

# MEASURING CLIMATE CHANGE

## THE ECONOMIC AND FINANCIAL DIMENSIONS



### Speakers, Moderators, and Organizing Team’s Bios

|  |    |
|--|----|
| Keynote Session .....  | 2  |
| Welcome Remarks .....  | 4  |
| November 18: International Efforts to Measure the Impact of Climate Change .....               | 5  |
| • The IMF Climate Change Indicators Dashboard .....  | 5  |
| • Panel Discussion 1: Key Issues in Measuring Climate Change in Macroeconomic Statistics ..... | 5  |
| • Panel Discussion 2: Climate Change and Statistics—The Road Ahead .....                       | 8  |
| November 17 .....  | 10 |
| • Session 1: Measuring Climate Change: The Economic Dimensions .....                           | 10 |
| • Session 2: Measuring Climate Change: The Cross-Border Dimensions.....                        | 11 |
| • Session 3: Measuring Climate Change: The Financial Dimensions.....                           | 13 |
| • Session 4: Measuring Climate Change: Country Cases .....                                     | 14 |
| 9 <sup>th</sup> IMF Statistical Forum Organizing Team.....                                     | 15 |

*All promotional material were created by CSF Creative Solutions.*

## Keynote Session



### Kristalina Georgieva

Currently serves as Managing Director of the International Monetary Fund, a position she was selected for on September 25, 2019 and has served as since October 1, 2019.

Before joining the Fund, Ms. Georgieva was CEO of the World Bank from January 2017 to September 2019, during which time she also served as Interim President of the World Bank Group for three months.

Previously, Ms. Georgieva helped shape the agenda of the European Union while serving as European Commission Vice President for Budget and Human Resources. In this capacity she oversaw the EU's €161 billion (US \$175bn) budget and 33,000 staff, as well as the EU's response to the Euro Area debt crisis and the 2015 refugee crisis. Before that, she was Commissioner for International Cooperation, Humanitarian Aid and Crisis Response, managing one of the world's largest humanitarian aid budgets.

Ms. Georgieva began her career in public service at the World Bank as an environmental economist in 1993. After serving for 17 years, and in many senior positions, including Director for Sustainable Development, Director for the Russian Federation, Director for Environment, and Director for Environment and Social Development for the East Asia and Pacific Region, her career culminated in her appointment as Vice President and Corporate Secretary in 2008. In this role, she served as the interlocutor between the World Bank Group's senior management, its Board of Directors, and its shareholder countries.

Ms. Georgieva serves on many international panels including as co-Chair of the Global Commission on Adaptation, and as co-chair of the United Nations Secretary-General's High-Level Panel on Humanitarian Financing. She has authored and co-authored over 100 publications on environmental and economic policy, including textbooks on macro- and microeconomics.

Born in Sofia, Bulgaria, in 1953, Ms. Georgieva holds a Ph.D in Economic Science and a M.A. in Political Economy and Sociology from the University of National and World Economy, Sofia, where she was an Associate Professor between 1977 and 1993. During her academic career, she was visiting fellow at the London School of Economics and at the Massachusetts Institute of Technology.

In 2010, she was named "European of the Year" and "Commissioner of the Year" by European Voice in recognition for her leadership in the EU's response to humanitarian crises. In October 2020, she received the Atlantic Council's *Distinguished International Leadership Award* in acknowledgement of exceptional and distinctive contributions during her career of public service.



## Johan Rockström

Director of the Potsdam Institute for Climate Impact Research, Professor at the Institute of Earth and Environmental Science at Potsdam University, and Professor in Water Systems and Global Sustainability at Stockholm University. Rockström gained international recognition with the development of the Planetary Boundaries framework, which has since become a standard of sustainability science. He is deeply involved in research activities covering a range of topics related to the Earth System and global sustainability in the Anthropocene, with the overarching research question: "What is the safe operating space for Humanity's future on Earth, and which sustainable transformations that can take us there?"

Rockström's research creates considerable impact. For example, he received the prestigious European Research Council (ERC) Advanced Grant, and is ranked as one of the most influential and most-cited scientists in the world by Clarivate Analytics. In addition to his research endeavors, which have been widely used to guide policy, Rockström provided strategic scientific guidance as a member of the European Commission's Expert Group 'Mission Board for Adaptation to Climate Change, including Societal Transformation' and various scientific academies, including the Royal Swedish Academy of Sciences and the German National Academy of Sciences Leopoldina.

He regularly acts as a speaker to high-level international meetings and organisations, such as the World Economic Forum (WEF), the General Assembly of the United Nations (UNGA), the United Nations Sustainable Development Solutions Network (SDSN) and the United Nations Framework Convention on Climate Change Conferences (UNFCCC). Moreover, he is the Chief Scientist of Conservation International, as well as chairing the advisory board for the EAT Initiative on Health, Food and Sustainability, the Earth League, Future Earth (co-chair), the United Nations Sustainable Development Solutions Network (SDSN) and the Earth Commission.

Rockström's work has been recognized with accolades, the most recent of which include the Prince Albert II of Monaco Climate Change Award (2020), the Hillary Laureate by the Hillary Institute of International Leadership (2017), the French distinction Knight of the Legion of Honour (2016), the German Environmental Award (2015) and the International Cosmos Prize (2015). Before becoming Director of the Potsdam Institute of Climate Impact Research, Rockström founded the Stockholm Resilience Centre at Stockholm University and was Executive Director at the Stockholm Environment Institute.

