

UN Science-Policy-Business Forum on the Environment

Science for Green Solutions



PROGRAMME

Nairobi, UN Environment Headquarters
2 & 3 December



SCIENCE
POLICY
BUSINESS
FORUM

Members of the Governing Consortium



For more information and to join the Forum, please contact:

Shereen Zorba, Head of Science-Policy Interface, UN Environment,
Tel : +254 788 526 000,
Email: Shereen.zorba@unep.org





ABOUT THE FORUM

The UN Science-Policy-Business Forum on the Environment aims to identify and promote opportunities to grow green technology markets, driven by advances in science and technology, empowering policies and innovative financing.

Driven by this goal, the Forum will strengthen the wider interface between science, policy, business and society by building consensus around key issues and by tearing down traditional barriers between these sectors.

Today's technology and science-driven revolution — known as the Fourth Industrial Revolution — offers an unprecedented opportunity to embrace cleaner, greener and more efficient solutions to sustainable development.

These solutions, however, are scalable only if supported by timely policy interventions, regulatory and governance frameworks and sustainable financial systems.

Planned as an annual event, the Forum hopes to become an incubator of great ideas and initiatives and an accelerator of cross-sectoral actions towards a more sustainable future.

The Forum is managed by a Governing Consortium coordinated by UN Environment.

The UN Science-Policy-Business Forum on the Environment is ...

A **showcase** for vetted 'green solutions' that are driven by advances in science and technology

A **catalyst** towards science-policy-business collaboration

A **think-tank** that brings together the expertise and knowledge of diverse communities

An **incubator** of great ideas and initiatives

An **accelerator** of action towards a more sustainable future through a set of high-powered annual events and consultations

100% **self-financed**

Members include:

European Space Agency (ESA), Global CEO Alliance, International Copper Association, Ltd. (ICA), The Belmont Forum, Start International, Tongji University, Society of Entrepreneurs for Ecology (SEE) Foundation, International Fertilizer Industry Association (IFA), Thomson Reuters Corporation, Philips Lighting B.V, IBM Corporation, Heaven Springs Dynasty Harvest (Group) Ltd, Jiangsu Muenster Environmental Science and Technology Co., Ltd., Intergovernmental Panel on Climate Change (IPCC), Climate & Clean Air Coalition (CCAC), International Resource Panel (IRP), Basel-Rotterdam-Stockholm Secretariat (BRS Secretariat), Global Environmental Outlook (GEO), Citizen Science Consortium, Institut de Recherche pour le Développement (IRD), World Economic Forum



AGENDA

SATURDAY. 02 DECEMBER, 2017

| | | |
|------------------------------------|--|---|
| 08:00 – 08:45 | Registration | |
| 09:00 – 11:00 Parallel Sessions | <i>Breakfast Session 1</i> Filling the Data Gaps in Air Quality Management Conference Room 9 | <i>Breakfast Session 2</i> Funding Science for a Pollution-free World: How Africa Can Close the Science-Funding Gap Press Centre |
| 11:00 – 12:30 | Opening Plenary Conference Room 1 | |
| 12:30 – 13:30 | Lunch Break | |
| 13:30 – 14:30 Parallel Sessions | Improved Tools for Air Quality Monitoring, Analyses, and Integrated Planning and Decision Making Press Centre | Water Quality Monitoring – Opportunities for engagement from the private sector, science community and civil society Conference Room 9 |
| | Vice Chancellors for Green Solutions: Focus on Africa Conference Room 10 | |
| 14:30 – 15:30 Parallel Sessions | The Business Case for Phasing Out Lead in Paint Conference Room 9 | Feeding the World Without Killing the Planet Press Centre |
| | Tackling Beijing’s Air Quality Challenge: Lessons Learnt Conference Room 10 | |
| 15:30 – 16:30 Parallel Sessions | Beyond the INDCs: Bridging the 70% Emissions Gap Press Centre | Conservation Futures: Reframing the conservation challenge Conference Room 9 |
| 16:30 – 17:30 Parallel Sessions | Accelerating Clean Energy Innovation Press Centre | Saving Oceans from Plastic Pollution: A Look at Alternative Materials & Green Design Conference Room 10 |
| | Greening the Blue: Technical Solutions to Reduce the Impact of UN Field Operations Conference Room 9 | |
| 17:30 – 18:30 Parallel Sessions | The Future of Citizen Science Conference Room 9 | Transforming Burden into Wealth: New Technologies in Wastewater Management Press Centre |
| | Geospatial, Technology and Indicators for Environmental Policy and Action Conference Room 10 | |
| 18:30 – 19:30 | Closed Session: Vice Chancellors for Green Solutions Conference Room 10 | |





