

Advancing Success Towards SDG2 (Zero Hunger) Through Science & Technology

July 13, 2023

SPEAKER BIOSKETCHES

**Listed in alphabetical order*

Channing Arndt, *Senior Director for Transformation Strategies, International Food Policy Research*

Channing Arndt is the Senior Director for Transformation Strategies, where he oversees four units within International Food Policy Research: Natural Resources and Resilience (NRR), Innovation Policy and Scaling (IPS-H+), Foresight and Policy Modeling (FPM), and Development Strategies and Governance (DSG), which houses IFPRI's regional offices and country programs. He has worked closely with central decision-making organs at the national level in Africa and Asia, including six years of resident experience in the Ministry of Planning and Finance in Mozambique. He has dedicated his career to the systemic transformations that underpin inclusive and sustainable economic development, and established a reputation for building institutional capacity in countries and via research networks such as the African Economic Research Consortium. His recent books include *Growth and Poverty in Sub-Saharan Africa*; *Measuring Poverty and Wellbeing in Developing Countries*; and *The Political Economy of Clean Energy Transitions*. He has published research in leading academic journals on a range of topics including agricultural development, poverty measurement, poverty alleviation and growth, market integration, nutrition, gender and discrimination, HIV/AIDS, technological change, trade policy, aid effectiveness, energy, bioenergy, climate variability, and the implications of climate change.

Inbal Becker-Reshef, *Director, NASA Harvest*

Dr. Becker-Reshef, is the Director of NASA Harvest which is NASA's global program on Food Security and Agriculture. It is made up of a diverse consortium of over 50 partners from the public and private sectors and is focused on advancing the use of satellite observations across the agricultural sector. She is a Research Professor at the department of Geographical Sciences at the University of Maryland and a visiting Professor at ICube – Laboratory of Engineering, Computer Science and Imagery at the University of Strasbourg. Her work is focused on the application of satellite observations for agricultural monitoring from the field to global scales, supporting decisions in food security, sustainability, and agricultural markets. She worked closely with national and international partners to initiate the G20 GEOGLAM (GEO Global Agricultural Monitoring) Program, where she is a Program Scientist leading the Crop Monitor initiative. She has received several awards and recognition for her work including the NASA Exceptional Public Achievement Medal for exceptional service to NASA, the US Asia-Pacific Economic Cooperation

(APEC) Science Prize for Innovation, Research, and Education, and the Planet Do Good award. Her background is in soil sciences and remote sensing and she received her Ph.D in 2012 from the University of Maryland.

Deanna Behring, *Assistant Dean and Director of Ag Sciences Global; Faculty Affiliate, School of International Affairs, Penn State*

Dr. Deanna Behring is responsible for leading and coordinating the Pennsylvania State University's growing portfolio of international research and educational programs. She joined the College of Agricultural Sciences in 2000 after more than a decade of experience in Washington, D.C., including an appointment to the White House Office of Science and Technology Policy under the Clinton administration as the assistant director for international affairs. Dr. Behring has also worked for the Central Intelligence Agency and the Department of Commerce, as well as on projects for the U.S. Trade Representative and the U.S. Agency for International Development. She speaks Chinese and French. Dr. Behring has a PhD in Communications Arts and Sciences from the Pennsylvania State University, a MA in International Affairs from Ohio University, and a BAs in Economics and French from Albion College and the Gerald Ford Institute for Public Service respectively. Dr. Behring also serves as a local city councilwoman.

Robert Bertram, *Chief Scientist, USAID Bureau for Resilience and Food Security*

Dr. Robert Bertram is the Chief Scientist in USAID's Bureau for Resilience and Food Security, where he serves as a key adviser on a range of technical and program issues to advance global food security and nutrition. In this role, he leads USAID's evidence-based efforts to advance research, technology and implementation in support of the U.S. Government's global hunger and food security initiative, Feed the Future. He previously served as Director of the Office of Agricultural Research and Policy in the Bureau for Resilience and Food Security, which leads implementation of the Feed the Future research strategy and related efforts to scale innovations in global food security efforts, working with a range of partners. Prior to that, he guided USAID investments in agriculture and natural resources research for many years. Dr. Bertram's academic background in plant breeding and genetics includes degrees from University of California, Davis, the University of Minnesota and the University of Maryland. He also studied international affairs at Georgetown University and was a visiting scientist at Washington University in St. Louis. He has been especially active in plant genetic resources policy as it relates to research for development, including applications of biotechnology in food security-related research. Before coming to USAID, he served with USDA's international programs as well as overseas with the Consultative Group on International Agricultural Research (CGIAR) system.