He obtained a Master of Science (MSc) at the Swedish University of Agricultural Sciences, a Diplôme d'Agronomie Approfondie (DAA) at Institut National Agronomique Paris-Grignon, a Licentiate of Philosophy (PhLic) at Stockholm University, and completed a doctorate (PhD) in Natural Resources Management at Stockholm University.

Photo credit: M. Axelsson/Azote



## Gerry Rice

Mr. Rice was appointed Director of the Communications Department (COM) at the International Monetary Fund in December 2011. Prior to his appointment, he served as Deputy Director for COM (2006-2011), formerly known as EXR.

As Director of the COM, Mr. Rice is responsible for IMF strategy on external engagements with media and the Fund's key stakeholders, including legislatures and parliaments, labor representatives, civil society groups, and academics, as well as the Fund's internal communications. The Director works closely with the Managing Director and senior Fund management on the communication of IMF operations, including policy and lending decisions.

Prior to joining the IMF, Mr. Rice had an illustrious 25-year career at the World Bank. Amongst other positions, he served at the World Bank as Communications Director, where he managed all aspects of the World Bank's external and internal communications.

Over 1999-2000, Mr. Rice returned to his native Scotland to help with the international economic dimensions of the devolution project that was launched with the establishment of the first Scottish Parliament in 300 years. At that time, he published a book entitled "*Scotland's Global Opportunity*".

Mr. Rice earned his PhD in Modern History from Glasgow University and was a Kennedy Scholar at Harvard University. His PhD thesis on the establishment of the US Peace Corps was later published as *The Bold Experiment*. He is also a graduate of Harvard's Management Development Program and has served as Visiting Professor at Glasgow University.

## Welcome Remarks



### Bo Li

Mr. Li assumed the role of Deputy Managing Director at the IMF on August 23, 2021. He is responsible for the IMF's work on about 90 countries as well as on a wide range of policy issues.

Before joining the IMF, Mr. Li worked for many years at the People's Bank of China, most recently as Deputy Governor. He earlier headed the Monetary Policy, Monetary Policy II, and Legal and Regulation Departments, where he played an important role in the reform of state-owned banks, the drafting of China's anti-money-laundering law, the internationalization of the renminbi, and the establishment of China's macroprudential policy framework.

Outside of the PBoC, Mr. Li served as Vice Mayor of Chongqing—China's largest municipality, with a population of over 30 million—where he oversaw the city's financial-sector development, international trade, and foreign direct investment. Mr. Li was also Vice Chairman of the All-China Federation of Returned Overseas Chinese. He started his career at the New York law firm of Davis Polk & Wardwell, where he was a practicing attorney for five years.

Mr. Li holds a Ph.D. from Stanford University and an M.A. from Boston University, both in economics, as well as a J.D., *magna cum laude*, from Harvard Law School. He received his undergraduate education from Renmin University of China in Beijing.



### Louis Marc Ducharme

Mr. Ducharme was appointed Director of the IMF's Statistics Department on June 17, 2013 (his title was later changed to Chief Statistician and Data Officer, and Director in May 2018). Before joining the IMF, he spent 30 years at Statistics Canada where he held various positions in the areas of economic statistics. His last tenure was Assistant Chief Statistician responsible for all economic statistics. During his career, he provided extensive technical assistance to a number of countries in Latin America on price indices and the operational organization of statistical activities. Between 2004 and 2010, he was the chair of the United Nations Voorburg Group on Service Statistics and contributed to the development of the vision and work plan for the development of international standards for statistics and services. He also taught macroeconomics at the Graduate School of Public and International Affairs at the University of Ottawa.

He has a D.Phil in Economics and science policy from the University of Sussex, United Kingdom, and both a master's and bachelor's degree in economics from the University of Montreal in Canada.

## November 18: International Efforts to Measure the Impact of Climate Change

### The IMF Climate Change Indicators Dashboard



#### **Gabriel Quirós Romero**

Deputy Director in the IMF's Statistics Department. He leads the conceptual and research work in the department as well as the G-20 Data Gaps Initiative; in the latter role he leads the work of the international statistical organizations through the Inter-Agency Group on Economic and Financial Statistics to overcome the main data gaps identified by the G-20 in the aftermath of the 2008 recession.

Before joining the IMF in May 2016, Gabriel held several positions at the European Central Bank in Frankfurt, including Head of Division and Counsellor to the ECB Executive Board. Previously, he worked at the Central Bank of Spain in both the Economics and the Market Operations Departments.

Gabriel started his career in academia, teaching economics at the universities of Valencia and Madrid and he gained a tenure of Associate Professor of Economics at the University of Valencia in 1986. In his career, he has concentrated subsequently in three main areas: Macroeconomics, Monetary Policy and Financial Markets, and Statistics. Throughout his career he has contributed to many international initiatives and publications in those areas. Gabriel's main current research topics are the Digital Economy, Big Data, and Climate Change Indicators for economic and financial analysis.

Gabriel has been Chairperson of numerous international working groups and taskforces. He was awarded the Spanish National Graduation First Prize in Economics in 1980. He holds a Doctorate in Economics from the College of Spain (Bologna, Italy) and a Master of Science in Economics from the London School of Economics (UK).

## Panel Discussion 1: Key Issues in Measuring Climate Change in Macroeconomic Statistics



#### **Nathalie Girouard**

Lead manager for the OECD International Programme for Action on Climate (IPAC). Since 2015, she is the Head of the Division for Environmental Performance and Information in the OECD Environment Directorate. She is overseeing the Environmental Performance Review programme, the development of work on environmental information and indicators and the OECD Fossil Fuel Support Intelligence Unit.