AGENDA

SUNDAY. 03 DECEMBER, 2017

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|------------------------------------|---|---|
| 9:00 – 10:00 | <i>Breakfast Session 3</i> Greening the New Belt and Road Initiative Press Centre | |
| 10:00 – 11:00 Parallel Sessions | Transformations in Big Data: Pathways to a More Sustainable Future Press Centre | Global Redesign: Shaping the Circular Economy: Case studies from China and India Conference Room 10 |
| 11:00 – 12:00 | Nature-based Solutions for Greener Cities: Case studies Conference Room 9 | |
| 11:00 – 13:30 | Closed Session: Meeting of the Science-Policy-Business Forum Governing Consortium | |
| 12:00 – 13:30 | Lunch Break | |
| 13:30 – 15:15 | Closing Plenary Conference Room 1 | |
| 15:15 - 15:30 | Group Photograph | |
| 15:30 | Opening of the Sustainable Innovations Expo | |
| 17:30 | Cocktail Reception | |



Session Overview

09:00-11:00

"Filling Data Gaps in Air Quality Management"

The United States Environmental Protection Agency and the United States Department of State, together with the World Bank will highlight a new draft white paper on the role of low cost sensors, satellite based measurements, and data management strategies in generating reliable and actionable estimates of ambient air quality.

Panelists:

Jian Liu, Chief Scientist, UN Environment
Gayle Hagler, Research Environmental Engineer, U.S. Environmental Protection Agency
Yewande Awe, Senior Environmental Engineer, World Bank
James Schauer, Professor, University of Wisconsin
Kourosh Karimkhany, Head, Weather Underground

09:00-11:00

"Funding Science for a Pollution-free World: How Africa Can Close the Science-Funding Gap"

The session will explore how to maximise funding opportunities to strengthen capacity building, research output dissemination and outreach for better policies against pollution in Africa. In addition to the Belmont Forum's developing interests in an Africa Regional international funding opportunity, we are also outlining a possible call on Climate, Environment, and Health and have already begun scoping a Disaster Risk, Resilience, and Reduction call, both of which would have relevance to the science-policy discussions on pollution at UNEA-3.

Panelists:

Erica Key, Executive Director, The Belmont Forum
Fatima Denton, Co-ordinator for the African Climate Policy Centre of the United Nations Economic Commission for Africa
Ibrahim Thiaw, Deputy Executive Director, UN Environment and UN Assistant Secretary-General
Nicholas Ozor, Executive Director, African Technology Policy Studies Network
Maurice Makoloo, Director, Eastern Africa, The Ford Foundation

13:30-14:30

"Improved Tools for Air Quality Monitoring and Decision Making"

It is important that the capacity of countries in Africa, Asia and Latin America to develop integrated planning of climate, air pollution and energy strategies is enhanced. In this session, we will launch new tools designed to support integrated planning and strategy development at the national level.

Panelists:

Alice Kaudia, Environment Secretary, Ministry of Environment and Natural Resources, Kenya
Liu Baoxian, Deputy Director, Beijing Municipal Environmental Monitoring Center
Johan Kuylenstierna, Policy Director, Stockholm Environment Institute
Charlie Heaps, Senior Researcher, Stockholm Environment Institute
Simpson Attieku, Energy Economist, Energy Commission, Ghana

13:30-14:30

"Water Quality Monitoring: Working together Towards Cleaner Water"

Access to healthy freshwater ecosystems and the services they provide are essential for sustaining lives, health and livelihoods. The session will review hi-tech water quality monitoring tools and methodologies undertaken by governments, the private sector and citizen science to track pollution-induced changes over time, whilst discussing solutions and opportunities for pollution-free fresh water.



