



Muddy flood waters of Boulder Creek in Boulder, Colorado, during the rain and flooding event of September 2013.

## OGMIUS EXCHANGE

In September 2013, the Front Range of Colorado experienced record or near-record precipitation that claimed 9 lives, destroyed or seriously damaged thousands of homes and resulted in billions of dollars of damage. In the aftermath of the floods the Western Water Assessment at the University of Colorado convened a panel of local experts ([https://cirescolorado.adobeconnect.com/\\_a1166535166/p751cdslj7x](https://cirescolorado.adobeconnect.com/_a1166535166/p751cdslj7x)) to discuss its preliminary assessment of the event (<http://wwa.colorado.edu/resources/front-range-floods/assessment.pdf>) and answer questions. In this issue of Ogmius we present further thoughts about the floods from two of the panelists, Nolan Doesken and Klaus Wolter. Nolan and Klaus raise important policy questions about the floods.

Nolan Doesken is the State Climatologist for Colorado and has been with the Colorado Climate Center at Colorado State University

since 1977. The Colorado Climate Center is responsible for monitoring the climate of Colorado. Following the Fort Collins and Pawnee Creek floods of July 1997, Nolan initiated a volunteer program engaging citizens in helping track local variations in precipitation (<http://www.cocorahs.org>).

Klaus Wolter is a Research Associate at the Cooperative Institute for Research in Environmental Sciences, University of Colorado Boulder, within the NOAA Earth System Research Laboratory - Physical Sciences Division. His main interests are empirical climate research, in particular the application of statistical methods to climate problems, such as the impact of ENSO on world-wide climate. Through his work with the Western Water Assessment and National Integrated Drought Information System he has developed statistical tools that allow him to make seasonal climate predictions.

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<http://sciencepolicy.colorado.edu/ogmius>

# CLIMATE, FLOODS AND PUBLIC POLICY: What did we learn from the September 2013 Colorado floods? by Nolan Doesken

There's nothing like heavy rain and flooding to stir up questions, especially when those floods go through urbanized areas and regions of gas and oil extraction. The rains of mid-September in Colorado, by coincidence, maximized directly over the city of Boulder, but affected nearly all the major population centers and many of the rivers of the Colorado Front Range. In a matter of a few days, Boulder went from being on track for another dry year to setting the record for all-time wettest water year (Oct-Sep) with 33.35", the wettest month on record with 18.17", and nearly doubled the old record for greatest rain in one day with 9.08" for the 24 hours ending at 5 PM September 12. Just south of Colorado Springs, an electronic rain gauge detected nearly 12" of rain in 24 hours which, if confirmed, sets a new statewide one-day rainfall record surpassing a record set back during the great floods of June 1965.

Media stories described this as a 1,000-year storm. But some in Boulder called it only a 25 or 50-year flood on Boulder Creek. Both claims were technically correct -- yet residential neighborhoods not normally considered in "flood plains" experienced extreme flooding. The terminology of "xx-year" storms always resonates with the media and the public but was only intended as a guide for planners, policy makers and engineers. Unintentionally, as useful as it may seem to be, it breeds exaggeration and misunderstanding. Regardless of nomenclature, it soon was apparent that if it rains hard enough, long enough, that any location can be a flood plain -- at least for a time.

Extreme events always stir up policy questions. Are our flood plain definitions and requirements too stringent or too lax? Are we overdesigning (and overspending) or underdesigning (and underspending) on dams and spillways and storm water collection and conveyance? Should property owners be allowed to rebuild in the most vulnerable canyons and flood plains? Should rivers be returned to their original channels and land owners returned to their original properties, or should we let nature establish and claim new territories? These are policy questions, not climate questions. But climate data are useful in addressing them.



2013 Boulder Creek flood aftermath. Photo: David Oonk/CIRES.

Unlike so many major floods from Colorado's past, this recent event was remarkably well documented. With the help of hundreds of well-positioned automated rain gauges and well over 1,000 volunteer manual rainfall reports, the rains that caused this flood are known. Documenting streamflow has been tougher since several rivers washed out historic stream gauges and carved new channels. Yet, with the help of many observations of flow rates and high water marks and countless photographs, quality estimates of flood flows will be determined. We can put firm numbers on what hit us, and we can take stock of how much or how little we were impacted. That information does not dictate policy, but it should at least inform policy and we should take advantage of it. And while we still speculate as to whether floods like this will become more common as climate change provides a warmer environment for future storms, we have been keenly reminded that in the face of current policies, some of us remain vulnerable to the impacts from heavy rains and floods. We can also feel good, though, as no major dams or emergency spillways failed or came close to failure.