Between 2009 and 2014, Nathalie coordinated OECD work on green growth and sustainable development and oversaw the mainstreaming of green growth within OECD country surveillance exercises and cross-cutting work of its Committees. She was responsible for the delivery of the Green Growth Strategy's Synthesis Report to the May 2011 Ministerial Council Meeting. She was also running the new OECD Green Growth and Sustainable Development Forum. Nathalie was advisor to the OECD Secretary-General, coordinating the accession process of five countries to the OECD between 2007 and 2009.

Prior to her first position at the OECD in the Economics Department, Nathalie belonged to the Research Department of the Bank of Canada. She holds a MSc in Economics from Montréal University.



## Stéphane Hallegatte

Senior Climate Change Advisor of the World Bank Climate Change Group. He joined the World Bank in 2012 after 10 years of academic research. His research interests include the economics of natural disasters and risk management, climate change adaptation, urban policy and economics, climate change mitigation, and green growth. Mr. Hallegatte was a lead author of the 5<sup>th</sup> Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). He is the author of dozens of articles published in international journals in multiple disciplines and of several books. He also led several World Bank reports including [Shock Waves: Managing the Impacts of Climate Change on Poverty](#) in 2015, [Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters](#) in 2016, and [Lifelines: The Resilient Infrastructure Opportunity](#) in 2019. He also led the writing team of the [Stern-Stiglitz High-Level Commission on Carbon Prices](#). He was the team leader for the first [World Bank Group Climate Change Action Plan](#), a large internal coordination exercise to determine and explain how the Group will support countries in their implementation of the Paris Agreement. In 2018, he received the [Burtoni Award](#) for his work on the link between climate change adaptation and poverty reduction. Mr. Hallegatte holds an engineering degree from the Ecole Polytechnique (Paris) and a Ph.D in economics from the Ecole des Hautes Etudes en Sciences Sociales (Paris).

Stéphane Hallegatte is the Senior Climate Change Advisor of the World Bank Climate Change Group. Mr. Hallegatte was a lead author of the 5<sup>th</sup> Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). He is the author of dozens of articles published in international journals in multiple disciplines and of several books and World Bank reports including [Shock Waves: Managing the Impacts of Climate Change on Poverty](#). In 2018, he received the [Burtoni Award](#) for his work on the link between climate change adaptation and poverty reduction. Mr. Hallegatte holds an engineering degree from the Ecole Polytechnique (Paris) and a Ph.D in economics from the Ecole des Hautes Etudes en Sciences Sociales (Paris).

Stéphane Hallegatte is the Senior Climate Change Advisor of the World Bank Climate Change Group. He is the author of dozens of articles published in international journals and of several books and World Bank reports on green growth, sustainable development, and the economics of natural disasters and climate change.



## Nick Johnstone

A Canadian national, holds a Doctorate in Economics from the University of Cambridge. As IEA's Chief Statistician, Mr. Johnstone leads the IEA Energy Data Centre (EDC) defining and implementing efficient and effective strategies for collecting processing and disseminating a wide range of energy data and statistics.

Prior to joining the IEA, Dr. Johnstone was Head of Division at the Directorate for Science, Technology and Innovation (DSTI) of the Organization for Economic Cooperation and Development (OECD) with main responsibilities including supporting the work of the Committee on Industry, Innovation and Entrepreneurship (CIIE), as well as subsidiary bodies working on sectoral issues. He was responsible for managing and implementing projects on policy evaluation, entrepreneurship, innovation and global value chains and application of digital technologies for public policies.

Prior to this the focus of his work was on the economics of environmental policy, first at the Department of Applied Economics at the University of Cambridge and subsequently in the Environmental Economics Programme of the International Institute for Environment and Development, where he contributed to a number of policy research projects in Central America, Brazil, West Africa and East Africa. Following this he led the Empirical Policy Analysis Unit in the OECD's Environment Directorate, implementing a number of projects assessing the effects of environmental policy settings on firm and household behavior.

## Debora Revoltella



Director of the Economics Department of the European Investment Bank, serving as Chief Economist, and has held this position since April 2011. The Department provides impact-driven economic analysis to support operations, the global positioning as well as the policy and strategy definition of the Bank. It comprises 30 economists, working in three divisions - Economic Studies, Country and Financial Sector Analysis and Policy and Strategy. Main publications of the department include the Annual Report on Investment and Investment Finance in Europe, regular Economic Notes on structural issues concerning the European economy and publications on the state of the banking sector in the different regions of operations of the EIB (CESEE, ENCA, North African Countries, ACP, etc.). The Economics Department is also in charge of the EIB Report on Results – which assesses the development impact of projects financed by the EIB under various mandates.



Debora holds a degree in Economics and a Master in Economics from Bocconi University as well as a PhD in Economics from the University of Ancona in Italy. After the experience as an adjunct Professor in Macroeconomics at Bocconi University, Debora joined the research department of Banca Commerciale Italiana, a leading Italian Bank. In 2001, she joined UniCredit as the Chief Economist for Central and Eastern Europe. She managed a team of 40 economists in charge of supporting the institution in its regional growth strategy. During these years, the department developed into a leading research centre for the region.

Debora is member of the Steering Committees of the Vienna Initiative and the CompNet, and a member of the Boards of the Joint Vienna Institute, the SUERF and the Euro 50 Group.



### **Reena Shah**

Chief of the Environment Statistics Section at the United Nations Statistics Division and responsible for the development of methodological work on environment statistics (e.g. the Framework for the Development of Environment Statistics), global data collection and dissemination of environment statistics with particular focus on water and waste statistics, capacity building in environment statistics at regional and national levels, and the development of the Global Set of Climate Change Statistics and Indicators that will be submitted to the 53rd session of the Statistical Commission in 2022 for adoption.