**Panelists:**

Philipp Saile, Head of GEMS/Water Data Centre, Federal Institute of Hydrology, Germany
 Hans Merton, Akvo Foundation
 James Donovan, Chair and CEO, Global CEO Alliance
 Byron Anangwe, Marketing Executive, Regional Centre for Mapping of Resources for Development
 Sophie Kamau, International Water Stewardship Programme

14:30-15:30

“The Business Case for Phasing Out Lead in Paint”

Laws and regulations can be designed to create an enabling environment for green growth, green investment, and poverty reduction. They can create rights and obligations that lead to the sound management of natural capital and set standards, guidelines and targets for industry to operate within green growth frameworks. The session will examine how regulatory frameworks can be better designed to stimulate the growth of green markets in the chemicals sector and encourage investment in alternative products, while eliminating the use of lead in paint?

Panelists:

Walker Smith, Director Office of Global Affairs and Policy, US Environment Protection Agency
 Carolyn Vickers, Team Leader Health and Safety, World Health Organization
 International Paint and Painting Ink Council Representative
 Dow Chemical Representative
 James M. Donovan, CEO, ADEC Innovations
 Alf Wills, Deputy Director General, Department of Environmental Affairs, South Africa

14:30-15:30

“Feeding the World without Killing the Planet”

Food production and food security do not go hand in hand. Unsustainable agricultural activities have grave consequences on natural resources and climate change, which in turn impact food security. Considered the fastest developing food-producing sector globally, aquaculture is a possible sustainable solution for food security in developing regions. The session will explore the challenges and opportunities ahead.

Panelists:

Steven Kukoda, Vice President/ Executive Director, International Copper Alliance
 Daya Reddy, President-elect, the International Council for Science
 William O’Neill, CEO, International Raw Materials
 Selma Cherchali, Manager, Centre National d’Etudes Spatiales
 Tat-Yung NG, Founder and Inventor, Heaven Springs Dynasty Harvest Group
 Christoph Neumann, Director International Regulatory Affairs, CropLife International
 Laurent Durieux, High Level senior international Remote sensing expert from SPACE-DEV, Institut de Recherche pour le Développement

14:30-15:30

“Tackling Beijing’s Air Quality Challenge: Lessons Learnt”

Green is Gold, clean air is health and wealth. This session will review the process of building an air quality management system (AQMS) in a city like Beijing to guarantee sustainable and effective development and implementation of air pollution control programs. Building an effective AQMS requires the application scientific findings from research as well as new technologies that can support policy making, while assessing the effectiveness of the program. This will include discussions on the evolution of pollution and future measures to tackle pollution more precisely. How can the experience and lessons learnt from Beijing be shared with cities around the world in similar situation?

Panelists:

He Kebin, Dean, School of Environment, Tsinghua University



Chen Tian, Deputy Secretary-General, Beijing Municipal Authority
Dong Jin, Associate Director, IBM Research China
UN Environment Representative (tbc)
Zhang Feng, Executive Director, Spic Beijing Electric Power
CCAC Representative (tbc)
Jian Liu, Chief Scientist, UN Environment

15:30-16:30

“Beyond the INDCs: Bridging the 70% Emissions Gap”

The eighth edition of the Emissions Gap Report clearly indicates that national pledges will only bring about one third of the reduction in emissions required to meet Paris Agreement targets. It highlights the role the business sector and other non-government actors need to play to fill that gap and ensure the Paris Agreement goals can still be met. The session will look at what it will take to fully empower the business sector and non-state actors to address the emissions reductions required to stay within safe temperatures. Thomson Reuters will present the latest data that tracks business efforts to reduce emissions in the Global 250 along with their value chains, which account for approximately one third of global annual emissions.

