EYE ON EARTH SUMMIT 2015 HIGHLIGHTS: TUESDAY, 6 OCTOBER 2015

The 2015 Eye on Earth Summit began on Tuesday morning in Abu Dhabi, United Arab Emirates (UAE) with an opening ceremony and welcoming plenary.

Seven sessions convened in the afternoon, focusing on data demand in areas such as policymaking, biodiversity monitoring, the Arab region, sustainable development, meeting donors' information needs, health and business performance.

In the evening, launch events highlighting new initiatives and side events were also held. Following an evening reception, delegates heard a wrap-up of the Summit's first day and the announcement of the winner of the Data Visualization Challenge, before gathering for a gala dinner.

OPENING CEREMONY: CONVENE, CONVERGE, COLLABORATE

The opening ceremony, moderated by Nima Abu Wardeh, Broadcast Journalist, began with an introductory video to illustrate the role of environmental data in overcoming global sustainability challenges. Razan Khalifa Al Mubarak, Secretary-General, Environment Agency – Abu Dhabi (EAD), noted that a transformation towards high quality and comprehensive science, technology and citizen knowledge will be critical in overcoming issues such as poverty, economic development and the protection of the environment. A film outlining the establishment, mission and initiatives of EAD's Abu Dhabi Global Environmental Data Initiative (AGEDI) followed her remarks.

Anwar Gargash, Minister of State for Foreign Affairs and Minister of State for Federal National Council Affairs, UAE, positioned the Eye on Earth Summit in the context of the recent adoption of the Sustainable Development Goals (SDGs) by the UN General Assembly (UNGA). He described UAE's long-term support for the SDG process, including investments in new energies, support for a blue economy, and working with 25 countries to eradicate poverty. He stressed that accurate and timely environmental data, as well as data partnerships, are critical in global efforts to tackle climate change and achieve the SDGs.

Achim Steiner, Executive Director, UN Environment Programme (UNEP), said that the environment is no longer viewed as an add-on, but part of the DNA of the SDGs, which themselves represent the first time all nations have come together to work in the same direction. He highlighted "big data" as crucial in developing systemic approaches for global responses to problems with local impacts, noting that schemes connecting the world of data with practical solutions will guide progress in the future.

Keynote Speakers during the opening ceremony

Rashid Ahmed Mohammed Bin Fahad, Minister, UAE Environment and Water, underscored the importance of data in supporting UAE's environmental agenda in its national strategy. He stated that, for a green economy, data is important to enhance competitive capabilities and suggested data can help close the gap between developed and developing countries.

WELCOMING PLENARY: DATA REVOLUTION AND INSTITUTIONAL TRANSFORMATION

The opening plenary began with Mohammed Al Ahbabi, Director General, UAE Space Agency, who highlighted the importance of space science for capacity building, noting the commitment of the UAE Space Agency in contributing to Earth observation, data monitoring and management at the local, regional and international levels to support global sustainability.

Thani Al Zeyoudi, Director of Energy and Climate Change, UAE Ministry of Foreign Affairs, stressed that achieving the SDGs will require growing institutions and cultivating a culture for the generation, review, and sharing of data. He noted that "robust data is not just about monitoring progress; it is required for decision making and policy setting." He outlined UAE initiatives focused on ensuring consistent statistical data, strengthening interagency coordination, developing a national inventory of greenhouse gas (GHG) emissions, and establishing key performance indicators, including green energy targets.

Naoko Ishii, CEO, Global Environment Facility (GEF), pointed to the SDGs as a clear recognition that protection of global commons is essential for achieving development ambitions. She highlighted the need for greater attention to accessibility and affordability of data, noting that deeper analysis was required to enable links between science and data to enable effective policymaking.

Mathis Wackernagel, President, Global Footprint Network, described the work of the Global Footprint Network, which uses an ecological matrix to assess biocapacity reserves and deficits. Stating that ecological debtors have been increasing worldwide, he underscored that addressing a country's ecological footprint status depends on biocapacity reserves, financial status and drawing on data to help guide decision making.

