

PROF. DR. OTTMAR EDENHOFER



— Prof. Dr. rer. pol., Dipl.-Vw.

CURRENT POSITIONS

- Director and Chief Economist at the Potsdam Institute for Climate Impact Research (PIK), PIK's research has been rated "excellent" during the last Leibniz evaluation
- Director of the Mercator Research Institute on Global Commons and Climate Change (MCC), work of MCC received "excellent" evaluation by independent scientific committee
- Professor of the Economics of Climate Change at the Technische Universität (TU) Berlin

CONTACT

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PROFILE

Ottmar Edenhofer is Professor at the Technische Universität Berlin and widely considered to be one of the world's leading experts on the economics of climate change. He is Director and Chief Economist at the Potsdam Institute for Climate Impact Research (PIK). From 2007-2018 he headed PIK's Research Domain 3 Sustainable Solutions which received an excellent evaluation by the Leibniz Society in 2014. Following the strategic decision of PIK in 2007 to become more *solution-oriented* with interdisciplinary Research Domains, Ottmar Edenhofer formed the research agenda of this department. He was pioneering in giving the institute which traditionally focused on large-scale quantitative computational modelling of the earth and its processes a social science research agenda providing rigorous and meaningful information on climate change mitigation to society. In 2012 he was appointed director of the newly founded Mercator Research Institute on Global Commons and Climate Change (MCC). The work of the MCC was considered "excellent" by an external scientific evaluation board commissioned by Stiftung Mercator in 2015, ranked first in Europe and fourth worldwide by the ICCG Climate Think Tank Ranking 2016 and ranked second in the category energy and the environment in Europe within the "Prospect: Think Tank Awards 2016". Edenhofer is member of the German National Academy of Science and Engineering acatech as well as member of the German National Academy of Sciences Leopoldina, Section Economics and Empirical Social Sciences. In July 2018, he was awarded the Romano Guardini Prize by the Katholische Akademie in Bayern (Catholic Academy in Bavaria).

From 2008 to 2015 Ottmar Edenhofer served as Co-Chair of Working Group III of the Nobel Laureate Intergovernmental Panel on Climate Change (IPCC). In this capacity he led the fifth assessment cycle and edited the report on "Climate Change 2014: Mitigation of Climate Change" and the "Special Report on Renewable Energy Sources and Climate Change Mitigation". The Fifth Assessment Report on Climate Change Mitigation has been considered a landmark report. It provided the scientific basis for the Paris Agreement. Its analysis on the feasibility of the 2°C-target was groundbreaking and provided essential information for decision makers.

Ottmar Edenhofer's research influences political decision making. He is advising ministers such as the German Foreign Minister Heiko Maas as well as the German Federal President Frank-Walter Steinmeier and the World Bank on questions of green growth. Furthermore, he is a member of the "High-Level Commission on Carbon Prices" chaired by Joseph Stiglitz, Nobel Laureate in Economics, and Lord Nicholas Stern at the invitation of Ségolène Royal and Feike Sijbesma, Co-Chairs of the Carbon Pricing Leadership Coalition (CPLC) High Level Assembly. The commission prepared a highly regarded scientific assessment on carbon pricing for the World Bank Group and International Monetary Fund Spring Meetings in 2017. In connection with the German G20 presidency in 2017, Edenhofer headed the T20 Task Force "Climate Policy and Finance" which prepared scientific policy advice for the G20 and is a member of the OECD Advisory Council "Growth, Investment and the Low-Carbon Transition". He is further part of the "National Expert Advisory Council on Climate Change" for Ireland which was set up in 2015 in the framework of the "Climate Action and Low-Carbon Development Bill 2015". The Council advises and makes recommendations to the Minister for the Environment, community and local government as a national mitigation plan is prepared. Ottmar Edenhofer has been appointed Coordinating Lead Author of the chapter on Economic Growth, Human Development and Planetary

Welfare for the report “Rethinking Society for the 21st Century” by the International Panel on Social Progress (IPSP). The Panel includes renowned economists and works under the patronage of Amartya Sen. The FAZ ranked Edenhofer repeatedly among the 15 most influential economists in Germany. Moreover, he was ranked among the 1% most influential scientists in the world due to his highly relevant publications in scientific literature.

