

International Climate Change Policy after Paris

Research Workshop Hosted by the Harvard Project on Climate Agreements

Harvard Kennedy School

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Biographies of Participants

Joseph Aldy is an Associate Professor of Public Policy at the Harvard Kennedy School (HKS), a Visiting Fellow at Resources for the Future, a Faculty Research Fellow at the National Bureau of Economic Research, and a Senior Adviser at the Center for Strategic and International Studies. His research focuses on climate change policy, energy policy, and mortality risk valuation. He also serves as the Faculty Chair of the Regulatory Policy Program at HKS. In 2009-2010, he served as the Special Assistant to the President for Energy and Environment at the White House. Aldy previously served as a Fellow at Resources for the Future, Co-Director of the Harvard Project on Climate Agreements, Co-Director of the International Energy Workshop, and worked on the staff of the President's Council of Economic Advisers. He earned his doctorate in economics from Harvard University and MEM and bachelor degrees from Duke University.

Scott Barrett is the Lenfest-Earth Institute Professor of Natural Resource Economics at Columbia University in New York City, with appointments in the School of International and Public Affairs and the Earth Institute. He taught previously at the Johns Hopkins University School of Advanced International Studies in Washington, DC and, before that, at the London Business School. He has also been a visiting scholar at Princeton, Yale, and Université de Paris 1 Panthéon-Sorbonne. His research focuses on transboundary and global problems, including strategies for designing and negotiating international environmental agreements, for which he received the Erik Kempe Award by the European Association of Environmental and Resource Economists and the Publication of Enduring Quality Award by the Association of Environmental and Resource Economists. He is the author of *Environment and Statecraft: The Strategy of Environmental Treaty-Making* and *Why Cooperate? The Incentive to Supply Global Public Goods*, both published by Oxford University Press. He received his PhD in Economics from the London School of Economics.

Daniel Bodansky is Foundation Professor at the Sandra Day O'Connor College of Law at Arizona State University (ASU). His work focuses on international environmental law generally and climate change law in particular. He has served as the climate change coordinator and attorney-advisor at the U.S. Department of State. Since 2001, Professor Bodansky has worked with the Center for Climate and Energy Solutions (formerly the Pew Center on Global Climate Change) as a consultant and adviser. He has served on the board of editors of the *American Journal of International Law* and is the

U.S.-nominated arbitrator under the Antarctic Environment Protocol. Professor Bodansky's book, *The Art and Craft of International Environmental Law* (Harvard 2010) received the 2011 Harold & Margaret Sprout Award from the International Studies Association as the best book in the field of international environmental studies. He also co-edited the *Oxford Handbook of International Environmental Law* (Oxford 2006). Professor Bodansky received his undergraduate degree from Harvard College, an M.Phil. in the History and Philosophy of Science from Cambridge University, and his law degree from Yale Law School, where he was a member of the *Yale Law Journal*.

Carlo Carraro is a professor of Environmental Economics at Ca' Foscari University of Venice. He holds a Ph.D. from Princeton University. He was President of the University of Venice from 2009 to 2014 and Director of the Department of Economics from 2005 to 2008. In 2008, he was elected Vice-Chair of Working Group III and Member of the Bureau of the Intergovernmental Panel on Climate Change (IPCC). In 2015, he was re-elected for a second term. He has worked as an IPCC Lead Author since 1995. Professor Carraro is the Scientific Director of *Fondazione Eni Enrico Mattei*, Executive Board Member of the Euro-Mediterranean Centre for Climate Change, and Director of the International Centre for Climate Governance. He is also President-Elect of the European Association of Environmental and Resource Economists, Co-Chair of the Green Growth Knowledge Platform Advisory Committee, and Editor of the Review of Environmental Economics and Policy, the most important international journal in its field. His blog is www.carlocarraro.org.