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# THOUGHTS ABOUT THE SEPTEMBER FLOODS IN COLORADO'S FRONT RANGE

## by Klaus Wolter

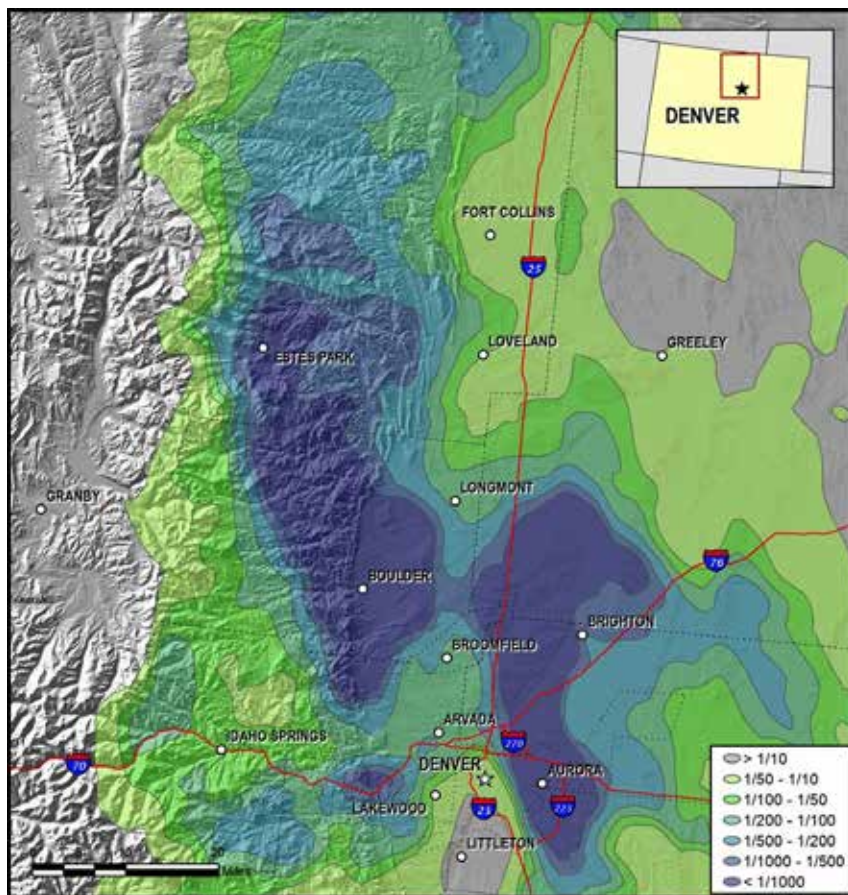
Extreme events can change our paradigms, and this one may be no exception. Personally, I had thought that by moving ABOVE the lower foothills with higher-frequency wildfires/mudslides/floods, I would have addressed this problem many years ago. Alas, I did not anticipate that our road network could be taken out as thoroughly as it did. But enough about me, here are some thoughts and questions (rather than answers), and these are not on behalf of the organizations I am affiliated with (NOAA/CU):

### 1. What is the relationship between rainfall and flooding?

Immediately after the flood, a NOAA press release ([http://www.nws.noaa.gov/oh/hdsc/aep\\_storm\\_analysis/8\\_Colorado\\_2013.pdf](http://www.nws.noaa.gov/oh/hdsc/aep_storm_analysis/8_Colorado_2013.pdf)) referred to this as a 1000-year rainfall event, based on NOAA-Atlas 14 (<http://hdsc.nws.noaa.gov/hdsc/pfds>). In our WWA flood briefing (<http://wwa.colorado.edu/resources/front-range-floods/assessment.pdf>), we pointed out that there are large error bars associated with such estimates on a regional scale. On the other hand, Boulder proper apparently “only” experienced a 25-to-50-year flood, according to Gilbert White’s famous marker along Boulder Creek. It would be worthwhile to figure out to what extent this discrepancy is due to a difference in methodology between NOAA (rainfall distribution fits) and USGS (flooding assessments), since the media (and general public) tend to conflate rainfall and flooding extremes. Since there have been at least five 10”+ rainfall events along the Front Range in the last five decades (Denver 1965, Jamestown 1969, Big Thompson 1976, Fort Collins 1997, and Boulder 2013), NOAA-Atlas 14 may need a revision in this region. And this is without even bringing in the specter of climate change that may alter future rainfall probabilities towards the more extreme end.

### 2. How important were recent wildfires in exacerbating flooding impacts?

It is noteworthy that one of the flood victims (Joseph Howlett, Jamestown) was killed by a rock slide that originated from a fire scar above town that dates back to an October 2003 wildfire (almost 10 years before



Annual exceedance probabilities for the worst case 7-day rainfall. Credit: NOAA's National Weather Service, Hydrometeorological Design Studies Center.

the flood). Other slides were common right across the hillsides of Boulder County, including the Four Mile burn area from a much more recent fire (September 2010). While it is possible that most of the landslides would have happened in the absence of fire scars, it would be a useful exercise to match such fire scars with landslides to see how much of an increased risk there really was, with and without mitigation efforts.