### **Fabio M. Natalucci**

Deputy Director of the Monetary and Capital Markets Department with responsibility for the IMF's global financial markets monitoring and systemic risk assessment functions.

He is responsible for the Global Financial Stability Report that gives the IMF's assessment of global financial stability risks. Prior to joining the IMF, Fabio was a Senior Associate Director in the Division of Monetary Affairs at the Federal Reserve Board, where he conducted research and current analysis on the relationship between monetary policy, financial regulatory policy, and financial stability. Between October 2016 and June 2017, Mr. Natalucci was Deputy Assistant Secretary for International Financial Stability and Regulation at the U.S. Department of Treasury.

His responsibilities included leading U.S. engagement on financial regulatory cooperation in the G-20, representing the U.S. Treasury at the Financial Stability Board, coordinating between domestic and international post-crisis regulatory reforms, and monitoring developments and vulnerabilities in global financial markets. Fabio holds a PhD in Economics from New York University.

## Panel Discussion 2: Climate Change and Statistics—The Road Ahead



### Gillian Tett

She serves as the chair of the editorial board and editor-at-large, US of the Financial Times. She writes weekly columns, covering a range of economic, financial, political and social issues. She is also the co-founder of FT [Moral Money](#), a twice weekly newsletter that tracks the ESG revolution in business and finance which has since grown to be a staple FT product. In 2020, Moral Money won the SABEW best newsletter.

Previously, Tett was the FT's US managing editor from 2013 to 2019. She has also served as assistant editor for the FT's markets coverage, capital markets editor, deputy editor of the Lex column, Tokyo bureau chief, Tokyo correspondent, London-based economics reporter and a reporter in Russia and Brussels.

Tett is the author of *The Silo Effect*, which looks at the global economy and financial system through the lens of cultural anthropology. She also authored *Fool's Gold: How Unrestrained Greed Corrupted a Dream, Shattered Global Markets and Unleashed a Catastrophe*, a 2009 New York Times bestseller and Financial Book of the Year at the inaugural Spear's Book Awards. Additionally, she wrote the 2003 book *Saving the Sun: A Wall Street Gamble to Rescue Japan from its Trillion Dollar Meltdown*. Her next book, *Anthro-Vision, A New Way to See Life and Business* will come out in June 2021.

Tett has received honorary degrees from the University of Exeter, the University of Miami, St Andrew's, London University (Goldsmiths), Carnegie Mellon, Baruch and an honorary doctorate from Lancaster University in the UK.

In 2014, Tett won the Royal Anthropological Institute Marsh Award and was named Columnist of the Year at the British Press Awards. Her 2012 article "Madoff spins his story" won the SABEW Award for best feature article. Other awards include a President's Medal by the British Academy (2011), being recognized as Journalist of the Year (2009) and Business Journalist of the Year (2008) by the British Press Awards, and as Senior Financial Journalist of the Year (2007) by the Wincott Awards. In 2017, Tett won the commentator of the year from Editorial Intelligence.

Before joining the Financial Times in 1993, Tett was awarded a PhD in social anthropology from Cambridge University based on field work in the former Soviet Union. While pursuing the PhD, she freelanced for the FT and the BBC. She is a graduate of Cambridge University.



### Mia Mottley

The Honourable Mia Mottley became Barbados' eighth and first female Prime Minister on May 25, 2018.

Ms. Mottley was elected to the Parliament of Barbados in September 1994 as part of the new Barbados Labour Party Government. Prior to that, she served as one of two Opposition Senators between 1991 and 1994. One of the youngest persons ever to be assigned a ministerial portfolio, Ms. Mottley was appointed Minister of Education, Youth Affairs and Culture from 1994 to 2001.

She later served as Attorney General and Deputy Prime Minister of Barbados from 2001 to 2008 and was the first female to hold that position.

Ms. Mottley is an Attorney-at-law with a degree from the London School of Economics, specializing in advocacy. She is also a Barrister of the Bar of England and Wales.

In 2002, she became a member of the Local Privy Council. She was also admitted to the Inner Bar, becoming the youngest ever Queens Counsel in Barbados.



### Amar Bhattacharya

Senior fellow in the Center for Sustainable Development, housed in the Global Economy and Development program at Brookings. His focus areas are the global economy, development finance, global governance, and the links between climate and development.

From April 2007 until September 2014, he was Director of the Group of 24, an intergovernmental group of developing country Finance Ministers and Central Bank Governors. In that capacity he led the work program of the Group, supported the deliberations of the Ministers, and was the principal point of interface with other organizations including the G20. He has therefore been an active participant in the global economic discussions and a key representative of the views of developing countries.



Prior to taking up his position with the G24, Mr. Bhattacharya had a long-standing career in the World Bank. His last position was as Senior Advisor and Head of the International Policy and Partnership Group. In this capacity, he was the focal point for the Bank's engagement with key international groupings and institutions such as the G7/G8, G20, IMF, OECD and the Commonwealth Secretariat. Through these different positions Mr. Bhattacharya has had a long-standing engagement in research and policy discussions on the global economy and spillovers, international financial architecture, development financing and the global governance agenda including on the role and reform of the international financial institutions.

He completed his undergraduate studies at the University of Delhi and Brandeis University and his graduate education at Princeton University.



### **James H. Stock**

Vice Provost for Climate and Sustainability, Harvard University; the Harold Hitchens Burbank Professor of Political Economy, Faculty of Arts and Sciences; and a member of the faculty at the Harvard Kennedy School. His current research includes energy and environmental economics with a focus on fuels and on U.S. climate change policy. Prior work includes econometric methods, forecasting, and empirical macroeconomics.

