Summary of the UN Fourth World Data Forum:
24-27 April 2023

The statement “data is the new oil,” coined by the British mathematician Clive Humby in 2006, found its way into discussions of the Fourth UN World Data Forum (UNWDF 2023), including the statement of UN Secretary-General António Guterres, who said “data represents in the 21st century what oil did in the 20th century.”

More than ever before, these words underscore the vital importance of data for achieving sustainable development as enshrined in the 2030 Agenda for Sustainable Development (2030 Agenda) and the Sustainable Development Goals (SDGs). Equating data to oil also reflects the fact that, similar to oil, data in its raw form is not useful. The power of data can only be harnessed, and its true value realized, by bringing it together, through statistical analysis, and by connecting it to other data sets to inform solutions for challenges facing humanity.

The 2030 Agenda, now at its mid-way point, faces significant challenges in its implementation. Data challenges include the paucity of data, incompatible and incomparable formats, and lack of adequate institutional capacities in national statistics offices, among others. In addition to this, the “Triple C” crises of COVID-19, climate change, and conflicts have, over the past four years, caused a reversal of some progress achieved on the SDGs. The call for urgency to support governments and stakeholders with adequate data to monitor and measure progress has been at the top of multilateral discussions. The UNWDF has played an important role in the response to this call through its meetings and associated projects in support of the digital transformation.

The Forum has been held regularly since 2017, bringing together the data and statistics community with the aim of nurturing partnerships, mobilizing high-level political and financial support for data, and building a pathway towards strengthening the data ecosystem for sustainable development. The first and second meetings held in 2017 and 2018 in Cape Town, South Africa and Dubai, United Arab Emirates, respectively, were attended by almost 2000 participants. In subsequent meetings, held virtually in 2020 and in a hybrid format in 2021 in Bern, Switzerland, participation in the Forum grew significantly with a current active list of over 20,000 interested stakeholders.

UNWDF 2023, which met in Hangzhou, China, convened under the theme, “Towards Data that Empowers our World.” The meeting was organized around four thematic areas:
• Innovation and Partnerships for Better and More Inclusive Data;
• Maximizing the Use and Value of Data for Better Decision-making;
• Building Trust and Ethics in Data; and
• Emerging Trends and Partnerships to Develop the Data Ecosystem.

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Over 400 speakers participated in close to 100 sessions, held under these thematic areas. Sessions consisted of a high-level panel on each topic, parallel thematic sessions, learning labs, and demonstration events. In addition, the venue featured a 2,000 square meter exhibition area showcasing cutting-edge projects on digital innovation from international organizations and other stakeholders.

Each UNWDF has resulted in a declaration communicating the ambitions of governments and other stakeholders. The Cape Town Global Action Plan for Sustainable Development Data (CTGAP) was the first declaration and is considered the blueprint for deploying the full range of data and statistics capacity to measure progress towards achieving the SDGs.

The Hangzhou Declaration, launched during the UNWDF 2023 closing ceremony, reflects on, among others, high-quality, timely, open, and inclusive data required to achieve the SDGs within the remaining seven years of the 2030 Agenda. The Declaration commits Parties to renew commitments to working as a global community under the UN and to revitalize the CTGAP through collective action to address challenges on the path towards modernized and stronger data and statistical systems that support achievement of the SDGs.

UNWDF 2023, held from 24-27 April 2023 in Hangzhou, China, brought together over 1000 in-person participants, and close to 10,000 visitors to the online interactive platform and virtual sessions.

A Brief History of the UN World Data Forum

Following a recommendation from the UN Secretary-General’s Independent Expert Advisory Group on a Data Revolution for Sustainable Development, the UN Statistics Division (UNSD) decided to convene a World Forum on Sustainable Development Data. It was envisaged as a platform to intensify cooperation between representatives of government, intergovernmental organizations and civil society, and various professional groups, such as national statistical offices (NSOs), information technology (IT) and geospatial information managers, and data scientists, among others. The UN World Data Forum consists of high-level plenary sessions and parallel breakout events clustered around specific themes.

First UN World Data Forum: This Forum, which took place from 15-18 January 2017, in Cape Town, South Africa, agreed on the CTGAP. The Action 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 activities and programmes, with a particular focus on addressing the monitoring needs of the 2030 Agenda for Sustainable Development;
- 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 was adopted by the UN Statistical Commission (UNSC) in March 2017.

Second UN World Data Forum: This Forum, which convened from 22-24 October 2018 in Dubai, United Arab Emirates, adopted the Dubai Declaration on “Supporting the Implementation of the Cape Town Global Action Plan for Sustainable Development Data.” Through the Declaration, Forum participants resolved to ensure that quality, relevant, timely, open, and disaggregated data “by income, sex, age, race, ethnicity, migration status, disability, geographic location, and other characteristics relevant in national contexts” are made available and accessible to all users. In addition, the Dubai Declaration called for establishing an innovative funding mechanism that would be responsive to the priorities of national data and statistical systems, with the goal of mobilizing funds, and activating partnerships and funding opportunities to strengthen the capacity of national data and statistical systems.

Virtual UN World Data Forum: The Third World Data Forum was expected to take place in October 2020, in Bern, Switzerland. However, due to the COVID-19 pandemic, a reduced virtual event took place from 19-21 October. The virtual Forum resulted in a Declaration on the “Global Data Community’s Response to COVID-19,” which appeals to the whole data community to come together to support the response to COVID-19 and accelerate action on the SDGs. It resolves to ensure trust in data and data privacy and increase investments in data to respond more effectively to the COVID-19 pandemic and future disasters. It also renewed the call made in the Dubai Declaration for an innovative funding mechanism to help implement the CTGAP.

Third World Data Forum: The Third World Data Forum convened in person from 3-6 October 2021, in Bern, Switzerland. The Bern Data Compact for the Decade of Action on the SDGs, launched during the closing plenary, summarizes commitments to accelerated action on implementation of the CTGAP and common actions to, among others: develop data capacity; establish data partnerships; produce data to leave no one behind; and build trust in data.
**Report of the Fourth UN World Data Forum**

**Opening Press Conference**

The Fourth UN World Data Forum (UNWDF 2023), themed “Towards Data that Empowers our World,” opened on Monday, 24 April, with a curtain raiser press conference. Louise Xi Li, UN Communication Group, moderated the press conference.

