UN SCIENCE-POLICY-BUSINESS FORUM ON THE ENVIRONMENT

Third Global Session

18-20 February 2021

Integrated Solutions

#ForNature

UN environment programme

SCIENCE POLICY BUSINESS FORUM

Big Data and Frontier Tech: Powering the Transition to a Sustainable Future

FEB 18th

15.00 - 19.00 EAT

ONLINE

Co-convened by with The Group on Earth Observations (GEO) and Technology Partners

DIGITAL PLANET SESSION

For 68% of the environment-related SDG indicators there is not enough data to assess progress, according to UNEP studies which also found that towards all 12 of the SDGs targets related to the state of the environment, there is either no data or no progress made. To achieve the environmental dimension of the SDGs, it is essential to scale up environmental action that is backed by adequate knowledge. A task that is only achievable through the deployment of the latest technologies, including earth observations, Artificial Intelligence, Machine Learning and the Internet of Things.

The Group on Earth Observations will report back on outcomes of the Earth Observations Indigenous Summit, with a focus on how satellite imagery can improve disaster risk management for indigenous communities. GEO will also provide an overview of its current work and future ambitions.

In cooperation with the European Parliament's special committee on AI and the Green Deal, the session will explore elements related to legislation, equity, democracy and transparency related to the technology use and the equitable sharing of Big Data products and services.

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To date, over 20 Member States have voiced their support to establish a Data for the Environment Alliance (DEAL). The session, for the first time, will present how this work is shaping up and the opportunities it presents.

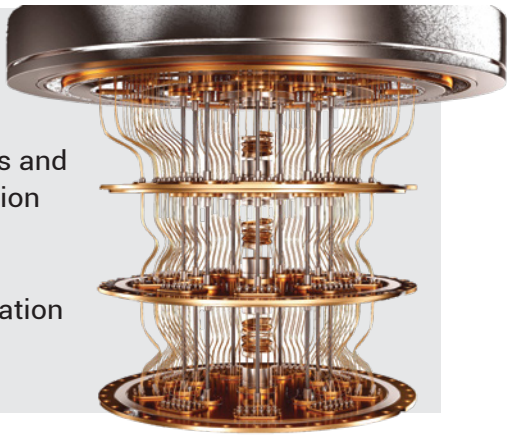
Key technology partners (including IBM, Microsoft, Amazon, Huawei, Google Earth Engine, Dassault Systèmes) will provide an overview of how their technologies are transforming our understanding of and actions for the planet. New initiatives and collaborations will be launched that directly contribute to UNEP's work and the vision presented in its Medium-Term Strategy.

The UN Decade on Ecosystem Restoration 2021 -2030, led by UNEP and FAO, is establishing a Digital Hub to facilitate the exchange of data and information amongst stakeholders engaged in research, policy formation and implementation.

The session will examine the following key questions:

Principles, standards and data ethics; investment frameworks and innovative financing (with contributions from UNEP's Innovation Branch)

Lessons learnt from projects such as the Biodiversity Observation Network, Climate Trace and GHG Tracking.



DIGITAL PLANET SESSION

Inger Andersen
Executive Director
UNEP

H.E. Hans Brattskar
Special Envoy, UNEA Presidency
Ministry of Climate and Environment, Norway

Petteri Taalas
Secretary-General
WMO

Juliet Kabera
Director General
Rwanda Environment Management Authority

Kathryn Guarini
Chief Operating Office & Vice President Impact Science
IBM Research

Alessandro Curioni
Vice President Europe and Africa
IBM Research

Tamar Eilam
IBM Fellow
IBM Research

Adam Smith
Co-Founder and Head of Strategy
Descartes Labs

Dr. Jonathan R. Everhart
Chairman & CEO
Global ReEnergy Holdings

Florence Verzelen
Executive Vice President, Industry, Marketing and Sustainability
Dassault Systemes

Willem Clappaert
Government Industry Solutions Leader
IBM

Laurent Durieux
Head of Mission AI, Big Earth Data and SDGs
IRD

DIGITAL PLANET SESSION

Maria Cecilia Londoño Murcia
Researcher
Alexander von Humboldt Biological Resources Research Institute

Rafael Monge Vargas
Director
National Geoenvironmental Information Center, Costa-Rica

David Jensen
Digital Transformation Taskforce Coordinator
UNEP

Jesarela López
Director of Technical Coordination of Vice Presidency
National Institute of Statistics and Geography of Mexico

