

Curriculum Vitae

REINHARD MECHLER

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Professional Experience

- Group leader "Disasters and Development," Risk and Vulnerability (RAV) program, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria
- Leader of and contributor to research and consultancy projects related to the economic aspects of disaster risk management and climate change adaptation as well as air pollution and climate change mitigation in Latin America, Africa, Asia and Europe
- Research foci: climate adaptation and mitigation strategies, economics of natural disasters, risk management, air pollution mitigation
- Projects, consultancies and training for World Bank, Caribbean Development Bank, Inter-American Development Bank, Asian Development Bank, DFID, GTZ, OECD, European Union and UN organizations
- Regular lecturer at Universities of Vienna, Austria, and Karlsruhe, Germany
- Supervision of 12 Ph. D. students during IIASA summer programs
- Reviewer of 4th Assessment Report of the IPCC, *Climate Policy, Regional Environmental Change, Natural Hazards and Earth System Sciences, Natural Hazards, Disasters, Journal of Seismology and Earthquake Engineering*
- Research scholar, IIASA, since 1999, current position: group leader
- Ph. D. Programme, University of Karlsruhe, 1998-2001
- Research Assistant, Centre for European Economic Research (ZEW), Mannheim, 1994-1998

Education

- Ph.D. University of Karlsruhe 2/2003. Thesis title: "Natural Disaster Risk Management and Financing Disaster Losses in Developing Countries." Winner of Schwebler-prize
- Diploma in Economics, University of Heidelberg, 7/1998, thesis title: "External Costs of Electricity Generation and Internalisation in the USA."
- Academic year, University of Massachusetts, Amherst, 1993-1994
- B.A. equivalents Economics 1995, Mathematics 1992, English 1992

Languages

- German: native speaker
- English: professional command
- French, Spanish and Italian: moderate command

Personal Information

Born October 7th 1968 in Würzburg, Germany. Married, one child.

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Publications

Books

Mechler, R. (2004). *Natural Disaster Risk Management and Financing Disaster Losses in Developing Countries*, Verlag für Versicherungswirtschaft, Karlsruhe.

Refereed journal articles

Hochrainer, S., Mechler, R., Pflug, G. (2009). Climate change and financial adaptation in Africa: Investigating the impact of climate change on the robustness of index-based microinsurance in Malawi. *Mitigation and Adaptation Strategies for Global Change* **14** (3): 231-250

Hochrainer, S., Mechler, R., Pflug, G., Lotsch, A. (2008). Investigating the Impact of Climate Change on the Robustness of Index-based Microinsurance in Malawi. World Bank Policy Research Working Paper 4631. Development Research Group, The World Bank: Washington DC.

Linnerooth-Bayer, J., Mechler, R. (2007). Disaster safety nets for developing countries: Extending public-private partnerships. *Environmental Hazards* **7**(1): 54-61

Cardenas, V., Hochrainer, S., Mechler, R., Pflug, G., Linnerooth-Bayer, J. (2007). Sovereign financial disaster risk management: the case of Mexico. *Environmental Hazards* **7**(1): 40-53

Linnerooth-Bayer, J., R. Mechler and M.J. Mace (2007). Insurance for Assisting Adaptation to Climate Change in developing countries. A proposed strategy. *Climate Policy* **6** (6): 621-636

Hochrainer, S., and R. Mechler (2006). Naturkatastrophen: Auswirkungen, Lösungsansätze und Rollen fuer Wissenschaft, Staat und Wirtschaft. *Wirtschaftspolitische Blätter* **4**: 561-579

Derwent, R.G., P.G. Simmonds, S. O'Doherty, D.S. Stevenson, W.J. Collins, M.G. Sanderson, C.E. Johnson, F. Dentener, J. Cofala, R. Mechler, and M. Amann (2006). External influences on Europe's air quality: Baseline methane, carbon

- monoxide and ozone from 1990 to 2030 at Mace Head, Ireland. *Atmos. Environ.*, **40** (5) 844-855
- Linneroth-Bayer, J., R. Mechler, G. Pflug (2005). Refocusing Disaster Aid. *Science* **309** (5737): 1044-1046
- Freeman, P., L. Martin, R. Mechler, K. Warner (2004). A Methodology for Incorporating Natural Catastrophes into Macroeconomic Projections. *Disaster Prevention and Management* **13**(4): 337-342
- Derwent, R., S. Stevenson, R. Doherty, W. Collins, M. Sanderson, C. Johnson, J. Cofala, R. Mechler, M. Amann, F. Dentener (2004). The Contribution from Shipping Emissions to Air Quality and Acid Deposition in Europe. *AMBIO* **34** (1): 54-59
- Dentener, F., D. Stevenson, J. Cofala, R. Mechler, M. Amann, P. Bergamaschi, F. Raes, R. Derwent (2004). The impact of air pollutant and methane emission controls on tropospheric ozone and radiative forcing: CTM calculations for the period 1990-2030. *Atmospheric Chemistry and Physics Discussions* **4**, 8471-8538
- Werner, U., R. Mechler, T. Plapp (2003). Hochwasser 2002 - Wechselwirkungen zwischen der Finanzierung von Überschwemmungsschäden und der Wahrnehmung von Hochwasserrisiken. *Zeitschrift für Versicherungswesen* **54** (23): 722-727