Li Junhua, Under-Secretary-General, UN Department of Economic and Social Affairs (UN DESA), stressed the importance of the data community for national, regional, and global data and statistics systems in achieving the SDGs. He emphasized the importance of data partnerships and innovation in ensuring no one is left behind and called for the data and statistics communities to forge new partnerships while strengthening existing ones. He drew attention to the forthcoming Hangzhou Declaration, which calls for accelerated actions from the data community in alignment with the CTGAP aimed at strengthened data partnerships and increasing the scale and level of investment in data and statistics by domestic and international actors.

Mao Shengyong, National Bureau of Statistics (NBS), CHINA, emphasized the importance of UNWDF 2023 for implementation of the 2030 Agenda, and reported that participants registered to attend the meeting represent academia, civil society, and other stakeholders. Among those, he noted, 40% are women and 34% are under the age of 45.

Xu Wenguang, Executive Vice Governor, Zhejiang Provincial Government, noted that technological innovation is the primary driving force for digital transformation in his province and the main engine of Zhejiang’s economy. He highlighted the importance of further strengthening digital innovation in the province to build a world-class IT industry.

Yao Gaoyuan, Mayor, Hangzhou City, said his city is a hub of creativity and innovation and maintains a rich cultural diversity as described by the 13th century explorer Marco Polo. He referred to the city as the “paradise green lung” of China’s sustainable development, also referred to as Ecological Civilization, with forest coverage of 65.3%. He mentioned that the city is the headquarters of digital companies, such as Alibaba and H3C, which provide digital payment solutions for consumers and businesses.

Stefan Schweinfest, Director, UNSD, noted UNWDF 2023 is taking place prior to the Geospatial World Forum (GWF) to be held in May 2023 in the Netherlands. He added that most new data capture technologies and solutions to be presented at UNWDF 2023 are enabled by geospatial information systems. He emphasized that while data is required for the current digital transformation, “good data is important” and requires investment and working together.

Francesca Perucci, Assistant Director, UNSD, pointed out that inclusive data requires more funding and more partnerships between the private and public sectors. She noted that the Forum will explore areas such as citizen-generated approaches to ensure data are fully relevant to users and identify ways to supplement traditional data collection processes.

Shaida Badiee, Managing Director, Open Data Watch, noted that UNWDF 2023 sessions will focus on lessons learned from the COVID-19 pandemic, with an emphasis on, among others, building better health information systems for governments, value addition to data, and building trust by curbing misuse and unethical use of data.

During the press conference, a journalist inquired about the types of international cooperation between NBS and international organizations, including UNSD, the World Bank, and the International Monetary Fund (IMF). Mao noted that statistical methods have improved through learning from experiences of others, permitting methods to be adapted to meet the needs of Chinese society. He also mentioned that a regional data center for the Asia-Pacific region, located in Hangzhou, has allowed China to use Big Data to partner with domestic players and international organizations and to strengthen capacity building. Mao also said that data, related to labor, capital, and land, has become “an important and innovative factor of production,” allowing China to upgrade its economy and improve its economic efficiency through digital industrialization. Schweinfest emphasized the key role of partnerships with the private sector and academia, adding that citizens must have a seat at the table regarding what data is needed and how it is used and produced.

**Opening Session**

Kang Yi, Commissioner, NBS, CHINA, moderated the opening ceremony held on Monday, 24 April.

Ding Xuexiang, Vice Premier of the State Council, CHINA, delivered a message on behalf of President Xi Jinping, which emphasized China’s willingness to strengthen data cooperation...
for SDG implementation. Speaking in his own capacity, Ding highlighted: the importance of multilateralism to deepen global governance; the potential of digital innovation for all people and countries; and the importance of a fair and just digital environment that promotes poverty reduction and narrows the digital divide between the global North and the global South.

In a video message, António Guterres, UN Secretary-General, stated that “data represents in the 21st century what oil did in the 20th century” for progress and development. Noting progress on the SDGs has stalled and even reversed, he stressed the importance of turbocharging the transformative power of data to achieve the SDGs. He mentioned the role of UN-supported initiatives, such as Data For Now (Data4Now), to unlock the full potential of data, allowing people to take control of data for the betterment of their daily lives.

Li Junhua, Under-Secretary-General for Economic and Social Affairs, UN DESA, stressed that inequality in data availability between countries is generating a divide with implications for development policy. He highlighted the need to nurture partnerships and generate needed investment for data.

Ola Awad, President, Palestinian Central Bureau of Statistics, remarked on the rapid response by the global data community to the COVID-19 pandemic and stressed the opportunity the Forum provides for the global recovery phase of the pandemic.

Following the high-level speakers, participants enjoyed a colorful presentation of some of Hangzhou’s cultural, historic, and gastronomic heritage.

Welcome and Introduction to the Forum

In a welcome and introductory statement on Tuesday, 25 April, Stefan Schweinfest, Director, UNSD, noted that the Forum provides a place to mingle, build trust, and identify projects for data practitioners, and encouraged participants to tackle data culture including governance, use, and quality, among others.

High-Level Panel: Host Country Plenary Session

Mao Shengyong, Deputy Commissioner, NBS, CHINA, moderated this session held on Tuesday, 25 April.

Kang Yi, NBS, CHINA, in a keynote address, reported on China’s technological advancements such as the use of Artificial Intelligence (AI) and electronic data collection, among others. Schweinfest lauded China for its international engagement and cooperation with developing countries to share experiences and innovation.

Wu Shengfeng, Director General, Zhejiang Provincial Bureau of Statistics, CHINA, discussed cutting edge projects in his province such as a redesigned, centralized data center to improve the efficiency of flood protection and disaster management.