Robbie Schingler, Co-Founder and President, Planet Labs

Robbie Schingler, President, Planet Labs, highlighted the Global Partnership for Sustainable Development Data under the context of a global sensing revolution combining consumer technology, "big data" and improved connectivity to enhance information transparency across the planet. He described the Dove Satellite, which collects and presents low-cost, daily online delivery of millions of square kilometers of geospatial data monitoring of, *inter alia*, energy infrastructure, agriculture and forestry with beneficial implications for the achievement of 15 out of 17 SDGs.

Pierre-Yves Cousteau, Founder, Cousteau Divers, cited estimates that ocean ecosystems have an annual economic value of US$2.5 trillion. He presented Project Hermes, a new open source, participatory initiative that is collecting real time and historic data on global ocean temperatures through dive profiles and funded in part through crowdsourcing.

TRACKS

ADDRESSING POLICYMAKING DEMAND FOR DATA: DIALOGUE BETWEEN DECISION MAKERS AND PROVIDERS: Moderating the session, Felix Dodds, University of North Carolina, summarized the importance of indicators at the global, national and sub-national levels to track progress on sustainable development.

Nawal Al Hosany, Masdar, described data as a critical ingredient in making decisions and building a knowledge economy drawing on the experience of Masdar's initiatives to fill data gaps in the UAE.

Moderator **Felix Dodds**, University of North Carolina

David Rhind, Nuffield Foundation, underscored the importance of: drawing on quality statistics; defining what quality data looks like; bridging gaps; building capacity; making data accessible; and communicating data effectively.

Kathrine Brekke, ICLEI – Local Governments for Sustainability, described cities' data needs and what they do with data, drawing on the city of Helsinki, Finland, as an example, and outlined the role of citizen data collection, international standards and the World Council on City Data.

Ingrid Dillo, Data Archiving and Networked Services, underscored the importance of the quality and technical integrity of data, suggesting basic data certification and standards to guide management of data.

Robert Gurney, University of Reading, presented on the Belmont Forum and Challenge, born out of the need to address environmental challenges through international collaboration and highlighted "big data" problems in environmental science, including volume, variety, veracity, velocity and data silos.

Marcos Silva, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), described CITES as a good example of data collection and application to monitor and track species trade and provide policymakers with information to support more effective decision making.

The ensuing discussion covered: the role of citizen science; the need to invest in data and data management; the usefulness of consistency in data collection; and the importance of data sharing and of synchronizing data in the public and private sectors.

BIODIVERSITY: DATA GAPS FROM GLOBAL TO LOCAL PRACTICE: In a session moderated by Richard Jenkins, International Union for Conservation of Nature (IUCN), Tim Hirsch, Global Biodiversity Information Facility (GBIF), stressed that filling gaps involves mobilizing inaccessible data as well as generating new data. To illustrate, he discussed GBIF's work with Environmental Impact Assessment (EIA) experts in West Asia to engage new data-holding communities, create a data repository, improve quality of EIAs through transparency, and establish training platforms.

Franck Courchamp, French National Center for Scientific Research (CNRS), highlighted the Global Invasive Species Database, a peer-reviewed online database, which provides invasive species descriptions, pathways of introduction, management considerations and key references for over 850 invasive species.

Ackbar Joolia, IUCN, discussed the IUCN Red List assessment process, its role in policymaking and capacity development through assessment tools and "train-the-trainer" programmes. He reported the goal of assessing 160,000 species by 2020, focusing on plants, invertebrates and fungi and on arid, freshwater and marine areas.

Natasha Ali, IUCN, spoke of a Standard for the Identification of Key Biodiversity Areas, contributing significantly to the global persistence of biodiversity in terrestrial, inland water and marine environments by harmonizing existing approaches in identifying important sites for biodiversity.

