**Selected Publications**

*Research keywords: Climate variability and change, extremes, adaptation, climate services, risk management, impacts assessment*

Pulwarty, R. Easterling, D, J. Adkins 2016: Financial services for climate risk management in the US. In Cutter S and A. Graubard (eds) Oxford Research Encyclopedia, Natural Hazard Science Oxford University Press (in review)

Lazrus, H, Gough, R., Maldonaldo, J., Pulwarty, R., Shea, E., and Souza, K, 2015: Rising Voices: The move to more fully engage Indigenous perspectives in climate science and policy. *Nature Climate Change* (in review)

Wiener, J, R. Pulwarty, D. Ware, 2015: Bark without bite: The socio-economic context of the 1950s drought. *Weather and Climate Extremes* (accepted-forthcoming)

Wood, E. Schubert, S. Wood, A, Peters-Lidard, C., Mo, K., Mariotti, A and R. S. Pulwarty, 2015: Prospects for advancing drought understanding, monitoring, and prediction. *J. Hydrometeor*, **16**, 1636–1657

Joyette, A, L. Nurse, R. Pulwarty 2015: Disaster risk insurance and catastrophe models in risk-prone Caribbean islands: The Caribbean experience. *Disasters* 39, 3, 467–492

Pulwarty, R. Maia, R. 2015: Adaptation challenges in complex rivers around the world: The Guadiana and the Colorado Basins. *Water Resources Management* **29**, 273-293

Ralph, F.M., Dettinger, M.D., White, A., Reynolds, D., Cayan, D., Schneider, T., Cifelli, R., Redmond, K., Anderson, M., Gehrke, F., Jones, J., Mahoney, K., Johnson, L., Gutman, S., Chandrasekar, V., Lundquist, J., Molotch, N., Brekke, L., Pulwarty, R., Horel, J., Schick, L., Edman, A., Mote, P., Abatzaglou, J., Pierce, R., Wick, G., 2014, A vision of future observations for western US extreme precipitation and flooding: *Journal of Contemporary Water Resources Research and Education*, **153,** 16-32.

Pulwarty, R., M. Sivakumar, 2014: Information systems in a changing climate: Early warnings and drought risk management. *Weather and Climate Extremes* **3**, 14-21

Wilhite, D. M. Sivakumar, R. Pulwarty, 2014: Managing drought risk in a changing climate: The role of National Drought Policy. *Weather and Climate Extremes* **3**, 4-13

Vaughan, L. J. Furlow, W. Higgins, C. Nierenberg, R. Pulwarty, 2014

[US Investments in International Climate Research and Applications: reflections on contributions to interdisciplinary climate science and services, development, and adaptation](http://www.earth-perspectives.com/content/1/1/23)Earth Perspectives 2014, **1**:23

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Mimura, N., Pulwarty R., Duc, D., Elshinnawy, I.. Redsteer, M., Huang, H., Nkem , J., Sanchez-Rodriguez, R., 2014: Adaptation Planning and Implementation. In: Climate Change 2014: IPCC Working Group II Impacts, Adaptation and Vulnerability. Working Group II contribution to the IPPC Fifth Assessment Report . Cambridge University Press

Birkmann, J. S. Cutter, ….R. Pulwarty, 2013: Scenarios for vulnerability: Opportunity and constraints in the context of climate change and disaster risk management. Climatic Change **121**, 1-16 doi:10.1007/s10584-013-0913-2, online first

Sivakumar, M. D. Wilhite, R. Pulwarty, R. Stefanski, 2013: The High-Level Ministerial Meeting and Declaration on National Drought Policy (HMNDP). *Bull. Amer. Meteor. Soc*. (electronic publication)

Moss, R, …Pulwarty, R. Behar, D. (and 15 authors) 2013: Come hell and high water: The Need for Practice-Relevant Climate Adaptation Science *Science* **432**, 696-698

Pozzi, W…..Pulwarty, R…(co-authors), 2013: Towards Global Drought Early Warning Capability: Expanding international cooperation for the development of a framework for global drought monitoring and forecasting *Bulletin of the American Meteorological Society* **94**, 776-785

Mariotti,, A, Schubert,S., Pulwarty, R, Huang, J., Barrie, D, 2013: Advancing drought understanding, monitoring and prediction. *Bull. American. Met. Soc*. **94**, 186-188

Pulwarty, R., and J. Verdin, 2013: Crafting early warning systems. in Birkmann (eds)

*Measuring Vulnerability to Natural Hazards: Towards Disaster Resilient*

*Societies* United Nations University Press Tokyo

Cardona, O. van Aalst, Birkmann , J, Fordham, M., McGregor, G., Perez , R Pulwarty, R., Schipper, L., Bach Tan Sinh, 2012: Determinants of Risk: Exposure and Vulnerability. Chapter 2 In IPCC Managing the Risks of Extremes and Disaster to Advance Climate Change Adaptation. Cambridge Press

