

Reinhard Mechler

Personal Profile

Reinhard Mechler has more than 15 years of experience working on the economics of disaster risk and climate change. He currently is deputy director of the 'Risk and Resilience' research program at the International Institute for Applied Systems Analysis (IIASA). He has been a visiting professor and senior lecturer at the University of Graz, as well as a senior lecturer at the University for Economics and Business in Vienna. His research interests comprise catastrophe risk analysis and policy, understanding the nexus between extreme events, climate change, justice and development, the role of resilience in disaster risk management, and policy instruments for climate mitigation and adaptation. He acted as a lead author on IPCC's special report on adaptation to extreme events (SREX) and on IPCC's 5th assessment report (Working Group II). He has been leading and contributing to many international research and consultancy projects.

Areas of expertise

Socio-economics of natural disaster risk and climate change, disaster risk sharing instruments and insurance, climate resilience and justice, disaster risk and climate change policy and governance, systems modelling, development economics, ecological economics.

Scientific advisory and other boards

- Scientific Advisory Board, Basque Centre for Climate Change (BC3)
- Management Board, Climate Change Centre Austria (CCCA)
- Co-leader, Loss and Damage Network

Editorial boards

Climate Risk Management, Mitigation and Adaptation Strategies for Global Change, @Risk, Economics of disasters and climate change

Field work expertise

India, Nepal, Pakistan, Indonesia, Madagascar, Honduras, Caribbean, Peru, China, Austria, Germany.

Positions – Research

2015 to present	Visiting professor&senior lecturer, Karl-Franzens-University, Graz
2014 to present	Deputy program leader 'Risk, Policy, Vulnerability,' IIASA
2009 to present	Senior lecturer, Vienna University of Economics and Business
2006 to 2013	Leader group 'Disasters, Adaptation and Development,' IIASA
1999 to 2006	Research scholar, IIASA
1998 to 2001	PhD researcher, University of Karlsruhe
1994 to 1998	Research Assistant, Centre for European Economic Research (ZEW)

Positions – Consultancy

12/2011 to 4/2012	IMC Worldwide, London
1/2011 to 9/2011	Perspectives, Hamburg
1/2005 to 9/2005	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Qualifications

2003	Ph.D. Economics, University of Karlsruhe
1998	Diploma in Economics, University of Heidelberg
1995	B.A. (equivalent) Economics, University of Heidelberg
1993-1994	University of Massachusetts, Amherst
1992	B.A. (equivalents) Mathematics & English Literature and Linguistics, University of Heidelberg