Healy Hamilton, NatureServe, spoke of the Biodiversity Indicators Dashboard, an interactive, multi-spatial and flexible platform, which permits the visualization of information about biodiversity to fill gaps in national capacity to help reach objectives such as the Aichi Biodiversity Targets and the SDGs.

Gary Geller, Group on Earth Observations Biodiversity Observation Network (GEO BON), underscored the need to facilitate national and regional BONs to close data gaps and facilitate monitoring systems with end-to-end connectivity. He

described the 'BON in a Box' toolkit for establishing national observation systems and providing associated planning tools for harmonizing data sharing.

Majid Al Qassimi, EAD, highlighted evidence-based planning for biodiversity protection in the Emirate of Abu Dhabi for a number of species including dugongs, flamingos, and dolphins while detailing *ex-situ* conservation plans for reintroducing the Scimitar-horned Oryx. Al Qassimi identified regional biodiversity challenges including political will to translate data collected into decision making and the need for regional cooperation in data sharing.

ARAB REGION'S ENVIRONMENTAL DATA CHALLENGES: Ahmed Abdelrehim, Centre for Environment and Development for the Arab Region and Europe (CEDARE), and Adel Farid Abdel-Kader, Trend Green Knowledge, moderated this session.

Nadia Makram Ebeid, CEDARE, pointed to the gap in access to reliable and scientifically-based data. She spoke on "big data," explaining this phenomenon helps peer into the future and make sound decisions.

Taher Al Shakhashir, Minister of Environment, Jordan, underscored lack of coordination among environmental agencies as one of the dominant challenges facing the region.

Iyad Abumoghli, UNEP-Regional Office for West Asia (UNEP-ROWA), emphasized that while many institutions and activities related to data gathering have been established, the key is to select and use the right information to craft policies. He recommended creating clear rules and laws that facilitate collection and access to information, uphold transparency and recognize citizens' right to obtain data.

Ahmed Abdulmuttaleb Baharoon, Executive Director, AGEDI, highlighted the importance of the Arab region working together, saying problems related to water and climate change cannot be solved by one country alone.

Abdel-Kader referred to the three aspects of sustainable development (economic, social and environmental), saying the latter is most difficult because of the paucity of environmental data. On this challenge, he called for the Arab region to have a vision, strategy, plan and business model.

Fathia Abdel Fadil, UN Economic and Social Commission for Western Asia (UN ESCWA), pointed to challenges such as: the cross-cutting nature of problems that require environmental data; the high cost of conducting surveys; maintaining timeliness of data and periodicity of surveys; incompleteness of administrative records; difficulty in producing and disseminating aggregated data; and the expansion of Millennium Development Goal (MDG) 7 into five SDGs, with 46 targets.

Asma Aba Hussein, Arabian Gulf University, noted the rise in country reporting in recent years and highlighted her university's specialty in preparing this data and building the capacity of students in this field.

Mohammed Dawood Al-Ahmed, Environment Public Authority, Kuwait, gave an overview of the eMISK tool, a geo-environmental database for investors, researchers and universities.

Najib Saab, Arab Forum for Environment and Development (AFED), urged frankness in addressing data challenges, saying experts should be encouraged to write fact-based reports without fear of how they will be received. He described AFED's strategy of promoting the information gathered through social media.

Yasser Othman, EAD, offered closing remarks, thanking all the attendees and experts.

MEASURING PROGRESS TOWARDS SUSTAINABLE DEVELOPMENT: PRIORITIES TO MEET THE DATA DEMAND: Constanza Martinez, IUCN, opened the session, highlighting the integrated nature of the SDGs, compared to the MDGs, pointing to the fact that environmental issues have a major role to play in addressing goals on food security, water supply and health, among others.

Peter Stephenson, World Wide Fund for Nature (WWF), discussed, *inter alia*, WWF's conservation programme standards, noting key challenges to overcome, such as incomplete indicators, gaps in data coverage, and limited data-collection due to inadequate capacities and resources. He recommended the wider adoption of scalable indicators that can be disaggregated at different levels.