Siddharth Chatterjee, UN Resident Coordinator in China, recalled that one-third of the world’s population remained unconnected to the Internet in 2022 and insisted on the importance of a common international data architecture that protects the rights of individuals.

Liu Tanren, Deputy Manager, SF Technology, reported on his company’s use of Big Data to overcome constraints in parcel delivery services, noting how smart planning using such data has enabled resource allocation, integration, and optimization of data to sustain efficient logistics. Commenting on the presentation, Ayache Khellaf, Secretary General, High Commission for Planning, MOROCCO, noted the need to support NSOs in low-income countries through investments that drive innovation and growth in data transformation.
Haishan Fu, Chief Statistician, World Bank, highlighting China’s crucial inputs over the years to the World Bank’s global poverty estimates, expressed hope that in the future, access to household micro-data would be available to allow better targeted poverty reduction interventions.

Xiaojun Wang, Renmin University, noted that, “China said goodbye to absolute poverty in 2020,” and highlighted the importance of statistical analysis to provide inputs for policy formulation.

Rachael Beaven, UN Economic and Social Commission for Asia and the Pacific (UNESCAP), noted that based on current trajectories, the Asia and Pacific region will achieve the SDGs in 2065. She reported disparities in data availability among countries.

Jiang Xiheng, Deputy Director, China International Development Knowledge Center, called for more available, timely, and granular data to support SDG implementation.

Huadong Guo, Director General, International Research Center of Big Data for SDGs (CBAS), said one-third of SDG indicators lack the necessary data, a gap which Big Data can partially address. He presented a case study on the use of satellite data, which showed that 18.6% of global land recovery in 2021 occurred in China.

Xuming He, President-Elect, International Statistical Institute (ISI), reiterated the importance of Big Data and collaborations for monitoring and assessment of the SDGs.

Liu Qiao, Peking University, discussed monitoring and evaluation of the SDGs based on effective measurements of happiness and welfare of populations, and reported that this method goes beyond the conventional use of GDP data and considers citizens’ wellbeing.

Discussant Lay Chhan, Deputy Director, National Institute of Statistics, CAMBODIA, said this method is also useful for low-income countries and can be applied to indicators related to peace, prosperity, and people’s happiness, among others.

Innovation and Partnerships for Better and More Inclusive Data

This thematic area focused on efforts to create an enabling environment for the integration of data through innovation and synergies. Sessions under this theme demonstrated, among others, transformation of data and statistical systems to ensure better data, visibility, and inclusivity for everyone.

High-level Panel: On Tuesday, 25 April, a high-level panel on this thematic area focused on ways to ensure inclusive data ecosystems and the role of public-private partnerships for this goal. Kate Warren, Executive Vice President, Devex, moderated the session.

Barnabé Okouda, National Institute of Statistics, CAMEROON, said ensuring inclusivity requires partnerships to address gaps in data availability for sustainable development needs.

Catalina Restrepo, MAKAIA, noted the importance of community-based methods and discussed an example in Medellin, Colombia, where communities provided with air quality sensors were able to analyze activities that affect air quality and design ways to mitigate air pollution.

Charles Lebon Mberi Kimpolo, African Institute for Mathematical Sciences (AIMS), discussed the importance of understanding the cultural identity of Indigenous Peoples in order to design surveys that are inclusive in the determination of disaggregated data sets.

Yana Gevorgyan, Secretariat Director, Group on Earth Observations (GEO), said national-level partnerships require political will to incentivize and facilitate collaborations, including national digital data strategies that cover areas such as data access, sharing, privacy, security, and others.

Concluding the session, Ning Jizhe, Vice Chairman, National Committee of the Chinese People’s Political Consultative Conference, said new data resources and technologies foster upgrading of data ecosystems, and urged governments to embrace new data and upgrade Internet capacities of statistical departments.
Increasing the Use of Innovative Sources, Methods, and Technologies to Decision-Making: Insights from the Data4Now Initiative: Maryam Rabiee, Sustainable Development Solutions Network (SDSN), moderated this parallel session on Tuesday, 25 April.

Francesca Perucci, Assistant Director, UNSD, discussed guiding principles and priorities for the Data4Now initiative. She provided examples of data solutions derived from the initiative including monitoring climate change and environmental variables through earth observations, collaborative citizen science, and simple surveys through Facebook for data collection.

Víctor Andrés Arévalo Cabra, National Administrative Department of Statistics, COLOMBIA, discussed a case study of data analysis regarding the relationship between children and their education centers. He reported that geolocation data of children’s homes has strengthened the education sector’s information systems. He cited data gaps on public policy monitoring as a constraint for determining school dropout rates.

Gunnar Larsson, Statistics Norway, demonstrated the use of web scraping tools to extract and transform unstructured data from the web into structured data. He highlighted some disadvantages of the method, including challenges in finding common traits among different websites.

Mamadou Diallo, Data4Now, outlined projects supporting developing countries in small area estimation statistical techniques by integrating GIS data into survey systems.

Innovative Ways for Increasing Timeliness and Coverage of SDG Indicators: This parallel session held on Tuesday, 25 April, focused on practical solutions from the scientific community to foster greater cross-disciplinarity and cross-sectoral collaboration for SDG monitoring and assessment.

Huadong Guo, Director General, CBAS, emphasized the importance of strong scientific partnerships to accelerate progress towards achieving the SDGs. Yana Gevorgyan, Secretariat Director, GEO, urged participants to explore how to break down silos and foster cross-disciplinary collaboration.

Jianhui Li, Vice President, Committee on Data of the International Science Council (CODATA), drew attention to the challenge of sharing data across countries and continents, particularly when some of the data can only be used inside one institution or country due to data regulatory policies. He urged participants to share data, saying “If you give more, you can get more.”

Daniel Hopp, UN Conference on Trade and Development (UNCTAD), said data sharing can make a significant difference creating public awareness on how geospatial data is collected, analyzed, and used to estimate, among others, areas of crop coverage in a region.

