DATA**

#### **DATA FOR COLLECTIVE IMPACT + NEW DATA**

**FRONTIERS:** Richard Crespin, CEO, CollaborateUp, moderated this session, initiating the discussion by inviting consideration of perceptions of the greatest barrier to collective action on the SDGs.

Jeff Jordan, President and CEO, Population Research Bureau (PRB), highlighted the absence of the right data and the lack of understanding of how groups use data to further SDG implementation. He stressed that the translation of data affects the way policymakers use them, and underscored the role of the media in addressing this challenge.

Carla Abou Zahr, Bloomberg Data for Health Initiative, drew attention to the need for data ownership by various actors in the policymaking chain, and the importance of building data collection capacities at local and national levels.

Sid Espinosa, Microsoft and former Mayor of Palo Alto, California, underscored the rapid technology change in the "fourth" industrial revolution, and highlighted Microsoft's partnerships with federal governments, academia and the private sector to effect change through Vision Zero on ending traffic fatalities.

Kathleen Strottman, Executive Director, Global Alliance for Children, underscored the need to set realistic timelines in order to create real lessons and effect behavior change, noting that



Panel speakers of the session on 'Data for Collective Impact and New Data Frontiers'

these timelines may not align with traditional donor patterns. She stressed the importance of a common language and shared vision among stakeholders, rather than a narrow focus of a single service provider's area of interest.

Highlighting the tendency to demonize the private sector, Matthew Laessig, Chief Operating Officer, Data.world, outlined concerns over change driven by the UN or governments, and pointed to the need for tools to incorporate more people in decision making. He said organizations should offer their standards and codifying methods where there is a need.

Jurie van Niekerk, South Africa Country Director, PYXERA Global, stressed that there often is no incentive from government to share data, as the data could highlight gaps in service provision, and the government may lack the skills to use data. He drew attention to the skills that corporations and the private sector are able to supply for the public good.

Simon Carpenter, Chief Technology Officer, SAP South Africa, noted that it is possible to marry the pursuit of profit with the need for social impact, calling for broad partnerships to use data to create opportunities for change. He highlighted artificial intelligence and machine learning as key features of the data revolution, noting that these will augment and leverage peoples' intelligence and skills.

Mallory Solder, UPS, stressed win-win opportunities for both the public and private sectors in data use in the humanitarian sector, including, from the private sector perspective, the move toward data philanthropy.

#### **A MODERNISATION OF COLLABORATIVE FRAMEWORKS AMONG DATA COMMUNITIES:**

This panel session, moderated by Irena Krizman, Vice-President, International Statistical Institute (ISI), addressed the challenges of developing collaborative frameworks, which include: attaining political agreement on collaborative frameworks and their coordination; highlighting innovative means of collaboration and communication; exchanging best practices on multi-stakeholder dialogue and other governance issues; and building trust among partners.

John Pullinger, National Statistician, UK, lamented that until now the statistics model has been production-focused, and urged considering the specifics of the required decisions and what is functional to the local economy. He emphasized that the new vision is entirely about people connecting with the "client," including governments and ministers, and including collaboration with the wider government statistical service before starting the partnership for data acquisition.

Linda Peters, Global Business Development Manager, Esri, emphasized the need to jointly develop a framework that will focus on issues of privacy, security and legality. She shared Esri's experiences on developing the GeoHub framework for the city of Los Angeles, the Urban Observatory and the Living Atlas as examples of partnering with many different organizations and stakeholders to portray data in different formats. For such initiatives, she emphasized the need to engage with the communities and stakeholders involved to ensure ownership and trust.

Claire Melamed, Executive Director, Global Partnership for Sustainable Development Data, described her organization as a "dating agency for data" as it provides a forum for collaborations across government, private sector, and non-governmental organizations. She noted that while cooperation is often challenged by perceived barriers to collaboration, the larger challenge is political, and she called for producing data on political agendas and data sharing between private and public sectors.

Oliver Chinganya discussed how Africa is responding to the data revolution through the Strategy for Harmonization of Statistics in Africa (SHaSA) and other strategies. He noted that the data revolution is not about generating more data, but rather about providing the right data to the right people at the right time in the right format. He outlined several instruments for capacity development to address the data revolution, including the Solution Exchange for the African statistical community, which is a platform for South-South cooperation.

Panelists responded to questions from the audience on how to engage and consider the political environment when working in an NSO; interpreting and using data captured in the natural



environment; coordinating actions on technical assistance among donors and development agencies; mentoring support systems and networks available to grassroots communities of practice; and the difficulties of mapping and capturing data without resources to update and maintain the data.