He is co-author, with Mark Watson, of a leading undergraduate econometrics textbook. In 2013-2014 he was Member of President Obama's Council of Economic Advisers, where his portfolio included macroeconomics and energy and environmental policy. He is co-editor of the *Brookings Papers on Economic Activity*, a member of the CBO Panel of Economic Advisers, and a member of the NBER Business Cycle Dating Committee.

He was Chair of the Harvard Economics Department from 2007-2009. He holds a M.S. in statistics and a Ph.D. in economics from the University of California, Berkeley.



### **Eric Van Nostrand**

Managing Director, is Head of Research for Sustainable Investments and Multi-Asset Strategies. He leads a global team focused on developing sustainable investment strategies that animate portfolios. He also oversees a team responsible for coordinating research and portfolio strategy across the multi-asset investment platform-including global economics, asset allocation, and portfolio construction. In both the sustainable and multi-asset contexts, Eric's team blends discretionary and systematic research approaches, while integrating BlackRock's traditional and sustainable research processes. Eric regularly engages with BlackRock's clients on the global economic and investment outlook, from both macro and sustainable perspectives.

Before his current role, Eric was Head of Macro Research & Portfolio Strategy for Multi-Asset Strategies and a portfolio manager on the firm's global tactical asset allocation (GTAA) team.

Prior to joining BlackRock, Eric was a staff economist and advisor to the Chairman of the White House Council of Economic Advisers, focusing on the U.S. macroeconomy and the global policy landscape. Eric holds a law degree from Yale Law School and degrees in economics and engineering from the University of Pennsylvania.



### **Kristina Kostial**

Deputy Director in the IMF's Strategy, Policy and Review Department. She joined the IMF in 1995 and has held positions in various departments, including as mission chief for Jordan, Lebanon, Rwanda, South Sudan, and Syria; deputy head of the IMF's Technical Assistance Office; and Head of the IMF's Strategy Unit.

Kristina holds a PhD from the European University Institute in Florence, Italy.

**November 17**

## Session 1: Measuring Climate Change: The Economic Dimensions



### **Catherine Pattillo**

She is a Deputy Director in the IMF's African Department. Since joining the Fund from a position at Oxford University, she has worked in the Fiscal Affairs Department where she was chief of the division responsible for the IMF's Fiscal Monitor, the Research Department, and on countries in Africa and the Caribbean, and the Strategy, Policy and Review Department where she worked on low-income country issues, and emerging issues such as gender, inequality, and climate change. She has published in these areas, as well as on Sustainable Development Goals, firm dynamics in sub-Saharan Africa, growth, investment, debt, monetary and exchange rate policies, aid, and currency crises. She received her Ph.D in Economics from Yale University.



### **Cliodhna Taylor**

Head of Research Partnerships at the UK Office for National Statistics. They oversee many of the ONS's research partnerships with academic partners, in particular the relationship with the UK's Economic Statistics Centre of Excellence which produces ambitious and innovative research in the field of economic statistics. In addition, they also oversee several research programmes in ONS – particularly those focussing on better measurement of the digital economy, the development of Beyond GDP statistics, and the valuation of official statistics. The uniting theme of this research is a looking beyond existing frameworks for measuring the economic, with a view to understanding what ONS as a National Statistics Institute could and should be producing in the near future to meet user needs.

Their career has focussed toward the development of innovative methodologies for the purposes of answering important economic questions. They wrote for the ONS's Economic Review, during which time they developed methodologies ranging from measuring the contributions to inflation based on the import intensity of consumer products, to better measuring wage and career progression in the labour market. Following this they moved to become Head of Labour Productivity, focussing both on expanding the granularity and scopes of the statistics being produced, as well as analyses of the UK's Productivity Puzzle. They then progressed to head up a team focussed on administrative labour market data analysis and developed a methodology to allow the use of the UK's payroll tax data to be used to create timely statistics. Having developed this methodology, they then moved to Her Majesty's Revenue and Customs to lead the team producing these statistics – further developing the methodology and producing a broader suite of monthly labour market statistics based on the data, aiding a fast assessment of the UK's labour market during the Covid pandemic. In November 2021 they then moved back to ONS and soon after took up their current role of Head of Research Partnerships.



### **Viveka Palm**

Prof Dr Viveka Palm is the Director for the Department of sectoral and regional statistics, Eurostat, since 2021. For the years 2013-2021, she worked as Deputy Head of Department for regions and environment, Statistics Sweden. At the same time, she has been employed as an Adjunct Professor in the Department of Sustainable development, Environmental science and Engineering (SEED) at the Royal Institute of Technology, KTH. She received her PhD and her Master of Science in Engineering Physics from KTH and worked for eight years at IVL the Swedish environmental institute.

Palm has been the co-chair of the UN Inter-Agency and Expert Group for the Sustainable Development Goal Indicators (IAEG-SDG) in the group for North America and Northern and Western Europe between the years 2019-2021.



### **Bram Edens**

He holds a Ph.D. in environmental economics from VU University Amsterdam. As senior statistician for the United Nations Statistics Division (UNSD), Bram is the project manager of the Natural Capital Accounting and Valuation of Ecosystem Services project, an EU funded project, jointly implemented with UNEP on developing and mainstreaming ecosystem accounting in Brazil, China, India, Mexico, and South Africa. He was heavily involved in the SEEA Ecosystem Accounting revision process with focus on valuation. He is also a contributing author to the IPBES Values Assessment.

Prior to joining UNSD, Bram worked in various roles for Statistics Netherlands, most recently as head of industry, energy and construction. He has published numerous articles on environmental-economic accounting topics, and is a referee for several scientific journals in the environmental domain.