Panelists:

H.E. Edgar E. Gutiérrez-Espeleta, President of the UN Environment Assembly, Minister of Environment and Energy, Costa Rica
Qian Xiaohua, Chairman, Society of Entrepreneurs for Ecology Foundation
Janos Pasztor, Former Senior Advisor of the UN Secretary General on Climate Change and Executive Director, Carnegie Climate Geoengineering Governance Initiative
Harry Verhaar, Head Global Public and Government Affairs, Philips Lighting
Huang Lin-Jie, Chief Scientist, Sanhua Holding Group
Timothy Nixon, Head of Sustainability Thought Leadership, Thomson Reuters

15:30-16:30

“Conservation Futures: Reframing the conservation challenge”

Since 1992 when the climate and biodiversity conventions were adopted during the Earth Summit in Rio, the two issues have followed very different trajectories. Climate change is a household word, the Paris agreement is changing how markets regard climate risk, and it is possible to envisage a future where climate change is under control. Biodiversity has not achieved the same profile, even if its loss represents a serious threat to the future stability of society and prospects for well-being on earth. What accounts for the different trajectories and rates of success, and what might be done to bring biodiversity conservation into the heart of political consideration?

Panelists:

Mark Halle, Interim Coordinator, Conservation Futures
Thomas Lovejoy, Professor, George Mason University
Jon Hutton, Director, Luc Hoffmann Institute
Chris Thomas, Professor, University of York
Nuru Mugambi, Director of Public Affairs & Sustainable Finance Lead, Kenya Bankers' Association
Sunita Narain, Director General, Centre for Science and Environment, India

16:30-17:30

Accelerating the move to Renewables: A Look at Innovation and Investment Opportunities

In the last year, all investments in renewables totaled \$241.6 billion (excluding large hydro). Investment in renewables capacity was roughly double that in fossil fuel generation; This prevented the emission of an estimated 1.7 gigatonnes of carbon dioxide. The investor hunger for existing wind and solar farms is a strong signal for the world to move to renewables. We look at means and ways to accelerate the move to renewables in today's global markets.



**Panelists:**

Harry Verhaar, Head Global Public and Government Affairs, Philips Lighting
 Antonia Gawel, Head of Circular Economy Initiative, World Economic Forum
 Sarah Marniesse, Head of Innovation, Institut de Recherche pour le Développement
 Luca Meini, Head of Environmental Policies, ENEL
 African Women Energy Entrepreneurs Framework Representative
 Wang Yongtian, General Manager, China International Water & Electric Corporation

16:30-17:30

“Saving Oceans from Plastic Pollution: A Look at Alternative Materials & Green Design”

The session will assess the potential of replacing certain categories of conventional plastics use — that may prove more amenable to reduction or replacement — with alternative materials, with focus in part on single-use plastic consumer and packaging waste, given the preponderance of this category in surveys of ocean plastics, especially in shoreline debris.

The session will also address:

- Micro-fibres: identified as abundant in surveys of biota, sediments and seawater.
- Three categories of alternative materials: natural fibres biomass-based, compostable, synthetic biopolymers and re-usable durable non-plastic material.
- The application of green design principles to the packaging sector.
- The place of alternative materials in the circular economy

Panelists:

Geoffrey Wahungu, Director General, National Environment Management Authority, Kenya
 Peter Ryan, Professor, University of Cape Town
 Michael Odhiambo Otieno, Takawiri Craft Enterprise

16:30-17:30

“Greening the Blue: Technical Solutions to Reduce the Impact of UN Field Operations”

The United Nations Department of Field Support (DFS) and UN Environment collaborate to improve the environmental performance of peacekeeping operations which represent over 50% of the overall UN system footprint. The solutions presented during the panel discussion will look at practical ways to reduce these impacts related to energy, water, wastewater and waste

Panelists:

Shoa Ehsani, Sustainability & Climate Neutral Strategy Officer, UN Environment
 Tom Sengalama, Head of Environmental Protection Unit, MONUSCO
 Emanuela Cattaneo, Environmental Sustainability Consultant, World Food Programme

17:30-18:30

“Transforming Burden into Wealth: New Technologies in Wastewater Management”

Wastewater is much more than a burden to be disposed of. This session will review new technologies that are enabling the transformation of wastewater into an efficient and sustainable source of energy, nutrients, organic matter and other useful by-products with implications on food and energy security as well as climate change mitigation. The session will also examine the financing, regulatory and policy structures required to empower investment in these technologies.

