

Operationalizing Sustainable Development

Committee

E. W. Colglazier

Co-Chair

E. WILLIAM COLGLAZIER (Co-Chair) is Editor-in-Chief of Science & Diplomacy and Senior Scholar in the Center for Science Diplomacy at the American Association for the Advancement of Science (AAAS). He served as the fourth Science and Technology Adviser to the Secretary of State from 2011 to 2014. From 1994 to 2011, he was Executive Officer of the National Academy of Sciences and the National Research Council where he helped to oversee the studies that provide independent, objective scientific advice on domestic and international public policy issues. Dr. Colglazier received his Ph.D. in theoretical physics from Caltech in 1971, and prior to 1994 worked at the Stanford Linear Accelerator Center, the Institute for Advanced Study in Princeton, the Center for Science and International Affairs at Harvard's Kennedy School of Government, and the University of Tennessee. He is a past chair of the Forum on Physics and Society and the Committee on International Scientific Affairs of the American Physical Society (APS) and a Fellow of the AAAS and APS. In 2015 he received the Joseph A. Burton Forum Award from the APS for "outstanding contributions to the public understanding or resolution of issues involving the interface of physics and society" and the Order of the Rising Sun, Gold Rays with Neck Ribbon from the Government of Japan for "contributing to science and technology exchange and mutual understanding between Japan and the United States." From 2016 to 2018, Dr. Colglazier served as co-chair of the Ten Member Group appointed by the U.N. Secretary General to advise on science, technology, and innovation for achieving the 17 Sustainable Development Goals of the UN 2030 Agenda.

Cherry A. Murray

Co-Chair

CHERRY MURRAY (NAS/NAE) 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.

Erin Bromaghim

Member

ERIN BROMAGHIM 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.

Harini Nagendra

Member

HARINI NAGENDRA is Director, Research Centre and Professor and Lead, Centre for Climate Change and Sustainability at Azim Premji University. Over the past 25 years, she has been at the leading edge of research examining conservation in forests and cities of South Asia from the perspective of both landscape ecology and social justice. For her interdisciplinary research and practice, she has received a number of awards including the 2009 Cozzarelli Prize from the U.S. National Academy of Sciences (with Elinor Ostrom), the 2013 Elinor Ostrom Senior Scholar award, and the 2017 Clarivate Web of Science award. Her publications include the books “Nature in the City: Bengaluru in the Past, Present and Future” (Oxford University Press, 2016) and “Cities and Canopies: Trees in Indian Cities” (Penguin, 2019, with Seema Mundoli) and over 150 peer reviewed publications, including in PNAS (Proceedings of the National Academy of Sciences of the United States of America), Nature, Nature Sustainability, and Science. Professor Nagendra writes a monthly column ‘The Green Goblin’ in the Deccan Herald newspaper, and is a well known public speaker and writer on issues of urban sustainability in India. She is also the author of a historical mystery fiction series set in 1920s colonial Bangalore. Professor Nagendra has been a Lead Author on the Fifth Assessment Report (AR5) of the United Nations Intergovernmental Panel on Climate Change (IPCC), and is a past Science Committee member of DIVERSITAS and the Global Land Programme. She is an Associate Editor of Global Environmental Change, on the Advisory Board of the World Resources Institute Ross Centre for Sustainable Cities, and the European Institute of Technology’s Climate Knowledge and Innovation Centre, and engages with international science and policy through her involvement as a Steering Committee member of the Future Earth Programme for Ecosystem Change and Society, and the Future Earth Urban Knowledge Advisory Network.

