



**Operationalizing Sustainable Development and Science and Technology Cooperation:  
Global Strategies**

**Virtual Side Event of the 7<sup>th</sup> Multi-stakeholder Forum on Science, Technology and  
Innovation for the Sustainable Development Goals (STI Forum)**

**Wednesday, May 4, 2022**  
**10:30 am to 12:00 pm EDT**  
All times are US Eastern Daylight Time

**Agenda**

**Meeting Objective:** Gather information on positive case studies for operationalizing sustainable development at a global level.

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| 10:30 am | <b>Opening Remarks and Introductions</b><br>Cherry Murray (NAS/NAE), University of Arizona (Committee Co-Chair)<br>Franklin Carrero-Martínez, National Academies of Sciences, Engineering, and Medicine                                                                                                                                                                                                      |
| 10:35 am | <b>Framing Remarks</b><br>Jan Marco Müller, Science and Technology Advisor, European External Action Service                                                                                                                                                                                                                                                                                                 |
| 10:45 am | <b>Panel: Science, Technology, and Innovation Cooperation</b><br>Moderator: Erin Bromaghim, City of Los Angeles <ul style="list-style-type: none"><li>• Klaus Tilmes, Senior Policy Advisor and Development Consultant</li><li>• Niki Frantzeskaki, Utrecht University</li><li>• Atsushi Sunami, Sasakawa Peace Foundation</li><li>• Jean-Paul Adam, United Nations Economic Commission for Africa</li></ul> |
| 12:00 pm | <b>Side Event Conclusion</b>                                                                                                                                                                                                                                                                                                                                                                                 |

## **Operationalizing Sustainable Development and Science and Technology Cooperation: Global Strategies**

### **Brief Description**

The U.S. National Academies of Sciences, Engineering, and Medicine's [Committee on Operationalizing Sustainable Development](#) is charged with identifying key research priorities and possible actionable steps needed to operationalize sustainable development at the global and local levels. The pandemic has made the achievement of the Sustainable Development Goals (SDGs) more challenging and provides an impetus to accelerate the pace of global policy discussions to deliver much needed change. The scientific community is increasingly recognizing the need for an action agenda, including the role of Science, Technology, and Innovations (STI) for SDG Roadmaps in the achievement of Agenda 2030, and sustainable post-COVID recovery. As a central information-gathering mechanism for this consensus activity, the committee will organize a session to highlight some of the most promising developments in STI for accelerating progress towards the SDGs and improving capacity for applying STI for the SDGs through science and technology cooperation. Delivering sustainability missions will require broad engagement and commitment. Speakers from the private sector, academia, nongovernmental organizations, and international organizations from across the globe will discuss positive case studies for operationalizing sustainable development at a global level, including perspectives from the Global South. Other topics for consideration during the session will include STI to enable societal transformations, including strengthening the science-policy interface, promoting innovation cohesion, and creating research agendas to inform post-2030 processes for the SDGs. The committee is co-chaired by William Colglazier (AAAS) and Cherry Murray (University of Arizona), and the final consensus report will be completed in 2022.

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**Biographies of Speakers and Moderators**

**Opening Remarks and Introductions**

**CHERRY MURRAY (NAS/NAE) (Committee Co-Chair and Moderator)** is Professor of Physics and Deputy Director for Research, Biosphere 2 at The University of Arizona. Her current research interests include policy, research, development, education and innovation to sustain human civilization on future Earth. From 1978 to 2004, Dr. Murray held a number of research positions, which culminated in the Senior Vice Presidency of Physical and Wireless Research, at Bell Laboratories, Lucent Technologies, formerly AT&T Bell Laboratories and previously Bell Telephone Laboratories, Inc. She then served at Lawrence Livermore National Laboratory as Deputy Director for Science and Technology from 2004 to 2007, and as Principal Associate Director for Science and Technology from 2007 to 2009. She was dean of Harvard University's School of Engineering and Applied Sciences from 2009 to 2014. Dr. Murray served as the Director of the U.S. Department of Energy's Office of Science from 2015 until 2017. She served as president of the American Physical Society in 2009, on the National Commission on BP Deepwater Horizon Oil Spill and Offshore Drilling in 2010, has served on numerous National and American Academy, American Association for the Advancement of Science, American Physical Society, Department of Energy and Department of Commerce committees, and currently serves as chair of the board of the Okinawa Institute of Science and Technology Graduate University and as a director of the American Academy of Arts and Sciences. In 2019, she was elected, representing the U.S. National Academy of Sciences, as co-chair for science of the Inter Academy Partnership, a partnership of over 140 national and regional science, engineering and medical academies dedicated to providing independent and credible advice to policy makers and to strengthening the role of academies nationally, regionally and globally. In 2021 she was appointed co-chair of the Ten Member Group of the Technology Facilitation Mechanism of the United Nations. Dr. Murray received her B.S. and Ph.D. in Physics from the Massachusetts Institute of Technology.