Peer-reviewed publications

- Schinko, T., and Mechler, R. Applying Recent Insights From Climate Risk Management to Operationalize the Loss and Damage Mechanism. *Ecological Economics* (in press).
- Hochrainer-Stigler, S., Desai, B., Maskrey, A., Mechler, R., Mochizuki, J. (2016). Risk-sensitizing Future Investment Needed to Achieve the Sustainable Development Goals. *International Journal of Disaster Risk Reduction* DOI:10.1016/j.ijdr.2016.12.005 (in press).
- Williges, K., Mechler, R., Bowyer, P., and Balkovic, J. Towards an assessment of adaptive capacity of the European agricultural sector to droughts. *Climate Services* (in press).
- Mochizuki, J., Hochrainer-Stigler, S., Mechler, R., Keating, A. An Overdue Alignment of Risk and Resilience Thinking. *Disaster* (in press).
- Keating, A., Campbell, K., Mechler, R., Magnuszewski, P., Mochizuki, J., Liu, W., Szoenyi, M. and McQuistan, C. (2017). Disaster resilience: What it is and how it can engender a meaningful change in development policy. *Development Policy Review*: 65–91
- Mechler, R. and T. Schinko (2016). Identifying the policy space for climate loss and damage. *Science* 354: 290-292.
- Mechler, R. (2016). Reviewing estimates of the economic efficiency of disaster risk management: Opportunities and limitations to using risk-based Cost-Benefit Analysis. *Natural Hazards* doi 10.1007/s11069-016-2170-y
- Keating, A., Venkateswaran, K., Szoenyi, M., MacClune, K., Mechler, R. (2016) From event analysis to global lessons: disaster forensics for building resilience. *Natural Hazards and Earth System Sciences* 16: 1603-1616.
- Hochrainer-Stigler, S. Desai, B., Williges, K., Maskrey, A., Mechler, R. and J. Mochizuki (2016). Risk-sensitizing Future Investment Needed to Achieve the Sustainable Development Goals, *International Journal of Disaster Risk Reduction*, <http://dx.doi.org/10.1016/j.ijdr.2016.12.005>
- Schinko, Mechler, R. and S. Hochrainer-Stigler (2016). A methodological framework to operationalize climate risk management: managing sovereign climate-related extreme event risk in Austria. *Mitigation and Adaptation Strategies for Global Change* DOI 10.1007/s11027-016-9713-0
- McCallum, I., Liu, W., See, L., Mechler, R., Keating, A., Hochrainer-Stigler, S., Mochizuki, J., Fritz, S., Dugar, S., Arestegui, M., Szoenyi, M., Laso Bayas, J.C., Burek, P., French, A. and Moorthy, I. (2016). Technologies to Support Community Flood Disaster Risk Reduction. *International Journal of Disaster Risk Science* 7, 2: 198-204.
- Mochizuki, J., Keating, A., Mechler, R., Egan, C., Hochrainer-Stigler, S. (2016). If Numbers Can Speak, Who Listens? Creating Engagement and Learning for Effective Uptake of

