

**Robert J. Lempert**

RAND Corporation  
(310) 393-0411 ext. 6217  
lempert@rand.org  
<http://www.rand.org/pardee/>

**EDUCATION**

1985 Ph.D., Harvard University, Applied Physics  
1983 S.M., Harvard University, Applied Physics and Science Policy,  
1980 B.A.S., Stanford University, Physics and Political Science, Phi Beta Kappa

**PROFESSIONAL EXPERIENCE**

2016 – Present Principal Researcher, RAND, Santa Monica, CA  
2008 – Present Director, RAND Frederick S. Pardee Center for Longer Range Global Policy and the Future Human Condition, Santa Monica, CA  
1990 – Present Senior Scientist, RAND, Santa Monica, CA  
1994 – Present Professor of Policy Analysis, RAND Graduate School, Santa Monica, CA  
1997 – Present Co-founder and President, Evolving Logic, Topanga, CA  
1988 – 1990 Associate Program Director, Project AIR FORCE Technology Applications Program, RAND  
1986 - 1988 Associate Scientist, RAND, Santa Monica, CA  
1984 – 1984 Research Associate, Energy and Materials Group, Office of Technology Assessment, Washington, D.C.

**CURRENT RESEARCH**

**Decision-making Under Uncertainty:** Dr. Lempert is a pioneer in developing new methods to harness information technology in support of policy-making under deep uncertainty. His robust decision methods help policy-makers to identify good choices in the absence of reliable predictions of the future and to more effectively communicate their choices. Dr. Lempert has been applying these computer-based methods in policy areas including climate change, energy policy, terrorism insurance, longer-term policy analysis, national security, and science and technology planning.

**Climate Change:** Dr. Lempert has worked extensively in the integrated assessment of climate change policies, with an emphasis on decision-making under conditions of deep uncertainty. Using the robust decision methods he has developed, Dr. Lempert and colleagues help policy makers more effectively address climate change in the face of deep scientific and economic uncertainties and the inevitability of surprise. His RAND research team currently helps the Metropolitan Water District of Southern California, the California Department of Water Resources, the California Energy Commission, and other organizations to include climate change in their long-range plans.

## PROFESSIONAL HONORS AND ORGANIZATIONS

- Fellow of the American Physical Society
- Member, Council on Foreign Relations
- Founding President, Society for Decision Making Under Deep Uncertainty
- Convening Lead Author, Working Group II of the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report; Lead Author, Working Group II of the IPCC Fifth Assessment Report and of the Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX)
- Chapter lead, Fourth US National Climate Assessment and chapter author, Third National Climate Assessment
- Member, National Academy of Sciences study panels on Assessing the Impacts of Climate Change on Social and Political Stresses, America's Climate Choices Informing Effective Decisions and Actions Related to Climate Change, Strategies and Methods for Climate-Related Decision Support, and Climate Change and Transportation
- Member, Santa Monica Task Force on the Environment

## PUBLICATIONS

- Lempert, Robert J., Tim McDonald, Steven W. Popper, Diogo Prosdocimi, and Thomas A. Small, Implementing a New Mobility Vision for Rancho Higuera in a Deeply Uncertain, Fast-Changing World: Results from RAND Corporation Participatory Local Planning Workshops. Santa Monica, CA: RAND Corporation, 2020.  
[https://www.rand.org/pubs/conf\\_proceedings/CF407.html](https://www.rand.org/pubs/conf_proceedings/CF407.html).
- Blake, S.J., Lempert, R.J., Popper, S.W. (2019) Travel Model Improvement Program, Sacramento Area Council of Governments Peer Review, August 2019. As of December 17, 2019:  
[https://www.fhwa.dot.gov/planning/tmip/resources/peer\\_review\\_program/sacog/report\\_2/](https://www.fhwa.dot.gov/planning/tmip/resources/peer_review_program/sacog/report_2/)
- Lempert, R. J., "Robust Decision Making (RDM)," in Marchau, Vincent A. W. J., Warren E. Walker, Pieter J. T. M. Bloemen, and Steven W. Popper, eds., *Decision Making under Deep Uncertainty: From Theory to Practice*, Cham: Springer International Publishing, 2019, pp. 23-51. [https://doi.org/10.1007/978-3-030-05252-2\\_2](https://doi.org/10.1007/978-3-030-05252-2_2)
- Sridharan, V., Broad, O., Shivakumar, A., Howells, M., Boehlert, B., Groves, D. G., ... & Lempert, R. (2019). "Resilience of the Eastern African electricity sector to climate driven changes in hydropower generation." *Nature communications*, 10(1), 302. PMCID: PMC6336820
- Lempert, Robert, Benjamin L. Preston, Jae Edmonds, Leon Clarke, Tom Wild, Matthew Binsted, Elliot Diringer, and Brad Townsend. "Pathways to 2050." Center for Climate and Energy Solutions (2019).