### 3. Did flood control measures in Boulder and elsewhere work?

Before congratulating ourselves in Boulder on the relatively mild flooding impacts (<http://www.csmonitor.com/USA/2013/0925/After-Colorado-floods-state-will-rebuild-but-should-it-redo>), a detailed rainfall analysis might reveal that there was a dramatic dropoff in rainfall in the upper reaches of Boulder Creek – while Boulder received more than 17” during that fateful week in



*Big Thompson State Highway 34. Photo: Grace Hood / KUNC.*

September, Nederland did not even get half as much. Just 10-20 miles to the north, communities from Jamestown to Allenspark recorded around 15" at similar elevations, so Boulder Creek could have been hit much harder (as was the case along the St. Vrain or Big Thompson rivers). Having a flooding event in September is also well-timed, since most reservoirs are typically near their annual low point, especially after a dry summer on the eastern plains that increased irrigation demand. To the delight of Front Range water managers, Barker and Gross reservoirs were among many reservoirs that ended up getting completely filled at a very unusual time of year, holding back critical runoff that might have made the flooding situation much worse. Getting back to the original question, it is important to know which mitigation measures implemented over recent decades in Boulder did their job, and which ones did not. In that context, I would not be surprised if the 100-year flood plain maps may also need to be revisited.

#### **4. What can we learn from this flood that will reduce the impact of the next one?**

While it may be tempting for affected parties to try to rebuild everything the way it was, it would be worthwhile to assess the current damages in the context of the 1969 and 1976 floods in particular, since the 2013 flood encompassed them both. Governor Hickenlooper admitted to this (<http://www.reporterherald.com/news/>

**A detailed rainfall analysis might reveal that there was a dramatic dropoff in rainfall in the upper reaches of Boulder Creek – while Boulder received more than 17" during that fateful week in September, Nederland did not even get half as much.**

[colorado-flood/ci\\_24234576/governor-makes-flood-visit-loveland](#)) in the context of rebuilding the Big Thompson State Highway 34. After the 1976 flood, homes with more than 50% flood damage were apparently not allowed to be rebuilt, to the dismay of affected homeowners, since that might have been without precedent in Colorado. After the 2013 flood, it would be interesting to assess how many 'virtual' homes and lives were spared this time around because the state of Colorado had learned a lesson.



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## RESEARCH HIGHLIGHT

# FIRE AND FLOOD: UNDERSTANDING HOW PEOPLE, GOVERNMENTS, AND SPECIFIC COMMUNITIES RESPOND TO EXTREME EVENTS

by Deserai Anderson Crow

This issue of Ogmios features a Research Highlight describing two new projects led by CSTPR's Deserai Anderson Crow that will attempt to answer some of the policy questions raised by recent extreme events in Colorado. Deserai is an Assistant Professor in the Environmental Studies program at the University of Colorado Boulder, Associate Director of the Center for Environmental Journalism and a faculty member of the Center for Science & Technology Policy Research. Deserai joined the faculty of the School of Journalism and Mass Communication in 2008 and moved to the Environmental Studies Program in 2012. She earned her Ph.D. from Duke University's Nicholas School of the Environment and Earth Sciences and a Masters of Public Administration from the University of Colorado at Denver's School of Public Affairs. After earning her B.S. in Journalism from the University of Colorado at Boulder, she worked as a broadcast reporter, anchor, and producer in Nebraska, West Virginia, California, Colorado Springs, and Denver.



Her research interests include environmental policy and the role that mass media and other factors play in policy decisions. She is particularly interested in environmental issues in the western United States. Her current research includes studies on environmental reporting trends, communication in environmental policymaking, and stakeholder use of environmental messaging strategies. Her previous research focuses on the adoption of non-consumptive recreational water rights by Colorado communities and the factors that influenced policy change within these communities, including mass media, policy entrepreneurs, stakeholder group involvement, and citizen engagement.

Natural disasters get a lot more attention than many environmental policy decision contexts. In the West it's often wildfires that draw attention, but this fall along Colorado's Front Range we also experienced extreme flooding. These cases provide ample learning opportunities for researchers interested in understanding how people, governments, and specific communities respond to extreme events, both from a personal behavior standpoint as well as a broader policy response perspective.



*A neighborhood watches the Boulder wildfires on Jan. 7, 2009.  
Photo: Jim Rettew.*

In 2012, I began a project with a group of graduate students from Environmental Studies and Geography that analyzes homeowner understanding of their wildfire risk, but more importantly what they decide to do in response to that information. Using a series of case studies of catastrophic wildfires in the Wildland Urban Interface zone, we hope to determine how much information homeowners have, how they get that information, and

then what mitigation efforts they undertake as a result. Using data from interviews with fire managers, focus groups with homeowners, management plan analysis, and media analysis, this research investigates the connections between information, values, local management regimes,

## RESEARCH HIGHLIGHT

and homeowner decisions regarding property mitigation in the face of wildfire risk. These findings will provide insight into how fire managers can create policies that promote homeowner mitigation efforts in high risk zones.

This fall, after watching our own communities inundated with floodwaters, Elizabeth Albright (Duke University) and I developed a research project that has been funded by the Natural Hazards Center at CU. Understanding the factors that encourage policy learning and adaptation in local policy contexts may prove critical, since this can mean the difference between ongoing flood vulnerability as a consequence of extreme weather events rather than long-term resilience. Determining the factors that increase the likelihood of policy change that may result in more adaptive local flood management will produce policy-relevant knowledge that may encourage long-term local-level adaptability and resilience to extreme climatic events. Our study investigates these issues in a cross-case investigation of communities affected by the September 2013 floods in Colorado, and the community-level decisions made in response to those floods. Using seven case communities located in the three hardest-hit counties in Colorado, the case studies draw on data from interviews, document analysis, public meetings, and media coverage to understand the processes through which communities are attempting to respond to the 2013 floods.