Dilek Fraisl
Research Scholar
IIASA

Jian Liu
Director Science Division
UNEP

Bonnie Lei
Head of Global Strategic Partnerships AI
Microsoft

Ana Pinheiro Privette
Lead
Amazon Sustainability Data Initiative (ASDI)

Alexandre Caldas
Chief, Big Data Branch
UNEP

Kate Fickas
Founder
NASA Ladies of Landsat

Pascal Peduzzi
Director
UNEP Grid-Geneva

Laurence Monnoyer Smith
Director of Sustainable Development
Centre National d'Études Spatiales

DIGITAL PLANET SESSION

Prof. Guo Huadong
Director, Institute of Remote Sensing and Digital Earth
Chinese Academy of Science

Olga Gershenzon
Co-Founder
SCANEX Holding

Thuraya al Hashimi
Executive Director Digital Data Enabling Sector
AE Federal Competitiveness & Statistics Centre (FCSC)

Charlotte Bishop
Senior Project Manager
Norway International Climate and Forest Initiative (NICFI)

Diana Mastracci Sánchez
Founder
GEO Indigenous Alliance

Dragoş Tudorache
Chair, Special Committee on Artificial Intelligence in a Digital Age
European Parliament

Ray Amani
Assistant Vice President of Investment
Nasdaq

Ado Lohmus
Permanent Representative to UNEP and Initiative coordinator
Estonia

Prof. Dr. Gilberto Camara
Director of the GEO Secretariat
UNEP

Marine Litter and Microplastics Mitigation and Prevention

FEB 19th

13.00 - 14.30 EAT

ONLINE

Co-convened in partnership with the
Global Partnership on Marine Litter (GPML)

MARINE LITTER SESSION

As a pollutant without borders, marine litter and microplastics continue to choke the world's oceans, with a recent study revealing higher concentrations of plastic hidden beneath the surface of the Atlantic Ocean than anyone previously thought - 7,000 microplastic particles per cubic meter of seawater.

Plastics has even been found in human placentas, demonstrating the reach of this pollutant.

Found along the world's coastlines and estuaries to the remotest polar regions and down into the deepest ocean trenches, we are only just beginning to understand the true impact of marine litter and microplastics on the environment and society.

To tackle plastics, the largest, most harmful and persistent fraction of marine litter, immediate action is needed.

Significantly reducing marine pollution by 2025, as envisaged by the Sustainable Development Goals, requires focused, accelerated action by multiple actors and sectors.

UNEA Resolution 3.7 on Marine Litter and Microplastics, stresses "the importance of long-term elimination of discharge of litter and microplastics to the oceans and of avoiding detriment to marine ecosystems and the human activities dependent on them from marine litter and microplastics".

The session will examine the following key questions:

What does the latest science tell us about the risks posed by marine litter and microplastics for ecosystems, human health and society ?

In order to manage and mitigate the risk of marine litter in our environment, what urgent policy action is required at the multi-lateral and national levels?

What part does innovation, technology and finance have to play?

What does multi-stakeholder cooperation offer in the management and mitigation of marine litter and microplastics related risk?

MARINE LITTER SESSION

Leticia Carvalho
Head of Marine and Freshwater Branch
UNEP

Prof. Jacqueline McGlade
Lead Author
UNEP Global Assessment on Marine Litter and Microplastics

H.E. Keriako Tobiko
Cabinet Secretary
Ministry of Environment and Forestry
Kenya

H.E. Jonathan Wilkinson
Minister of Environment and Climate Change
Canada

Lois Michele Young
Chairperson
Alliance of Small Island States (AOSIS)

H.E. Satoru Lino
Deputy Director, Office of the Marine Environment
Ministry of the Environment of Japan

Patrick Labat
Senior Executive Vice President, Northern Europe
Veolia

Gabriel Thoumi
Director of the Plastics Programme and Financial Markets
Planet Tracker

MARINE LITTER SESSION

H.E. Bérangère Abba
Vice President of UNEA, Secretary of State for the Biodiversity
France

Melissa Wang
Senior Scientist
Greenpeace

Tina Ngata
Environmental & Indigenous Rights Advocate
Women Major Groups Representative

Nicholas Holmes
Chief Technology Officer for Global Government,
IBM Cloud and Cognitive Software

Saiful Ridwan
Chief Enterprise Solutions
UNEP

Kari Tamura Chua
Global Head of Product
The Stakeholder Company

Heidi Savelli
Programme Management Officer, Global Partnership for Marine Litter
UNEP