- Pendleton-Jullian, Ann and Robert J. Lempert, Technology and Work Worth Doing (Not Jobs) Post-AlphaGo: A World-Building Workshop on the Future of Artificial Intelligence. Santa Monica, CA: RAND Corporation, 2019.  
[https://www.rand.org/pubs/conf\\_proceedings/CF398.html](https://www.rand.org/pubs/conf_proceedings/CF398.html).
- Lempert, R. J. (2018). “Addressing Uncertainty in Developing Long-Term Greenhouse Gas Emission Reduction Strategies.” World Resources Institute.  
<https://www.wri.org/climate/expert-perspective/addressing-uncertaintydeveloping-long-term-greenhouse-gas-emission>.
- Lempert, R., J. Arnold, R. Pulwarty, K. Gordon, K. Greig, C. Hawkins Hoffman, D. Sands, and C. Werrell, 2018: Reducing Risks Through Adaptation Actions. In Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 1309–1345. doi: 10.7930/NCA4.2018.CH28
- Schmitt Olabisi, L., Azhar, G. S., Abbott, M., & Lempert, R. J. (2018). Participatory Modeling of Climate Change Impacts on Public Health in Long Beach, California.
- Lempert, R. J., & Trujillo, H. R. (2018). Deep Decarbonization as a Risk Management Challenge. RAND.
- Olabisi, L. S., Azhar, G. S., Abbott, M., & Lempert, R. J. (2018). Participatory Modeling of Climate Change Impacts on Public Health in Long Beach, California: Discussion from a Workshop Hosted by the RAND Frederick S. Pardee Center for Longer Range Global Policy and the Future Human Condition. RAND health quarterly, 8(1).
- Groves, D. G., Knopman, D., Berg, N., Bond, C. A., Syme, J., & Lempert, R. J. (2018). Adapting Land Use and Water Management Plans to a Changing Climate in Miami-Dade and Broward Counties, Florida. Rand Corporation.
- Walker, W., Marchau, V., Bloemen, P., Lawrence, J., Lempert, R., & Kwakkel, J. (2018). A Response to Glynn et al., “From data to decisions: Processing information, biases, and beliefs for improved management of natural resources and environments”. Earth's Future.
- Lempert, R. J., Marangoni, G., Keller, K., & Duke, J. (2018). Is Climate Restoration an Appropriate Climate Policy Goal?. Rand Corporation.
- Sliver, R. L., Lempert, R. J., Wikman-Svahn, P., & Keller, K. (2018). Characterizing uncertain sea-level rise projections to support investment decisions. PloS one, 13(2), e0190641.  
PMCID: PMC5802450
- Tariq, A., R. Lempert, J. Riverson, M. Schwartz and N. Berg (2017). “A Climate Stress Test of Los Angeles’ Water Quality Plans,” Climatic Change, 144, 4, pp.625-639.

DO NOT USE FOR PROPOSALS

- Tingstad, A, R.J. Lempert, M. Moskwik, D.L. Warren, C. Parmesan, L.O. Mearns, S. McGinnis, and Y. Rhu (2017) “Demonstrating the Applicability of a Robust Decision Making (RDM) to Conservation Decision-Making Under Uncertain Future Climate: Pilot Study Using the Northern Pygmy Salamander (*Desmognathus organi*),” J. of Conservation Planning, 13, pp 11-24.
- Andrew R. Hoehn, Richard H. Solomon, Sonni Efron, Frank Camm, Anita Chandra, Debra Knopman, Burgess Laird, Robert J. Lempert, Howard J. Shatz, Casimir Yost (2017) Strategic Choices for a Turbulent World: In Pursuit of Security and Opportunity, RAND, RR-1631-RC
- Bessette, D. L., Mayer, L. A., Cwik, B., Vezér, M., Keller, K., Lempert, R. J. and Tuana, N. (2017) “Building a Values-Informed Mental Model for New Orleans Climate Risk Management,” Risk Analysis, 37: 1993–2004.
- Guivarch, Céline, Lempert, Robert, Trutnevyte, Evelina (2017): “Scenario techniques for energy and environmental research: An overview of recent developments to broaden the capacity to deal with complexity and uncertainty,” Environmental Modelling & Software, 97, pp. 201-210
- Mayer, Lauren A., Loa, Kathleen, Cwik, Bryan, Tuana, Nancy, Keller, Klaus, Gonnerman, Chad, Parker, Andrew M., Lempert, Robert J. (2017) “Understanding scientists’ computational modeling decisions about climate risk management strategies using values-informed mental models,” Global Environmental Change, 42, pp. 107-116
- Gong, M., R. Lempert, A. M. Parker, L. A. Mayer, J. Fischbach, M. Sisco, Z. Mao, D. H. Krantz and H. Kunreuther (2017). "Testing the Scenario Hypothesis: An Experimental Comparison of Scenarios and Forecasts for Decision Support in a Complex Decision Environment." Environmental Modeling and Software 91, 135-155
- Hoehn, A. R., R. H. Solomon, S. Efron, F. Camm, A. Chandra, D. Knopman, B. Laird, R. J. Lempert, H. Shatz and C. Yost (2017). Exploring America's Role in a Turbulent World: Strategic Rethink.
- Knopman, D. and R. Lempert (2016). Urban Responses to Climate Change: Framework for Decisionmaking and Supporting Indicators. RAND. RR-1144-MCF
- Carlsen, H., R. Lempert, P. Wikman-Svahn and V. J. Schweizer (2016). "Choosing small sets of policy-relevant scenarios by combining vulnerability and diversity approaches." Environmental Modeling and Software 84: 155-164.
- Robert J Lempert (2016). “Experiment Earth: Responsible Innovation in Geoengineering by Jack Stilgoe A Case for Climate Engineering by David Keith” Science and Public Policy (book review).