**FRANKLIN CARRERO-MARTÍNEZ** joined the National Academies of Sciences, Engineering, and Medicine in 2018 where he directs the Global Sustainability and Development and the Science and Technology for Sustainability program within the division of Policy and Global Affairs. Prior to this appointment, he was the Acting Deputy Science and Technology Adviser to the Secretary of State. Dr. Carrero-Martínez holds a B.S. in biology, with honors from the University of Puerto Rico (UPR), a Ph.D. in cell and developmental neurobiology, and a certificate in business administration from the University of Illinois at Urbana-Champaign. His multidisciplinary career includes several roles in academia and government: from researcher and educator, science administrator, to science policy and diplomacy. Previously, Dr. Carrero-Martínez held appointments as associate professor at the UPR, Mayagüez, Adjunct Professor at the UPR Medical Science Campus, and as visiting scholar at Duke University, Massachusetts Institute of Technology, and Japan's Institute of Genetics.

## **Framing Remarks**

**JAN MARCO MÜLLER** is Science & Technology Advisor in the Strategic Policy Planning Division of the European External Action Service (EEAS). Previously, he was Head of Directorate Office/Coordinator for Science to Policy and Science Diplomacy, International Institute for Applied Systems Analysis (IIASA). He was also the Policy Officer for International Relations in the Joint Research Centre, and before that was Assistant to the EU Chief Scientific Adviser, Professor Dame Anne Glover. In that role he managed Professor Glover's office, assisted her in her daily tasks and coordinated her relations with internal and external stakeholders. Professor Glover, who previously served as Chief Scientific Adviser to the Scottish Government, reported directly to the Commission President and had the mandate to provide independent expert advice on any aspect of science, technology and innovation. Before his assignment to the CSA's Office, Dr Müller worked for three years as Assistant to the Director-General of the Joint Research Centre (JRC), the European Commission's in-house science service. Previous roles include Head of Business Development & Public Relations of the UK Natural Environment Research Council's Centre for Ecology & Hydrology; Programme and Communications Manager of the European Commission's Institute for Environment and Sustainability in Ispra (Italy); Assistant to the Scientific Director of the Helmholtz Centre for Environmental Research (UFZ) in Leipzig (Germany); and Secretary of the Partnership for European Environmental Research (PEER). He also served for four years on the Scientific Advisory Board of the French national environmental research centre CEMAGREF (now IRSTEA). Holding a Ph.D. in Geography, Dr Müller has often worked with Latin American countries, in particular Colombia. He speaks six languages and has a keen interest in developing the science-policy interface.

## **Panel: Science, Technology, and Innovation Cooperation**

**ERIN BROMAGHIM (Committee Member and Moderator)** is the Director of Olympic and Paralympic Development in Los Angeles Mayor Eric Garcetti's Office of International Affairs. In this role, Ms. Bromaghim is focused on realizing the City's plans to make Los Angeles more sustainable, inclusive, resilient, and innovative ahead of the Olympic and Paralympic Games in 2028 and through the enduring legacy the Games will leave for all Angelenos. This legacy includes her work as the Conrad N. Hilton Foundation Fellow, using the framework of the United Nations Agenda 2030 to align, measure, and track the City's progress toward the 17 Sustainable Development Goals. She is also a Visiting Senior Fellow with the Truman Center for National Policy, where she leads their work on City and State Diplomacy. Ms. Bromaghim previously spent 14 years as a senior civilian with the U.S. Department of Defense, where she managed interagency defense, intelligence, special operations, and security reform efforts. Ms. Bromaghim entered federal civil service as a Presidential Management Fellow with the U.S. Navy, later working for the U.S. Air Force, the Office of the Secretary of Defense, and NATO. She holds degrees from Wake Forest University and Georgetown University, as well as a certificate in advanced project management from Stanford University.