Ottmar Edenhofer has published articles in Science, PNAS, Nature Climate Change, Resource and Energy Economics, Energy Economics, Macroeconomic Dynamics, World Development, Journal of Environmental Economics and Management as well as other peer-reviewed journals and authored a number of books. His publications address the design of instruments for climate and energy policy, questions of growth, technological change and development, public finance, welfare economics, distributional effects of climate policy instruments, game theoretic aspects of designing international agreements, long-term scenarios of the climate and energy system, mitigation costs and mitigation strategies, as well as the science-policy interface. His work has been heavily cited, which is illustrated by an h-index of 35 in Scopus, 33 in ISI Web of Science and 57 in Google Scholar.

He supervised 45 successfully completed PhD projects and currently supervises 20 PhD students. His former PhD students received prestigious prizes for their dissertations and some of them have been appointed to professorships in the meantime.

Edenhofer’s work has been picked up e.g. by The New York Times, the Economist, China Daily Nature, Der Spiegel, ARD, ZDF and Deutschlandfunk. He frequently contributes to major media publications such as DIE ZEIT, Süddeutsche Zeitung and Frankfurter Allgemeine Zeitung.

EDUCATION

- 1987 — Diplomvolkswirt (Master Degree in Economics), University of Munich (with honors)
- 1991 — B.A. Philosophy, Munich School of Philosophy
- 1999 — Doctor rer. pol. (summa cum laude), topic: Social Conflict and Technological Change. Evolutionary Models of Energy Use.

CAREER

- 1982 - 1987 — Founding of public health company
- 1987 - 1994 — Member of Jesuit order
- 1991 - 1993 — Founder and director of humanitarian organization (Jesuit Refugee Service) in Croatia and Bosnia
- 1994 - 2000 — Assistant at the Institute for Sociology at the Technische Universität Darmstadt
- 2000 - 2005 — Deputy Chair of research domain Social Systems at the Potsdam Institute for Climate Impact Research
- 2004 - 2007 — Lead Author, Working Group III of the Intergovernmental Panel on Climate Change (IPCC), Chapters 1 und 11. In 2007, the IPCC received the Nobel Peace Prize.
- since 2005 — Chief Economist of the Potsdam Institute for Climate Impact Research
- 2007 — Advisor to the Federal Foreign Office on questions of global climate change
- 2007-2018 — Deputy Director of the Potsdam Institute for Climate Impact Research
- 2007 — Call to the position of President of the Wuppertal Institute, associated with a professorship at Bergische Universität Wuppertal; declined
- since 2008 — Professor for "Economics of Climate Change" at the Technische Universität Berlin, member of faculties VI and VII
- 2008 – 2015 — Co-Chair of Working Group III of the IPCC
- since 2012 — Director of Mercator Research Institute on Global Commons and Climate Change (MCC)
- since 2018 — Director of the Potsdam Institute for Climate Impact Research

MEMBERSHIP OF BOARDS AND COMMITTEES, SCIENTIFIC POLICY ADVICE (selection)

Policy and Business Advice

- Member of the High-Level Commission on Carbon Prices founded at the invitation of Ségolène Royal and Feike Sijbesma, Co-Chairs of the Carbon Pricing Leadership Coalition (CPLC) High Level Assembly, chaired by Joseph Stiglitz, Nobel Laureate in Economics, and Lord Nicholas Stern
- Member of the OECD Advisory Council “Growth, Investment and the Low-Carbon Transition”
- Member of the Advisory Board of the Green Growth Knowledge Platform (project of the Global Green Growth Institute, the OECD, United Nations Environment Programme and the World Bank)
- Member of the Advisory Committee to Princeton’s Carbon Mitigation Initiative CMI
- Member of the Volkswagen Sustainability Council
- Member of the *National Expert Advisory Council on Climate Change* for Ireland set up in the framework of the “Climate Action and Low-Carbon Development Bill 2015”