DO NOT USE FOR PROPOSALS

- Trutnevycyte, E., C. Guivarch, R. Lempert and N. Strachan (2016). "Reinvigorating the scenario technique to expand uncertainty consideration." Climatic Change: 1-7.
- Groves, David G., Robert J. Lempert, Deborah W. May, James R. Leek and James Syme (2016). Using High-Performance Computing to Support Water Resource Planning: A Workshop Demonstration of Real-Time Analytic Facilitation for the Colorado River Basin. Santa Monica, CA: RAND Corporation, CF-339-RC  
[http://www.rand.org/pubs/conf\\_proceedings/CF339.html](http://www.rand.org/pubs/conf_proceedings/CF339.html).
- Lempert, Robert J., Drake Warren, Ryan Henry, Robert W. Button, Jonathan Klenk and Kate Giglio. (2016) Defense Resource Planning Under Uncertainty: An Application of Robust Decision Making to Munitions Mix Planning. Santa Monica, CA: RAND Corporation.
- Fischbach, J. R., R. J. Lempert, E. Molina-Perez, A. Tariq, M. L. Finucane and F. Hoss (2015). Managing Water Quality in the Face of Uncertainty: A Robust Decision-Making Demonstration for EPA's National Water Program, RAND. RR-720-EPA
- Isley, S. C., R. J. Lempert, S. W. Popper and R. Vardavas (2015). "The effect of near-term policy choices on long-term greenhouse gas transformation pathways." Global Environmental Change 34: 147-158.
- Lempert, R. J. (2015). "Values and uncertainty." Nature Climate Change. 5.10 (2015): 914-915.
- Dobbins, James, Richard H. Solomon, Michael S. Chase, Ryan Henry, F. Stephen Larrabee, Robert J. Lempert, Andrew Liepman, Jeffrey Martini, David Ochmanek and Howard J. Shatz. Choices for America in a Turbulent World: Strategic Rethink. Santa Monica, CA: RAND Corporation, 2015. [http://www.rand.org/pubs/research\\_reports/RR1114](http://www.rand.org/pubs/research_reports/RR1114).
- Robert Lempert, Brent Boehlert, David Groves, James E. Neumann, Kenneth M. Strzepek, Oliver Broad, Vignesh Sridharan and R. Cervigni (2015). "Adaptation to Climate Change in Planning Infrastructure". Enhancing the Climate Resilience of Africa's Infrastructure. Raffaello Cervigni, Rikard Liden, a. James E. Neumann and K. M. Strzepek. Washington, DC, World Bank.
- Lempert, R. (2015) "Embedding (Some) benefit-cost concepts into decision support processes with deep uncertainty." Journal of Benefit Cost Analysis, 5 (3), 487-514
- Debra Knopman, Jordan Fischbach, David Groves, and Robert Lempert (2014). "The challenge of Adaptation Under Deep Uncertainty: An Organizing Principle for Future Water Resources Research," Water Resources Impact, 16,1 p. 8-9.
- Groves, D. G., E. Bloom, R. Lempert, J. Fischbach, J. Nevills and B. Goshi (2014). "Developing Key Indicators for Adaptive Water Planning." Journal of Water Resources Planning and Management .