Juan Bofill
Senior Engineer in the Water Management Division
European Investment Bank

Rethinking Cities: Bringing Nature to the Urban Environment

FEB 19th

15.00 - 18:00 EAT

ONLINE

Co-convened with the Sustainable Cities Impact Programme, the Integrated Urban Solutions Partnership and the Global Alliance for Building and Construction (Global ABC)

GREEN CITIES SESSION

Close to 66% of global populations are expected to live in cities by 2050. The resource requirements of urban areas could grow to nearly 90 billion tonnes per year by 2050 with high demand for land, food supplies and raw materials that will far exceed the planet's threshold. Cities are already responsible for some 75% of greenhouse gas emissions. In and around cities, biodiversity and green areas provide ecosystem benefits and services increasing the resilience of cities and improving human health.

According to the report The Weight of Cities by the International Resources Panel (IRP), cities that become more resource-efficient in transport, commercial buildings, and building heating/ cooling could achieve reductions of between 36 to 54 percent in energy use, GHG emissions, metals, land and water use.

The argument has been made that urban planning, sector optimization, cross-sector optimization towards circularity and behavioural changes will together provide cumulative benefits far greater than the those provided by each of the four levers individually.

Building Better in response to the COVID-19 pandemic is helping reimagine city concepts such as the "15-minute city", shifts to active mobility, shorter value chains, and an emphasis on bringing nature back into cities - not least by taking a hybrid approach to infrastructure, connecting the grey infrastructure with nature-based solutions.

An annual average of USD6.9 trillion in infrastructure investment up until 2030 is considered indispensable for the achievement of global development and climate agendas.

The bulk of this investment, according to the OECD, involves developing countries – including fragile low-income economies and emerging economies driven by population growth, increased income levels and rapid urbanization. However, developed countries will also require action to bridge infrastructure and capacity gaps, given the need to invest in retrofitting ageing infrastructure – particularly in light of renewed climate change mitigation and adaptation efforts.

The session will examine the following key questions:

What strategies to redesign, rethink and transform cities, and the infrastructure that support them, will lead to the greatest efficiency, resilience and inclusion?

What policies, investments and multi-sector initiatives are required to implement these strategies at scale to achieve the SDGs?

With a view to supporting changes in present consumption and production patterns, what are the essential cross-cutting interlinkages in different infrastructure systems?

GREEN CITIES SESSION

Carlos Manuel Rodriguez
CEO
Global Environment Facility

Abdalah Mokssit
Secretary
IPCC

Maimunah Modh Sharif
Executive Director
UN Habitat

H. E. Rodrigo Rodriguez Tornquist
Secretary of Climate Change, Sustainable Development and Innovation
Argentina

H. E. Nezha Bouchareb
Minister of Regional Planning, Housing, Urbanism and City Policy,
Kingdom of Morocco

H.E. Jeanne d'Arc Mujawamariya
Minister of Environment
Rwanda

Harry Verhaar
Head of Global Public & Government Affairs
Signify

Martin Powell
Head of Urban Development
Siemens AG

José Luis Martínez-Almeida
Mayor of Madrid
Spain

Dr. Li Zhang
Secretary General
Society of Entrepreneurs for Ecology Foundation,
China

GREEN CITIES SESSION

Daniel Quintero Calle
Mayor of Medellin
Colombia

Yvonne Aki-Sawyerr OBE
Mayor of Freetown
Sierra Leone

Sarah O'Carroll
Government & Cities Network Manager
The Ellen MacArthur Foundation

Anton Koller
President, District Energy
Danfoss

Emmanuelle Nasse Bridier
Head of Urban Resilience Initiative
Meridiam

Paolo Falcioni
Director General
APPLiA

Aniruddha Dasgupta
Global Director
WRI Ross Center for Sustainable Cities

Ursula Hartenberger
Researcher
Global Alliance for Buildings and Construction

GREEN CITIES SESSION

Robert Pinter
Green & Healthy Buildings Manager Europe
International Copper Association

Julie Greenwalt
Co-Chair GEO for Cities
UNEP

Martina Otto
Head of Cities
UNEP

Anu Ramaswami
Co-author
IRP report "The Weight of Cities"

Oliver Hillel
Programme Officer
Secretariat of the Convention on Biodiversity

Kobie Brand
Vice President for Africa and Director
ICLEI Cities Biodiversity Center (CBC)

Dr. Wang Lan
Deputy Dean, College of Architecture and Urban Planning
Tongji University

Nature-positive Food Systems for a Healthy Planet and Healthy People

FEB 20th

13:00 - 16:00 EAT

ONLINE

Convened in support of the 2021 Food Systems Summit and the UN Decade on Ecosystem Restoration

FOOD SYSTEMS SESSION

For 68% of the environment-related SDG indicators there is not enough data. Today, the world's food systems need to be transformed towards nature-positive patterns. The rebuilding of economies after the COVID-19 crisis offers an opportunity to change the global food system and make it resilient to future shocks, while ensuring an environmentally sustainable and healthy nutrition for all.