Rui Cardoso Pereira, *Head, Insect Pest Control Section, Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture*

Dr. Rui Cardoso Pereira is an entomologist and the Head of the Insect Pest Control Section, Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture in Vienna, Austria. He received his B.S in Agronomy and M.S in Integrated Pest Management from Technical University of Lisbon before

becoming field operations head and latter program director of Madeira-Med, in Madeira Island, Portugal. After, he received his Ph.D. in Entomology and Nematology at the University of Florida, Gainesville FL, USA. The dissertation “Influence of a juvenile hormone analogue and dietary protein on male Caribbean fruit fly, *Anastrepha suspensa* (Diptera: Tephritidae), sexual behavior” received the “Department’s Mulrennan Outstanding Ph. D. Student Award”. Immediately after, conducted research with the objective of technology transfer of the use of methoprene and protein to improve male sexual performance of mexfly at the USDA, Mission TX, USA. In 2007, he joins the Insect Pest Control Section at the IAEA, in Vienna. Since then he have been providing technical support to more than 50 Technical Cooperation Projects of the IAEA around the world and serve as Scientific Secretary of 3 Coordination Research Projects of the FAO/IAEA. In 2017 he was appointed as Head of the Insect Pest Control Section. He was member of the IPPC Technical Panel on Pest Free Areas and Systems Approaches for Fruit Flies (TPFF). Also, since 2014 he was appointed as chair of the International Fruit Fly Steering Committee.

E. William Colglazier, *Editor-in-Chief of Science & Diplomacy and Senior Scholar in the Center for Science Diplomacy, the American Association for Advancement of Science*

Dr. E. William Colglazier is Editor-in-Chief of Science & Diplomacy and Senior Scholar in the Center for Science Diplomacy at the American Association for Advancement of Science (AAAS). He served as the fourth Science and Technology Adviser to the Secretary of State from 2011 to 2014 to provide scientific and technical expertise and advice in support of the development and implementation of U.S. foreign policy. From 1994 to 2011, he was Executive Officer of the U.S. National Academy of Sciences (NAS) and the National Research Council (NRC) where he helped to oversee the studies that provide independent, objective scientific advice on domestic and international public policy issues. He received his Ph.D. in theoretical physics from the California Institute of Technology 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. While at Harvard, he also served as Associate Director of the Program in Science, Technology, and Humanism of the Aspen Institute. He is past chair of the Forum on Physics and Society of the American Physical Society (APS) and a Fellow of the AAAS and APS.

Lina Dotsenko, *Co-Founder and CEO, Bridges*

Dr. Lina Dotsenko is the co-founder and CEO of BRIDGES (<https://bridges.com.ua/en/>), a Ukraine-based organization established in 2008 that serves as an advisory center to the Ukrainian agricultural industry and policy makers in cooperation with the leading US institutions. She holds a Ph.D. degree in Agricultural Economics and Extension Education. She is also an alumna of the USDA-funded Faculty Exchange Program (1998), and the Regional Scholar Exchange Program funded by the US Department of State (2001), spending two semesters at Penn State University doing research and taking courses.

Cary Fowler, *Special Envoy for Global Food Security, U.S. Department of State*

Dr. Cary Fowler is perhaps best known as the "father" of the Svalbard Global Seed Vault, described by former UN Secretary General Ban Ki-moon as an "inspirational symbol of peace and food security for the entire humanity." The Seed Vault provides ultimate security for more than 850,000 unique crop varieties, the raw material for all future plant breeding and crop improvement efforts. He proposed the creation of this Arctic facility to Norway, headed the international committee that developed the plan for its establishment, and now chairs the international council that oversees its operations. In 2005 Dr. Fowler was chosen to lead the new Global Crop Diversity Trust, an international organization housed at the UN's FAO in Rome. This position carried international diplomatic status. During his tenure, he built a sizable endowment and raised additional funds for international programs to conserve crop diversity and make it available for plant breeding. The Trust successfully implemented a global project to rescue 90,000 threatened crop varieties in developing countries, and is now engaged in an effort to collect, conserve and pre-breed the wild relatives of more than 25 major crops. In 2015, US President Barack Obama appointed Dr. Fowler to the Board for International Food and Agricultural Development.