Gretchen Kalonji, Sichuan University, called for better collaboration among universities and other institutions to break down silos between academic and research practitioners in data sciences. Charles Brigham, Esri, emphasized the importance of building trust and working in collaboration.

Boosting Data Availability on Agricultural Land Ownership from a Gender Perspective: Balancing Inclusion and Quantity: This session, held on Thursday, 27 April, was moderated by Valerie Bizier, Food and Agriculture Organization of the UN (FAO).

Minerva Eloisa Esquivias, Statistics Authority, the PHILIPPINES, discussed a consultative process by the Philippine Census of Agriculture and Fisheries to collect data on SDG Indicator 5.a.1, which is one of two indicators that focuses on women’s rights to own and have control over agricultural land.

Mahesh Kumar Subedi, National Statistics Office, NEPAL, described women’s ownership of agricultural land in his country, noting that 31.5% of total households in Nepal are headed by women according to the 2021 census, with 38% of land ownership being held by women.

Margarita Guerrero, FAO, explained the methodology for producing proxy estimates for SDG Indicator 5.a.1. She stressed the wide availability and standardization of surveys, which include questionnaires targeted at both the individual and household levels.

Irene Toma, FAO, explained the application of small area estimation using the Fay-Herriot model to assess SDG Indicator 5.a.1 and produce more reliable district-level estimates in Nepal from demographic and health survey data.

Livia Montana, Demographic and Health Survey Program, noted that all surveys should be country-owned and country-led and that a standard approach for considering SDG proxy indicators is a priority.
Pietro Gennari, FAO, said every USD 1 invested in data production systems generates a USD 32 return. He said timely data and sufficiently disaggregated data enable efficient actions on policy issues and can facilitate a tailored approach to addressing the data needs of specific user groups.

**Integrating Population, Displacement and Geospatial Data in Humanitarian Emergencies:** On Thursday, 27 April, this session centered on Ukraine as an example of how having the right data at the right time is critical for effective humanitarian crisis response.

Ihor Verner, Director-General, State Statistics Service, UKRAINE, outlined challenges related to gathering population data in the face of massive outflows of people since the war began, and voiced optimism that recent work with mobile operators could provide accurate population estimates.

Sebastian Steinmüller, UN Refugee Agency (UNHCR), explained the problem of double counting as many refugees seeking asylum fled initially to one country, then moved to another to reunite with family members.

Karolina Krelinova, Program Manager, International Organization for Migration Ukraine, noted the wide area of cellphone coverage in Ukraine has allowed the production of relatively precise data sets indicating the share of the population experiencing internal displacement.

Andrew Tatem, University of Southampton, emphasized the importance of understanding and accounting for biases when using multiple data sources. Romesh Silva, UN Population Fund (UNPFA), highlighted the importance of population projections using disaggregated data, to ensure that crisis response reaches those most in need.

Ana Maria Pereira, UN Office for the Coordination of Humanitarian Affairs, noted that according to current estimates, 30% of the Ukrainian population has fled their homes.

**Maximizing the Use and Value of Data for Better Decision-making**

This thematic area focused on efforts to add value to data through better analysis and communication to improve data literacy and ensure the full use of data for bettering lives through the agency, respect, and inclusion of everyone.

**High-level Panel:** The high-level plenary on this thematic area was held on Wednesday, 26 April, and was moderated by Sree Sreenivasan, CEO, Digimentors.

Jeanne Holm, Deputy Mayor, City of Los Angeles, US, said accurate data is necessary for city planning and highlighted the necessity of equity to understand the needs of populations.

**New Developments in Governance of Cross-border Data Flows:** This session, held on Tuesday, 26 April, was moderated by Bob Fay, Centre for International Governance Innovation (CIGI), discussed, among others, promising developments on the role that trade agreements can play in data regulation.

Henry Gao, Singapore Management University, described the US, China, and the EU as the three global digital kingdoms. Discussing cross-border data flows, he noted that: the US prioritizes digitized products and self-regulation; China focuses on physical goods under heavy government regulation; and the EU has a strong tradition of human rights protection.

Lorrayne Porciuncula, Executive Director, Datasphere Initiative, described data sandboxes as nimble digital spaces for agile governance of data across borders that can decrease legal and regulatory uncertainty and increase market entry.

Alex He, CIGI, identified some challenges in existing laws and regulations on data export in the country, including vague and broad definition of key terms such as data processors, which are defined differently across laws.

Patrick Leblond, University of Ottawa, called for a common standards agreement to enable countries to develop common data flow permits and data regulatory mechanisms.

Chris Maloney, Hewlett Foundation, said that in the hands of policymakers, data is power and unlocking its value depends on who has control of it and who can access and use it.

Miosotis Mercelia Rivas Peña, Director General, National Statistics Office, DOMINICAN REPUBLIC, stressed the importance of aligning the production of statistics with national planning and broader and sectoral development strategies.

On maximizing the visualization of data, Li Pengde, Vice President, Ministry of Natural Resources, CHINA, mentioned the importance of timing and integration of data with good science.

On the role of the private sector in generating more usable data, Zhen Rixin, Alibaba Lingyang, highlighted that his company has the necessary infrastructure to provide data and make it more exchangeable across different enterprises and sectors.

During the session, participants, through an online survey on Slido, rated openness and access as the most effective way of maximizing the value of data.
Susan Ariel Aaronson, George Washington University, described digital trade regulations for AI, stating, among others, that trade agreements do not clarify how data can be shared or who is liable when AI is inaccurate.

Building the Evidence to Rebuild Trust in Governance Systems: This session held on Tuesday, 26 April, discussed how to tackle the current crisis of credibility in governance systems around the world.

Beate Trankmann, UN Development Programme (UNDP), welcomed progress on data availability for governance in recent years. She mentioned that the SDGs have enabled the availability of comparative governance data, adding that nearly 40% of countries have developed indicators for SDG 16 (peace, justice, and strong institutions). She acknowledged that better data does not automatically lead to better governance systems. She noted that such data remains useful for strengthening accountability to the public, which can boost public confidence and lead to better policy implementation.