Scientific functions and editorships

- Member of the German National Academy of Science and Engineering, acatech
- Member of the German National Academy of Sciences Leopoldina, Section Economics and Empirical Social Sciences
- Member of the Scientific Advisory Board, European Institute on Economics and the Environment (EIEE)
- Member of the Scientific Advisory Board, EUREF-Institute Berlin
- Member of the Forschungsforum Energiewende [Research Forum Energy Transition], working group Economics
- Member of the Academy of Sciences and Humanities Hamburg
- Member of the Editorial Board of REEP Review of Environmental Economics and Policy (ranked 6th in Environmental Studies and 15th in Economics according to the 2015 Journal Citation Reports by Thomson Reuters)
- Member of the Editorial Board of Economics of Energy & Environmental Policy (EEEP)

TOP 20 PUBLICATIONS

ISI Publications

Sterner, T., Barbier, B. E., Bateman, I., van den Bijgaart, I., Crépin, A., Edenhofer, O., Fischer, C., Habla, W., Hassler, H., Johansson-Stenman, O., Lange, A., Polasky, S., Rockström, J., Smith, H. G., Steffen, W., Wagner, G., Wilen, J.E., Alpizar, F., Azar, C., Carless, D., Chávez, C., Coria, J., Engström, G., Jagers, S.C., Köhlin, G., Löfgren, Å., Pleijel, H. & Robinson, A. (2019): Policy design for the Anthropocene. *Nature Sustainability*, doi: 10.1038/s41893-018-0194-x.

Creutzig, F., Bren d'Amour, C., Weddige, U., Fuss, S., Beringer, T., Gläser, A., Kalkuhl, M., Steckel, J. C., Radebach, A., & Edenhofer, O., (2019): Assessing human and environmental pressures of global land-use change 2000-2010. Cambridge: Cambridge University Press, Volume 2, E1, doi: 10.1017/sus.2018.15

Kalkuhl, M., Steckel, J. C., & Edenhofer, O. (2019): All or nothing: Climate policy when assets can become stranded. *The Journal of Environmental Economics and Management*, doi: 10.1016/j.jeem.2019.01.012.

Edenhofer, O., Steckel, J., Jakob, M., & Bertram, C. (2018): Reports of coal's terminal decline may be exaggerated. *Environmental Research Letters*, doi: 10.1088/1748-9326/aaa3a2.

Franks, M., Klenert, D., Schultes, A., Lessmann, K., & Edenhofer, O. (2018): Is capital back? The role of land ownership and savings behavior. *International Tax and Public Finance*, doi: 10.1007/s10797-018-9486-3.

Fuss, S., Flachsland, C., Koch, N., Kornek, U., Knopf, B., & Edenhofer, O. (2018): A framework for assessing the performance of cap-and-trade systems: Insights from the European Union Emissions Trading System. *Review of Environmental Economics and Policy*, Vol. 12, Issue 2, 220-241, doi: 10.1093/reep/rey010.

Klenert, D., Mattauch, L., Combet, E., Edenhofer, O., Hepburn, C., Rafaty, R., & Stern, N. (2018): Making carbon pricing work for citizens. *Nature Climate Change*, Vol. 8, 669–677, doi: 10.1038/s41558-018-0201-2.

Jakob, M., Chen, C., Fuss, S., Marxen, A., Rao, N. D., & Edenhofer, O. (2016): Carbon Pricing Revenues Could Close Infrastructure Access Gaps. *World Development*, 84, 254-265, doi: 10.1016/j.worlddev.2016.03.001.

Kalkuhl, M. & Edenhofer, O. (2016): Ramsey meets Thünen: the impact of land taxes on economic development and land conservation. *International Tax and Public Finance*, doi: 10.1007/s10797-016-9403-6.

Klenert, D., Mattauch, L., Edenhofer, O., & Lessmann, K. (2016): Infrastructure and inequality: Insights from incorporating key economic facts about household heterogeneity. *Macroeconomic Dynamics*, doi: 10.1017/S1365100516000432.