**KLAUS TILMES** is a Senior Policy Adviser and former World Bank Director with over 30 years of international experience in development policy, strategy development at global, country, and sectoral levels, and program implementation. Since leaving the World Bank, Mr. Tilmes is providing policy advice to international organization, governments, and private sector companies on economic trends, human development, data policies, and technology strategies. As senior expert, he works closely with the African Center for Economic Transformation and the United Nations organizations on science, technology, and innovation. At the World Bank, Mr. Tilmes worked most recently with the Office of the President to develop the institution's strategy on emerging technologies and scaling adoption through financial assistance, policy advice, and public-private partnerships. He served as Director of the Trade and Competitiveness Global Practice, overseeing operations across Sub-Saharan Africa, the Middle East, and North Africa and leading global expert teams on trade competition policy, innovation, and

entrepreneurship. During his tenure at the World Bank, Mr. Tilmes also held positions as Operation and Strategy Director for Finance and Private Sector Development; Knowledge Strategy Advisor; and Manager at the Independent Evaluation Group. He earned a Master's in Public Administration from Harvard University as a McCloy Scholar and a Master in Economics from the University of Mannheim.

**NIKI FRANTZESKAKI** is a Chair Professor of Regional and Metropolitan Governance and Planning, Section Spatial Planning, Geosciences Faculty, Utrecht University, the Netherlands. Her expertise is on urban transitions and their governance and planning, with a focus on sustainability, resilience, livability and more specifically strengthening people-nature interactions in the urban environment. She has a rich international research experience with a portfolio of on-going projects in Australia, Canada and the United States of America. She has been a Highly Cited Researcher awardee from Clarivate Analytics in 2020 and 2021 putting her in the top 1 percent of researchers globally in the cross-field of social sciences and ecology. From 2019 to 2021, she has been a Research Professor and Director of the Centre for Urban Transitions in Swinburne University of Technology, Melbourne, Australia. From 2010 to 2019, she has been an Associate Professor at the Dutch Research Institute for Transitions with Erasmus University Rotterdam. She has published nearly 100 peer-reviewed articles and released four books on urban sustainability transitions in 2017 and 2018 and 2020. She has also edited 18 special issues in top-ranked journals on sustainability, sustainability transitions and urban governance.

**ATSUSHI SUNAMI** is the President of The Sasakawa Peace Foundation, as well as the President of the Ocean Policy Research Institute of The Sasakawa Peace Foundation. He is also Director of the SciREX center and Executive Advisor to the President at the National Graduate Institute for Policy Studies (GRIPS) and Guest Professor at the Research Organization for Nano & Life Innovation at Waseda University. He is currently serving as a member of the Basic Policy Group under the Committee on National Space Policy in the Cabinet Office, also as Chair of the Space Utilization Promotion Round-table under the Minister for Space Policy in the Cabinet Office. In addition, he is a member of the Innovation Strategy for Security and Safety at the Cabinet Office and on the Advisory Board for the Promotion of Science and Technology Diplomacy in the Ministry of Foreign Affairs, Japan. He holds a B.S.F.S. from Georgetown University and an M.I.A. and Ph.D. in Political Science from Columbia University.

**JEAN-PAUL ADAM** is the Director for Technology, Climate Change and Natural Resources Management in the United Nations Economic Commission for Africa (since January 2020). He previously served in several Cabinet positions in the Government of Seychelles including Minister of Finance, Trade and the Blue Economy (2015-2016) where he negotiated a debt for climate change adaptation swap in 2015 which placed 30% of Seychelles oceanic space under protection, and launched the process for Seychelles to become the first issuer of a Blue Bond. He also served as Seychelles' Minister of Foreign Affairs (2010-2015) and Minister of Health (2016-2019).