Simon Stuart, IUCN, underscored the successful integration of environmental, social and economic indicators into the SDGs. He pointed to taxonomic capacity as a key challenge in biodiversity monitoring, suggesting the need for novel techniques to enable greater participation of citizen scientists.

Tanya Bryan, GRID-Arendal, discussed the importance of marine data for achieving the SDGs, noting that healthy marine ecosystems are capable of contributing to several non-marine SDGs. She underscored, *inter alia*, the need to ask the right questions to use data effectively, and the need to develop metrics around scales to achieve global and national targets.

Eugenie Regan, UNEP-World Conservation Monitoring Centre, discussed the need for interconnected data and sharing of solutions across organizations to enable decision makers to create smarter and more sustainable economies. She noted poor progress on the target of halting biodiversity loss by 2020, highlighting increased pressure on species despite increased awareness.

Guido Schmidt-Traub, Executive Director, UN Sustainable Development Solutions Network (SDSN), underscored progress on availability of environmental data, but cautioned that improved understanding is needed on how to use this data effectively to develop metrics for better policymaking.

Discussions followed, considering, among other things: civil society participation in monitoring; data access across different domains; and mechanisms for monitoring the quality of data.

DONORS' DEMAND FOR DATA: Barbara Ryan, Secretariat Director, GEO, moderated the session and introduced the panelists.

Sylvia Lee, Skoll Global Threats Fund, underscored the importance of considering how to gather and make data accessible when designing projects, suggesting, among others things: working with users from the outset so projects are
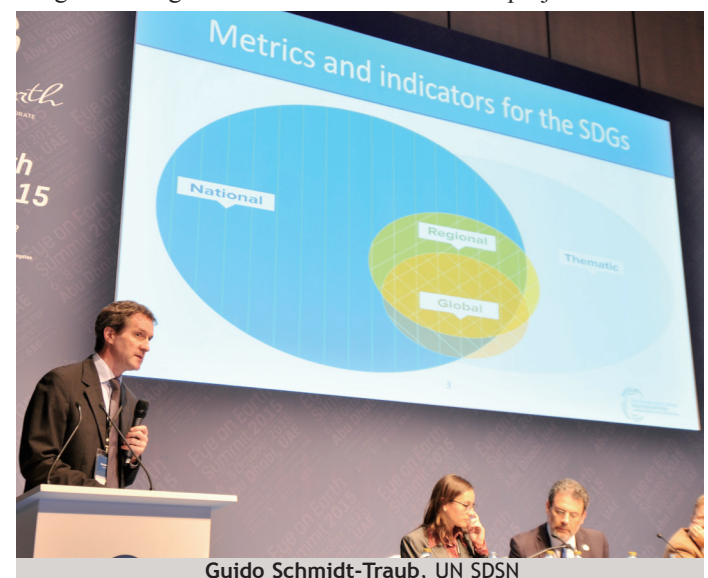
Guido Schmidt-Traub, UN SDSN

designed around their needs; using data from government agencies; and working with journalists to enable accurate storytelling that serves the needs of users. Noting that 90% of data had been generated in the last two years, she pointed to the need to harness "big data" through innovative sources such as social media.

Jackson Kimani, Clinton Foundation, described the System for Land-based Emissions Estimation in Kenya (SLEEK) project, which aims to: contribute to data collection required for Kenya's UN Framework Convention on Climate Change (UNFCCC) reporting; support land-sector policymaking; and make relevant data accessible. He noted the importance of standards and protocols to govern data generation for enabling better data collection and help countries leverage aid.

Tom Cummings, Tällberg Foundation and the Global Alliance for Banking on Values, discussed how data could be used in foundation and activist decision-making processes. He noted the challenge for environmental and sustainable finance is how to effectively link social and environmental criteria in donor evaluation of projects.