## Session 2: Measuring Climate Change: The Cross-Border Dimensions



### Evie Sylviani

She serves as a Director in the Statistic Departments of Bank Indonesia since December 2020. Her responsibilities include managing data and statistics development, developing Bank Indonesia's Data Center, supervising regulatory formulation for data development and reporting, and coordinating the implementation of G20 Data Gap Initiatives' recommendations for Indonesia.

Since joining Bank Indonesia in 1997, she has worked in many areas, such as Monetary Operation Department, Monetary and Economic Research Department, Office of the Governor, and International Department. Prior to current position, she served as a Deputy Director in International Department and was actively participated in working groups and various initiatives in international fora, among others in the area of capital flows, financial market development, and sustainable finance. She also served as an Advisor to the Executive Director of the South East Asia Voting Group (SEAVG) at the IMF in 2013-2015.

She holds a Master Degree in Applied Economics from the University of Michigan, Ann Arbor, USA.



### Anu Peltola

The Acting Head of Statistics and Information at UNCTAD. She coordinates UNCTAD's work on SDG indicators, including an inter-agency initiative on the statistical measurement of illicit financial flows, jointly with UNODC. She oversees projects to develop new statistics and build countries' statistical capacity, for instance to measure gender equality in the economy and trade. The work is reflected in data-driven analysis, such as the annual UNCTAD SDG Pulse and the 2021 Development Globalization Facts and Figures dedicated to small island developing States, their challenges, capacities, remoteness and transport costs, environmental and climate vulnerabilities as well as their human development.

Before joining UNCTAD, she worked in UNECE coordinating the first-ever inter-agency steering group on climate change statistics and leading international work to develop guidance on topics, such as modernizing statistical legislation and the value of official statistics for the Conference of European Statisticians. Her background is in Statistics Finland where she worked as Head of Statistics and Head of Development in short-term economic statistics, household statistics and business statistics.



### Maria Borga

The Deputy Division Chief in the Balance of Payments Division at the IMF where she is playing a leading role in the update of the international statistical standards, including the *Balance of Payments and International Invest Position Manual*. Prior to joining the IMF, she served as Senior Statistician at the OECD, where she oversaw the implementation of the OECD's *Benchmark Definition of Foreign Direct Investment, 4th edition (BD4)*.

Her research at the OECD included integrating FDI statistics into the OECD's Trade in Value Added Database and harmonizing and linking FDI statistics with statistics on the operations of multinational enterprises (MNEs). Before joining the OECD, Dr. Borga served as Assistant Division Chief for Research and Analysis in the Balance of Payments Division of the U.S. Bureau of Economic Analysis (BEA).

She led research into improving BEA's measures of banking, wholesale and retail trade, and insurance services to better capture trade in these services and into the impact that the offshoring of both goods and services has had on employment at the parent companies of U.S. MNEs. Her other research included the impact of foreign expansion on the domestic operations of U.S. MNEs, globalization of R&D activities within MNEs, and adaptation of production processes to host country factor prices at U.S. MNEs' foreign manufacturing affiliates.

She received a B.A. in Economics and a B.S. in French from the Pennsylvania State University and a Ph. D. in Economics from Boston University.



## Ulrich Volz

Director of the Centre for Sustainable Finance and a Professor of Economics at SOAS, University of London. He is also a Senior Research Fellow at the German Development Institute and Honorary Professor of Economics at the University of Leipzig. At SOAS, he previously served as Head of the Department of Economics and Member of the University's Executive Board. Ulrich is a director of the Global Research Alliance for Sustainable Finance and Investment and serves on the advisory board of the International Sustainable Finance Centre. Ulrich was Banque de France Chair at EHESS in Paris, and also taught at Peking University, Kobe University, Hertie School of Governance, Freie Universität Berlin, Central University of Finance and Economics in Beijing, and the Institute of Developing Economies (IDE-JETRO) in Tokyo. He spent stints working at the European Central Bank and the European Bank for Reconstruction and Development and held visiting positions at the University of Oxford, University of Birmingham, ECB, Bank Indonesia, and Aoyama Gakuin University in Tokyo. Ulrich holds a PhD from Freie Universität Berlin and was a Fox International Fellow and Max Kade Scholar at Yale University. Ulrich was part of the UN Inquiry into the Design of a Sustainable Financial System and has acted as an advisor to several governments, central banks, international organisations and development agencies on matters of macroeconomic policy, sustainable finance and development. He is currently advising the Brazilian central bank on developing an environmental and social risk analysis framework and has worked with the Finance Ministers of the V20 climate vulnerable countries on ways to address macrofinancial risks stemming from climate change. Ulrich was lead author of a recent study on [Climate Change and Sovereign Risk](#) as well as a 2018 UN report on [Climate Change and the Cost of Capital in Developing Countries](#). He is a co-editor of the NGFS volume on [Case Studies of Environmental Risk Analysis Methodologies](#) and the [Routledge Handbook of Banking and Finance in Asia](#). He is co-chair of the [Debt Relief for Green and Inclusive Recovery initiative](#).

## Session 3: Measuring Climate Change: The Financial Dimensions



### Tobias Adrian

The Financial Counsellor and Director of the IMF's Monetary and Capital Markets Department. He leads the IMF's work on financial sector surveillance and capacity building, monetary and macroprudential policies, financial regulation, debt management, and capital markets. Prior to joining the IMF, he was a Senior Vice President of the Federal Reserve Bank of New York, and the Associate Director of the Research and Statistics Group.