Mariana Conte Grand is Professor of Economics, Universidad del CEMA (Buenos Aires, Argentina). She holds a B.A. in Economics (Universidad Nacional de La Plata, 1990), M.A. in Public Policy (Instituto Torcuato Di Tella, 1992), and a Ph.D. in Economics (UCLA, 1997). She was a professor at several universities in Argentina and visiting scholar at the University of Washington in Seattle and UCLA. She directed during several years the Economics Department (and its Masters Program) at Universidad del CEMA, where she teaches advanced microeconomics and environmental economics. She has received numerous fellowships, including from the Inter-American Development Bank, Phi Beta Kappa Alumni Association, the U.C. Institute on Global Conflict and Cooperation, the Beijer Institute, and the Inter-American Institute for Global Change. She has worked for projects financed by multilateral banks related to environmental regulation design and was hired as an expert witness in several environmental damage legal cases. She has publications in academic journals such as *Environmental and Development Economics*, *Ecological Economics*, and *Ecological Indicators*. She was a Lead Author of the Fifth Intergovernmental Panel on Climate Change Report and is Editor of the *Journal of Applied Economics*.

Ottmar Edenhofer is Deputy Director and Chief Economist at the Potsdam Institute for Climate Impact Research, Professor of the Economics of Climate Change at the Technical University Berlin, and Director of the Mercator Research Institute on Global Commons and Climate Change. He is co-chair of the Energy Platform of the European Council of Academies of Applied Sciences, Technologies and Engineering (Euro-CASE), and member of several honorary and professional associations. Edenhofer has published articles in numerous leading peer-reviewed journals and has

authored a number of books. He is former Co-Chair of Working Group III of the Intergovernmental Panel on Climate Change. In this capacity he led the Fifth Assessment Report (AR5) cycle and co-edited the AR5 *Climate Change 2014 - Mitigation of Climate Change*, as well as the IPCC *Special Report on Renewable Energy Sources and Climate Change Mitigation*. Edenhofer's research explores climate and energy policy, the impact of induced technological change on mitigation costs and mitigation strategies, growth and development theory, public finance, game theoretic aspects of designing international agreements, and the science-policy interface.

Kelly Sims Gallagher is Professor of Energy and Environmental Policy and Director of the Center for International Environment and Resource Policy at The Fletcher School, Tufts University. She served in the Obama Administration as a Senior Policy Advisor in the White House Office of Science and Technology Policy and as Senior China Advisor for the Special Envoy for Climate Change at the U.S. State Department (2014 – 2015). Gallagher previously directed the Energy Technology Innovation Policy research group at the Harvard Kennedy School. She studies energy and climate policy in both the United States and China and specializes in the role of policy in spurring the development and deployment of cleaner and more efficient energy technologies. A Truman Scholar, she has an MALD and PhD in international affairs from The Fletcher School, and an AB from Occidental College. She is a member of the Council on Foreign Relations. Gallagher is editor of *Acting in Time on Energy Policy* (Brookings Institution Press 2009)—and author of *The Global Diffusion of Clean Energy Technologies: Lessons from China* (MIT Press 2014) and numerous academic articles and policy reports.

Bård Harstad was a faculty member at Northwestern University for eight years and is now a Professor of Economics at the University of Oslo. He has written on international agreements, conservation, and political economy in journals such as the *American Economic Review*, *Quarterly Journal of Economics*, *Journal of Political Economy*, *Review of Economic Studies*, and *American Political Science Review*. His paper “Buy Coal” received the Erik Kempe Award in Environmental and Resource Economics from the European Association of Environmental and Resource Economists as the best paper in the field by a European author, 2011-2012.

Geoffrey Heal, Donald C. Waite III Professor of Social Enterprise at Columbia Business School, is noted for contributions to economic theory and resource and environmental economics. He holds bachelors, masters, and doctoral degrees from Cambridge University. Author of eighteen books and about two hundred articles, Professor Heal is a Fellow of the Econometric Society, Past President of the Association of Environmental and Resource Economists, recipient of its prize for publications of enduring quality and a Life Fellow, recipient of the 2013 Best Publication Prize of the European Association of Environmental and Resource Economists, and a founder, Director, and chairman of the Board of the Coalition for Rainforest Nations, developers of the REDD policy for reducing deforestation by awarding carbon credits for forest conservation. Recent books include *Nature and the Marketplace*, *Valuing the Future*, and *When Principles Pay*. Professor Heal chaired a committee of the National Academy of Sciences on valuing ecosystem services, was a Commissioner of the Pew

Oceans Commission, was a coordinating lead author of the IPCC's Fifth Assessment Report, and was a member of President Sarkozy's Commission on the Measurement of Economic Performance and Social Progress.