Andrew Gerard, *Program Manager, USAID's Innovation, Technology, and Research Hub*

Dr. Andrew Gerard is Program Manager for the Partnerships for Enhanced Engagement in Research (PEER) Program in USAID's Innovation, Technology, and Research Hub. PEER provides grants to developing country researchers who partner with U.S. government-funded scientists to better understand development challenges and develop solutions. Prior to coming to USAID in 2020, Dr. Gerard worked at Michigan State University (MSU) while completing a Ph.D. At MSU, he managed the Academy for Global Engagement, which provided MSU faculty members opportunities and funding to build their global research networks, and conducted research on coffee sector development in Rwanda and Burundi. Before pursuing his Ph.D., he worked at the Global Knowledge Initiative in Washington, DC, where he focused on building global research networks and collaborating with African governments and other stakeholders on science and technology policy and strategy. Dr. Gerard has a Ph.D. in Community Sustainability from MSU, a Master of Public Policy from Georgetown University, and a bachelor's degree in Behavioral Sciences from Andrews University.

Peter D. Goldsmith, *Professor, University of Illinois*

Dr. Peter Goldsmith brings new ideas about markets, commercial practices, and management to help small- and medium-scale farmers escape the trap of persistent poverty while helping small agribusinesses establish a vibrant private sector. He leads USAID's Feed the Future Lab for Soybean Value Chain Research bringing 50 researchers across 15 countries together to develop soybean as a technology to reduce poverty and malnutrition in the poorest countries of the world. He is using his soybean research and teaching experience over the past 15 years in Brazil and Argentina to make a difference in Africa and other developing countries. Dr. Goldsmith holds a B.A. (Political Science) from Kenyon College, 1981; a B.S. (Dairy Science) from The Ohio State University, 1983; a M.B.A. (Finance), Xavier University, 1990; a M.A. (Economics) from The Ohio State University, 1993; and a Ph.D. (Agricultural Economics) from The Ohio State University, 1995.

Elizabeth Hodson de Jaramillo, *Professor Emeritus, the Pontificia Universidad Javeriana*

Dr. Elizabeth Hodson de Jaramillo is Professor Emeritus at the School of Sciences of the Pontificia Universidad Javeriana. She has a Ph.D. in Botany. She is an international consultant on bioeconomy, biodiversity, agro-biotechnologies and biosafety of GMOs, Member of the Academia Colombiana de Ciencias Exactas, Físicas y Naturales and; Honorary Fellow for the Scientific Committee in Fondazione Scuola Medica Salernitana (Italy). She furthermore is a member of the Ad Hoc Technical Expert Group on Risk Assessment and Risk Management under the Cartagena Protocol on Biosafety (Convention on Biological Diversity); of UNESCO's World Commission on the Ethics of Scientific Knowledge and Technology (COMEST); the Inter-American Network of Academies of Sciences (IANAS); and serves as the Chair of Bioeconomy and Sustainable Development of the IICA (Inter-American Institute for Cooperation on Agriculture).

Bonnie Denise Jenkins, *Under Secretary for Arms Control and International Security, U.S. Department of State*