- Jones, R. N., A. Patwardhan, S. Cohen, S. Dessai, A. Lammel, R. Lempert, M. M. Q. Mirza and H. v. Storch (2014). Chapter 2. Foundations for Decision Making. Climate Change 2014: Impacts, Adaptation, and Vulnerability. Intergovernmental Panel on Climate Change (IPCC).
- Kalra, N., S. Hallegatte, R. Lempert, C. Brown, A. Fozzard, S. Gill and A. Shah (2014). Agreeing on Robust Decisions: A New Process of Decision Making Under Deep Uncertainty. Policy Research Working Paper. W. Bank, World Bank. WPS-6906
- Moss, R., P. L. Scarlett, M. A. Kenney, H. Kunreuther, R. Lempert, J. Manning, B. K. Williams, J. W. Boyd, E. T. Cloyd, L. Kaatz and L. Patton (2014). Decision Support: Connecting Science, Risk Perception, and Decisions. Climate Change Impacts in the United States: The Third National Climate Assessment. J. M. Melilo, T. Richmond and G. Yohe. Washington DC, US Global Change Research Program: 620-647.
- David V. Budescu, Stephen B. Broomell, Robert J. Lempert & Klaus Keller (2014). "Aided and unaided decisions with imprecise probabilities in the domain of losses," EURO J Decis Process, 2(1-2), 31-62
- Andrew M. Parker, Sinduja V. Srinivasan, Robert J. Lempert, Sandra H. Berry, (2014). "Evaluating simulation-derived scenarios for effective decision support," Technology Forecasting and Social Change 91, 64-77.
- Nakicenovic, Nebojsa, Robert Lempert, Anthony Janetos (2014). "A Framework for the Development of New Socio-economic Scenarios for Climate Change Research: Introductory Essay," Climatic Change 122: 351-361
- Julie Rozenberg, Céline Guivarch, Robert Lempert, Stéphane Hallegatte (2014). "Building SSPs for climate policy analysis: a scenario elicitation methodology to map the space of possible future challenges to mitigation and adaptation," Climatic Change, 122(3) 509-522
- Tingstad, A., Groves, D., and Lempert, R. (2014). "Paleoclimate Scenarios to Inform Decision Making in Water Resource Management: Example from Southern California's Inland Empire." J. Water Resour. Plann. Manage. 140 (10)
- S. Dalal, B. Han, R. Lempert, A. Jaycocks, A. Hackbarth (2013). "Improving scenario discovery using orthogonal rotations," Environmental Modelling & Software, 48 1-16
- Stern, P. C., K. L. Ebi, R. Leichenko, R. S. Olson, J. D. Steinbruner and R. J. Lempert (2013). "Managing risk with climate vulnerability science." Nature Climate Change 3: 607-609.
- Steven Isley, Robert Lempert, Steven Popper, Raffaele Vardavas, (2013) An Evolutionary Model of Industry Transformation and the Political Sustainability of Emission Control Policies, RAND TR-1308

- Lempert, R. J., N. Kalra, S. Peyraud, Z. Mao, Sinh Bach Tan, Dean Cira, and Alexander Lotsch (2013). Ensuring Robust Flood Risk Management in Ho Chi Minh City: A robust decision making demonstration, The World Bank. WPS-6465.
- Christopher P. Weaver, Robert J. Lempert, Casey Brown, John A. Hall, David Revell, Daniel Sarewitz (2013) Improving the contribution of climate model information to decision making: the value and demands of robust decision frameworks, WIREs Climate Change, Volume 4, Issue 1, pages 39–60, January/February 2013.
- Joseph R. Kasprzyk, Shanthi Nataraj, Patrick M. Reed, Robert J. Lempert (2013). “Many objective robust decision making for complex environmental systems undergoing change” Environmental Modelling & Software 42, 55-71
- Kriegler, E., O'Neill, B.C., Hallegatte, S., Kram, T., Lempert, R.J., Moss, R.H., Wilbanks, T. (2012) “The need for and use of socio-economic scenarios for climate change analysis: A new approach based on shared socio-economic pathways,” Global Environmental Change volume 22, issue 4, year 2012, pp. 807 – 822
- Hall, J. M., R. Lempert, K. Keller, A. Hackbarth, C. Mijere and D. McInerney (2012). "Robust Climate Policies under uncertainty: A comparison of Info-Gap and RDM methods." Risk Analysis.
- Hallegatte, S., A. Shah, R. Lempert, C. Brown and S. Gill (2012). Investment Decision Making Under Deep Uncertainty: Application to Climate Change. Washington, DC, World Bank, PRWP 6193.
- Lempert, Robert, Ryan L. Sriver, and Klaus Keller. 2012. “Characterizing Uncertain Sea Level Rise Projections to Support Investment Decisions.” California Energy Commission. Publication number: CEC-500-2012-056
- Lempert, R. and J. Zmud 2012. “Recrafting Scenario Practice to Achieve Robust Long-Term Decisions.” Delivering Tomorrow: Logistics 2050 A Scenario Study. Bonn, Germany, Deutsche Post AG: 166-172.
- Lempert, R.J. 2012 “Climate Scenarios that Illuminate Vulnerabilities and Potential Robust Responses, Climatic Change 117 pp 627-646
- Rozenberg, J., C. Guivarch, R. Lempert and S. Hallegatte 2012. Building SSPs: A Scenario Elicitation Methodology to Map the Space of Possible Future Mitigative and Adaptive Capacity. FEEM (Fondazione Eni Enrico Mattei) Working Paper. 2012.052
- McInerney, D., R. Lempert, and K. Keller, "What are robust strategies in the face of uncertain climate threshold responses?," 2012, Climatic Change,