Panelists:

Elliott Harris, UN Assistant Secretary General and Director of New York Office, UN Environment
 Ludo Diels, CEO, Andicos Corporation, Belgium
 Zhang Yixin, Dean, Suzhou Urban and Environment Research Institute, Xi’an Jiaotong-Liverpool University
 Cate Nimanya, Director, Uganda Office, Water for People



Sascha Gabizon, Executive Director, Women in Europe for a Common Future

17:30-18:30

“The Future of Citizen Science”

The session will begin with lightening talks that show how governments, universities, and NGOs bring different perspectives to bear on citizen science around the world. A panel of experts will then discuss how coordination and partnership can help maximize the impact of citizen science on environmental governance and sustainable development. Key outcomes include recommendations for advancing global citizen science through coordination and partnership, presented at the UNEA; and, announcement of a new Global Citizen Science Consortium.

Panelists:

Anne Bowser, Director of the Commons Lab, Wilson Centre

Martin Brocklehurst, Global Mosquito Alert

Carlos Martin-Novella, Deputy Executive Secretary, Secretariat of the Basel, Rotterdam, and Stockholm Conventions

H.E. Ms. Marta E. Juarez Ruiz, Ambassador of the Republic of Costa Rica on Special Mission to UN Environment

Johannes Vogel, Chair, European Citizen Science Association

Li Fengting, Deputy Dean, IESD & College of Environmental Science and Engineering, Tongji University

Vice Chancellors for Green Solutions Representative

17:30-18:30

“Geospatial and Indicator Technologies for Environmental Policy and Action”

The goal of the “World Environment Situation Room” initiative is to deliver and present to Member States and environmental Stakeholders a high quality and impact demonstration global project with overarching environmental policy relevance and impact. The platform includes geo-reference, remote-sensing and earth observation information systems integrated with statistics and data on the environmental dimension of sustainable development.

Panelists:

Derek Gliddon, National Partnerships & Development Manager, AGEDI, EAD

Edan Dionne, Director Corporate Environmental Affairs, IBM

Patrick Chege, Technology Director, ESRI EA

Peter Harris, Managing Director, GRID Arendal

Maria Andrzejewska, Director, GRID Warsaw

09:00-10:00

“Greening China’s New Belt and Road Initiative”

Four years after China announced its ambitious intention to develop The Silk Road Economic Belt and the 21st Century Maritime Silk Road, many questions remain. The goal of this—the biggest investment in development in human history—is to enhance economic development and inter-regional connectivity by focusing on enhancing policy coordination, facilities and infrastructure connectivity, trade, financial integration, and people-to-people bonds. Developing infrastructure and regional connectivity provides opportunities to improve people’s lives, yet this must not be seen to compromise the health of the natural environment. This session will pose questions as to the safeguards, opportunities and challenges to ensure that this ambitious initiative will deliver on its promise to protect the environment and achieve sustainable development.

Panelists:





Zhou Guomei, China-ASEAN Environmental Cooperation Center Ministry of Environmental Protection, China
 Jan Dusik, Regional Director Europe, UN Environment
 Kumi Kitamori, Head of Green Growth & Global Relations Division, OECD
 Li Wensheng, Member, Society of Entrepreneurs for Ecology Foundation
 Gianluca Ghiara, Vice Chairman of the Environment Working Group, EU-China Chamber of Commerce
 Zhou Linsheng, Executive Director, China Southern International Cooperation Centre
 Jamil Ahmad, Deputy Director, UN Environment New York Office

10:00-11:00

“Transformations in Big Data: Pathways to a More Sustainable Future”

The session will focus on key advancements and the emerging role of big data analytics, Artificial Intelligence, and earth observation systems in driving technological innovation and achieving a sustainable future. More specifically, this session will explore the untapped potential for big data to address complex environmental and sustainability challenges, and how big data analytics is driving important changes in the marketplace.

Panelists:

Michael Karasick, Vice President, Global Labs, IBM Research
 Fabio D. Vescovi, Earth Observation Consultant, Airbus Defence and Space
 Mae Jemison, 100 Year Starship; Chair, Dorothy Jemison Foundation for Excellence (Former NASA Astronaut)
 James Donovan, CEO and Co-founder, ADEC Innovations
 Angel Hsu, Director, Yale Data-Driven Environmental Solutions Group

10:00-11:00

“Global Redesign: Shaping the Circular Economy: Case studies from China and India”

Hosted by the International Resource Panel

The session will present robust evidence of the impact of current and future production and consumption systems on the environment, economy and society. It will tackle Mitigating Air Pollution and Achieving SDGs in Cities through a Systems Focus on Natural Resources and Infrastructure, using data on water, fossil fuels, air pollution and greenhouse gas emissions for New Delhi, India and over 600 cities in China to identify policy-bundles that deliver a significant improvement in human well-being with a relatively small investment in resources.