Concluding the session, Krizman reminded participants of the upcoming 61st ISI World Statistics Congress (WSC), which will take place in Marrakech, Morocco, from 16-21 July 2017.

**SHARING DATA, ENGAGING WITH LOCAL GOVERNMENTS AND COMMUNITIES TO ACHIEVE DEVELOPMENT GOALS:** Moderator Richard Kaufholz, Esri South Africa, introduced this session, saying current developments in technology are bringing people closer to their worlds and empowering them to define a future that reflects their values, hopes and dreams. Using the analogy of the physical “public square” where information had been shared over centuries and where conversation had started, he said open data provides a digital platform for enabling people to have these conversations digitally. On open data principles, he said data need to be discoverable and well-described, explorable, accessible both physically and technically in the necessary format, and collaborative. On Esri’s Global Data application, he said GIS provides the framework and process for enabling a smarter world through data integration and management, visualization and mapping, analysis and modelling, planning and design, decision making, and taking appropriate actions.

Kaufholz demonstrated how GIS integrates real-time data through providing dynamic information, enabling local municipalities to create their own visual conceptual architecture using multiple open data sets on ArcGIS Online through built-in layout design tools such as chart visualizations to start citizen data sites. He demonstrated how Esri uses 59,000 open datasets to build specific applications, such as the Rhino Information System that aggregates media information and data feeds about rhinos; and the Urban Observatory that collates information about city population data and services.

Clifford Okembo demonstrated the recently developed Kenya Open Data portal, which provides government data openly available for public use in Kenya, including in sectors such as agriculture, education, health, energy and in a variety of formats

including maps, tables, and data-on-request. He elaborated on partner data sets, including information about donor agencies, financial information about government services, and civil society security information.

Kaufholz further demonstrated the GeoJozi Developer Challenge, developed in response to a request from Johannesburg City Council, inviting young software developers to address the lack of data on street addresses, particularly in informal settlement areas, using GIS data. He described how winner Thapelo Sekwena, a junior software developer with almost no GIS experience, came up with a solution called Redeem Jozi, which uses gamification, crowdsourcing and augmented reality to obtain users’ addresses in exchange for mobile airtime.

Participants then discussed issues around data availability and accuracy, and security and open data policies in Kenya and other countries.

**HARNESSING THE POWER OF DATA FOR THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT – A JOINT SESSION OF THE IAEG-SDGs AND HLG-PCCB:** The panel on the IAEG-SDGs was moderated by Lisa Bersales, who tasked panelists with reflecting on various conference themes of understanding the world through data and leaving no one behind.

Carol Coy, Director General, Statistical Institute of Jamaica, said the take-aways gleaned from the conference sessions under the theme ‘Understanding the world through data’ include the need to: ensure that the indicators measured cover every aspect of life; collaborate, including with the private sector, because the public sector cannot produce all the needed data; and recognize the importance of data literacy, open data and transparency.

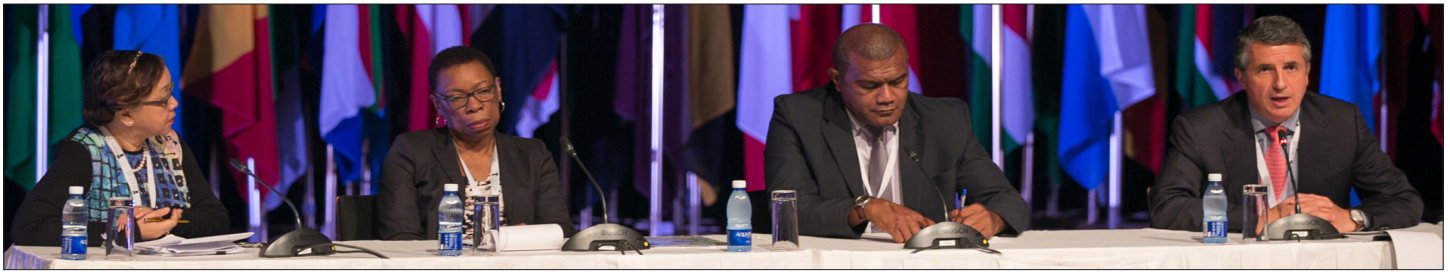
Kemueli Naiqama, Deputy Government Statistician, Bureau of Statistics, Fiji, reflected on the theme “Leaving no one behind,” underscoring the importance of thinking outside the box and creating new networks between the government and private sector. From the perspective of a small island developing State, he underlined the important role of development partners and donors in building capacity for using new statistical tools.