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Supratid, S., Ziervogel, G., 2012: Managing the Risks from Climate Extremes at the Local Level. Chapter 5 in IPCC Special Report on Managing the Risks of Extremes and Disaster to Advance Climate Change Adaptation. Cambridge Press pp. 291-338

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Martinez, R. Hemming, D., Pulwarty, R., and others, 2012 Improving climate risk management at local levels – techniques, case studies, good practices and guidelines for World Meteorological Organization Members. InTech Electronic Books

Nakashima, D. et al 2012. Weathering Uncertainty: Traditional Knowledge for Climate Change Assessment and Adaptation. Paris, UNESCO, and Darwin, UNU, 120 pp.

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forecasts, for agricultural decisions. In Stigter K., 2007 (ed): Guide to Agrometeorological Practices. Commission for Agricultural and Meteorological Practices Geneva 40pp. <http://www.wmo.ch/web/wcp/agm/RevGAMP/>

Pielke, R., Carbone,…..Pulwarty, R., and Coauthors, 1997: Societal aspects of weather: Report of the Sixth Prospectus Development Team of the U.S. Weather Research Program to NOAA and NSF. *Bull. Amer. Meteor. Soc*., **78**, 867–876.

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*Atmospheric Physics* **16***, 217-237*

Meehl, G. A., T. Karl, D. R. Easterling, S. Changnon, R. Pielke, Jr., D. Changnon, J.

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Gilbes, F., J., Velez-Arocho Caribbean Countries Needs: Inter-American Institute for Global Change Research. Center for Hemispherical Cooperation and Education in Engineering and Applied Science University of Puerto Rico, Mayaguez pp. 117-130

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Books

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Diaz, H., Pulwarty, R. (Eds), 1997: Hurricanes: Climate and Socio-economic impacts

Springer-Verlag Pub. Heidelberg 307 pp. *Re-released in paperback 2012*

Selected (Representative) Reports:

Pulwarty, R. et al, 2015: The National Integrated Drought Information System: Structure

Approaches and Accomplishments 2007-2014. US House Science and Technology

Committee Report (forthcoming)

Huang, J Svoboda, M, Wood, A, Schubert, S, Peters-Lidard, C, Wood, E, Pulwarty, R, Mariotti,

A, Barrie, D, 2015: Research to advance national drought monitoring and prediction capabilities. NOAA Interagency Drought task Force. NOAA/Modeling Analysis Predictions and Projections. 29pp.

UNESCO, 2012, Weathering Uncertainty: Traditional Knowledge for Climate Change

Assessment and Adaptation. International Panel of Experts for the Indigenous Peoples, Marginalized Populations and Climate ISBN 978-92-3-001068-3 120pp.

Center for Disease Control and Prevention, 2011: When Every Drop Counts-protecting

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U.S. Department of Health and Human Services Atlanta 56pp

Pulwarty, R, 2011: Drought information systems: Improving national and international

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Policy. WMO Geneva Publication AGM 12 WAOB 2011 133 pp

IPCC-USGCRP, 2009: Enhancing U.S. Research Contributions to Working Group II of

the IPCC 5th Assessment. Washington DC 20pp

NIDIS 2011: Drought Preparedness for Tribes in the Four Corners Region 42pp.

http://www.drought.gov/workshops/tribal

NIDIS, 2010: *Climate Change, Drought and Early Warning on Western Native Lands*

 *Workshop Report 9‐11* *June, 2009* (Jackson Lodge, Grand Teton National Park,

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Pulwarty, R and N. Hutchinson, 2009: Vulnerability and Capacity Assessment: A

Guidance Manual for Conducting and Mainstreaming Vulnerability and Capacity

Assessments in the Caribbean. Caribbean Community Climate Centre and CARICOM 60 pp. [www.caribbeanclimate.bz](http://www.caribbeanclimate.bz)

Brekke, L., Kiang, J, Olsen, R., Pulwarty, R., Raff, D., Webb, R. and White, K. 2009.

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Pielke, R.,Pulwarty, R., 2003: Social Science in NOAA. Report to the NOAA

Science Advisory Board. 30pp. plus Appendices

Pulwarty, R., 2002: Climate Change in the Caribbean: Water, Agriculture, Forestry

Caribbean Planning for Adaptation to Climate Change Project. Organization of

American States and World Bank 35 pp.

Pulwarty, R., 2002: Fisheries and adaptive management in varying environments: Where

are the successes and failures? NSF Inter-American Institute Collaborative Research Network Reports 30 pp.