Nathaniel Keohane is an economist, advocate, and expert on climate, environment, and energy issues in the United States and globally. Dr. Keohane is Vice President for Global Climate at Environmental Defense Fund (EDF). In 2011-2012, he served in the Obama Administration as Special Assistant to the President for Energy and Environment in the White House. Prior to joining the Administration, Dr. Keohane was Director of Economic Policy and Analysis and then Chief Economist at EDF, playing a lead role in efforts to enact comprehensive cap-and-trade legislation in Congress. Dr. Keohane is an Adjunct Professor of Law at New York University, and a past Senior Fellow and Lecturer in Global Affairs at Yale University's Jackson Institute. Before joining EDF in 2007, Dr. Keohane was an Associate Professor of Economics at the Yale School of Management. His research in environmental economics has been published in prominent academic journals, and he is the co-author of *Markets and the Environment* (2nd ed., Island Press, 2015), and co-editor of *Economics of Environmental Law* (Edward Elgar, 2009). He received his Ph.D. from Harvard University in 2001, and his B.A. from Yale College in 1993.

Henry Lee is the Jassim M. Jaidah Family Director of the Environment and Natural Resources Program within the Belfer Center for Science and International Affairs, Faculty Co-Chair of the Sustainability Science Program, and a Senior Lecturer in Public Policy—all at Harvard's Kennedy School of Government. Before joining the School in 1979, Mr. Lee spent nine years in Massachusetts state government as Director of the State's Energy Office and Special Assistant to the Governor for environmental policy. He has served on numerous state, federal, and private boards, and advisory committees on both energy and environmental issues. Additionally, he has worked with private and public organizations, including the InterAmerican Development Bank, the State of São Paulo, the U.S. Departments of Energy and Interior, the National Research Council, General Electric, the Massachusetts Department of Conservation and Recreation, and the U.S. EPA. His recent research interests focus on energy and transportation, China's energy policy, and public infrastructure projects in developing countries. Mr. Lee is the author of recent papers on both the U.S. and China, the economic viability of electric vehicles, and numerous case studies on energy and the environmental policy.

Andrei Marcu has been a pioneer with regard to climate change and greenhouse gas (GHG) markets. In the private sector, he has been Chief Executive Officer of BlueNext, the environmental exchange based in Paris, and Head of Regulatory Affairs, Environment and Climate Change for Mercuria Energy Trading (Geneva). Earlier in his career, Mr. Marcu had substantial experience in the electric power industry in Canada. He was the Founder and CEO of the International Emissions Trading Association (IETA), a business association dedicated to creating efficient and environmentally robust emissions markets for GHGs. He remains a Board Member of IETA. Mr. Marcu also acted as Senior Managing Director of the World Business Council for Sustainable

Development in charge of Energy and Climate. He has collaborated with influential think tanks, including the Centre on Regulation in Europe (Brussels), the Centre for European Policy Studies (Brussels), and the International Centre for Trade and Sustainable Development (Geneva). Mr. Marcu currently advises governments on issues related to the UNFCCC negotiations and was one of the negotiators who contributed to the development of the markets section in the Paris Agreement.