Chapters in books

- Mechler, R. and N. Islam. Cost Benefit Analysis of Disaster Risk Management and Climate Adaptation in Bangladesh. Santos, I. , Borde, A., Guha-Sapir, D. (eds.). Economics of Natural Disasters, Earthscan, London (*forthcoming*).
- Mechler, R. Hochrainer, S., Kull, D. , Patnaik, U. Assessing the costs and benefits of financial drought risk management in Uttar Pradesh, India. Sum, P. (ed.) Managing Drought Risk. United Nations Strategy for Disaster Risk Reduction (UNISDR), Geneva (*forthcoming*).
- Linnerooth-Bayer, J., Mace, M. J., Mechler, R.. Insurance and adaptation: Opportunities and obstacles for the climate change negotiations. In G. Sjostedt, F. Cede, G.O. Faure (eds.). Strategic facilitation of the climate talks. Earthscan, London, United Kingdom (*forthcoming*)
- Hochrainer, S., Mechler, R. (2008). Assessing financial and economic vulnerability to natural hazards: bridging the gap between scientific assessment and the implementation of disaster risk management with the CatSim model. Patt, A., Schröter, D., Klein, R., de la Vega-Leinert, A. (eds). Assessing Vulnerability to Global Environmental Change. Earthscan
- Mechler, R., J. Linnerooth-Bayer, S. Hochrainer, G. Pflug (2006). Assessing Financial Vulnerability and Coping Capacity: The IIASA CATSIM Model. In J. Birkmann (ed.). Measuring Vulnerability and Coping Capacity to Hazards of Natural Origin. Concepts and Methods. United Nations University Press, Tokyo: 380-398
- Mechler, R., J. Linnerooth-Bayer, and D. Peppiatt (2006). Microinsurance for natural disaster risks? Insights from a ProVention/IIASA research initiative. In S. Nicklin, B. Cornwell, and S. Fairbrother (eds.). Real Risk. Leicester, Tudor Rose: 41-42
- Mechler, R. and J. Linnerooth-Bayer (2006). Potential Benefits and Limitations of Micro-Insurance as a Risk Transfer Mechanism for Developing Countries, in Micro-finance and disaster risk reduction. In P.G. Chakrabarti and M. Bhatt (eds.). New Delhi, Knowledge World: 219-225

- Linnerooth-Bayer, J. and R. Mechler (2005). Financing Disaster Risks in developing and emerging-economy countries. Policy Issues in Insurance No. 08: Catastrophic Risks and Insurance. OECD, Paris: 105-162
- Mechler, R. (2004). Macroeconomic impacts of natural disasters. In K. Demeter, N.E. Erkan, A. Guner (eds). The Role of Local Governments in Reducing the Risk of Disasters. The World Bank Institute, Washington, DC: 35-47
- Mechler, R. (2003). Natural Disaster Risk and Cost-Benefit Analysis. In A. Kreimer et al. (eds.). The Future of Disaster Risk: Building Safer Cities. World Bank, Washington DC: 45-56
- Mechler, R. (2001). Naturkatastrophen und Globaler Wandel. in: W. Schulz et al. Lexikon Nachhaltiges Wirtschaften. R. Oldenbourg-Verlag, München: 253-259