DO NOT USE FOR PROPOSALS

- Lempert, Robert J. and Shawn McKay, 2011. "Some thoughts on the role of robust control theory in climate-related decision support," Climatic Change, 107:241–246.
- Lempert, R.J. and Nidhi Kalra 2011. Managing Climate Risks in Developing Countries with Robust Decision Making. World Resources Report, Washington, D.C.: World Resources Institute, 9 p.
- Haewon C. McJeon, Leon Clarke, Page Kyle, Marshall Wise, Andrew Hackbarth, Ben Bryant, Robert J. Lempert 2011: "Technology interactions among low-carbon energy technologies: What can we learn from a large number of scenarios?" Energy Economics, 33, 619-631
- Lempert, R.J. and Don Prosnitz, 2011. Governing Geo-Engineering Research: A Political and Technical Vulnerability Analysis of Potential Near-Term Options, RAND TR-846-RC
- Lempert, Robert J. David G. Groves, 2010. "Identifying and evaluating robust adaptive policy responses to climate change for water management agencies in the American west" Technology Forecasting and Social Change, 77, pp. 960-974.
- Lempert, R.J. 2010: "Robust Decision Making" in Olsen, J. Rolf, Julie Kiang and Reagan Waskom, (editors). Workshop on Nonstationarity, Hydrologic Frequency Analysis, and Water Management. Colorado Water Institute Information Series No. 109.  
www.cwi.colostate.edu
- Bryant, B. and R.J. Lempert, 2010. "Thinking Inside the Box: A Participatory, Computer Assisted Approach to Scenario Discovery," Technology Forecasting and Social Change, 77,1, pp. 34-49.
- Robert J. Lempert, Steven W. Popper, Endy Y. Min, and James A. Dewar, 2009: Shaping Tomorrow Today: Near-Term Steps Towards Long-Term Goals, RAND CF-267
- Dessai, S., Hulme, M., Lempert, R. and Pielke, R. jr. 2009: "Do we need better predictions to adapt to a changing climate?" EOS 90(13), 111-112
- Lempert, Robert J. 2009: *Using Climate Change Scenarios to Inform Water Quality Decisions*, White Paper Prepared for EPA's Global Change Research Program, March.
- Lempert, Robert; Scheffran, Juergen; Sprinz, Detlef F. 2009: "Methods for Long-Term Environmental Policy Challenges," Global Environmental Politics, Vol. 9, No. 3, August pp.106-133.
- Dessai, S., M. Hulme, R. Lempert and R. Pielke, Jr: 2009: "Climate prediction: a limit to adaptation?" In W.N Adger, I. Lorenzoni and K. O'Brien (eds.) Adapting to climate change: thresholds, values, governance Cambridge University Press, Cambridge.
- Lakdawalla, Darius N., Dana P. Goldman, Pierre-Carl Michaud, Neeraj Sood, Robert Lempert, Ze Cong, Han de Vries, and Italo Gutierrez, 2009: "US Pharmaceutical Policy in a Global



DO NOT USE FOR PROPOSALS

Marketplace,” Health Affairs, vol. 28, p. 138-150. Winner of the Eugene Garfield Economic Impact of Medical and Health Research Award.

Robert J. Lempert , 2008: “Tool box for policy planners.” Book review of The Handbook of Technology Foresight, Nature, 455, 169-170, Sept.

Toman, Michael , James Griffin, Robert J. Lempert 2008: Impacts on U.S. Energy Expenditures and Greenhouse-Gas Emissions of Increasing Renewable-Energy Use, RAND, TR-384-1-EFC.

Groves, D. G., M. Davis, R. Wilkinson, and R. Lempert, 2008: Planning for Climate Change in the Inland Empire: Southern California, Water Resources IMPACT, July.

David G. Groves, Robert J. Lempert, Debra Knopman, Sandra H. Berry, 2008: Preparing for an Uncertain Future Climate in the Inland Empire: Identifying Robust Water-Management Strategies, DB-550-NSF, RAND

Robert J. Lempert, Benjamin P. Bryant, and Steven C. Bankes, 2008: Comparing Algorithms for Scenario Discovery, RAND WR-557-NSF.