Our goal for both of these projects is to understand critically important policy processes and decisions in the context of natural disasters, which is important to scholarship. We also



Cleanup in Boulder, Colorado after the 2013 flood.  
Photo: Bruce Raup/CIRES.

hope that both projects will contribute to the knowledge base for local and county governments that are faced with difficult and critical decisions to protect their communities in the moments during and after a disaster, but that also may at times decide to create adaptive policies to encourage more long-term resilience within their communities. It is these instances that we hope can provide lessons for decision makers and community managers.

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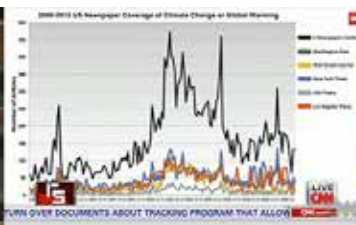
## CENTER NEWS



Roger Pielke Testifies before U.S. House Committee on Science, Space and Technology, Subcommittee on Environment

On December 11 Roger Pielke, Jr., testified before the U.S. House Committee on Science, Space and Technology, Subcommittee on Environment, about "A Factual Look at the Relationship Between Climate and Weather".

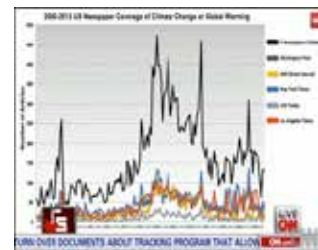
His testimony can be viewed here: <http://science.house.gov/>



hearing/subcommittee-environment-hearing-factual-look-relationship-between-climate-and-weather.

Max Boykoff Figure Used By CNN

Max Boykoff's figure on US Media Coverage of Climate Change/Global Warming was used in a recent CNN news segment: Media's global warming fail featuring Philippe Cousteau and Andrew Revkin (<http://youtu.be/ZSZG1Dnallc>).





# CENTER NEWS

## Max Boykoff Helps the New York Times Assess Its Climate Change Coverage

Max Boykoff weighed in on recent changes that The New York Times made to its climate change coverage. Max, who tracks media coverage of climate change, found that The Times' print edition published a third fewer articles in which climate change featured prominently this year compared to last year. However, the amount of news coverage often corresponds to particular events or controversies. Read more: <http://www.nytimes.com/2013/11/24/public-editor/after-changes-how-green-is-the-times.html>.



## Roger Pielke Launches New Research Program on the Science, Technology, Policy and Politics of Sport

Science, Technology, Policy and Politics of Sport, STePPS (<http://sciencepolicy.colorado.edu/steps>) is a new project of the CIRES Center for Science and Technology Policy

Research. It is focused on the governance of sport, with a special emphasis on the roles of science and technology in how sport is governed. STePPS will focus on original research, university education and outreach to the broader community. We have partnered with the emerging undergraduate certificate program in Critical Sports Studies (<http://www.colorado.edu/ethnicstudies/undergrad/css.html>) in the Department of Ethnic Studies. Roger will also be teaching a new course in the spring semester, ETHN 3104: The Governance of Sport ([http://sciencepolicy.colorado.edu/students/ethn\\_3104](http://sciencepolicy.colorado.edu/students/ethn_3104)). The goal of this course is to introduce students to issues of governance in various societal settings as viewed through the lens of sport. Students should emerge from this class with tools of critical thinking and analysis, along with greater substantive knowledge of various interesting and important cases in the governance of sport. If you are interested in learning more about STePPS, please contact Roger Pielke, Jr., [pielke@colorado.edu](mailto:pielke@colorado.edu).



# GRADUATE STUDENT NEWS

## Meaghan Daly and Lisa Dilling Receive New USAID Grant

CSTPR graduate student Meaghan Daly and Lisa Dilling have received a new grant titled "Identifying Constraints to and Opportunities for Co-production of Climate Information for Improved Food Security". The grant, funded by U.S. Agency for International Development, seeks to reduce impacts of climate variability and change on food security by systematically identifying opportunities for and constraints to the use of climate forecasts for improved adaptation planning. Read more: <http://cires.colorado.edu/blogs/prometheus/2013/11/19/lisa-dilling-receives-new-grant-on-climate-information-for-improved-food-security>.



## Shawn Olson and Max Boykoff Paper Referenced In Guardian Article

A paper by recent CSTPR grad Shawn Olson and Max Boykoff was referenced in a Guardian article titled "Climate contrarians are more celebrity than scientist: A new study identifies climate contrarians as a keystone species in the denial ecosystem," by John Abraham. Abraham writes, "Dr.