Reports, working papers and conference proceedings

- Mechler, R., Hochrainer, S., Kull, D., Chopre, S., Singh, P., Opitz-Stapleton, S., Wajih, S. (2009). "Uttar Pradesh Drought Cost-Benefit Analysis". Risk to Resilience Working Paper 5. Moench, M., Caspari, E. & A. Pokhrel (eds.), ISET, ISET-Nepal and ProVention, Kathmandu, Nepal. Provention Consortium, Geneva.
- Moench, M., Ahmed, S., Mustafa, D., Khan, F., Mechler, R., Kull, D., Dixit, A., Opitz-Stapleton, S., and The Risk to Resilience Study Team (2009). "Moving from Concepts to Practice: A Process and Methodology Summary for Identifying Effective Avenues for Risk Management Under Changing Climatic Conditions". From Risk to Resilience Working Paper No. 8. Moench, M., Caspari, E. & A. Pokhrel (eds.), ISET, ISET-Nepal and ProVention, Kathmandu, Nepal.
- Mechler, R. (2008). "From Risk to Resilience. The Cost-Benefit Analysis Methodology". From Risk to Resilience Working Paper No. 1. Moench, M., Caspari, E. & A. Pokhrel (eds.), ISET, ISET-Nepal and ProVention, Kathmandu, Nepal. Provention Consortium, Geneva.
- Linnerooth-Bayer, J., C. Bals, R. Mechler (2008). Insurance Instruments for Adapting to Climate Risks. A Proposal for the Bali Action Plan. Germanwatch, Bonn.
- Mechler, R., S. Hochrainer, K. Williges (2008). The special nature of natural disaster risk in Asian megacities. A case for megacity risk pooling? ADB conference "Natural Catastrophe Risk Insurance Mechanisms for Asia and the Pacific". 04-05 November 2008, Tokyo, Japan
- Linnerooth-Bayer, J., Bals, C. and Mechler, R. (2008). Climate Change: What Role for Insurance? IIASA Policy Brief #04, IIASA.
- Aaheim, A., Berkhout, F., McEvoy, D., Mechler, R., Neufeldt, H. Patt, A. Watkiss, P., Wreford, A., Kundzewicz, Z., Lavalle, C., Egenhofer, C. (2008). Adaptation to Climate Change: Why is it needed and how can it be implemented? Centre for European Policy Studies (CEPS) Policy Brief, Brussel.
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- Tanner, T., Hassan, A., Islam, K., Conway, D., Mechler, R., Ahmed, A. and Alam, M. (2007). ORCHID: Piloting Climate Risk Screening in DFID Bangladesh. Detailed Research Report. Institute of Development Studies, University of Sussex, UK.
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- Islam, K. and Mechler, R. (2007). ORCHID: Piloting Climate Risk Screening in DFID Bangladesh. An Economic and Cost Benefit Analysis of Adaptation Options. Institute of Development Studies, University of Sussex, UK
- Mechler, R. , J. Linnerooth-Bayer with D. Peppiatt (2006). Disaster Insurance for the Poor? A ProVention/IIASA study. A review of microinsurance for natural disaster risks in developing countries. Provention consortium, Geneva.
- Nasserasadi, K., M. Ghafory-Ashtanay and R. Mechler (2006). Indirect Seismic Loss Model for Industrial Facilities. Conference Proceedings. First European Conference on Earthquake Engineering and Seismology, Geneva, Switzerland, 3-8 September 2006.
- Mechler, R., J. Linnerooth-Bayer and D. Peppiatt (2005). The potential benefits and limitations of micro-insurance as a risk transfer mechanism for developing countries. Viewpoint for International Day for Disaster Reduction, 12 October 2005. ProVention/IIASA.
- Bals, C., Burton, I., Butzengeiger, S., Dlugolecki, A., Gurenko, E., Hoekstra, E., Höpfe, P., Kumar, R., Linnerooth-Bayer, J., Mechler, R., Warner, K. (2005). Insurance-related Options for Adaptation to Climate Change. Executive summary for report on occasion of UNFCCC COP meeting, Montreal, The Munich Climate Insurance Initiative (MCII).
- Cardenas, V., Hochrainer, S., R. Mechler, and G. Pflug (2005). Assessing the Financial Management of Public Sector Disaster Risk: The Mexican Case. IIASA-DPRI Conference, Beijing, China, 14-18 September 2005.
- Linnerooth-Bayer, J. and R. Mechler (2005). Insurance-related mechanisms for assisting developing countries adapt to Climate Change. In Bals, C., Burton, I., Butzengeiger, S., Dlugolecki, A., Gurenko, E., Hoekstra, E., Höpfe, P. , Kumar, R., Linnerooth-Bayer, J., Mechler, R., Warner, K. (2005). Insurance-related Options for Adaptation to Climate Change. Report on occasion of UNFCCC COP meeting, Montreal, The Munich Climate Insurance Initiative (MCII): 38-58.
- Hoeglund-Isaksson, L., R. Mechler (2005). The GAINS Model for Greenhouse Gases - Version 1.0: Methane (CH₄). IIASA Interim Report. IIASA Interim Report IR-05-054 .
- Mechler, R. (2005). Cost-benefit analysis of natural disaster risk management in developing countries. Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Eschborn.
- Mechler, R. (2004). Financing disaster risk by means of contingent credit in Colombia: Costs and Benefits. Report to World Bank, Washington DC.
- Amann M, Bertok I, Cofala J, Heyes C, Klimont Z, Mechler R, Schoepp W, Leonor Tarrason, L. (2004). An Integrated Assessment Framework for Particulate Matter in Europe. Final Report submitted to the European Commission, DG Environment, Brussels, Belgium for a research study on "Preparatory Actions in the Public Health and Environmental Policy Sector."