**Keynotes, Public Lectures, Invited Presentations, Co-convened conferences and workshops**

Invited Presentations include Keynotes and Featured Lectures to international, national, regional and private sector audiences on climatic extremes, variability and change, climate services, food and water security, adaptation, impacts, anduse of scientific information in water resources, insurance, agriculture, and ecosystem management. Interagency presentations are not included. **Convened numerous scientific and collaborative forums and workshops, on climate early warning, disaster risk management, climate services, and adaptation with International, Federal, State, Tribal and private sector partners.**

Recent invited lectures and presentation: Selected Examples (excludes professional interagency presentations and addresses)

*“Drivers of drought”* The Governor of Nevada Drought Forum. 21-23 September 2015 Carson City NV

*“California Drought and the role of ENSO”* Southern California Water Workshop: Protecting our Future.27 August, 2015 Pomona CA

*“The role of professional Scientific Societies in fostering Climate Service”* International Union of Geodesy and Geophysics June 2015

*“Life-cycles of Drought: Science, preparedness and Adaptation*. International Union of Geodesy and Geophysics June 2015

*“Climate and adaptation in complex river basins.* American Water Resources Association New Orleans June 2015

*“GEO: An Americas perspective”.* World Congress on Disaster Risk Reduction Sendai, Japan March, 2015

*“Drought response in the West”* American Association of Environmental Engineers U.S. Press Club Washington DC. February 2015

*“Practice-relevant adaptation science across climate timescales”* American Meteorological Society 5-9 January, 2015 Phoenix AZ

*“Research needs in the Lifecycles of drought”* American Geophysical Union address: 14-19 December, 2015 San Francisco CA

*“Drought in California: Monitoring and Forecasting”* Western Governors Drought Forum 8-9 December 2014 Las Vegas NV

*Keynote address “Climate, water resources and drought in the Western* U.S. 12-14 November, 2014 Engineering News Record Annual Meeting Huntington Beach CA

*“Building Drought Resilience.* World Bank Washington DC 5-6 November, 2014“Building a post 2015 sustainable development agenda for the Americas Organization of American States Washington DC 22-23 October, 2014

*Invited Speaker “Crafting science entrepreneurship to better manage emerging global risks”*

VII Americas Competitiveness Forum. Port of Spain, Trinidad and Tobago 8-10 October, 2014

*Keynote “Climate Services in the United States” UN* World Meteorological Organization Global Framework for Climate Services Geneva Switzerland 7-10 September 2014

*Invited Keynote address “Climate extremes, risk, and adaptation practice”* Chinese Academy of Sciences Beijing China 8-11 September 2014

*“Recent advances in forecasting hazards: climate, drought and early warning”* (invited) Understanding Risk Forum July 1-3 London, UK.

*“Climate risk management and climate services”* WMO Technical Commission Conference: Climate Services: the Legacy of the Climate Prediction and Services Program. UN WMO Heidelberg, June 30-July 3

*“Climate, risk and services”* Keynote at World Climate Research Program-Latin American and the Caribbean Developing, linking and applying climate information. 18-20 March, 2014 Montevideo, Uruguay

*“Developing National Integrated Drought Information Systems: Lessons for Turkey”*

Ankara USAID 4-5 March, 2014

*“Informing climate adaptation decisions: Are we doing and not learning?* Workshop on US-UK collaboration on climate science to support adaptation. Georgia Tech 2014

*“NIDIS: An Update and an Outlook”* American Meteorological Society February 2014 Atlanta GA

*“Global Risks and National Water Security”* American Geophysical Union December 2013 San Francisco

*“Climate change and drought risk management in Mediterranean watersheds”* American Geophysical Union December 2013 San Francisco

*“Climate impacts and Adaptation in the Caribbean-Assessing and using the adaptation assessment models”* UN Development Program and Global Environmental Facility Training workshop for Community-based adaptation 2013 Trinidad

*“ Climate Observations in support of Adaptation”* Global Climate Observing Systems 2013 Offenbach, Germany

 *“Aridity, Drought and their Consequences”* and *“Megadroughts”* National Council for Science and the Environment. 2013 Washington DC

*“Climate, Fisheries and Food Security”* Center for Strategic International Studies. 2013 Washington DC

***Training activities***

*2003- present: Assessing Vulnerability to Climate Change in the Caribbean.* Natural Resources Graduate Program*.* University of the West Indies, Barbados

*Graduate-level courses taught* Natural Resources Management, Environmental Change, Meteorology, Climate and Vegetation, Conservation Thought and Practice University of Colorado, Boulder

*Training courses on Climate Risk Management at:* USAID, Inter-American Institute for Global Change Research, Global Environment Facility, The Nature Conservancy, Caribbean Economic Community (15 countries)

UN Development Program and Global Environmental Facility Training workshop for Community-based adaptation March, 2013