Robert J. Lempert, Horacio R. Trujillo, David Aaron, James A. Dewar, Sandra H. Berry, Steven W. Popper 2008: Comparing Alternative U.S. Counterterrorism Strategies Can Assumption-Based Planning Help Elevate the Debate? RAND, DB-548-RC.

David Groves, Debra Knopman, Robert Lempert, Sandra Berry, and Lynne Wainfan, Presenting Uncertainty About Climate Change to Water Resource Managers, 2007: RAND TR-505-NSF.

Robert J. Lempert. 2007: “Creating Constituencies for Radical Long-Term Change,” Research Brief – Number 2. John Brademas Center for the Study of Congress, New York University. [http://www.nyu.edu/brademas/pdf/Lempert\\_Formatted-\\_FINAL.pdf](http://www.nyu.edu/brademas/pdf/Lempert_Formatted-_FINAL.pdf)

Dixon, Lloyd, Robert J. Lempert, Tom LaTourrette, Robert T. Reville, 2007: The Federal Role in Terrorism Insurance: Evaluating Alternatives in an Uncertain World, RAND, MG-679-CTRMP

Robert J. Lempert and Myles T. Collins., 2007: “Managing the Risk of Uncertain Threshold Response: Comparison of Robust, Optimum, and Precautionary Approaches” Risk Analysis 27 (4), 1009–1026

Robert Lempert. 2007: “Can Scenarios Help Policymakers Be Both Bold and Careful?” in Blindside: How to Anticipate Forcing Events and Wild Cards in Global Politics Francis Fukuyama ed. Brookings Institution Press, Washington DC.

DO NOT USE FOR PROPOSALS

- Dixon L, R. Lempert, T. LaTourrette, R..T. Reville, and P. Steinberg. 2007: Tradeoffs among alternative government interventions in the market for terrorism insurance. RAND. DB-525, [http://www.rand.org/pubs/DOCUMENTED\\_briefings/DB525/](http://www.rand.org/pubs/DOCUMENTED_briefings/DB525/)
- David G. Groves and Robert J. Lempert, 2007: "A new analytic method for finding policy-relevant scenarios," Global Environmental Change 17, 73-85.
- Robert J. Lempert, David G. Groves, Steven W. Popper, Steve C. Bankes, 2006: "A General, Analytic Method for Generating Robust Strategies and Narrative Scenarios," Management Science, vol 52, no 4, April.
- Robert J. Lempert, Alan H. Sanstad, Michael E. Schlesinger, 2006: "Multiple Equilibria in a Stochastic Implementation of DICE with Abrupt Climate Change," Energy Economics 28 pp 677-689.
- Steven W. Popper, Robert J. Lempert, and Steven C. Bankes, 2005: "Shaping the Future," Scientific American, vol 292, no. 4 pp. 66-71, April.
- Robert J. Lempert and Steven W. Popper, 2005: "High-Performance Government in an Uncertain World," in High Performance Government: Structure, Leadership, and Incentives. Ed. Robert Klitgaard and Paul Light. Santa Monica: The RAND Corporation.
- Kateryna Fonkych and Robert Lempert, 2005: "Assessment of Environmental Kuznets Curves and Socioeconomic Drivers in IPCC's SRES Scenarios," Journal of Environment & Development, vol 14, no. 1, p. 27-27.
- Robert J. Lempert, Nebojsa Nakicenovic, Daniel Sarewitz, Michael Schlesinger, 2004: "Characterizing Climate-Change Uncertainties for Decision-makers," Climatic Change, 65, 1-9.
- Robert J. Lempert, 2003: "Assessing the Role of Voluntary Programs in Climate Change Policy," Proceedings of 2003 ACEEE Summer Study on Energy Efficiency in Industry, ACEEE.
- Robert J. Lempert, Steven W. Popper, Steven C. Bankes, 2003: Shaping the Next One Hundred Years: New Methods for Quantitative, Long-Term Policy Analysis, RAND MR-1626-RPC, Aug.
- Robert J. Lempert, Parry Norling, Christopher Pernin, Susan Resetar, Sergej Mahnovski, 2003: Next Generation Environmental Technologies: Benefits and Barriers, RAND/MR-1682
- Robert J. Lempert, 2002: Transition Paths to a New Era of Green Industry: Technological and Policy Implications, RAND P-8067.
- Robert J. Lempert, Steven W. Popper, Susan Resetar, Stuart Hart, 2002: Capital Cycles and the Timing of Climate Change Mitigation Policy, Pew Center on Global Climate Change, 60 pp.