Ines Kharrat, Office of the Presidency, TUNISIA, spoke about the integration of SDG indicators within her country’s government.

Vebjørn Aalandslid, Deputy Head of Statistics, NORWAY, gave a detailed presentation of Norway’s centralized statistics system which is open, transparent, and characterized by clear guidelines.

Dilek Fraisl, International Institute for Applied Systems Analysis (IIASA), presented research findings on the potential for citizen-generated data to be used in SDG monitoring, saying that over 30% of SDG indicators have the potential for citizen science to contribute. She reported that in 2022, Ghana became the first country to use citizen-generated data to officially report on SDG Indicator 14.1.1b on plastic debris density.

Datos Abiertos NL: Local Data to Solve Social Challenges: This mini session, held on Tuesday, 26 April, explored the work of the Datos Abiertos NL platform, which means open data platform in Spanish. The platform seeks to use data and statistics to improve the lives of people, and allow them to distinguish facts from misinformation and understand the world around them. Following a short explanatory video, María Teresa Treviño Fernández, President, State Institute of Transparency, Access to Information and Protection of Personal Data, MEXICO, described two open data platforms, Data Abiertos Nuevo León and Info Nuevo León, which both: share and analyze data for evidence-based policy making; improve citizen engagement, increase transparency in local governance; and add value to efficient public services while training local governments on open data practices.

Global Data Barometer: Measuring the State of Data for Public Good and the Achievement of the SDGs: This session on Thursday, 27 April, was moderated by Shaiza Badiee, Open Data Watch, and Silvana Fumega, Global Data Barometer. Fumega described the Barometer as a multi-dimensional index that assesses countries against metrics focused on data for the public good.

Francesca Perucci, UNSD, recalled that when the SDGs were adopted in 2015, UNSD had to face new data challenges, such as the need to understand their interlinkages.

Fernando Perini, International Development Research Centre, CANADA, said that all countries ranked in the Barometer have the opportunity to learn from each other, adding that good practice “comes from everywhere.”

Joseph Foti, Open Government Partnership, pointed out that the Barometer is the only global database with open data on government lobbying. Laura Meggiolaro, Land Portal Foundation, explained the unique challenges with land data, including their cross-cutting and multi-dimensional character and that they involve power dynamics from outdated systems often developed under former colonial regimes.

Aura Martinez Oriol, Global Initiative for Fiscal Transparency, said her initiative has been working on transparency around public budgets and their contribution to the SDGs.

Georg Neumann, Open Contracting Partnership, noted that climate resilience cannot be addressed without open data. He discussed an example in Assam, India, where an intelligent open data model revealed that most vulnerable communities lacked sufficient funding to build back infrastructure following natural disaster.

A Seat at the Table: Engaging with Decision-makers to Better Understand and Address Data Needs for Evidence-based Policy Making: On Thursday, 27 April, this session was moderated by Vibeke Oestreich Nielsen, UNSD. The session
shared experiences from the Data4Now initiative on how producers and users of data can work together effectively to meet national decision-making needs.

Do Thi Thu Ha, General Statistics Office, VIET NAM, described the national statistics indicator system for all core indicators in the country, including for sustainable development, logistics, the digital economy, and gender issues.

Monirul Islam, Prime Minister’s Office, BANGLADESH, mentioned the importance of a monitoring and evaluation framework for data validation and authentication, noting his country was the first to establish an SDG implementation tracker. Using an example of poverty alleviation estimation, Halima Neyamat, UN Resident Coordinator’s Office in Bangladesh, stressed that timely evidence-based Big Data is key for resource allocation in SDG monitoring and reporting.

Charles Lebon Mberi Kimpolo, Director, AIMS, underlined the importance of UN data groups, as Bangladesh has established, to “go beyond statistics” and provide impact-oriented technical assistance to governments.

Andrea Ordaz-Németh, Central Statistical Office, HUNGARY, mentioned that relationships form the core of linking data with policymakers. She said that NSOs, in order to ensure value-added data, must find out what the data users require rather than make assumptions.

**Building Trust and Ethics in Data**

This thematic area covered efforts to apply ethical and professional principles in all data holdings and the data value chain within the data ecosystem. The sessions under this thematic area demonstrated, among others, open data and interoperability practices, the application of quality assurance, and data protection policies.

**High-level Panel:** The plenary session on this topic was moderated by Sree Sreenivasan, CEO, Digimentors on Wednesday, 26 April, and focused on trust in data pertaining to transparency, openness, and visibility of data.

Shaida Badiee, Open Data Watch, noted that while digital transformation is important, caution is required to apply safeguards for privacy, particularly in the context of open data sources.

Drudeisha Madhub, Data Protection Commissioner of the Data Protection Office, MAURITIUS, reported on the Commission’s work in ensuring compliance and enforcement of her country’s data protection legislation, investigation of data breach complaints, and certification of data providers and users.

Batdavaa Batmunkh, Chairman, National Statistics Office, MONGOLIA, described strategies aimed at data protection in his country to create, among others, visibility of data to users while enhancing transparency.

Natalia Carfi, Executive Director, Open Data Charter, reported on the growing interest in open data. She drew attention to the Festival de Datos—a data festival planned for November 2023 in Uruguay, which will include an open data session by civil society.

Yusuf Murangwa, Director General, National Institute of Statistics, RWANDA, noted the need to demonstrate capacity, legitimacy, competence, and privacy in the data ecosystem.

A Slido survey was offered to participants and revealed that trust, governance, and partnership were identified as key areas for data stewardship.
and thus improve diagnoses and treatment. He stressed the importance of political will in protecting data security and patient privacy.

Stephen MacFeely, World Health Organization (WHO), stressed that to develop digital health products to improve health outcomes, data management and use is essential.

Yongyi Min, UN DESA, called for increased investment for disaggregated health data and guidelines on how data is collected, stored, accessed, and managed. She said the UN system can develop clear policy and governance strategies to build national health statistical capacities within a broader data ecosystem.