As agricultural systems form the foundation of our food systems, it is imperative that they are redesigned to restore and regenerate, rather than degrade, ecosystems — all while providing affordable and healthy diets for a global population estimated to reach 10 billion by 2050.

The question is less what we need to achieve, but "how" – how to induce behavioral change at scale to restore ecosystems and reverse the damage to the planet? What policies, incentives and investments are needed to motivate responsible individual and collective action and capitalize on the synergistic opportunities that lie in food systems?

Unless we redesign food systems and consumption patterns, greenhouse gas (GHG) emissions from global food production will continue to push the planet beyond the internationally agreed goal of limiting global warming to 1.5°C, even if we immediately halted all other emissions.

Food systems contribute up to 29% of all GHG emissions, including 44% of methane.

Agriculture alone is responsible for up to 80% of biodiversity loss and continues to overuse increasingly limited natural resources – including water, forests and land. The sector accounts for up to 70% of all freshwater use and 80% of all deforestation, and more than 1/4 of the energy used globally is expended on food production and supply.

The UN Decade on Ecosystem Restoration 2021 – 2030, led by UNEP and FAO, includes a focus on farmlands and other ecosystems vital for sustainable food systems.

The session will examine the following key questions:

Why a transformation of our food systems is integral for nature and economies?

How does Regenerative Agriculture connect us back to nature?

How can we promote Nutrient Use Efficiency with as much as 80% being lost to the environment?

How do we tackle food waste?

What targeted actions by public and private actors can support the transformation?

FOOD SYSTEMS SESSION

James Lomax
Advisor, Sustainable Food Systems and Agriculture
UNEP

Philip Lymbery
CEO
Compassion in World Farming Organization

Alzbeta Klein
Director General
IFA

H. E. Mahindananda Aluthgamage
State Minister of Agriculture
Sri Lanka

Mark Sutton
Professor
UK Centre for Ecology & Hydrology

Maliha Malik
Chief Operating Officer
FFC Food Security and Agiculture Center of Excellence (FACE)

Anna Engleryd
Chair, Executive Body, UNECE Convention on Long-range Transboundary Air Pollution
Swedish Environmental Protection Agency

Martina Otto
Head of Cities
UNEP

H.E. Renato Alvarado
Minister of Agriculture and Livestock
Costa-Rica

Emma Naluyima
Private Veterinarian
2019 Africa Food Prize Recipient

FOOD SYSTEMS SESSION

Marcus Gover
CEO
WRAP

Maria Carolina Duran
Secretary of Economic Development
City of Bogota, Colombia

Jorge Merino
Director, Economic Promotion Agency Conquito
City of Quito, Ecuador

Ullas Samrat
Co-Founder
Triton Foodworks

Dr. Esau Galukande
Director, Gender and Community Service
City of Kampala, Uganda

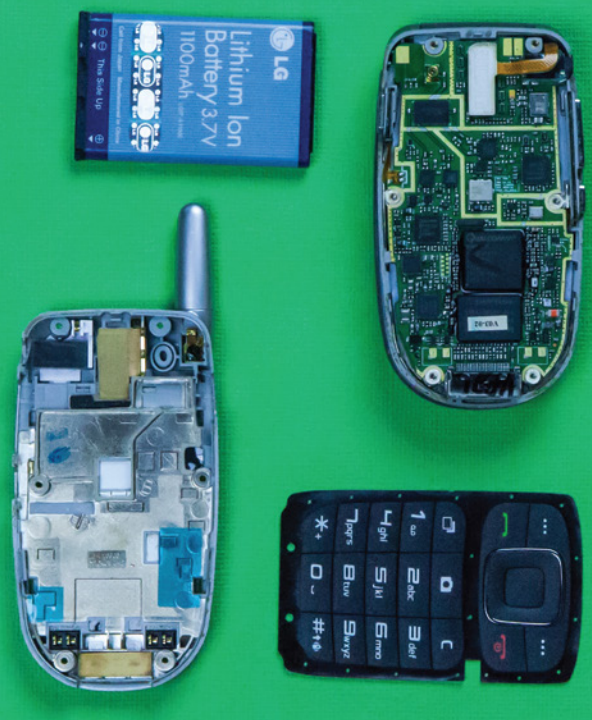
Jean-Marie Dembele
Associate Professor of Computer Science
Gaston Berger University.
St-Louis, Senegal