DO NOT USE FOR PROPOSALS

- Robert J. Lempert, Steven W. Popper, Steven C. Bankes 2002: "Confronting Surprise," Social Science Computer Review, 20/4, 420-440.
- Robert J. Lempert, 2002: "A New Decision Sciences for Complex Systems, 2002: " Proceedings of the National Academy of Sciences, vol 99, suppl. 3, pp. 7309-7313, May 14.
- Robert J. Lempert, Michael E. Schlesinger, 2002: "Adaptive Strategies for Climate Change," Innovative Energy Strategies for CO2 Stabilization, Robert Watts, ed., Cambridge University Press, 468 pp.
- Caroline Wagner , Steven Popper, and Robert Lempert. 2002: "Moving Beyond Foresight", European Commission Foresight - Scenarios - Landscaping Workshop, Brussels, Belgium, July 2002.
- Robert J. Lempert and Michael E. Schlesinger, 2001: "Climate-Change Strategy Needs to be Robust," Nature, 412, 375.
- Robert J. Lempert, 2001: "Finding Transatlantic Common Ground on Climate Change?" The International Spectator, vol. XXXVI, no. 2, April – June.
- Charles Meade, Robert J. Lempert, Fred Timson, James Kadtke: Assessing the Benefits and Costs of a Science Submarine, RAND MR-1369.0-NSF, May 2001.
- Christopher Pernin, Mark Bernstein, Robert Lempert, Paul Dreyer, 2001: Developing an energy investment strategy for Anaheim, RAND/AB-563
- Steven C. Bankes, Robert J. Lempert, and Steven W. Popper, 2001: "Computer-Assisted Reasoning," Computing in Science and Engineering, vol 3, No. 2, pp 71-77 March/April.
- Robert J. Lempert, Michael E. Schlesinger, 2000: "Robust Strategies for Abating Climate Change," Climatic Change, 45 (3/4): 387-401.
- Robalino, David A. and Robert J. Lempert, 2000: "Carrots and Sticks for New Technology: Crafting Greenhouse Gas Reduction Policies for a Heterogeneous and Uncertain World," Integrated Assessment, 1, 1-19.
- Robert J. Lempert, Michael E. Schlesinger, Steven C. Bankes, and Natalia G. Andronova, 2000: "The Impact of Variability on Near-Term Climate-Change Policy Choices and the Value of Information," Climatic Change, 45(1), 129-161.
- Benjamin, Roger, Stephen Carroll, James Dewar, Robert Lempert, Sue Stockly 2000: Achieving the Texas Higher Education Vision, RAND, DRU-2305-CAE
- Bernstein, Mark, Scott Hassell, and Robert Lempert, May Cooler Temperatures Prevail: Let Technology Reduce Hot Air Over Global Warming, RAND Review, RAND, Winter 1999-2000.

DO NOT USE FOR PROPOSALS

- Bernstein, Mark, Robert Lempert, David Loughran, and David Ortiz, The Public Benefit of California's Investments in Energy Efficiency," RAND, MR-1212.0-CEC, March 2000.
- Bernstein, Mark, P. Bromley, J. Hagen, S. Hassell, R. Lempert, J. Munoz, D. Robalino, Developing Countries and Global Climate Change: Electric Power Options for Growth, Pew Center on Global Climate Change, June 1999.
- Resetar, Susan A., Beth E. Lachman, Robert J. Lempert, Monica M. Pinto, 1999: Technology Forces at Work: Profiles of Environmental Research and Development at Dupont, Intel, Monsanto, and Xerox, RAND, MR-1068-OSTP.
- Robalino, David A. and Robert J. Lempert, 1998: "Carbon Taxes or Technology Subsidies? An Exploratory Modeling, Agent-based Simulation Assessment of Climate Change Policy," Proceedings of the Conference on Economics with Heterogeneous Interacting Agents, Ancora-Italy, May 29-30.
- George Park and Robert Lempert, The Class of 2014: Preserving Access to California Higher Education, RAND MR-971-CERT, 1998.
- Robert Lempert and Jim Bonomo, New Methods for Robust Science and Technology Planning, RAND DB-238-DARPA, 1998.
- Lempert, R. J., and M. E. Schlesinger, 1997: With the Right Incentives, We'll Kick Our Carbon Habit, Los Angeles Times, December 1.
- Robert J. Lempert, Michael E. Schlesinger, and Steve Bankes, "When We Don't Know the Costs or the Benefits: Adaptive Strategies for Abating Climate Change", 33, 235-274, Climatic Change, 1996.
- "Adaptive Strategies for Abating Climate Change: An Example of Policy Analysis for Complex Adaptive Systems", Steve Bankes and Robert J. Lempert, to appear in *Evolutionary Programming V: Proceedings of the Fifth Annual Conference on Evolutionary Programming*, MIT Press.
- Lempert, R. J., and M. E. Schlesinger, 1995: A Global Warming Middle Ground, Los Angeles Times, November 16.
- Robert J. Lempert, Beth E. Lachman, Susan Fuhs, and N. Darius Sankey, Performance Measures for the Federal Investment in Environmental and Natural Resources Research and Development, RAND DRU-1179-CTI, August 1995.
- Frey, H. C., Robert J. Lempert, Gwen Farnsworth, David C. Acheson, Paul S. Fischbeck, and Edward S. Rubin, 1995: A Method for Federal Energy Research Planning: Integrated Consideration of Technologies, Markets, and Uncertainties, The Atlantic Council, April.