Nebojsa Nakicenovic

Member

NEBOJSA NAKICENOVIC is the Executive Director of The World In 2050 (www.TWI2050.org). He is Deputy Chair of the Group of Chief Scientific Advisors to the European Commission, was the Deputy and Acting Director General of the International Institute for Applied Systems Analysis and tenured Professor of Energy Economics at Vienna Technology University. Among other positions, Dr. Nakicenovic has been a member of the Earth League; Earth Commission of the Global Commons Alliance; Multi-stakeholder Technical Group of Advisor on Sustainable Development Goal 7; Scientific Advisory Boards of the Potsdam Institute for Climate Impact Research; Fondazione Eni Enrico Mattei; Japanese Institute of Environmental Studies; German Aerospace Center; Renewable Energy Policy Network for the 21st Century; OMV Advisory Group on Sustainability; and Climate Change Centre Austria. He has also been a Technology and Innovation Advisor to the Government of Montenegro. He serves on many Editorial Boards of peer-reviewed journals, including Technological Forecasting and Social Change; Climate Policy, Energy Policy, Institution of Civil Engineers; Current Opinion in Environmental Sustainability; Energy Sector Management; Ecosystem Health and Sustainability; Scientific World Journal; Environmental Innovation and Societal Transitions; and the Energy Strategy Reviews. Dr. Nakicenovic's research interests include the long-term patterns of technological change, economic development and response to climate change and, in particular, the evolution of energy, mobility, digital technologies. Dr. Nakicenovic holds bachelors and master's degrees in economics and computer science from Princeton University and the University of Vienna, where he also completed his Ph.D. He also holds Honoris Causa Ph.D. degree in engineering from the Russian Academy of Sciences.

Ilona Otto

Member

ILONA OTTO is a professor in societal impacts of climate change at the Wegener Center for Climate and Global Change at the University of Graz. She leads a research group focusing on social complexity and system transformation. The group's ambition is to use complex science theory and novel research methods to analyze social dynamic processes and interventions that are likely to spark rapid social changes necessary to radically transform the interactions of human societies with nature and ecosystem services in the next 30 years. Dr. Otto is a social scientist by training. She uses various research methods including social surveys, case studies, behavioral experiments, and simulations in analyzing problems related to global environment changes, development, adaptation, and sustainability. Dr. Otto is a principal investigator in an EU Horizon 2020 Project CASCADES: Cascading Climate Risks: Towards Adaptive and Resilient European Societies and in a Climate Knowledge and Innovation Community (KIC) Project REBOOST: A Boost for Rural Lignite Regions. She led a chapter on human health in the World Bank Report 'Turn Down the Heat: Confronting the New Climate Normal', she contributed to the 2020 UN Emission Gap Report, and she led the Report on Modelling the Impact of Climate Change on Poverty at a Subnational Scale that was contracted by the World Bank. Dr. Otto received her Ph.D. in Resource Economics from the Humboldt University of Berlin.

Alfred Watkins

Member

ALFRED WATKINS is the Founder and the Chairman of the Global Solutions Summit (GSS), which focuses on innovative business models and financing strategies to promote the large-scale deployment in emerging markets of commercially viable, financially sustainable development solutions for potable water, renewable energy, information and communications technology (ICT), health care, housing, sustainable agriculture, food processing, and manufacturing. Prior to founding GSS, Dr. Watkins worked for more than 23 years at the World Bank and served as the World Bank's Science and Technology Program Coordinator and head of the World Bank's Science, Technology and Innovation Global Expert Team. He has extensive on-the-ground experience leading science, technology, and innovation capacity-building programs and projects in Africa, Asia, and various countries in the Former Soviet Union, including Russia, Ukraine, Kazakhstan, and Latvia. Dr. Watkins organized two World Bank Global Forums on Science, Technology and Innovation Capacity Building for Sustainable Development (one in 2007 and another in 2009). Before joining the World Bank, he also served as a legislative assistant/staff economist in the U.S. Congress and was an assistant professor at the University of Texas at Austin. In March 2017, United Nations (UN) Secretary-General António Guterres appointed him to a 3-year term on the Governing Council of the Technology Bank for the Least Developed Countries (LDCs). In January 2020, the Secretary-General reappointed him to a second 3-year term. The main objective of the Technology Bank, which was formally established by the UN General Assembly in December 2016, is to help LDCs identify and deploy the technology to (1) foster inclusive sustainable growth and (2) achieve the Sustainable Development Goals. Dr. Watkins received his Ph.D. in Economics from the Graduate Faculty of the New School University.