Maxwell Boykoff and Shawn Olson trace the history of climate contrarians back to the 1980s and discuss their potential motivations and strategies. The study identifies these contrarians as a "keystone species;" climate

contrarians are more influential than their scant numbers and limited expertise would suggest, and exert an outsized media impact. Read more: <http://www.theguardian.com/environment/climate-consensus-97-per-cent/2013/nov/08/climate-change-denial-celebrity-not-science>.



## Jessica Weinkle Awarded Ph.D.

CSTPR's Jessica Weinkle was awarded a Ph.D. in Environmental Studies in December. Her research focused on the insurability of the hurricane risk with particular attention given to the use of science by different interests. Jessica studies the science and politics of insurance with special attention given to public insurance programs used to manage catastrophic risk. Her work considers the role of science and catastrophe

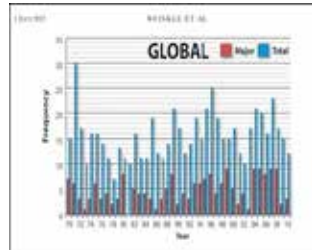


# GRADUATE STUDENT NEWS

modeling in meeting public goals of risk insurability and affordability. Jessica works in partnership with the catastrophic insurance company and Lloyd's syndicate, ICAT.

## Jessica Weinkle, Ryan Maue and Roger Pielke, Jr. Paper Referenced In Washington Post

A paper by recent CSTR grad Jessica Weinkle, along with Ryan Maue and Roger Pielke, Jr., was referenced in a Washington Post article "Everything you need to know about 'super typhoons'" by



Brad Plumer. Plumer writes, "Last year, three researchers at the University of Colorado and the Naval Research Laboratory did their best to reconstruct a worldwide database for hurricanes or typhoons that made landfalls between 1970 and 2010. Their conclusion? 'The analysis does not indicate significant long-period global or individual basin trends in the frequency or intensity of landfalling [tropical cyclones] of minor or major hurricane strength.'" Read more: <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/11/08/everything-you-need-to-know-about-super-typhoons>.

## CENTER EVENTS CSTR Noontime Seminar Series

CSTR's fall 2013 noontime seminar series has concluded. The presentations are available online at the links below.

- International Negotiations Survey: Exploring Possible Avenues for Climate Diplomacy. Björn-Ola Linnér, Centre for Climate Science and Policy, Linköpings universitet (Sweden), CIRES Visiting Fellow Fall 2013: [https://cirescolorado.adobeconnect.com/\\_a1166535166/p6fik9f0ode](https://cirescolorado.adobeconnect.com/_a1166535166/p6fik9f0ode).



- Climate Change Communication and Adaptation Decision-making in the Humanitarian Sector in East Africa: Three cases. Amy Quandt, Arielle Tozier de la Poterie, and Kanmani Venkateswaran, Environmental Studies and Center for Science and Technology Policy Research, UCB: [https://cirescolorado.adobeconnect.com/\\_a1166535166/p8av54utv73](https://cirescolorado.adobeconnect.com/_a1166535166/p8av54utv73).



- Balancing cost, performance, and efficiency for complex water problems: A many objective approach to sustainability. Joseph Kasprzyk, Civil, Environmental and Architectural Engineering, UCB (co-sponsored



by Western Water Assessment): [https://cirescolorado.adobeconnect.com/\\_a1166535166/p6xy4y5fjoo](https://cirescolorado.adobeconnect.com/_a1166535166/p6xy4y5fjoo).

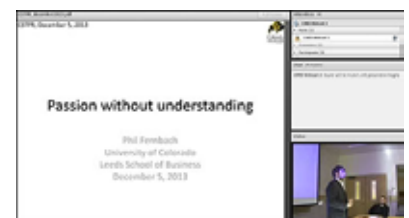
- Estimating the historical and future probabilities of large terrorist events. Aaron Clauset, Computer Science, UCB: [https://cirescolorado.adobeconnect.com/\\_a1166535166/p5uyfws1tak](https://cirescolorado.adobeconnect.com/_a1166535166/p5uyfws1tak).



- Multi-level Governance, Climate Change and Urban Energy Transitions: State-local relations in Colorado's 'New Energy Economy'. Michele Betsill, Department of Political Science, Colorado State University, and CIRES Visiting Fellow Fall 2013: [https://cirescolorado.adobeconnect.com/\\_a1166535166/p1mw06qofdu](https://cirescolorado.adobeconnect.com/_a1166535166/p1mw06qofdu).



- Political Extremism Is Supported by an Illusion of Understanding. Phillip Fernbach, Leeds School of Business, Leeds School of Business, UCB: [https://cirescolorado.adobeconnect.com/\\_a1166535166/p9e7mph7es4](https://cirescolorado.adobeconnect.com/_a1166535166/p9e7mph7es4).