Panelists:

Izabella Teixeira, Former Brazilian Minister of Environment, IRP Co-Chair
 Janez Potocnik, Former European Commissioner for Environment, IRP Co-Chair
 Stefan Brinzeu & Anu Ramaswami, IRP Panel Members and lead authors of the Information Note to UNEA-3 “Assessing Global Resource use: A systems approach to resource efficiency and pollution reduction”
 Chen Tian, Deputy Secretary General, Beijing Municipal Authority
 Li Dan, Vice President, Jiangsu Munster Environmental Technologies

11:00-12:00

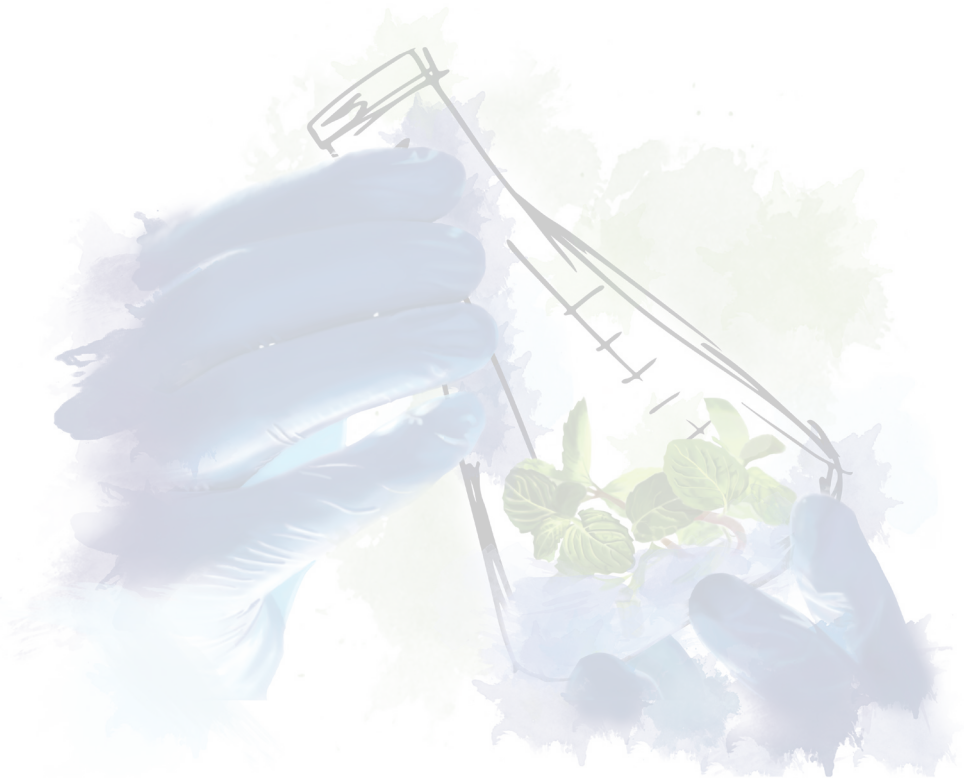
“Nature Based Solutions for Greener Cities”

The purpose of this session is to showcase how nature-based solutions address environmental, social and economic challenges and increase resilience to climate change, and therefore respond to the Sustainable Development Goals (SDGs). The cost-effectiveness of these solutions and the multiple benefits they provide, e.g. on air and water quality or resource efficiency, will be discussed, and their contribution to the SDGs highlighted.

Panelists:

Paul Mahony, OPPLA
 Carlo Calfapietra, Senior Researcher, National Research Council, Italy
 Erica Key, Executive Director, The Belmont Forum





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Science-Policy-Business Forum

Science Division

UN Environment

unenvironmentsciencepolicyforum@unep.org