

CURRICULUM VITAE

Name: Nicolas Alexandre Bauer
Place of birth: Ibiza, Spanien
Date of birth: 19.12.1974
Citizenship: German
Marital status: Unmarried, no kids

Office Address: Fondazione ENI Enrico Mattei
Corso Magenta 63
20123 Milano, Italy
Nico.Bauer@feem.it

EDUCATION

- 2000 – 2005 PhD student in Department for Global Change and Social Systems at Potsdam-Institute for Climate Impact Research (PIK), Germany Diploma Volkswirtschaftslehre (Economics) June 2000
 - Defense of the thesis „Carbon Capture and Sequestration – An Option to Buy Time?“, April 2005. Accepted with *magna cum laude*.
- 1994 – 2000 student at University Potsdam, Germany
 - Diploma Volkswirtschaftslehre (Economics), June 2000
 - Pre-Diploma Volkswirtschaftslehre (Economics), February 1998
- 1985 – 1994 Markgraf-Ludwig Gymnasium (High-School) Baden-Baden, Germany
 - Abitur, June 1994

EMPLOYMENT

- Since April 2006 senior scientist at Fondazione ENI Enrico Mattei (FEEM), Italy, in the Climate Change Modelling and Policy programme
- February 2005 – March 2006 senior scientist at Paul-Scherrer Institut (PSI), Switzerland, in the Energy Economics Modelling Group
- July 2003 – January 2006 scientist in the project „Ocean sequestration of CO₂ and the transformation of the energy system“ at PIK financed by the VW-Foundation
- July 2000 – June 2003 scientist in the project „Sequential indicator based control strategies“ at PIK financed by the VW-Foundation
- February 1999 – June 2000 research assistant at PIK for the preparation of the contribution of Working Group III for the Third Assessment Report of IPCC
- October 1998 – February 1999 lecture at the chair for Public Management at University Potsdam
- October 1995 – September 1998 research assistant and lecture at the chair for macro economic theory at University Potsdam

PREVIOUS WORK

- Integrated Modelling
 - Development, implementation and analysis of the model MIND
 - Development and analysis of an extended version of the model DICE
 - Integration of economics, energy and environment in analytical and numerical models
- Climate Policy
 - Timing of mitigation policies
 - Price and quantity instruments
 - Flexible instruments within the Kyoto protocol
 - Instruments for securing carbon sequestration
- Model Analysis
 - Sensitivity analysis
 - Monte-Carlo analysis
 - Decision under uncertainty
- Modeling and analysis software
 - Integration of the programming language GAMS and MatLab into the analysis environment SimEnv for flexible sensitivity and Monte-Carlo analysis
 - Development of the model validation environment MOVE
 - Development of the data organisation toolbox DOT
 - Development of the energy system modelling framework GenERIS
 - Development of various tools to link various tools
- Economic modelling
 - Integrated climate- economy models
 - Endogenous models
 - Energy systems models
 - Monopolistic competition
 - Growth models with multiple optima
 - Equilibrium theory
 - Trade theory
 - Growth models with resources and trade
 - Multiple capital stock growth models and capital market equilibria
 - New Economic Geography models with multiple equilibria
 - Urban economics and urban zoning
 - Macro economic models
- Methodology
 - Linear, non-linear and dynamic optimisation
 - Equilibrium theory
 - Production, utility and capital theory

- Algorithms finding optima and equilibria
- Economics and history

TECHNIKEN UND METHODE

- Modelling and Simulation
 - Analytical and numerical economic models
 - Validation and calibration of economic models
- Analysis of Models
 - Sensitivity analysis, Monte-Carlo analysis, uncertainty analysis
 - Analysis of large data samples
- Software
 - Mathematica, Maple
 - MatLab, SciLab, R, Gretl, GAMS
 - SimEnv
 - LaTeX, Word, Excel, Unix, DOS, GnuPlot, basic knowledge in C

CONTRIBUTION TO SCIENTIFIC REPORTS

- Annual Report 2003 entitled „Towards Sustainable Energy Systems“ for the German advisory council on global change
- Contribution for Working Group III of the Third Assessment Report of IPCC