# CENTER EVENTS

## Spring 2014 Seminar Series Adapting to Change: Promise, Pitfalls and Politics

**January 29, 2014 at 12:00 PM**

Place Attachment, Performance and Climate Change Adaptation  
by Saffron O'Neill, Human Geography, University of Exeter  
CSTPR Conference Room, 1333 Grandview Avenue

**February 5, 2014 at 12:00 PM**

Knowledge Production, Access, and Use for Climate  
Adaptation at Local Scales in Northern Tanzania  
by Meaghan Daly, Center for Science and Technology Policy  
CSTPR Conference Room, 1333 Grandview Avenue

**February 12, 2014 at 12:00 PM**

The Energy-Water Nexus: Where Climate Adaptation and  
Greenhouse Gas Mitigation Policies Collide  
by Kristen Averyt, CIRES and Western Water Assessment  
CSTPR Conference Room, 1333 Grandview Avenue

**March 5, 2014 at 12:00 PM**

Psychological and Community Correlates of Adaptation to  
Water Stress Among Smallholding Farmers in Sri Lanka  
by Amanda Carrico, Vanderbilt Inst. for Energy & Environment  
CSTPR Conference Room, 1333 Grandview Avenue

**March 12, 2014 at 12:00 PM**

Guinea Pigs of the Shale: Informed Consent & the Politics of  
Fracking

by Adam Briggles, Philosophy and Religion, Univ. of N. Texas  
CIRES Auditorium

**April 2, 2014 at 12:00 PM**

Reporting, Regulation, and the Governance of Climate  
Change in the U.K.

by Samuel Tang, Geography, King's College London  
CSTPR Conference Room, 1333 Grandview Avenue

**April 16, 2014**

Visualising the Environment and the Politics of Representation  
by Joanna Boehnert, Center for Science and Technology  
Policy Research, University of Colorado  
IBS 155 B

**April 23, 2014 at 12:00 PM**

Playing with Fire: Social Interactions and Wildfire Mitigation  
Behaviors in Colorado  
by Katie Dickinson, National Center for Atmospheric Research  
and Center for Science and Technology Policy Research  
CSTPR Conference Room, 1333 Grandview Avenue

To view updates to our seminar schedule see: [http://sciencepolicy.colorado.edu/news/seminars\\_spring2014.html](http://sciencepolicy.colorado.edu/news/seminars_spring2014.html). Join our mailing list to receive notification of upcoming talks and a link to the webcast by entering your email under "Join our Mailing List" on the left hand column at <http://sciencepolicy.colorado.edu>. See you in the spring!

# CENTER PRESENTATIONS

## Lisa Dilling Talk at AGU Meeting

Lisa Dilling gave a talk at the American Geophysical Union Fall 2013 meeting titled "The Dynamics of Vulnerability and Implications for Climate Change Adaptation: Lessons from Urban Water Management."

Her talk was part of the session on Climate Change Effects on Natural Hazards: Science, Communication and Policy. Her coauthors are Meaghan Daly, William Travis, Olga Wilhelmi, Roberta Klein, Doug Kenney, Andrea J. Ray, and Kathleen Miller. To view the presentation slides see: [http://sciencepolicy.colorado.edu/news/dilling\\_agu2013.pdf](http://sciencepolicy.colorado.edu/news/dilling_agu2013.pdf).



## Max Boykoff Talk at University of Copenhagen on Media and Climate Change

On October 22, Max Boykoff gave a talk at the University of Copenhagen's Sustainability Science Centre on "What have future generations done for me lately? Making sense of the role of media in shaping awareness



and engagement with climate change". Max highlighted how particular problems in the web of interaction between science, media, policy and the public have contributed to (mis)perceptions, debates, and varied understandings to climate challenges. To view a webcast of this talk see: <http://podcast.hum.ku.dk/mediaviewer/?objectId=967>. To view the presentation slides see: <http://sustainability.ku.dk/sustainability-lectures/previous/slides/ssc-13-10-22-boykoff>.

## Climate Wise Women

On October 6, Climate Wise Women Constance Okollet of Osukuru United Women's Network and Ngozi Onuzo of Sierra Club's Global Population and Environment provided a global



platform for the promotion of women's leadership on climate change. Through powerful personal narratives, Climate Wise Women gives a human face and voice to an issue that sits squarely at the nexus of the conversation on gender equality, environmental justice, food security, the eradication of extreme poverty, and public health. The event was cosponsored by Inside the Greenhouse (<http://sciencepolicy.colorado.edu/itg>), a project that Max Boykoff co-leads.

# NEW PUBLICATIONS

Boykoff, M. T. and S. K. Olson (2013). 'Wise contrarians': a keystone species in contemporary climate science, politics and policy. *Celebrity Studies* 4 (3) 276-291, doi: 10.1080/19392397.2013.831618, Published October 25, [http://sciencepolicy.colorado.edu/admin/publication\\_files/2013.35.pdf](http://sciencepolicy.colorado.edu/admin/publication_files/2013.35.pdf).