Brian Murray, director of the Environmental Economics Program at Duke University's Nicholas Institute for Environmental Policy Solutions and interim director of the Duke University Energy Initiative, is widely recognized for his work on the economics of climate change policy. This includes the design of cap-and-trade policy elements to address cost containment and inclusion of offsets from traditionally uncapped sectors such as agriculture and forestry. Murray is among the original designers of the allowance price reserve approach for containing prices in carbon markets that was adopted by California and the Regional Greenhouse Gas Initiative (RGGI) cap-and-trade programs. Throughout his 21-year research career, he has produced many peer-reviewed publications on topics ranging from the design of market-based environmental policies and the effectiveness of renewable energy subsidies to the evaluation of programs to protect natural habitats such as forests, coastal, and marine ecosystems.

Matthew Paterson is Professor of International Politics at the University of Manchester. His research focuses on the political economy of global environmental change. His publications include *Global Warming and Global Politics* (1996), *Understanding Global Environmental Politics*, (2000), *Automobile Politics* (2007), *Climate Capitalism: Global Warming and the Transformation of the Global Economy* (with Peter Newell, 2010), and most recently *Transnational Climate Change Governance* (with Harriet Bulkeley and 8 others, Cambridge University Press 2014). He is currently focused on the political economy and cultural politics of climate change, and starting to work on the networked character of global climate governance.

Billy Pizer is Professor at the Sanford School of Public Policy and Faculty Fellow at the Nicholas Institute for Environmental Policy Solutions, both at Duke University. His current research examines how public policies to promote clean energy can effectively leverage private sector investments, how environmental regulation and climate policy can affect production costs and competitiveness, and how the design of market-based environmental policies can address the needs of different stakeholders. From 2008 until 2011, he was Deputy Assistant Secretary for Environment and Energy at the U.S. Department of the Treasury, overseeing Treasury's role in the domestic and international environment and energy agenda of the United States. Prior to that, he was a researcher at Resources for the Future for more than a decade. He has written more than thirty peer-reviewed publications, books, and articles, and holds a Ph.D. and M.A. in economics from Harvard University and BS in physics from the University of North Carolina at Chapel Hill.

Qi Yue is Assistant Researcher in China's National Center for Climate Change Strategy and International Cooperation (NCSC), within the National Development and Reform Commission. She

graduated from Peking University in 2007 with her Bachelors degree in environmental science. She received her Ph.D. in natural resources in 2013 under a joint doctoral training program of the Chinese Academy of Sciences and the Max-Planck Society (Germany). She joined the International Cooperation Department of NCSC in 2013. She serves as a Chinese Delegate in the UNFCCC negotiations, prior to COP-21 in Paris focusing on ADP Workstream 2, Multilateral Assessment, as well as IAR outcome and issues relating to market and non-market mechanisms. She has also participated in the technical review of National Communication as a member of the Expert Reviewer Team. As a researcher, she is working on the following areas: country studies on climate targets and domestic policy and measures; transparency framework and methodologies; strategies for international climate cooperation; adaptation in urban areas; global climate governance; national low-carbon development strategies; sectoral technology needs assessment of China; and emission trading systems.

Lavanya Rajamani is professor at the Centre for Policy Research, New Delhi, where she researches legal issues relating to the environment (in particular climate change), international law, and human rights. She has authored or edited several books on international environmental law and is a frequent contributor to periodicals and academic journals. She is co-author of a forthcoming book, *International Climate Change Law*. Lavanya has worked on and analysed the international climate negotiations since 1998. Among other roles, she has served as a consultant to the UNFCCC Secretariat and as a negotiator for the Alliance of Small Island States. She was part of the UNFCCC core drafting and advisory team at the Paris negotiations. Lavanya has taught at Queens' College, Cambridge and at Worcester College, Oxford. She holds an LLM from Yale, a DPhil and BCL from Oxford, where she was a Rhodes scholar, and a B.A.LL.B. (Honours) from National Law School, Bangalore. She has held several visiting fellowships at Universities across the world, including most recently as the Sir Frank Holmes Visiting Fellow at the Victoria University of Wellington, New Zealand.