Ambassador Bonnie Denise Jenkins, PhD has served as the Under Secretary for Arms Control and International Security since July 22, 2021. She previously served in the Obama Administration as Special Envoy and Coordinator for Threat Reduction Programs in the Bureau of International Security and Nonproliferation (ISN) from July 2009 until January 2017. Ambassador Jenkins coordinated U.S. efforts on threat reduction globally and U.S. government programs in chemical, biological, nuclear, and radiological (CBRN) security. She was the State Department lead for all four of the Nuclear Security Summits held from 2010 to 2016, as well as the U.S. Representative to the G7 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction. Before serving as Coordinator, she was a Legal Adviser to the U.S. Arms Control and Disarmament Agency where she provided advice to U.S. ambassadors and delegations negotiating arms control and nonproliferation treaties. Ambassador Jenkins also provided legal advice to treaty implementation bodies including the Chemical Weapons Convention, the Comprehensive Nuclear Test Ban Treaty, the Open Skies Treaty, the Conventional Forces in Europe Treaty, and the Biological Weapons Convention (BWC). She has worked with international institutions such as the International Atomic Energy Agency, the World Health Organization, the Organization for the Prohibition of Chemical Weapons, the Office of Security and Cooperation in Europe, the Comprehensive Nuclear-Test-Ban Treaty Organization, Interpol, and the BWC Implementation Support Unit. Ambassador Jenkins has a Ph.D. in International Relations from the University of Virginia; an LL.M. in International and Comparative Law from the Georgetown University Law Center; an M.P.A. from the State University of New York at Albany; a J.D. from Albany Law School; and a B.A. from Amherst College. She also attended The Hague Academy for International Law. Jenkins is a retired U.S. Naval Reserve Officer and received numerous awards for her military service. She is a member of the New York State Bar.

Zeyaur R. Khan, *Principal Scientist, International Centre of Insect Physiology and Ecology.*

Dr. Zeyaur R. Khan, Principal Scientist at the International Centre of Insect Physiology and Ecology (icipe), Nairobi, Kenya, was elected ESA Fellow in 2010. He is internationally lauded for his development and dissemination of the innovative system of "push-pull farming," which simultaneously addresses issues of crop pests, soil improvement, food security, climate change and sustainability. Khan attended the Indian Agricultural Research Institute, New Delhi, receiving M.S. (1977) and Ph.D. (1980) degrees in insect taxonomy and insect physiology, respectively. After teaching at Rajendra Agricultural University (1980–1983) in Bihar, India, he worked as a post-doctoral fellow (1983–1985) at the International Rice Research Institute (IRRI) in the Philippines, research associate at the University of Wisconsin, Madison (1985-1986), entomologist at IRRI (1986–1991), and visiting senior scientist at Kansas State University (1991–1993) before joining icipe in 1993. Khan is also an adjunct professor at Cornell University and at Northwest University in South Africa. He is a council member of International Congress of Entomology. Khan has mentored 50+ graduate students from 16 countries, authored or co-authored 150 scientific papers, 10 book chapters, and five books. He was a plenary speaker at the 2008 International Congress of Entomology. He is an Honorary Fellow of the Royal Entomological Society, London, recipient of the International IPM Excellence Award (2009), ESA's Nan-Yao Su Award for Innovation and Creativity in Entomology (2010), icipe's Thomas Risley Odhiambo Distinguished Fellow award (2012), and Louis Malassis International Scientific Prize for Outstanding Career in Agriculture (2015).

Rattan Lal, *Distinguished University Professor of Soil Science, The Ohio State University*

Rattan Lal, Ph.D., is a Distinguished University Professor of Soil Science and Director of the CFAES Rattan Lal Center for Carbon Management and Sequestration at The Ohio State University, as well as an Adjunct Professor of University of Iceland and the Indian Agricultural Research Institute (IARI), India. He received a B.S. from Punjab Agricultural University, Ludhiana, India (1963); M.S. from Indian Agricultural Research Institute, New Delhi, India (1965); and Ph.D. from the Ohio State University, Columbus, Ohio (1968). He served as Sr. Research Fellow with the University of Sydney, Australia (1968-69), Soil Physicist at IITA, Ibadan, Nigeria (1970-87), and Professor of Soil Science at OSU (1987 to date). He has authored/co-authored over 1000 refereed journal articles and more than 550 book chapters, has written and edited/co-edited more than 100 books. He was included in the Thomson Reuters list of the World's Most Influential Scientific Minds (2014-2016), and he is among Clarivate's Highly Cited Researchers in Agriculture (2014-2021), as well as ranked #1 in Agronomy and Agriculture overall, #34 globally for the year 2020, and #73 globally for career from 1973-2020 among the top 2% of scientists by Stanford's Ioannidis (2019, 2020, 2021). He has received an Honoris Causa degree from nine universities throughout Europe, USA and Asia; the Medal of Honor from UIMP, Santander, Spain (2018); the Distinguished Service Medal of IUSS (2018); and is fellow of the five professional societies. Dr. Lal has mentored 115 graduate students and 182 visiting scholars from around the world. He was President of the World Association of Soil and Water Conservation (1987-1990), International Soil and Tillage Research Organization (1988-1991), Soil Science Society of America (2006-2008), and the International Union of Soil Sciences (2017-2018). He is Chair in Soil Science and Goodwill Ambassador for Sustainability Issues for the Inter-American Institute for Cooperation on Agriculture (IICA), and member of the 2021 United Nations Food Security Summit Science Committee and Action Tracks 1 & 3. Dr. Lal is