REVIEW FOR SCIENTIFIC JOURNALS

- Ecological Economics
- Energy Economics

PUBLIKATIONEN

- Peer-reviewed
 - Edenhofer, O., Lessmann, K., Held, H. and Bauer, N. (2004): *Endogenous Growth, Biased Technological Change and Energy Use*. Submitted to Environmental and Resource Economics.
 - Edenhofer, O., Bauer, N. and Kriegler, E. (2004): *Climate Protection and Welfare: Insights from the Model MIND*. Ecological Economics, pp. 277 – 292.
 - Edenhofer, O., Schellnhuber, H.-J. and Bauer, N. (2004): Risks and Opportunities of Planet Protection. *Internationale Politik – Transatlantic Edition*, Vol. 5(4), S. 61 – 78.
 - Bauer, N., Edenhofer, O., Held, H. and Kriegler, E. (2005): *Uncertainty of the role of carbon capturing and sequestration within climate change mitigation strategies*. In: E.S. Rubin, D. W. Keith und C. F. Gilboy (Eds.), Proceedings of 7th International Conference on Greenhouse Gas Control Technologies. Volume 1: Peer-Reviewed Paper and Plenary Presentations (September 5 – 9

- 2004 Vancouver, Canada), IEA Greenhouse Gas Programme, Cheltenham, UK, pp. 931 – 939.
- Edenhofer, O., Held, H. and Bauer, N. (2005): *A regulatory framework for carbon capturing and sequestration within the Post-Kyoto Process*. In: E. S. Rubin, D. W. Keith und C. F. Gilboy (Eds.), Proceedings of 7th International Conference on Greenhouse Gas Control Technologies. Volume 1: Peer-Reviewed Paper and Plenary Presentations (September 5 – 9 2004 Vancouver, Canada), IEA Greenhouse Gas Programme, Cheltenham, UK, pp. 989 – 997.
 - Edenhofer, O., Lessmann, K., Bauer, N. and Held, H. (2005): *Climate Protection! – A New Energy Policy?* Vierteljahreshefte zur Wirtschaftsforschung 74, 2, 137 – 147.
 - Bauer, N. (2005): *Carbon Capture and Sequestration: An Option to Buy Time?* PhD-Thesis, Potsdam University, Germany.
 - Edenhofer, O., Lessmann, K. and Bauer, N. (2006): *Mitigation Strategies and Costs of Climate Protection: The Effects of ETC in the Hybrid Model MIND*. Energy Journal (Special Issue on Endogenous Technological Change and the Economics of Atmospheric Stabilisation), S. 207 – 222.
 - Bauer, N., Edenhofer, O. and Kypreos, S. (2006): *Linking Energy System and Macroeconomic Growth Models – Is the Supply Curve Enough?* Paper submitted to the Journal of Computational Management Science (Special Issue on Managing Energy and the Environment).
- Semi-Peer-reviewed
 - Edenhofer, O., Schellnhuber, H.-J., und Bauer, N. (2004): *Der Lohn des Mutes*. Internationale Politik, Vol. 59(8), S. 29 – 38.
 - Edenhofer, O., Held, H. und Bauer, N. (2004): *Wege zu einem nachhaltigen Energiesystem: Ein ordnungspolitischer Rahmen für die Emissionsminderung und Kohlenstoffdeponierung*. In: Bernt Johnke, Jürgen Scheffran und Konrad Soyez (Hrg.): Abfall, Energie und Klima. Wege und Konzepte für eine integrierte Ressourcennutzung. Erich Schmidt Verlag, Berlin, S. 26 – 40.
 - Edenhofer, O., Lessmann, K. and Bauer, N. (2006): *Mitigation Strategies and Costs of Climate Protection: The Effects of ETC in the Hybrid Model MIND*. FEEM Working Paper Series Nr. 150.2006, Milano, Italy.
 - Bauer, N. and Edenhofer, O. (2006): *Macroeconomic Effects of Carbon Capture and Sequestration within a Long-Term Transition towards a Low-Carbon Society*, submitted for 8th International Conference on Greenhouse Gas Technologies Trondheim, Norway, June 19 – 23, 2006.
 - Held, H., Edenhofer, O. and Bauer, N. (2006): *How to Deal with Risks of Carbon Sequestration within an International Emission Trading Scheme and Incomplete Capital Market*, submitted for 8th International Conference on Greenhouse Gas Technologies Trondheim, Norway, June 19 – 23, 2006.