Robert Stavins is the Albert Pratt Professor of Business and Government at the Harvard Kennedy School, Director of the Harvard Environmental Economics Program, Director of Graduate Studies for the Doctoral Programs in Public Policy and in Political Economy and Government, and Director of the Harvard Project on Climate Agreements. He is a University Fellow and member of the board of Resources for the Future, a Research Associate of the National Bureau of Economic Research, Editor of the *Journal of Wine Economics*, and an elected Fellow of the Association of Environmental and Resource Economics. He was formerly Chairman, Environmental Economics Advisory Committee, U.S. Environmental Protection Agency Science Advisory Board. He was a Coordinating Lead Author of the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Professor Stavins' research has examined diverse areas of environmental economics and policy, and his work has appeared in a hundred articles in academic journals and popular periodicals, and several books. He holds a B.A. in philosophy from Northwestern University, an M.S. in agricultural economics from Cornell, and a Ph.D. in economics from Harvard.

Robert Stowe is Executive Director of the Harvard Environmental Economics Program and Manager of the Harvard Project on Climate Agreements—both University-wide programs based in the Harvard Kennedy School (HKS). He is an Adjunct Lecturer at HKS, teaching a course on international climate-change policy. Stowe has been engaged through the Harvard Project in the annual Conferences of the Parties of the U.N. Framework Convention on Climate Change since 2007. He was a Contributing Author to a chapter on international cooperation in the Intergovernmental Panel on Climate Change’s Fifth Assessment Report. Stowe has worked in non-profit, academic, and business organizations, including as Vice President of Programs of the Citizens Network for Foreign Affairs, which provides assistance in agriculture and agribusiness to developing countries, and as a consultant to the World Bank and other organizations on agricultural management projects. Rob holds a Ph.D. in political science from the Massachusetts Institute of Technology and an A.B. in physics from Harvard College. He blogs on climate policy for *The Energy Collective*: <http://theenergycollective.com/users/robertstowe>.

Alexander Thompson (Ph.D., University of Chicago) is Associate Professor of Political Science and a Faculty Associate of the Merston Center for International Security Studies at Ohio State University. His research focuses on the politics of international organizations and law, with applications in political economy, security and the environment. He is the author of *Channels of Power: The UN Security Council and U.S. Statecraft in Iraq* (Cornell) and articles in *International Organization*, *International Studies Quarterly*, the *European Journal of International Relations*, the *Journal of Conflict Resolution*, the *Journal of Legal Studies* and other outlets. Much of his current research is on the design of international climate change agreements, from both a theoretical and a policy perspective.

David Victor is an internationally recognized leader in research on energy and climate change policy, as well as energy markets. His research focuses on regulated industries and how regulation affects the operation of major energy markets. He has a dual understanding of the science behind climate change and how international and domestic public policy work. Victor authored “Global Warming Gridlock,” which explains why the world hasn’t made much diplomatic progress on the problem of climate change, while also exploring new strategies that would be more effective. Victor is a leading contributor to the Intergovernmental Panel on Climate Change (IPCC), a United Nations-sanctioned international body with 195 country members. As a community volunteer, he also serves as Chairman of the Community Engagement Panel that was established as part of the decommissioning of the San Onofre Nuclear Generating Station.

Zou Ji holds a B.S. in environmental engineering (1984) and an M.S. in Engineering Economics (1990) from Tsinghua University. He also holds a Ph.D. in environmental and resources economics (1997) from Renmin University of China, where he later served as Deputy Dean of the School of Environment and Natural Resources. Professor Zou was China Country Director for the World Resources Institute (2009 – 2012) and served as a coordinating lead author for the Fifth Assessment Report of IPCC Working Group III. He has been a member of the UN Intergovernmental Committee of Experts on Sustainable Development Financing. He was nominated as a delegate of

China to the UN Climate Talks (2000 - 2009 and 2012-present). Since 2012, Professor Zou has served as the Deputy Director General of the National Center for Climate Change Strategy and International Cooperation under China's National Development and Reform Commission. His research has focused on the economic analysis of energy and climate policies with technological change, international climate-policy architecture, and sustainable urban planning. He works as team leader for such projects as "China Macro Strategy for Low Carbon Development" and "Climate Strategy for the New Development Bank (BRICS)."