laureate of the GCHERA World Agriculture Prize (2018), Glinka World Soil Prize (2018), Japan Prize (2019), U.S. Awasthi IFFCO Prize (2019), Arrell Global Food Innovation Award (2020), World Food Prize (2020), and India's Padma Shri Award (2021).

Andrii Martyn, Head, Land-Use Planning Department, & Professor, National University of Life and Environmental Sciences of Ukraine

Dr. Andrii Martyn is an expert in agrarian policy and land governance in Ukraine, with a career spanning over 20 years. Currently, he serves as the Head of the Land-Use Planning Department and a Professor at the National University of Life and Environmental Sciences of Ukraine in Kyiv. In addition to his academic role, he also holds the position of Senior Project Manager (Land Reform) at the Reforms Delivery Office of the Cabinet of Ministers of Ukraine. He graduated with honors from the National Agrarian University in 2000, specializing in "Land Surveying and Cadastre." In 2007, he completed his studies in "Legal Studies" at the same university, earning a specialist qualification in law, and also holds a master's degree in "Forestry" from the National University of Life and Environmental Sciences of Ukraine, which he obtained in 2020. Prof. Andrii Martyn's expertise covers a broad range of areas, including agrarian policy, real property relations, land governance, land market, and real estate valuation. He holds a position of coordinator of the "New Agrarian Policy" working group within the National Council for the Recovery of Ukraine from the Consequences of the War. Prof. Martyn's extensive scholarly work includes authoring and co-authoring 35 books, 228 scientific publications, and 23 training materials. His publications cover topics such as land-use planning, land conservation, land governance, land cadastre, property valuation, real estate registry, land rights, and environmental protection. In recognition of his expertise and contributions, Prof. Dr. Andrii Martyn was elected as a Corresponding Member of the National Academy of Agrarian Sciences of Ukraine in 2020. His research, policy coordination, and dedication to sustainable agrarian development continue to shape and influence the agricultural landscape of Ukraine.

Jodie Miller, Section Head, the International Atomic Energy Agency

Dr. Jodie Miller currently works as Section Head of the Isotope Hydrology Section of the International Atomic Energy Agency in Vienna. She is also an Associate Professor in the Department of Earth Sciences at Stellenbosch University in South Africa. Although she started out in metamorphic petrology, these days she regards herself as an Earth Scientist with diverse research interests in isotope geochemistry and mineralogy, with a focus on isotope hydrology. She has around 10 years of experience in various projects across a broad spectrum of earth sciences including: groundwater sustainability and vulnerability assessment using isotope tracers; field mapping of complex geological terrains and their bearing on groundwater movement; using isotopes to track the interaction between surface water and groundwater. Prior to this, she worked on a variety of large regional mapping programs in Mozambique, Madagascar and Namibia.

Najat Mokhtar, Deputy Director General, International Atomic Energy Agency

Dr. Najat Mokhtar was appointed Deputy Director General and head of the Department of Nuclear Sciences and Applications of the International Atomic Energy Agency on 1 January 2019. Prior to her appointment, she was Director of the Division for Asia and the Pacific in the Department of Technical Cooperation. From 2012 to 2014, Dr. Mokhtar was the Section Head of the Nutrition and Health related Environmental Studies, Human Health Division. From 2010 to 2012, she was the Director of Science and Technology at the Hassan II Academy of Science and Technology in Morocco, where she coordinated the national strategy on Education and Research. She worked as University Professor and Research Director at the University Ibn Tofail in Morocco for more than 20 years. Dr. Mokhtar was a Technical Officer at the Agency from 2001 to 2007. Dr. Mokhtar holds a PhD in Nutrition and Endocrinology from Laval University in Canada and has a doctorate in food sciences from the University of Dijon in France. She has done her postdoctoral training as a Fulbright fellow at Johns Hopkins University in the United States of America.