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- Mechler, R. and J. Weichselgartner (2003). Disaster Loss Financing in Germany – The Case of the Elbe River Floods 2002. Interim Report IR-03-021. IIASA, Laxenburg.
- Linnerooth-Bayer, J. and R. Mechler (2003). Climate Change, Extreme Weather and Burden Sharing, Pro-active Strategies for Implementation of Article 4.8 of the UNFCCC, Background paper for UNDP SIDS workshop on Insurance and Climate-Related Extreme Weather Events, Milan.
- Freeman, P., L. Martin, R. Mechler, K. Warner (2003). A Methodology for Incorporating Natural Catastrophes into Macroeconomic Projections. in: van der Veen, A., A. L. Vetere Arellano and J.-P. Nordvik (2003). Proceedings: Joint NEDIES and University of Twente Workshop - In search of a common methodology for damage estimation. Report EUR 20997 EN (2003), Bruxelles, Office for Official Publications of the European Communities, European Union: 151-165.
- Hochrainer, S., R. Mechler, G. Pflug (2003). The IIASA Model for the Evaluation of Financial Disaster Risk Management Instruments for Developing Countries. Proceedings of Third Annual DPRI-IIASA Meeting "Integrated Disaster Risk Management: Coping with Regional Vulnerability." Kyoto, Japan, 3-5 July 2003.
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- Freeman, P. K., L. A. Martin, J. Linnerooth-Bayer, R. Mechler, G. Pflug and K. Warner (2003). Disaster Risk Management: National Systems for the Comprehensive Management of Disaster Risk and Financial Strategies for Natural Disaster Reconstruction. Inter-American Development Bank, Washington DC.
- Mechler, R. (2003). Natural Disaster Risk Management and Financing Disaster Losses in Developing Countries. Ph.D thesis. University of Karlsruhe.
- Mechler, R., M. Amann and W. Schoepp (2002). Methodology to Estimate Changes in Statistical Life Expectancy Due to the Control of Particulate Matter in Air Pollution. IIASA Interim Report IR-02-035.
- Mechler, R., M. Amann and W. Schöpp (2002). Preliminary estimates of changes in statistical life expectancy due to the control of particulate matter air pollution in Europe. EMEP Co-operative Programme for Monitoring and Evaluation of the Long Range Transmission of Air Pollutants in Europe. Transboundary Particulate Matter in Europe: Status report 2002. Kjeller, Norway: 61-89.
- Obersteiner, M., C. Azar, S. Kossmeier, R. Mechler, K. Moellersten, S. Nilsson, K. Read, Y. Yamagata, J. Yan (2002). Managing Climate Risk, Interim Report IR-01-051. Laxenburg, Austria, IIASA.
- Freeman, P., L. Martin, J. Linnerooth-Bayer, R. Mechler, S. Saldana, K. Warner and G. Pflug (2002). Financing Reconstruction. Phase II Background Study for the Inter-American Development Bank Regional Policy Dialogue on National Systems

for Comprehensive Disaster Management. Inter-American Development Bank, Washington DC.

Freeman, P., L. Martin, R. Mechler, K. Warner with P. Hausman (2002). Catastrophes and Development, Integrating Natural Catastrophes into Development Planning, Disaster Risk Management Working Paper Series No. 4. World Bank, Washington DC.

Mechler, R. and G. Pflug (2002). The IIASA Model for Evaluating Ex-ante Risk Management: Case Study Honduras. Report to Inter-American Development Bank, Washington DC.

Freeman, P. and R. Mechler (2001). Public Sector Risk Management in Mexico for Natural Disaster Losses. Wharton-World Bank Conference "Innovations in Managing Catastrophic Risks: How Can They Help The Poor?" January 8-10, 2001. Disaster Management Facility, World Bank, Washington DC.

Freeman, P., L. Martin, R. Mechler, and K. Warner (2000). Integrating Natural Catastrophe Exposure into Development Planning: Case study of catastrophe risk in Nicaragua. IIASA, Laxenburg.

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Freeman, P., L. McKellar, L. Martin, R. Mechler, and K. Warner (2000). Integrating Natural Catastrophe Exposure into Development Planning: Case study of flood risk in Argentina. Laxenburg. IIASA, Laxenburg.

Aschenbrenner, S. und R. Mechler (1999). New Perspectives for Business Consulting in the Risk Management of Natural Disasters And Global Change in: Goossens, L.H.J. (ed.), Proceedings of the 9th Annual Conference Risk Analysis: Facing the New Millenium 10.-13.10.1999, European Society for Risk Analysis (SRA), Delft University Press, Delft: 657-663.

Mechler, R. (1997). Externe Kosten der Umweltnutzung und ihre Implementierung am Beispiel der Adders in den USA. Diploma thesis, Wirtschaftswissenschaftliche Fakultät der Universität Heidelberg.

Thesis work

Mechler, R. (2003). Natural Disaster Risk Management and Financing Disaster Losses in Developing Countries. Ph.D thesis. University of Karlsruhe.

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