Abstract: In the 1980s, celebrity climate contrarians, which we might understand as a kind of 'keystone species' or 'charismatic megafauna', emerged through resistance to dominant interpretations of scientific evidence, and through divergent views regarding what are the best ways to respond to climate threats. Our research here examines the growth pathways of these beings through historical accounts of the 'Wise Use' movements rooted in the United States (US) West, as well as interview data and participant observations at the 2011 Heartland Institute's Sixth International Conference on Climate Change, and through tracking of media coverage of climate change and contrarian think tanks over the last 25 years. This contribution helps to better understand celebrity climate contrarians embedded in countermovement activities through a threefold analysis: of the motivations that prop up these contrarian stances, such as ideological or evidentiary disagreement to the orthodox views of science (also known as scientific consensus); the drive to fulfil the perceived desires of special interests (for example, carbon-based industry); and the exhilaration from self-perceived academic martyrdom and the more general desire for notoriety. In these ways, celebrity is a vehicle for influence, and influence is vital to decision-making within the dynamic architectures of contemporary climate science, politics and policy. Read more: [http://sciencepolicy.colorado.edu/admin/publication\\_files/2013.35.pdf](http://sciencepolicy.colorado.edu/admin/publication_files/2013.35.pdf).

Hale, B. (forthcoming). *Polluting and Unpolluting. Environmental Ethics*, 2nd Edition. Ed. Michael Boylan. Wiley-Blackwell, [http://sciencepolicy.colorado.edu/admin/publication\\_files/2013.29.pdf](http://sciencepolicy.colorado.edu/admin/publication_files/2013.29.pdf).



Excerpt: The question for our paper relates to the wrong of pollution, or by extension, the wrong of environmental damage. Does the wrong of pollution consist fundamentally in the harm-causing effects of sullyng some environment? Or is there something more? Read more: [http://sciencepolicy.colorado.edu/admin/publication\\_files/2013.29.pdf](http://sciencepolicy.colorado.edu/admin/publication_files/2013.29.pdf).

Linnér, B. and R. A. Pielke, Jr., 2013. *More Authoritarian Politics is Not the Solution to Climate Change (english version)*. *Dagens Nyheter*, September 27, [http://sciencepolicy.colorado.edu/publications/special/authoritarian\\_politics.html](http://sciencepolicy.colorado.edu/publications/special/authoritarian_politics.html).

Excerpt: On Thursday the Intergovernmental Panel on Climate Change presented the first of four assessments, this one taking stock of the physical science of the climate system. The report's reception and promotion highlight challenges that arise when expertise meets politics.



The temptation to use the conclusions to forward different political agendas will be abundant. And rightly so, the initial idea behind the IPCC report was to provide an assessment of science that could be used by policy-makers. This is clearly not a problem when politicians, activists or lobbyists use the report in an open debate on how to address climate change. Read more: [http://sciencepolicy.colorado.edu/publications/special/authoritarian\\_politics.html](http://sciencepolicy.colorado.edu/publications/special/authoritarian_politics.html).

Pielke, R.A. Jr. (2013). *After Haiyan: how to act on scientific advice that's politically inconvenient?* *The Guardian*, Nov. 19, <http://www.theguardian.com/science/political-science/2013/nov/19/typhoon-haiyan-scientific-advice-extreme-weather>.



Excerpt: The proposal, advanced by the G77 plus China, that the US and other nations should pay tens or even hundreds of billions of dollars to poor countries that suffer disasters, is a central theme of the climate negotiations now taking place in Warsaw, Poland.

It's an idea that has been made more tangible by the tragic loss of life and devastation in the Philippines caused by super typhoon Haiyan, one of the most powerful observed storms of recent decades. Read more: <http://www.theguardian.com/science/political-science/2013/nov/19/typhoon-haiyan-scientific-advice-extreme-weather>.

Pielke, R.A., Jr. (2013). *Behind Japan's Climate Fail: Nuclear Energy and Global Warming Commitments*. *The Breakthrough Institute Blog*, November 21, <http://thebreakthrough.org/index.php/voices/roger-pielke-jr/behind-japans-climate-fail>.



Excerpt: The Japanese government announced last week its adoption of a new emissions reductions target: 3.8 percent by 2020 from 2005 levels. This figure is a setback from an earlier target of reducing emissions by 25 percent from 1990 to 2020, part of a policy called "mamizu" that was criticized as being not ambitious enough, when in reality it would have been very difficult to achieve. The new target shows how Japan has once



again implemented “mamizu” policies: in 2010, prior to the Fukushima nuclear disaster, Japan got 18.5 percent of its total energy consumption from carbon-free sources. In 2012, it was 6.4 percent. Read more: <http://thebreakthrough.org/index.php/voices/roger-pielke-jr/behind-japans-climate-fail>.

Ethics, Policy & Environment, [http://www.tandfonline.com/toc/cepe21/current#.Uq9eA\\_RDt1a](http://www.tandfonline.com/toc/cepe21/current#.Uq9eA_RDt1a).

The winter issue of Ethics, Policy, & Environment (co-edited

by CSTPR’s Benjanim Hale and George Mason University’s Andrew Light) is now out.

This issue includes a Target article by Mark Sagoff, with commentaries from Rachel Fredericks, Carl Safina, Simon James and others, as well as feature articles on climate justice, conservation through commodification, and precautionary principle. For more information see: [http://www.tandfonline.com/toc/cepe21/current#.Uq9eA\\_RDt1a](http://www.tandfonline.com/toc/cepe21/current#.Uq9eA_RDt1a).