Cherry Murray, Deputy Director for Research, Biosphere2; Professor of Physics and Professor of Electrical and Computer Engineering, University of Arizona

Dr. Cherry A. Murray is the Benjamin Peirce Professor of Technology and Public Policy, emerita, at Harvard University, and Professor of Physics and Deputy Director for Research of Biosphere 2 at the University of Arizona. She obtained both a B.S. and a Ph.D., in physics from the Massachusetts Institute of Technology. Her research interests have varied from experimental condensed matter and surface physics to nanotechnology, innovation, research and development of telecommunications networks, national security, and science and technology policy. Her current 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 and as Principal Associate Director for Science and Technology from 2004 to 2009. She was dean of Harvard University's School of Engineering and Applied Sciences from 2009 until 2014. Dr. Murray served as the Director of the United States 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 a Chair of the Board of the Okinawa Institute of Science and Technology Graduate University and on the Board of the American Academy of Arts and Sciences. In 2019, she was elected, representing the US 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. She was also selected in 2021 to be co-chair of the UN 10-Member Group for the Technology Facilitation Mechanism for the Sustainable Development Goals.

Suresh Pillai, *Director, Texas A&M University's National Center for Electron Beam Research*

Professor Suresh Pillai is the Director of Texas A&M University's National Center for Electron Beam Research (NCEBR) and Professor of Molecular Microbiology and Senior Faculty Fellow. He is the Associate Department Head for Graduate Programs in the Food Science & Technology Department at Texas A&M University. He is a Fellow of the International Forum on Industrial Processes and has served on the FDA's Science Advisory Board for the National Center for Toxicological Research and the Foundation for Food & Agricultural Research. He brings together researchers from across the Texas A&M University System and around the world to harness their skills to make paradigm-shifting changes in how we address contemporary food, public-health and environmental challenges. He is a molecular microbiologist by training, and has been with Texas A&M University System for 31 years. His research program focuses on molecular microbiology as it relates to food processing, food safety, and environmental microbiology. In addition, his research focuses on the detection, characterization, and decontamination of microbial populations in natural and man-made ecosystems using a variety of contemporary tools such as genomics, transcriptomics, proteomics, and metabolomics. He is a subject matter expert for the UN's International Atomic Energy Agency (IAEA) and the US National Nuclear Security Administration's Office of Radiological Security. He has published over 200 peer-reviewed research papers, edited/authored 6 reference books, 35 book chapters and has presented his research and global vision in over 70 countries.

Cynthia Rosenzweig, *Senior Research Scientist, NASA Goddard Institute for Space Studies*

Dr. Cynthia Rosenzweig is a Senior Research Scientist at the NASA Goddard Institute for Space Studies, where she heads the Climate Impacts Group. She is Co-Chair of the New York City Panel on Climate Change (NPCC), a body of experts convened by the mayor to advise the city on adaptation for its critical infrastructure. She co-led the Metropolitan East Coast Regional Assessment of the U.S. National Assessment of the Potential Consequences of Climate Variability and Change, sponsored by the U.S. Global Change Research Program. She was a Coordinating Lead Author of Working Group II for the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). She is Co-Director of the Urban Climate Change Research Network (UCCRN), Co-Editor of the First and Second UCCRN Assessment Reports on Climate Change and Cities (ARC3), and Co-Chair of the Urban Thematic Group for the United Nations UN Sustainable Development Solutions Network (SDSN) and the Campaign for an Urban Sustainability Development Goal (SDG). She serves as Chair of the Board of the New York City Climate Museum. She was named as one of "Nature's 10: Ten People Who Mattered in 2012" by the journal Nature, for her work preparing New York City for climate extremes and change. A recipient of a Guggenheim Fellowship, she joins impact models with climate models to project future outcomes of both land-based and urban systems under altered climate conditions. She is a Professor at Barnard College and a Senior Research Scientist at The Earth Institute at Columbia University.