Peter Rylander
Partner
IBM Global Business Services

Pal Oystein Stormorken
VP Farm Ecosystems
Yara International

Shirley Lu
GEO Author, Managing Director Asia
ProVeg International

Addressing E-waste through Tracking, Traceability and Circular Approach



Co-convened by the Secretariat of the Basel, Rotterdam and Stockholm Convention & UNEP's Private Sector Unit

FEB 18th

13.00 - 15.00 EAT

ONLINE

E-WASTE SESSION

According to the UN's Global E-waste Monitor of 2020, of the 53.6 million metric tonnes (Mt) of e-waste generated worldwide in 2019, only an estimated 17.4% was recycled. While this is an improvement of 21% in just five years, this means we do not know where the majority of this waste is disposed of, and there is a risk that much ends up in countries with no facilities for recycling and disposing such wastes. Efforts to reverse this trend need our attention more than ever before.

The negative effects of e-waste on human health and the environment continues to be scientifically documented in many regions of the world. **E-waste exported to developing countries can be subject to poor recycling techniques. This results in long-term contamination of nearby land and rivers**. Consequently the food chain, and POPs may eventually end up as contaminants in foods destined for human consumption.

The environmentally sound management of e-waste and the transboundary movements of e-waste or used equipment may serve as a big lever in the direction of circularity by reducing the need for mining of materials of strategic value and increasing recycling and resource recovery as well as creating new market opportunities, jobs and sources of income.

The Extended Producer Responsibility (EPR) schemes, one of the approaches encouraging producers to bear the responsibility for the collection and management of their products when they reach end-of-life, have not been adopted in many developing countries.

The tracking and traceability of e-waste requires better implementation of policies, innovating systemic and technological solutions involving governments, private sector, academia and the civil society whereby the environmental sound management of e-waste is ensured, and a circular approach is encouraged without jeopardizing human health and the environment.

The session will examine the following key questions:

E-waste has been an issue of concern for a number of years. Why is it still a problem despite numerous efforts by governments, industry, civil society and international organizations?

What are the main drivers of e-waste for becoming a global environmental challenge?

What policies and regulatory mechanisms are best suited to tackle e-waste? How to deal with the informal sector and informal practices to manage e-waste?

How does the sustainable management of e-waste contribute to the circular economy? How to avoid the loss of valuable resources?

Can regional cooperation provide solutions to support developing countries?

What role industry can play in dealing with e-waste in a sustainable way? Are there innovative solutions from the manufacturing /design perspective?

E-WASTE SESSION

Rolph Payet
Executive Secretary
Secretariat of the Basel, Rotterdam and Stockholm Conventions

Michel Tschirren
Senior Policy Advisor
International Chemicals & Wastes Management Division
Federal Office for the Environment, Switzerland

H.E. Tuan Ibrahim
Minister of Environment and Water
Malaysia

Joanne Deoraj
Permanent Secretary
Ministry of Planning and Development, Trinidad and Tobago

Björn Appelqvist
Chair of the Scientific and Technical Committee
International Solid Waste Association

Larke Williams
Foreign Affairs Officer
US Department of State

Olga Speranskaya
Senior Advisor
IPEN

Silvia Beatriz Vazquez
Director, Environmental Affairs
Ministry of Foreign Affairs, Int. Trade & Worship, Argentina

E-WASTE SESSION

Sam Adu-Kumi
Director Chemicals Control and Management Centre
Environmental Protection Agency, Ghana

Vanessa Gray
Head of Environment and Emergency Telecommunication
International Telecommunication Union

Bruce Anderson
Managing Director for Global Electronics Industry
IBM

Brendan Edgerton
Director, Circular Economy
World Business Council for Sustainable Development

Shalini Sharma
Co-Founder & CEO
E-Waste Exchange

Pascal Leroy
Director General
WEEE Forum

Seika Sanno
Deputy Director, Industrial & Hazardous Waste Management
Ministry of Environment, Japan