DO NOT USE FOR PROPOSALS

- Lachman, Beth E., Robert J. Lempert, Susan A. Resetar, and Thomas Anderson, *Technology for a Sustainable Future — Ideas: A Summary of Workshop Discussions*. Santa Monica, CA: RAND Corporation, 1995. <https://www.rand.org/pubs/reprints/RP417.html>.
- Lempert, R. J., M.E. Schlesinger, J. K. Hammitt, "The Impact of Potential Abrupt Climate Changes on Near-Term Policy Choices," *Climatic Change*, 26: 351-376, 1994. Also published as: "The Impact of Potential Abrupt Climate Changes on Near-Term Policy Choices," R. J. Lempert, M. E. Schlesinger and J. K. Hammitt. In *Integrative Assessment of Mitigation, Impacts, and Adaptation to Climate Change*, N. Nakicenovic, W. D. Nordhaus, R. Richels and F. L. Toth (Eds.), International Institute for Applied Systems, Analysis, pp. 173-204, 1994.
- "The Mediterranean Environment: The Prospects for Cooperation to Solve the Problems of the 1990s," Robert Lempert and Gwen Farnsworth, *Mediterranean Quarterly*, Vol 5, No. 4, Fall 1994.
- The Decline of the U.S. Machine Tool Industry and Prospects for its Sustainable Recovery, David Finegold, Keith W. Brendley, Robert Lempert, Donald Henry, and Peter Cannon, Brent Boultinghouse, Max Nelson, Vol. 1, RAND, MR-479/1-OSTP, 1994.
- The Transition to Sustainable Waste Management: A Simulation Gaming Approach, Robert J. Lempert and William Schwabe, RAND MR-183-EAC, 1993.
- Report of a Workshop on Expanding U.S. Air Force Noncombat Mission Capabilities, Carl Builder, Robert Lempert, Kevin Lewis, Eric Larson, and Milton Weiner, RAND MR-246-AF, 1993.
- "A Sequential-Decision Strategy for Abating Climate Change, " Hammitt, J.K., R. J. Lempert, M.E. Schlesinger, *Nature*, **357**, 315-318 (1992).
- "Sequential Policies for Abating Global Climate Change," Hammitt, J.K. and R. J. Lempert, *Global Climate Change and Energy Policy*, W. Rosen and R. Glasser, eds. (American Institute of Physics, New York, 1992).
- Air Force Non-Combat Operations: Lessons from the Past, Thoughts for the Future. R. Lempert, D. Lewis, B. Wolf, and R. Bitzinger, RAND N-3519-AF (1992).
- U.S. Space-Based Remote Sensing: Challenges and Prospects, Dana J. Johnson, Max Nelson, Robert Lempert, RAND N-3589-AF/A/OSD, 1992.
- Emerging Technology Systems and Arms Control, R. Lempert, I. Chang, K. McCallum, RAND Report R-4029-USDP (1991).
- Cruise Missile Arms Control, R. Lempert, RAND Report, R-3792-FF/RC, (1989).

DO NOT USE FOR PROPOSALS

"A Monte Carlo Exchange Model for Ballistic Missile Defense Effectiveness," Edward Harshberger and Robert Lempert, Proceedings of the 1987 Summer Computer Simulations Conference, (Society for Computer Simulation, San Diego, 1987), p. 879.

"Molecular Coherent-potential Approximation for Zincblende Pseudobinary Alloys," R. J. Lempert, K. C. Hass, H. Ehrenreich, Physical Review B, 1987.

"Electronic Structure and Magnetic Interactions in Diluted Magnetic Semiconductors," H. Ehrenreich, K. C. Hass, N. F. Johnson, B.E. Larson, R. J. Lempert, Proceedings of 18th International Conference on the Physics of Semiconductors, Stockholm, Sweden, August 1986.

New Electric Power Technologies: Problems and Prospects for the 1990's, Peter Blair et. al., Washington, D.C.: U.S. Congress, Office of Technology Assessment, July 1985.

"The Effects of Chemical and Structural Disorder in Pseudobinary Semiconductor Alloys," K. C. Hass, R. J. Lempert, H. Ehrenreich, Physical Review Letters, **52**, 77 (1984).