Steve Ollis, John Snow Incorporated, highlighted the need to enhance interoperability of systems, ensure gender equity in access to digital technology infrastructure, and establish a global governance framework to prevent countries from “reinventing the wheel” on the digitization of health data while ensuring accountability of different actors in the health data landscape.

Preparing for the Next Pandemic: Applying a System-wide Approach to Health Data: On Wednesday, 26 April, Shaida Badiei, Open Data Watch, moderated this session, which considered challenges and opportunities in applying a system-wide approach to health data, and outlined best practices for health data governance.

Stephen MacFeely, WHO, shared lessons from the pandemic, and stressed the need to shift from a focus on “health information systems” towards “information systems for health” to better understand determinants and outcomes.

Caroline Mutwiri, National Bureau of Statistics, KENYA, highlighted the role of governments in enabling a system-wide approach by facilitating coordination for dialogue among ministries and agencies.

Rachael Beavan, UNESCAP, noted that across the Asia Pacific region, 64 million children are not registered, adding that some countries are now allowing women to register births in the health facility where they give birth.

Onalenna Seito-Kgokwe, Ministry of Health and Wellness, BOTSWANA, drew attention to the need for strategic alliances to foster collaboration on issues of data and underscored the importance for ministries to understand who is collecting what data, and how, to design effective policy interventions.

Johannes Jütting, Partnership in Statistics for Development in the 21st Century (PARIS21) Secretariat, concluded the session, urging participants to focus on the local level to effectuate change.

Emerging Trends and Partnerships to Develop the Data Ecosystem

This session covered efforts to harness the data revolution to support global, regional, national, and sub-national data ecosystems for implementation of the CTGAP. The sessions under this thematic area demonstrated, among others, the benefits of NSO leadership, improved coordination and cooperation mechanisms, and capacity improvements.

High-level Panel: This high-level plenary focused on how to mobilize data for global priorities, such as climate change, conflict, and COVID-19, and strengthen implementation of the CTGAP. The session was moderated by Kate Warren, Executive Vice President, Devex Media.

Nnenna Nwakanma, International Digital Health and AI Research Collaborative (I-DAIR), said, in the current data ecosystem, policymakers, women in data, and mental health require more visibility. She emphasized the need to create value in data to attract investment and societal support.

Karla Yee Amezaga, World Economic Forum (WEF), reported on the need to ensure regulations and policies in anticipation of rapidly transforming digital technologies. She further highlighted the importance of citizen-generated data.

Elisa Dhuli, Institute of Statistics, ALBANIA, noted that her country has developed a national strategy for scientific research, technology, and innovation to foster good governance and inclusive investments.

Claudia Wells, Development Initiatives, said no data is too small as long as it is inclusive. She noted the importance of creative engagement through art and music and the need to ensure that data collection is not extractive, but participatory.

Camilo Andrés Mendez Coronado, National Administrative Department of Statistics (DANE), COLOMBIA, called for investing in regional-level data initiatives and highlighted ongoing collaborations among NSOs in Latin America.

Prim Rajasurang Wongkrasaemongkol, ASEAN Data Science Explorer, called for youth empowerment in data about statistics and increased cyber security to protect data from youth that spend over 40% of their time online.

SDG 16 (Peace, Justice and Strong Institutions):
Measuring Progress and Reporting Challenges: This session, moderated by Francesco Gosetti, National Institute of Statistics (ISTAT), ITALY, discussed methodologies and approaches adopted by countries to measure SDG 16.

Mariana Neves, UNDP Oslo Governance Centre, presented the development of 16 modules to support national surveys of, among others, access to justice and prevention of corruption, discrimination, violence, and human trafficking.

Adrián Franco, Vice President, National Institute for Statistics and Geography (INEGI), MEXICO, presented national surveys on governance and crime related to victimization in households, businesses, urban security, and crime and corruption. These surveys, he said, form a basis for public policies.
Salomé Flores Sierra Franzonir, UN Office on Drugs and Crime-INEGI Centre of Excellence, presented the Manual on Corruption Surveys with guidance on how to measure corruption. She highlighted the importance of using SDG 16 bribery indicators.

Aurelia Spătaru, Deputy General Director, National Bureau of Statistics, MOLDOVA, reported on her country’s crime assessments to address low levels of public trust in the justice system.

Maria Giuseppina Muratore, ISTAT, shared the Italian experience in victimization surveys, including measurements of homicide and femicide data. She mentioned, among others, the use of data from administrative data sources and population surveys.

**How Public-Private Data Collaboration Helps Governments Address Crises:** This session, held on Tuesday, 26 April, was dedicated to the emerging practice of combining data sets from public and private sources. It showcased the key role played by companies such as LinkedIn, Meta, and Waze during the COVID-19 pandemic to address policy and social needs.

Holly Krambeck, World Bank, presented the Development Data Partnership which connects international organizations with for-profit companies on a common platform. She said the Partnership currently has projects supporting 13 SDGs.

Casey Weston, Senior Manager, LinkedIn Data for Impact, underscored the need to be selective on which data sets they share because of privacy concerns.

Sahiti Sarva, Data Scientist, World Bank, described a crisis response to the 2023 earthquake in Turkey that combined public data sets on damaged buildings with data from Meta on relative wealth and Ookla, an App that enables users test their Internet speed, to evaluate economic impacts of the earthquake and understand the pace of economic recovery across different regions and communities.

Riza Teresita Halili, UNDP, observed that COVID-19 changed our relationship with data and put a premium on real time data since it means saving lives.

Laura McGorman, Meta, described a collaboration with the World Bank to gather data on small business owners, illustrating that during the pandemic, much higher closure rates of female-owned businesses took place due to school closures.

Qiuyun Shang, IMF, and Mahmut Kutlukaya, IMF, presented the Green Recovery Data Hub, a project that helps countries develop strong policies for post-COVID economic recovery.

Robert Marty, World Bank, spoke about a project that studied road safety in Kenya relating to effects of COVID curfews, which led a spike in traffic accidents when the curfew was lifted.