Julio Santaella, President, INEGI, likened NSOs to chefs using new ingredients and recipes to build creative new dishes and find new customers while being sensitive to their needs. He remarked that NSOs must become leaders in cooking the information to produce nourishment that is attractive to society, while maintaining the same standards and rigor that statisticians have always kept.

Bersales remarked that an emerging message is that statisticians should now think “outside the box,” reaching out and providing messages that can be understood by all stakeholders. Participants discussed the role of voluntary certification schemes such as the Forest Stewardship Council (FSC) certification, in enabling people to choose sustainably produced products. They also discussed the importance of not limiting capacity development to statistics institutions and mainstreaming it into national development plans and sector plans.



Moderator **Richard Kaufholz**, Esri South Africa



Panel speakers during the session on 'Moving Forward - Harnessing the Power of Data for the 2030 Agenda for Sustainable Development - A Joint Session of IAEG-SDGs and HLG-PCCB'

Gabriella Vukovich moderated a discussion on closing observations of the HLG. She emphasized the need to build capacity for the “infrastructure” to implement the SDG indicators, and said statisticians need to come out of their comfort zones and be forward-looking to anticipate the technological needs of user communities.

Georges-Simon Ulrich, Director General, Federal Statistical Office, Switzerland, highlighted that regional roadmaps are being developed in addition to the Global Action Plan. He noted the need to ensure systems develop in an integrated way and said the official statistics community should take the lead in helping to identify cross-cutting issues.

Ariunzaya Ayush, Chair, NSO, Mongolia, emphasized the need for creating a favorable legal environment, including with regard to privacy and data security, and also noted challenges with regard to human resources.

Ola Awad noted the need for: coordination and engagement of partnerships; promotion of ownership and participatory approaches; using technology to produce, provide and use data; better mobilization of resources; and leaving no one behind.

### CLOSING PLENARY

In the final panel discussion of the Forum, John Pullinger invited panelists to provide final thoughts on the way forward, and urged participants to: “step up” as the custodians of one of the planet’s most precious assets: data; “step forward” since there is no benefit gained from “sitting on it;” and “step on the gas” because the world is moving very fast towards 2030. Lisa Bersales urged participants to realize the potential for new

partnerships, to continue to produce the basic statistical services, and to learn to teach and package the new information better and disseminate this globally through open data access.

Gabriella Vukovich noted that NSOs, as central managers of information in countries, need to use their best qualities and assets, such as structured thinking and preference for standards, and ensure others use them as well. She noted that this is especially important given the volume of data in the world that may not be reliable.

Nnenna Nwakanma, Africa Regional Coordinator, World Wide Web Foundation, underscored the need to communicate with everyone, including those not digitally enabled, and to breakdown scientific knowledge in a manner easily understood by all. Schweinfest noted that the Global Action Plan is only the beginning, and there is work to do to complete the plan. He also urged that although the next Forum is in two years’ time, work must continue and not wait until then.

Pali Lehlola and Schweinfest expressed thanks to all involved with organizing the Forum, and Schweinfest closed the meeting at 5:30 pm.

### UPCOMING MEETINGS

**48th Session of UN Statistical Commission:** The UNSC will consider proposals of the IAEG-SDGs, as contained in the report of its fourth meeting. **dates:** 7-10 March 2017 **location:** New York, US **contact:** UN Statistics Division **www:** <http://unstats.un.org/unsd/default.htm>

**Fifth Meeting of the IAEG-SDGs:** The Group is expected to hold its fifth meeting at the end of March. **dates:** TBC March 2017 **location:** TBC **contact:** UN Statistics Division **www:** <http://unstats.un.org/sdgs/meetings/>

**UN High-level Political Forum on Sustainable Development 2017:** The HLPF is charged with following up on implementation of the 2030 Agenda for Sustainable Development, including the SDGs. It will hold its fifth session on the theme of ‘Eradicating poverty and promoting prosperity in a changing world.’ HLPF will also conduct the first set of Goal-specific reviews under the 2030 Agenda. The Goals to be reviewed in 2017 are: Goal 1 (End poverty in all its forms everywhere); Goal 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture); Goal 3 (Ensure healthy lives and promote well-being for all at all ages); Goal 5 (Achieve gender equality and empower all women and girls); Goal 9 (Build resilient infrastructure,