Mr. Adrian has taught at Princeton University and New York University, and has published in economics and finance journals, including the American Economic Review and the Journal of Finance. His research focuses on the aggregate consequences of capital market developments.

He holds a PhD from the Massachusetts Institute of Technology; an MSc from the London School of Economics; a Diplom from Goethe University Frankfurt; and a Maîtrise from Dauphine University Paris.



### Caroline Willeke

The Deputy Director General of the European Central Bank's Statistics Department, responsible in particular for macro-economic statistics, surveys and climate-related data. Previously, she was working in various managerial positions in the areas of Statistics, Economics and HR & Organisation at the European Central Bank.

Mrs. Willeke holds a Ph.D. in Economics from the University of Cologne. She has been the Chair of various ESCB Working Groups and member of several European and International statistical bodies. She is the author of various articles on central banking, monetary analysis and statistics.



### Małgorzata Osiewicz

A Team Lead in the Monetary and Economic Statistics Division of the ECB. She leads a team responsible for conducting business and households' surveys in Europe and exploring data sources for climate-related information.

Previously, she was working in various areas of statistics, including topics on financial derivatives, labour market and payments data.

Mrs Osiewicz was also a consultant at the World Bank in the Trade and Competitiveness Global Practice.



### Elena Triebkorn

The Head of the Sustainable Finance Data Hub at Deutsche Bundesbank's Statistics Division.

She is one of the team leads in the Network on Greening the Financial System (NGFS) Workstream on Bridging Data Gaps and a member of the Irving Fisher Committee (IFC) Sustainable Finance Working Group.

Before joining the Sustainable Finance Data Hub, she was a Deputy Head of Section in the General Economic Statistics Division, working mainly on consumer and real estate price statistics.

Elena holds a master's degree in economics from the University of Notre Dame.



### Ville Tolkki

He has been a Senior Adviser at the Bank of Finland since 2017. He is currently working at the Statistical Analysis and Information Services -division. His tasks focus on developing banking and other financial sector statistics in close collaboration with the users.

Before joining the Bank of Finland, he worked at Statistics Finland in various positions. He started in late 1990's with development projects on Regional Input-Output -tables and Regional Accounts transition into European System of Accounts (ESA) 1995. From 2003 onwards he worked for 10 years with business statistics as a Senior Statistician and a Head of Statistics. His last assignment at Statistics Finland was a Head of National Accounts -section during the ESA 2010 transition.

Recently he has contributed to the work of international statistical community within the themes of sharing confidential statistical data and sustainable finance.



## Session 4: Measuring Climate Change: Country Cases



### Vitor Gaspar

A Portuguese national, has been Director of the Fiscal Affairs Department of the International Monetary Fund since 2014. Prior to joining the IMF, he was a Special Adviser at Banco de Portugal. He served as Minister of State and Finance of Portugal during 2011–13. He also held a number of positions in European institutions. Notably, he was director general of research at the European Central Bank from 1998–2004.

Mr. Gaspar holds a Ph.D. and a post-doctoral agregado in Economics from Universidade Nova de Lisboa; he graduated from Universidade Católica Portuguesa.



### Scott Wentland

A senior research economist at the Bureau of Economic Analysis (BEA), where his research centers on applied microeconomics topics and, more recently, environmental economic accounting. Prior to joining the BEA in 2015, he worked as a tenured Associate Professor of Economics at Longwood University.

He received his PhD in Economics from George Mason University in 2009 and has since published research on a variety of topics, including housing, taxation, real estate, urban economics, and environmental economic accounting.

Outside his capacity at the BEA, Scott Wentland regularly teaches a graduate econometrics course at George Washington University and co-teaches an undergraduate personal finance course at Longwood University. He currently serves as a Board Member for the Society of Government Economists (SGE) and is a member of the Conference on Research in Income and Wealth (CRIW).



### Julio Santaella

Since January 2016, Julio Santaella is the President of the Instituto Nacional de Estadística y Geografía (INEGI), the Mexican National Statistics Office. From 2001 to 2015, Mr. Santaella served at the Bank of Mexico as the Executive Coordinator of the Mexican Petroleum Fund, Manager of Information and Analysis, Director of the Central Bank Operations Support, Researcher for the General Direction of Economic Research, as well as for the Central Bank Governing Board.

In the academic field, he has been a researcher and teacher at the ITAM (1985-86, 1997-2003), Coordinator of the Applied Economics Center, Chairman of the Economics Department and Deputy Director of the Economic Research and Analysis Center.

From 1992 to 1997 he served as an economist of the Research Department and the European Department I of the International Monetary Fund, and from 1984 and 1987, he was appointed Department Chief of Macroeconomic Policy in the General Direction of Treasury Planning at the Finance Ministry.

Julio A. Santaella received his Bachelor Degree in Economics from the Instituto Tecnológico Autónomo de México (ITAM). He holds a Master's degree and PhD. in Economics from the University of California (UCLA).



### Ricardo Valencia Ramirez

Economist from the Javeriana University of Colombia, Ricardo Valencia Ramirez currently serves as the Deputy Director of the National Statistics Office of Colombia (DANE, for its acronym in Spanish). He has served as advisor on Corporate Social Responsibility at the Colombian Center for Corporate Responsibility, advisor to the Executive Presidency of the Colombian Confederation of Chambers of Commerce, Associate Researcher and Coordinator of the Rural Economic Development Component at Georgetown University - Colombia Program, with impact in Bogota and eight regions of Colombia.

He has also hold executive positions in environmental and recycling projects in AVINA Colombia, WIEGO (Women in Informal Employment Globalizing and Organizing), Tetra Pak, CEMPRES Colombia and *Iniciativa Regional para el Reciclaje Inclusivo*.