Adel Farid Abdel-Kader, Trend Green Knowledge, pointed to the need for an information system that can track and compare progress and analyze financial needs for each of the SDGs, underscoring the importance of matching up the needs of donors and countries through improved communication. He highlighted the importance of intelligent development spending, through analyzing data on spending patterns and outcomes.

Discussions covered, *inter alia*: conditions attached to loans; monitoring impacts of foreign aid; geographical distribution of funding; and the importance of not losing track of data.

BUILDING KNOWLEDGE FOR HEALTHY LIVES: Jacqueline McGlade, UNEP, moderated the session, beginning with an overview of efforts to support assessment processes and provide public access to UN and country-level data through UNEPLive. She provided examples of assessing health-related impacts through, for example, UNEP's Affordable Air Quality Monitoring System.

Hayat Sindi, i2 institute for imagination and ingenuity, introduced an initiative called 'Diagnostic for All' using low-cost, portable and easy-to-use technology and linking science to community needs. Sindi urged greater imagination and out-of-the-box thinking in harnessing science for benefits at the community-level.

Hayat Sindi, Founder, i2 institute for imagination and ingenuity

Maria Neira, World Health Organization (WHO), discussed the Global Platform on Air Quality and Health, which will provide open access to data, guidance on ground measurements and air pollution indicators. She described WHO work to provide evidence-based guidelines, promote the role of health impact assessments and develop health indicators.

Joni Seager, Bentley University, identified three ways in which gender considerations are failing to be appropriately included within health and environment data: collecting gender-disaggregated data and then hiding it; focusing only on the household level; and failing to collect gender data altogether.

Parrys Raines, Climate Girl, cautioned that there is a lack of relevant data targeted at a young audience. She noted that the Climate Girl website strives to provide a global platform for youth to share their own climate change stories and solutions.

Iman Nuwayhid, American University of Beirut, presented data on health and ecological sustainability in the Arab region, emphasizing that despite improvements in child and maternal mortality rates, the region continues to be plagued by a high burden of disease, population pressures, food and water insecurity, as well as war-related displacements. Given this context, Nuwayhid urged environmental and public health professionals to play a greater role in managing for uncertainty.

ENVIRONMENTAL DATA FOR BUSINESS PERFORMANCE: Opening the session, Leon Bennun, The Biodiversity Consultancy, highlighted the session as the only one with a business focus at the Summit.

Scott Williams, PricewaterhouseCoopers, described embedded challenges within the world's economic paradigm and highlighted opportunities for the private sector to include sustainability in their business models.

Bartholomew Judd, European Investment Bank (EIB), outlined how better environmental understanding, in part though EIAs, can enhance business performance by increasing access to finance and reducing regulatory and reputational risks.

Simon Wilson, Five Oceans Environmental Services, described data demand, data utilization and challenges in data management from the private consultancy perspective. He highlighted the role of consumer demand, social media, best practices, contractual clauses around intellectual property and confidentiality, regulations, and financial institutions and funding agencies, in facilitating or inhibiting data consistency, availability and transparency.

Bennun presented on the role of biodiversity and natural capital accounting in businesses, and the current status of available global data. On data gaps, he called for: increased funding; regulatory approaches requiring companies to share data; and strategic assessments to join thinking and planning and reduce business data needs.

The ensuing discussion covered: limitations of social media; maintaining databases and paying for them; the narrative driving business engagement in sustainable development; supply chain visibility; and the role of consumer-driven demand.

DAY ONE WRAP-UP

Jacqueline McGlade, UNEP, gave a brief summary of the day's events, including the importance of data integration, addressing data gaps, and data applicability and purpose, particularly among citizen groups seeking access to justice. She announced 'Airscapes Singapore' as the winner of the Data Visualization Challenge. 'Airscapes Singapore' visualizes crowdsourced air pollution metrics for urban populations to monitor air quality in real time.