**Bringing Youth to Data Leadership: The Los Angeles Data Science Federation:** This mini session held on Tuesday, 25 April, explored the City of Los Angeles Data Science Federation’s work to tackle the city’s data and technological problems. Jeanne Holm, Deputy Mayor, City of Los Angeles, described the city’s Data Science Federation, which brings together 18 universities and colleges to expose city staff to new approaches and technologies. She said it recruits young people to city government by showing them the impact they can have in their neighborhood, while giving students real-world solutions to problems that can help build their résumés and have a big impact.

**Learning Labs**

Learning and Teaching Official Statistics with the Help of the UN Sustainable Development Group: On Wednesday, 26 April, this hands-on learning session, moderated by Elena Proden, UN Institute for Training and Research (UNITAR), targeted the learning and training of NSOs.

Samir Issara, High Commission for Planning, MOROCCO, emphasized the need for e-learning training strategies, comprised of webinars and massive open online courses (MOOCs), to complement face-to-face training and improve access and timely delivery of training.

Vibeke Oestreich Nielsen, UNSD, reported on needs identified by the Global Network of Institutions for Statistical Training (GIST) to understand gaps for prioritizing training among NSOs. She noted that GIST is piloting a toolkit that will support countries to identify, prioritize, and meet training needs to produce official statistics.
Madina Imaralieva, UNITAR, led a demonstration of the UN Sustainable Development Group platform that provides an overview of learning opportunities on statistical data, which can be filtered for each of the SDGs. She introduced courses on SDG monitoring tools and guidance, an e-handbook on SDG indicators, and national metadata for the SDGs. Learning lab participants explored the UN Sustainable Development Group platform with their own learning needs and shared their results.

**Demonstration Events**

*Using the World Risk Poll to Improve Global Safety:* On Wednesday, 26 April, Ed Morrow, Lloyd’s Register Foundation, described the World Risk Poll, which assesses and compares perceptions and experiences of risk, often where little or no official safety data exists. He described how the Poll uses probability-based random sampling across four modules, including risk and safety prior to and during the COVID-19 pandemic, disaster resilience, misuse of personal data, and violence and harassment at work. On examples, he showed Poll results highlighting that of people who experienced harassment at work, over 50% experienced such harassment three or more times, suggesting that “if it happens once, it’s likely to happen again.” He also showed Poll results indicating that over 40% of Internet users are afraid of having their personal data misused, with personal income being a major driver for their subjective worry about personal data theft. He stressed that the Poll can be useful for SDG progress tracking.

*Empowering SDG Policy Makers with Spatial Data and Analytics:* On Wednesday, 26 April, Beate Trankmann, UNDP, stressed that for the first time since the Human Development Index was established, it has regressed for two years in a row due to a multitude of crises, including the COVID-19 pandemic, conflict, and climate change. She stressed that cutting-edge data could provide “air under our wings to make up for ground lost” on human development. She described the UNDP GeoHub, which uses geospatial data to capture and understand the local dynamics on complex development challenges on the ground.

Babatunde Abidoye, UNDP, illustrated the application of the GeoHub, using examples of loss and damage associated with climate change and making a socio-economic case for energy access investments to target “who is being left behind” regarding electricity access.

Inya Nlenanya, UNDP, concluded the session with a demonstration of the GeoHub by exploring multidimensional aspects of poverty in Zambia, and highlighting how to interact with the data and use filters for specific queries.

**High-level Panel: Programme Committee**

This session, held on Thursday, 27 April, was moderated by Shaida Badiee, Open Data Watch. Elsa Dhuli, Institute of Statistics, ALBANIA, drew attention to the work of the Committee to oversee the Forum’s Programme, noting its role in deciding the thematic areas, content, and format of the Forum, and recommending key speakers, data stories, and slogans.

On how the Forum has evolved since its emergence in 2017, Francesca Perucci, UNSD, emphasized, among others, the importance of the Forum’s significant virtual participation in 2020 and called for greater engagement on understanding the work of virtual participants and how to improve engagement with them.

Camilo Andrés Mendez Coronado, DANE, COLOMBIA, stressed that the Fifth World Data Forum, which will convene in Medellín in 2024, will emphasize diversity and inclusiveness and how to build partnerships on data through these themes.

Claudia Wells, Development Initiatives, said the data community has successfully invited many “into the tent,” but urged the Programme Committee to focus on finding other tables to sit at.

Xuming He, President-Elect, ISI, recommended a greater focus on regional meetings in view of the significant resources required for international gatherings.

Babatunde Abidoye, UNDP, pointed to strong interest in work on spatial data and new trends driven by the COVID-19 pandemic.
On the evolution of the Forum over time, Nnenna Nwakanma, I-DAIR, stressed the importance of what she called “the X factor,” referring to greater emotional engagement, artistic interventions, relational approaches, and more politically active discussions that can bring in youth and other stakeholders.

An online Slido survey noted that on emerging challenges, the UN World Data Forum has best addressed fostering cooperation and coordination among all stakeholders. Perucci emphasized that the Forum is “meant to be a process and not just an event,” and called for better progress on prioritizing the needs of developing countries in vulnerable situations and mobilizing strategic investments.

Closing Ceremony
On Thursday, 27 April, the closing ceremony, moderated by Mao Shengyong, Deputy Commissioner, NBS, CHINA, began with a short video that recapped Forum highlights.

UN Deputy Secretary-General Amina J. Mohammed, in a video message, applauded the progress achieved since the 2017 UNWDF in Cape Town. “Today we see data discussed at a political level, and have come to understand the value of data as a strategic asset that is key to making decisions for people and planet,” she said, adding, “investing in data has never been more urgent.”

Mao Youfeng, Deputy Commissioner, NBS, CHINA, said China will develop international data governance standards to achieve global aspirations of overcoming the digital divide. He stated that “enhancing the common welfare is the common goal,” reiterating that data can drive future growth.

Xu Wenguang, Executive Vice Governor, Zhejiang Provincial Government, recalled the message delivered by Chinese President Xi Jinping, on the need to advance global digital governance and international cooperation in order to inject new vitality into sustainable development.