In his academic career he has taught in several of the main schools of economics in the country.



## 9<sup>th</sup> IMF Statistical Forum Organizing Team



### Serkan Arslanalp

Deputy Division Chief in the Balance of Payments Division of the IMF's Statistics Department. He has worked in several departments of the Fund (APD, MCM, FAD, AFR) on a range of countries (advanced economies, emerging markets, low-income/fragile states) and policy areas (strategy; bilateral, regional, and global surveillance; Fund lending operations; standards; capacity development).

He has led missions to several countries in the Asia-Pacific and Middle East regions. With Takahiro Tsuda, he has pioneered a widely used database on the global investor base for sovereign debt.

His research has been published in leading journals, including the IMF Economic Review, Japan and the World Economy, Journal of Economic Perspectives, and the Journal of Finance.

Mr. Arslanalp holds an undergraduate degree in Economics and Computer Science from MIT and a PhD in Economics from Stanford University.



### Cristina Batog

A data management officer in the IMF's Data Operations Division in the Statistics Department, where she works on expanding machine-to-machine data collection and dissemination, developing the IMF Climate Indicators Dashboard, and managing the Sustainable Development Goals and Government Finance databases.

Previously, she worked in the IMF's European Department, where she conducted research on regional economic outlook, fintech, the changing role of cash and new digital forms of money.

She holds an M.A. from Georgetown University.



### Cristina Carraro Piacentini

A Senior Administrative Assistant in the Front Office of the IMF's Statistics Department. Since joining the Fund in 2011, she has worked in the Western Hemisphere Department supporting Canada, Mexico, and the United States country teams; in the Office of the Managing Director assisting one of the Deputy Managing Directors; and in the African Department supporting the Capacity Development team, organizing several events during Spring/Annual Meetings, and conferences including [The Future of Work in sub-Saharan Africa](#).

Ms. Piacentini received her Master of Business Administration from the University of Maryland Global Campus.



### Jannick Damgaard

A Senior Economist in the Balance of Payments Division of the IMF's Statistics Department. He previously served as a Senior Advisor in the Office of the Nordic-Baltic Executive Director at the IMF and as an external expert on Financial Soundness Indicators.

Prior to joining the IMF, he filled various roles at Danmarks Nationalbank, including in the Economics, Financial Stability, and Statistics Departments. He also worked at the European Central Bank and served as the Economic and Financial Counsellor at the Danish Embassy in Washington DC.

His research on foreign direct investment has been published in international peer-reviewed journals and featured in the Financial Times, New York Times, Washington Post, and other leading news outlets.

He holds an MSc and a PhD in Economics from the University of Southern Denmark.



### Gisele Fanali

A Senior Administrative Assistant in the Operations Division of the IMF's [Statistics department](#). She joined the IMF in 2014 and since then worked for various departments such as Legal (LEG), Statistics (STA) and the Institute for Capacity Development (ICD).

In 2016 she accepted a position as the assistant of the director of the [Financial Intelligence Unit](#) located in Buenos Aires, Argentina. Before joining the Fund, she worked at the [Instituto Balseiro](#), an academic institution that belongs partially to the [National University of Cuyo](#) and partially to Argentina's [National Atomic Energy Commission](#).



## Gregory Legoff

A Senior Economist in the Real Sector Division at the IMF's Statistics Department. He was previously the IMF's the Real Sector Statistics Advisor in Southern Africa for three years after three years in a similar position in the Pacific.

Previously Gregory had worked for more than five years at the Australian Bureau of Statistics on national accounts statistics and more specifically on supply and use and input-output tables.

Prior to this Gregory worked at the Organization for Economic Co-operation and Development in Paris on business and international trade statistics.



## Naoto Osawa

A senior economist in the Government Finance Division of the IMF's Statistics Department, working on macroeconomic statistics including fiscal statistics, and monetary and financial statistics since 2017. Prior to joining the IMF, he worked for the Bank of Japan as a head of the Financial Statistics Group of Research and Statistics Department in charge of compiling and disseminating Japan's financial statistics including monetary statistics and flow of funds accounts.

Previously at the Bank of Japan, he worked as a senior economist, monitoring and analyzing economies including Japan, the US, Euro Area and ASEAN, pertinent to Bank of Japan's monetary policy. He also worked for the Monetary Authority of Singapore as a principal economist in charge of Japan's economy.

He holds a Ph.D. in economics from The Johns Hopkins University.



## Daniel Rodríguez Delgado

A Senior Economist at the IMF's Statistics Department.

He currently works on issues related to Fund's data dissemination initiatives, applications of Big Data for surveillance among other issues. Since joining the IMF in 2008, Mr. Rodríguez has also worked in Fund surveillance and programs country cases.

He holds a Ph.D. in Economics from the University of Minnesota, USA.



## Alessandra Sozzi

A Data Analytics Officer in the IMF's Statistics Department. Alessandra contributed to the development of the internal Covid-19 High-Frequency Data Hub by curating the ingestion process and data processing of several high-frequency indicators, as well as the development of a new Passenger Capacity Index from flight data and other new indicators. She is also part of the team that has developed the [new IMF Climate Change Indicators Dashboard](#).

Previously, she worked for the Office for National Statistics in the UK, where her research focused on the use of big data sources in the context of official statistics, the development of machine learning coding tools to automate the classification of survey responses, and the development of anomaly detection techniques in survey responses.

She was part of the Eurostat Task Force on Big Data (ESSnet Big Data), a project within the European statistical system (ESS) with the aim of integrating big data into the regular production of official statistics.