Pali Lehlola, Statistician-General, Statistics South Africa



promote inclusive and sustainable industrialization and foster innovation); Goal 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development); and Goal 17 (Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development). The UN Secretary-General also will present the second yearly report on progress towards the SDGs, based on the global indicator framework. Approximately 40 countries are expected to present voluntary national reviews of progress on the 2030 Agenda in their countries. **dates:** 10-19 July 2017 **location:** New York **contact:** UNDESA **www:** <https://sustainabledevelopment.un.org/hlpf>

**61<sup>st</sup> ISI World Statistics Congress (WSC):** The biennial WSC is the flagship conference of the International Statistical Institute (ISI) and its seven associations, bringing together eminent statisticians and members of the statistical community to present, discuss, promote and disseminate research and best practices in every field of Statistics and its applications. **dates:** 16-21 July 2017 **location:** Marrakech, Morocco **email:** [contact@isi2017.org](mailto:contact@isi2017.org) **www:** <http://www.isi2017.org/>

**Africa Open Data Conference 2017:** The Africa Open Data Community is a convening space for the tech industry, small businesses, journalists, civic tech, entrepreneurs, researchers, students, IT solution providers, banks, telecoms, insurance companies, NGOs, donor organizations, and local and national governments to connect virtually and in person to share advances in open data, share lessons, and form new collaborations. **dates:** 17-21 July 2017 **location:** Accra, Ghana **contact:** Africa Open Data Community **www:** <http://www.badili.org/2nd-africa-open-data-conference-2017-accra/>

**Sixth Meeting of the IAEG-SDGs:** The Group will hold its sixth meeting sometime during the final quarter of 2017. **dates:** TBC **location:** TBC **contact:** UN Statistics Division **www:** <http://unstats.un.org/sdgs/meetings/>

**Workshop on Migration Statistics:** The UN Economic Commission for Europe (UNECE) will convene this workshop in October. **dates:** 30-31 October 2017 **location:** Geneva, Switzerland **contact:** UNECE Secretariat **www:** <https://www.unece.org/index.php?id=43941#/>

**28th International Population Conference:** Statistics South Africa will host the 28th International Population Conference of the International Union for the Scientific Study of Population (IUSSP). This event brings together approximately 2,000 population scholars, policymakers, and government officials from around the world to discuss the latest population research and debate pressing global and regional population issues. **dates:** 29 October - 4 November 2017 **location:** Cape Town, South Africa **contact:** UN Statistics Division **www:** <http://ipc2017capetown.iussp.org/>

**Second UN World Data Forum:** The second UN World Data Forum is expected to convene at the end of 2018 or early 2019. The UN Secretary-General's Independent Expert and Advisory Group on Data Revolution for Sustainable Development recommended organizing a World Forum on Sustainable

Development Data every two years. **dates:** TBD **location:** Dubai, United Arab Emirates **contact:** UN Statistics Division **www:** <http://unstats.un.org/sdgs/meetings/>

For additional upcoming events, see: <http://sdg.iisd.org/events/calendar/>

## GLOSSARY

ADAPT	Advanced Data Planning Tool
AfDB	African Development Bank
CEPI	Centro de Pensamiento Estratégico Internacional
CRVS	civil registration and vital statistics
CSIS	Center for Strategic and International Studies
DFID	Department for International Development
DESA	Department of Economic and Social Affairs
GIS	geographical information systems
GRI	Global Reporting Initiative
HDC	Health Data Collaborative
HLG	High-level Group for Partnership, Coordination and Capacity-Building for statistics for the 2030 Agenda for Sustainable Development
HOT	Humanitarian OpenStreetMap Team
IAEG-SDGs	Inter-Agency and Expert Group on Sustainable Development Goal Indicators
IDRC	International Development Research Centre
INDEC	Statistical Planning and Coordination in the National Institute of Statistics and Census
INEGI	National Institute of Statistics and Geography
IODC	International Open Data Conference
ISI	International Statistical Institute
MDGs	Millennium Development Goals
NSDSs	National Strategies for the Development of Statistics
NSO	national statistical office
OPAL	Open Algorithm project
PARIS21	Partnership in Statistics for Development in the 21st Century
PSA	Philippine Statistics Authority
SDGs	Sustainable Development Goals
UNDP	United Nations Development Programme
UN GGIM	United Nations Global Geospatial Information Management
UNGA	United Nations General Assembly
UNICEF	United Nations Children's Fund
UPS	United Parcel Service
WFP	World Food Programme