## S&T OPPORTUNITIES

### IDA Science and Technology Policy Institute Science Policy Fellowship Program

This two-year fellowship provides recent bachelor’s or master’s degree recipients a unique opportunity to use their critical thinking and analytic skills to work on a diverse set of challenges in science and technology (S&T) policy areas including energy and the environment, innovation and competitiveness, evaluation and scientometrics, information technologies, national security, and life sciences. Fellows will be involved in collaborative research for leaders in the White House Office of Science and Technology Policy (OSTP) in the Executive Office of the President and for such federal agencies as the National Science Foundation and National Institutes of Health. More information: <https://www.ida.org/stpi/careers/fellows.php>. **Deadline: January 31, 2014.**

### CALL FOR PAPERS

#### Science Communication Ethics: State of the Art

We live in a world dependent on science and technology, one that has been substantially modified by their application. As a result, communicating about science and understanding the complex relationship between science and society has gained ever-increasing importance. Too often the focus of this research has been on the effectiveness of communicating science to non-experts. What have remained overlooked are the ethical considerations underlying this communication process. How ought science be communicated to non-expert audiences?

These questions were raised at the third Iowa State University Summer Symposium on Science Communication. It became clear that while scholarship on these ethical issues is growing, it remains scattered and on the periphery of science communication scholarship. The decision was made to pursue the creation of a theoretically informed collected volume on

science communication ethics as a means to extend and share this work with audiences in science communication studies, science communication practice, science and technology studies, and the broader scientific and science policy communities.

The collected volume we plan will be open to scholars in all disciplines who are able to connect their analyses to broader issues of theory in considering problems such as these:

- What are the underlying goals of science communication?
- What are the boundaries of appropriate advocacy and promotion?
- What ethical obligations do scientists have to communicate to broader publics?
- What ethical requirements should govern discussions of risks, benefits, “facts,” and uncertainties?
- What is the role of the political process in the management of science and technology?

We invite contributions of 5000-7000 words that consider one of these or any other issue in the ethics of science communication and that are explicitly informed by some aspect of theory taken from the social sciences or humanities. The submission of ideas or extended abstracts to any of the editors for comment well prior to this deadline is strongly encouraged.

Papers should be submitted no later than **October 15, 2015**, to the volume’s lead editor, Dr. Susanna Priest ([susannapriest@yahoo.com](mailto:susannapriest@yahoo.com)). Questions may be addressed to Jean Goodwin ([goodwin@iastate.edu](mailto:goodwin@iastate.edu)) or Michael Dahlstrom ([mfd@iastate.edu](mailto:mfd@iastate.edu)).

The fourth ISU Summer Symposium (29-31 May, 2014) is also open for scholars to receive feedback on early versions of work. More information: <http://scicomm.las.iastate.edu/summer-symposia/2014-summer-symposium>.



### NEW CSTPR VIDEO

*Making Sense of the Role of Media in Shaping Awareness and Engagement with Climate Change* by Max Boykoff at University of Copenhagen’s Sustainability Science Seminar. This Webinar can be viewed at: <http://podcast.hum.ku.dk/mediaviewer/?objectId=967>.

To view more CSTPR videos see: <http://sciencepolicy.colorado.edu/news/multimedia>.

## Job Opportunities

### Post-Doc Opportunity: University of Wisconsin-Madison

A two-year postdoctoral researcher position is available with the Water Sustainability and Climate (WSC) research group at the University of Wisconsin-Madison as part of a five-year project funded by the National Science Foundation. The position requires strong social science training and ability to couple social research with ecological and hydrologic sciences. The researcher will have the opportunity to work with an excellent interdisciplinary research group.

This position will investigate the processes of environmental governance that shape human-environment interactions in the Yahara Watershed of southern Wisconsin. The WSC project features an integrated model and scenario development process to compare alternative futures for the watershed.

The 2-year Postdoctoral Research position will begin in Summer 2014. Review of applications will begin January 13, 2014 and continue until an applicant is selected. More info: <http://www.nelson.wisc.edu/jobs/details.php?j=3158>

### Job Opportunity: Saint Michael's College, Assistant Professor

Saint Michael's College invites applications for a Tenure-Track Assistant Professor in our Environmental Studies Program to begin Fall 2014. The ideal candidate will be a broadly trained Environmental Scientist with a Ph.D. in Environmental Science or Environmental Studies, with an interest in policy. Research and teaching interests may include but are not limited to global climate change, energy, sustainable land use, resource and environmental management, or environmental health and justice. We seek a colleague enthusiastic about the teaching and research opportunities in Vermont's exceptional natural environment, and attracted to the College's commitment to experiential learning, social justice, global awareness and interdisciplinary education.

Review of applications will begin on January 10, 2014 and continue until the position is filled.

More info: <http://smcvt.interviewexchange.com/jobofferdetails.jsp?JOBID=45170&type=7>

## ABOUT US

Ogmios is the newsletter of the Center for Science and Technology Policy Research. The Center is within the Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado-Boulder. The mission of CIRES, which was established in 1967, is to act as a national resource for multidisciplinary research and education in the environmental sciences. CIRES is jointly sponsored by the University of Colorado-Boulder and the National Oceanic and Atmospheric Administration.

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