Lisa Schechtman, *Senior Strategic Engagement Advisor, USAID*

Lisa Schechtman is the Senior Strategic Engagement Advisor for USAID's Center for Water Security, Sanitation, and Hygiene, where she guides the Agency's water- and sanitation- related external and

political engagements, including with bilateral donor partners, civil society, Congress, and the United Nations, to advance the U.S. Global Water Strategy and the Water for the World Act of 2014. Lisa has 20 years' experience in global health, development, and human rights, and has a range of expertise at the intersections of policy development, advocacy, and programming, including in HIV prevention, gender-based violence, and water security and sanitation. She holds a Master's Degree in International Human Rights from the University of Denver and a Bachelor's Degree in English Literature and French Language from Northwestern University.

Shoba Sivasankar, *Section Head, Joint FAO / IAEA Center of Nuclear Techniques in Food and Agriculture*

Sobhana (Shoba) Sivasankar has over 25 years of experience leading international agricultural R&D programs in both the public and private sectors, with focus on crop improvement and climate-smart solutions for crop production. Shoba is currently the Head of Plant Breeding and Genetics at the Joint FAO/IAEA Center of Nuclear Techniques in Food and Agriculture and leads a technical team for R&D and technology transfer to more than a hundred Member Countries of the IAEA and the FAO. In this role, she provides strategic direction to onboard, strengthen and transfer next-generation technologies in crop improvement towards national, regional and global food security under climate change. Technologies and practical applications onboarded/strengthened during her four plus years in this role at the IAEA in Vienna, Austria, include functional genomics for trait utilization, cell/tissue culture and induced genetic variation for improvement of vegetative and tree crops, seed systems for upscaling of improved crop varieties, microbes in biological control of plant diseases, astrobiology and space breeding, and gene editing. Formerly, as Director of two CGIAR mega-Programs, she drove their exceptional performance and eventual merger into CGIAR's Grain Legumes and Dryland Cereals Program across eight CGIAR Centers. Her result-oriented leadership of cross-functional teams in previous roles has delivered, among others, (a) establishment of the agronomic-trait transgenic product pipeline at DuPont Pioneer, now Corteva, from discovery research at multiple global locations to early product testing in the Americas, (b) establishment of the high-throughput plant phenotyping platform at DuPont Pioneer, (c) establishment of the first Farming Systems Research Station in Kerala, India, and (d) establishment of the agricultural extension office in Koottanad, Kerala. Shoba is inventor in 120 published patent applications across 38 patent families with over 20 issued and is author/editor of several peer-reviewed publications/books. She has a Ph D from the University of Guelph, Canada, and MBA from the University of Iowa, USA.

Sergii Skakun, *Assistant Professor, Department of Geographical Sciences & College of Information Studies, University of Maryland*

Dr. Sergii Skakun is an Assistant Professor with a joint appointment at the Department of Geographical Sciences and the College of Information Studies (iSchool) of the University of Maryland. He joined UMD in October 2015. From 2013 to 2015, he was a Senior Engineer at Samsung SDI (South Korea), where he was responsible for developing industrial vision inspection systems. From 2006 to 2013, he has held multiple positions (latest Senior Scientist) at the Space Research Institute (Ukraine), where he was

performing research in remote sensing. He received PhD in Computer Science from National Academy of Sciences of Ukraine in 2005. Dr. Skakun has participated as a PI or Co-I in projects funded by NASA, NSF, Google, European Commission (EC), EC Joint Research Center (JRC), U.S. Civilian Research & Development Foundation (CRDF), National Academy of Sciences of Ukraine, State Space Agency of Ukraine and Science & Technology Center in Ukraine (STCU). He is a two-time recipient as a PI of the Future Investigators in NASA Earth and Space Science and Technology (FINESST) grants "Agriculture Velocity of Winter Wheat" (2022-2025, Leonid Shumilo) and "Climate induced agriculture change hotspots and its implication to global food security in the former Soviet Union (Russia and Ukraine)" (2021-2024, Abdul Qadir).