Koch, N., Grosjean, G., Fuss, S., & Edenhofer, O. (2016): Politics matters: Regulatory events as catalysts for price formation under cap-and-trade. *Journal of Environmental Economics and Management*, 78, 121-139, doi: 10.1016/j.jeem.2016.03.004.

Bertram, C., Luderer, G., Pietzcker, R. C., Schmid, E., Kriegler, E., & Edenhofer, O. (2015): Complementing carbon prices with technology policies to keep climate targets within reach. *Nature Climate Change*, 5(3), 235-239, doi: 10.1038/nclimate2514.

Edenhofer, O. (2015): King Coal and the queen of subsidies. *Science*, 349(6254), 1286-1287, doi: 10.1126/science.aad0674.

Steckel, J. C., Edenhofer, O., & Jakob, M. (2015): Drivers for the renaissance of coal. *Proceedings of the National Academy of Sciences of the United States of America*, 112(29), E3775-E3781, doi: 10.1073/pnas.1422722112.

Edenhofer, O. & Minx, J. (2014): Mapmakers and navigators, facts and values. *Science*, 345(6192), 37-38, doi: 10.1126/science.1255998.

Jakob, M. & Edenhofer, O. (2014): Green growth, degrowth, and the commons. *Oxford Review of Economic Policy*, 30(3), 447-468, doi: 10.1093/oxrep/gru026.

Edenhofer, O., Hirth, L., Knopf, B., Pahle, M., Schlömer, S., Schmid, E., & Ueckerdt, F. (2013): On the economics of renewable energy sources. *Energy Economics*, 40, S12-S23, doi: 10.1016/j.eneco.2013.09.015.

Edenhofer, O., Seyboth, K., Creutzig, F., & Schlömer, S. (2013): On the Sustainability of Renewable Energy Sources. *Annual Review of Environment and Resources*, 38, 169-200, doi: 10.1146/annurev-environ-051012-145344.

Assessment Reports

Edenhofer, O., Pichs-Madruga, R., Sokona, Y., Farahani, E., Kadner, S., Seyboth, K., Adler, A., Baum, I., Brunner, S., Eickemeier, P., Kriemann, B., Savolainen, J., Schlömer, S., Stechow, C. v., Zwickel, T., & Minx, J. C. (eds.) (2014): *Climate Change 2014 - Mitigation of Climate Change: Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press.

Edenhofer, O., Pichs-Madruga, R., Sokona, Y., Seyboth, K., Matschoss, P., Kadner, S., Zwickel, T., Eickemeier, P., Hansen, G., Schlömer, S., Stechow, C. v. (eds.) (2012): *Renewable Energy Sources and Climate Change Mitigation. Special Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press, 1075 pp.

Books

Edenhofer, O. & Jakob, M. (eds.) (2017): *Klimapolitik: Ziele, Konflikte und Lösungen*. C.H. Beck Verlag, 128 p.

Edenhofer, O., Wallacher, J., Reder, M., & Lotze-Campen, H. (eds.) (2010): *Global aber gerecht*. München: Beck Verlag, 240 p.

Article in an Edited Book

Edenhofer, O., Flachsland, C., Jakob, M., & Lessmann, K. (2015): The Atmosphere as a Global Commons: Challenges for International Cooperation and Governance. In: Bernhard, L., Semmler, W. (eds.), *The Oxford Handbook of the Macroeconomics of Global Warming*. Oxford: Oxford University Press, 260-296.

MAIN RESEARCH INTERESTS

- Impact of technological change on the costs and strategies of climate change mitigation
- Public Finance
- Distributional effects of climate policy instruments
- Economics of Atmospheric Stabilization
- Social Cost-Benefit Analysis
- Economic Growth and Sustainability Theory
- Economics of Climate Change
- Welfare Theory and General Intertemporal Equilibrium Theory
- Model simulations in economics and social sciences
- Game theoretic aspects of designing international agreements
- Energy Economics
- Scientific policy advice and the science-policy-interface
- Inequality Research