- DRR Investment in Developing Countries. *PLOS Currents Disasters*, 1 doi: 10.1371/currents.dis.ab5922892b54a68f7315e967f6dd3406.
- Mochizuki, J., Vitoontus, S., Wickramarachchi, B., Hochrainer-Stigler, S., Williges, K., Mechler, R., Sovann, R. (2015). Operationalizing Iterative Risk Management under Limited Information: Fiscal and Economic Risks Due to Natural Disasters in Cambodia. *International Journal of Disaster Risk Science* 6:321–334
- Hochrainer-Stigler, S., Mechler, R., Mochizuki, J. (2015). A risk management tool for tackling country-wide contingent disasters: A case study on Madagascar. *Environmental Modelling & Software*, 72:44-55
- Birkmann, J. and Mechler, R. (2015). Advancing climate adaptation and risk management. New insights, concepts and approaches: what have we learned from the SREX and the AR5 processes? *Climatic Change* 33 (1) : 1-6
- Mechler R. and Bouwer, L. (2015). Reviewing trends and projections of global disaster losses and climate change: Is vulnerability the missing link? *Climatic Change* 33 (1) : 23-35
- Mysiak, J, Surminski, S., Thieken, A., Mechler, R. and J. Aerts (2015). Brief Communication: Sendai Framework for Disaster Risk Reduction – success or warning sign for Paris? *Natural Hazards Earth System Science Discussions* 3: 3955–3966.
- Husby, T., Mechler, R and B. Jongman (2015). What if Dutch investors started worrying about flood risk? Implications for disaster risk reduction. *Regional Environmental Change*. DOI 10.1007/s10113-015-0769-2
- Mochizuki, J., Mechler, R., Hochrainer-Stigler, S., Keating, A., Williges, K. (2015) “Revisiting the ‘disaster and development’ debate – Toward a broader understanding of macroeconomic risk and resilience.” *Climate Risk Management* 3: 39-54.
- Jongman, B., Hochrainer-Stigler, S., Feyen, L., Aerts, J., Mechler, R., Botzen, W., Bouwer, L., Pflug, G., Rojas, R., Ward, P. (2014). Reply to 'Statistics of flood risk.' *Nature Climate Change* 4:844-845
- Mechler R. & Bouwer, L. (2014). Reviewing trends and projections of global disaster losses and climate change: Is vulnerability the missing link? *Climatic Change*, Published online 12 August 2014.
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- Hochrainer-Stigler, S., Mechler, R., Pflug, G., Williges, K. (2014). Funding Public Adaptation to Climate-related Disasters. Estimates for a Global Climate Fund. *Global Environmental Change* 25, 87-96
- Mechler, R., Hochrainer-Stigler, S. (2014). Revisiting Arrow-Lind: Managing sovereign disaster risk. *Journal of Natural Resources Policy Research* 6 (1): 93-100
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- Kull, D., Mechler, R. Hochrainer-Stigler, S. (2013). Probabilistic Cost-Benefit Analysis of Disaster Risk Management in a Development Context. *Disasters* 37(3): 374-400.
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- Handmer, J., Y. Honda, Z.W. Kundzewicz, N. Arnell, G. Benito, J. Hatfield, I.F. Mohamed, P. Peduzzi, S. Wu, B. Sherstyukov, K. Takahashi, Z. Yan (Lead authors) and Mechler, R. et al. (Contributing authors) (2012). Changes in impacts of climate extremes: human systems and ecosystems. In: *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, UK, and New York, NY, USA, 231-290.
- Hochrainer-Stigler, S., Sharma, R.B, and Mechler, R. (2012). Disaster Microinsurance for Pro-Poor Risk Management: Evidence from South Asia. *Journal of Integrated Disaster Risk Management*, 2(2): 1-19.
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- Linnerooth-Bayer, J., Hochrainer, S., Mechler, R. (2011). Insurance against Losses from Natural Disasters in Developing Countries. Evidence, gaps and the way forward. *Journal of Integrated Disaster Risk Management* DOI10.5595/idrim.2011.0013
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- Hochrainer, S. and Mechler, R. (2011). Natural Disaster Risk in Asian Megacities: A Case for Risk Pooling? *Cities*. DOI 10.1016/j.cities.2010.09.00
- Mechler, R., Rezai, A., Stagl, S. (2010). Is Green Growth feasible? Some reflections and implications for Austria. *Wirtschaftspolitische Blätter* (4): 451-465.
- Mechler, R. and Z.W. Kundzewicz (2010). Assessing adaptation to extreme weather events in Europe—Editorial. *Mitigation and Adaptation Strategies for Global Change* 15 (7): 611-620.
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- Mechler, R., S. Hochrainer, A. Aaheim, H. Salen and A. Wreford (2010). Modelling economic impacts and adaptation to extreme events: Insights from European case studies. *Mitigation and Adaptation Strategies for Global Change* 15 (7): 737-762
- Hochrainer, S., J. Linnerooth-Bayer and R. Mechler (2010). The European Union Solidarity Fund. *Mitigation and Adaptation Strategies for Global Change* 15 (7): 797-810
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- Linnerooth-Bayer, J., Mechler, R. (2007). Disaster safety nets for developing countries: Extending public-private partnerships. *Environmental Hazards* 7: 54-61
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- 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 : 621-636
- Hochrainer, S., and R. Mechler (2006). Naturkatastrophen: Auswirkungen, Lösungsansätze und Rollen fuer Wissenschaft, Staat und Wirtschaft. *Wirtschaftspolitische Blätter* 4: 561-579
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Books

- Amendola, A., Ermolieva, T., Linnerooth-Bayer, Mechler, R. (eds.) (2013). *Integrated Catastrophe Risk Modeling. Supporting Policy Processes*. Springer, Heidelberg
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Book chapters

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- Mitchell, T., Mechler, R., Harris, K (2014) Disaster risk management and adaptation to extreme events: Placing disaster risk management at the heart of national economic and fiscal policy. In Markandya, A., Sainz de Murieta, E. Galarraga, I. [eds] *Handbook on the Economics of Adaptation*. Routledge: 417-436
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- Supporting Policy Processes, A. Amendola, T. Ermolieva, J. Linnerooth-Bayer, R. Mechler (eds) Springer, Dordrecht, The Netherlands, pp.3-12
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