Yao Gaoyuan, Mayor, City of Hangzhou, said the Forum and the Hangzhou Declaration will leave a deep imprint on the history of Hangzhou, and reminded participants that digital technology has become “the new card for Hangzhou to present itself to the world.”

Francesca Perucci, UNSD, reported that UNWDF 2023 has showcased concrete achievements and practical solutions that can be scaled up with the necessary political will. She reiterated that sustainable development has a financial cost and that an urgent and sustained increase in the scale and level of investment in data from public, private, and philanthropic sectors is crucial to make progress on the SDGs. She announced the Hangzhou Declaration as an accelerator of the CTGAP and presented a video highlighting its main objectives.

Youfeng offered the gift of a traditional painted scroll named “The Beauty of Hangzhou” to Colombia, host of the Fifth UN World Data Forum. Leonardo Trujillo Oyala, NSO, COLOMBIA, thanked the outgoing UNWDF 2023 host for the souvenir and welcomed participants to the city of Medellin in November 2024.

Stefan Schweinfest, Director, UNSD, stated that over 10,000 active visitors attended the Forum online, with over 100 sessions and 400 speakers. He closed the meeting at 6:22 pm.

Hangzhou Declaration: Accelerating Progress in the Implementation of the CTGAP
The Hangzhou Declaration reflects on, among others, the high quality, timely, open, and inclusive data required to achieve the SDGs within the remaining seven years of the 2030 Agenda for Sustainable Development.

The Declaration commits forum members to renew their commitments to: work as a global community under the UN, which, through the UN Data Strategy and our Common Agenda, sets out a joint vision for a better whole-of-UN data ecosystem and measurement approach for people and the planet; and revitalize the CTGAP through collective action to overcome the multitude of crises faced on the path to modernized and stronger data and statistical systems to support achievement of the SDGs.

Parties also commit to establishing new priorities under a streamlined set of CTGAP strategic areas covering:
• coordination and strategic leadership;
• innovation and modernization of national data and statistical systems;
• dissemination and use of sustainable data; and
• multi-stakeholder partnerships to mobilize resources and coordinate efforts for statistical capacity development in infrastructure and human resources.

Regarding the CTGAP, Forum members commit to define a system for periodic monitoring and evaluation of progress and lessons learned, with clear and easy to communicate ambitions linked to national and regional programmes and plans.
On the organizing of future fora, they commit to focus on milestones in their collective action to support the launch of new initiatives, provide a strategic reflection point, and take stock of progress on implementation of the CTGAP, which remains the common framework for the design and implementation of country-led capacity development activities.

On financial investments, the Declaration urges the international data community and governments to recognize the financial cost of sustainable development and promote marginal investments in data and statistical systems.

The Declaration also calls for:
• accelerated action and the development of a data stewardship approach aligned to the CTGAP to drive the innovation and partnerships required for responsive alignment to the needs of society, thereby demonstrating the value of data to enable decision making at all levels; and
• an urgent and sustained increase in the level and scale of investments in data and statistics to strengthen statistical capacity in low-income countries and fragile states, close data gaps for vulnerable groups, and enhance country resilience in the current context of economic crisis, conflict, climate change, and increased food insecurity.

Upcoming Meetings

The Geospatial World Forum (GWF): This annual gathering of professionals from the geospatial and associated sectors will bring together participants from public policy, national mapping agencies, private sector enterprises, multilateral and development organizations, and scientific and academic institutions. dates: 2-5 May 2023 location: Rotterdam, the Netherlands www: geospatialworldforum.org/index.html

Multi-Stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum): The eighth edition of this Forum will focus on the theme “Science, technology and innovation for accelerating the recovery from the coronavirus disease (COVID-19) and the full implementation of the 2030 Agenda for Sustainable Development at all levels.” dates: 3-4 May 2023 location: UN Headquarters, New York www: sdgs.un.org/sd/tsf2023

Second UN-Habitat Assembly: The UN-Habitat Assembly was established by the UN General Assembly (UNGA) in 2018 upon dissolution of the UN-Habitat Governing Council. The Assembly is a universal body composed of the 193 UN Member States. It convenes every four years. dates: 5-9 June 2023 location: Nairobi, Kenya www: unhabitat.org/governance/un-habitat-assembly

ISI World Statistics Congress: The Congress is the leading event on statistics and data science worldwide, bringing together more than 2,000 professionals from academia, official statistics organizations, the health sector, and the private sector. It is organized by the International Statistical Institute. dates: 16-20 July 2023 location: Ottawa, Canada www: isi2023.org/conferences/ottawa-2023/

International Data Week 2023: Organized by CODATA, World Data System, and the Research Data Alliance, this event brings together a global community of data scientists and data stewards; researchers from all domains; data, interoperability and informatics experts from all fields; and industry leaders, entrepreneurs, and policymakers. dates: 23-26 October 2023 location: Salzburg, Austria www: internationaldataweek.org/idw2023/

SDG Summit: The Summit is the quadrennial meeting of the High-level Political Forum on Sustainable Development (HLPF) under the auspices of the UN General Assembly. The 2023 Summit will be the second since the adoption of the SDGs and will take place at the midpoint of implementation of the 2030 Agenda for Sustainable Development. dates: 19-20 September 2023 location: UN Headquarters, New York www: hlpf.un.org/sdg-summit

Festival de Datos: This event brings together more than 400 delegates from governments, multilateral organization, the private sector, academia, and civil society, and builds on the first Data for Development Festival held in Bristol, UK, in 2018. dates: 7-9 November 2023 location: Punta del Este, Uruguay www: data4sdgs.org/festivaldedatos

Fifth UN World Data Forum: The Fifth UN World Data Forum will bring together data practitioners, statisticians, policymakers, and other stakeholders to spur data innovation, nurture partnerships, mobilize high-level political and financial support for data, and build a pathway to better data for sustainable development. dates: 18-12 November 2024 location: Medellín, Colombia www: unstats.un.org/unsd/undataforum/about/

For additional upcoming events, see sdg.iisd.org/