Vaughan Turekian, Executive Director, the National Academies' Policy and Global Affairs Division

Vaughan Turekian is the executive director of the National Academies' Policy and Global Affairs Division (PGA). Prior to joining the Academies, he served as the fifth science and technology adviser to the U.S. secretary of state. In this capacity, he advised the secretary of state and other senior State Department officials on emerging science, technology, and health matters affecting the foreign policy of the United States. He is currently the co-chair of the 10 member group of advisers to the U.N. secretary general on the role of science, technology, and innovation to advance the achievement of the Sustainable Development Goals. He has affiliations with Georgetown University School of Foreign Service and the University College London. Previously, Turekian was chief international officer for the American Association for the Advancement of Science and the founding director of its Center for Science Diplomacy. In this capacity, he worked to build bridges between nations based on shared scientific goals, placing special emphasis on regions where traditional political relationships are strained or do not exist. In addition, Turekian worked at the State Department as a special assistant and adviser to the undersecretary for global affairs (2002 - 2006). Turekian holds a B.S. in geology and geophysics and international studies from Yale University and an M.S. and Ph.D. from the University of Virginia, where he focused on the transport and chemistry of atmospheric aerosols in marine environments.

Ray R. Weil, Professor, University of Maryland

Professor Ray R. Weil is an internationally recognized expert on soil science, nutrient cycling, soil organic matter and cover crop systems for soil health and water quality. His methods for soil microbial biomass and active carbon (POXC) are adopted by USDA/NRCS and researchers worldwide. His research on multi-purpose cover crops and ecological approaches to soil management is used by landscape managers and farms, large and small. He has advised on food security and soil management in Africa and other developing regions. He teaches undergraduate and graduate-level courses in soil science, soil fertility and sustainable agriculture at the University of Maryland. In 2022 he was awarded the FoodShot Global Groundbreaker Prize for his work on soil sulfur and food protein quality. His textbook, *The Nature and Properties of Soils*, is the most widely used soils textbook in the US and around the world.

Catherine E. Woteki, *Professor, Iowa State University*

Dr. Catherine Woteki is Professor of Food Science and Human Nutrition at Iowa State University and Visiting Distinguished Institute Professor in the Biocomplexity Institute of the University of Virginia. She currently is a member of President Biden's Council of Advisors on Science and Technology as well as Chair of the Board of Trustees of the American Society for Nutrition Foundation. She served as Chief Scientist and Under Secretary for USDA's Research, Education, and Economics (REE) mission area from 2010 to 2016. In that role, she developed the Office of the Chief Scientist, established the USDA Science Council, instituted the Department's first scientific integrity and open data policies, and was a founding member of the Meeting of Agricultural Chief Scientists held under the auspices of the G-20. Dr. Woteki is an advocate for building the platforms needed to enhance domestic and international food and agricultural research.

Prior to joining USDA, Dr. Woteki served as Global Director of Scientific and Regulatory Affairs for Mars, Incorporated, where she managed the company's scientific policy on matters of health, nutrition, and food safety. From 2002 to 2005, she was Dean of Agriculture and also head of the Agricultural Experiment Station at Iowa State University. Dr. Woteki served as the first Under Secretary for Food Safety at the U.S. Department of Agriculture (USDA) from 1997 to 2001, where she oversaw the safety of meat, poultry and egg products. Dr. Woteki served in the White House Office of Science and Technology Policy (OSTP) as Deputy Associate Director for Science from 1994 to 1996. During that time, she co-authored the Clinton Administration's policy statement, "Science in the National Interest."

Mark Wuddivira, *Professor and the Dean of the Faculty of Food and Agriculture, The University of the West Indies*

Professor Mark Wuddivira is a Professor of Agri-Environmental Soil Physics and the Dean of the Faculty of Food and Agriculture, The University of the West Indies (UWI), St. Augustine, Trinidad and Tobago. As an outstanding researcher and internationally sought-after expert, his research agenda on soil physical management and the sustainable use of humid tropical ecosystems have generated many publications in impactful international journals. He is the Editorial Board Chair of the Tropical Agriculture journal and an Associate Editor of the Journal of Plant Nutrition and Soil Science (Wiley). He is also a Fellow of the Caribbean Academy of Sciences, a Director on the Board of Directors for the Cocoa Research Centre, UWI, St. Augustine, and a Director on the Board of Directors for the Caribbean Agricultural Research and Development Institute (CARDI).