Ogmius

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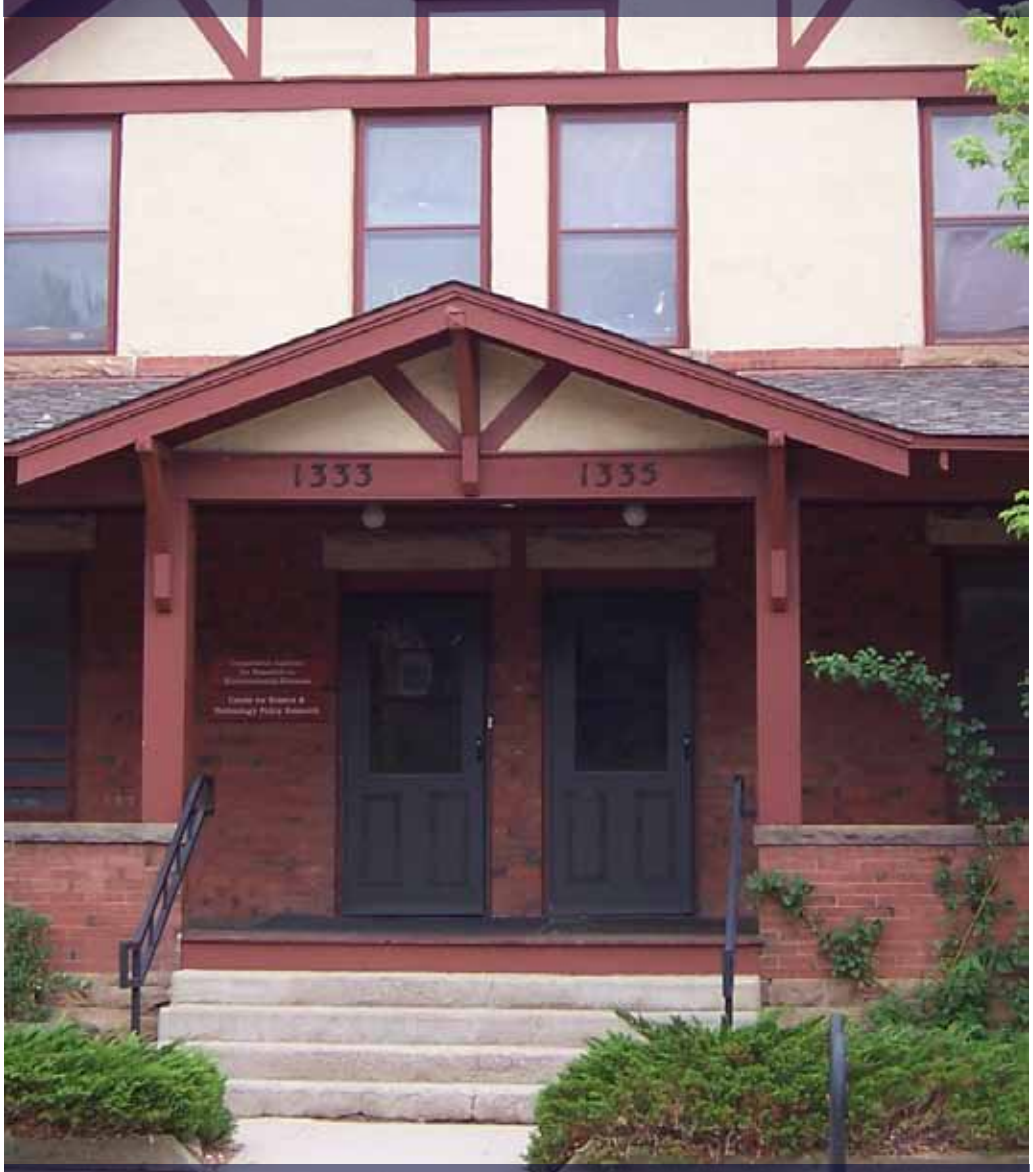
OGMIUS 10TH ANNIVERSARY ISSUE

The Center for Science and Technology Policy Research opened its doors in August 2001 and was recognized as an official University center in August 2002. To commemorate the Center's 10th anniversary our founding director, Roger Pielke, Jr., provides his reflections on the Center's first 10 years and then our current director, Bill Travis, discusses the Center's contributions to understanding society's role in earth systems over the past 10 years. Several of our former graduate students, postdocs and visitors add reminiscences of their days at "Grandview"* as well as how their experiences here shaped their careers and interests.



* The Center is located at 1333 Grandview Avenue in Boulder.

THIS ISSUE

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http://sciencepolicy.colorado.edu/ogmius

FOUNDING DIRECTOR
ROGER PIELKE, JR. (2001-2007)

Here at the University of Colorado Boulder, it is exciting to be able to celebrate the 10th anniversary of the CIRES Center for Science and Technology Policy Research in conjunction with the 45th anniversary of our parent organization, CIRES. Here are a few reflections looking back at the past 10 years, and to the future of our Center.

Back in 2001 I decided to leave the National Center for Atmospheric Research for a faculty position at the University of Colorado. I was fortunate – and hindsight shows just how fortunate – to have convinced Bobbie Klein to make the journey across town with me.

With the support and encouragement of Susan Avery, then CIRES director, we were shown 1333 Grandview as a possible home for our offices. The building at the time had been unoccupied for a while, and suffered from neglect and wear. But we saw a lot of potential and told Susan we'd take it. Consistently from the start, the support of CIRES for creating a vibrant research center focused on science and technology policy research has been the backbone of everything that we have done since those first days.

Early in the fall semester of 2001, we then made perhaps our best decision in the hiring of Ami Nacu-Schmidt. I say we, though as is typically the case, it would be far better to say that Bobbie decided and I trusted her good judgment. There can be no doubt that the heart of the Center – the two people who have made it what it is today – are Bobbie and Ami. But I am getting ahead of the story. We then got to work.

By the fall of 2002 we had successfully met the criteria of establishing a new research center on campus, and set forth doing all of those things needed to institutionalize a presence on campus. A wonderful website followed, then a Graduate Certificate Program, a very big NSF grant, a parade of presidential science advisors, courses, students, visitors and a growing staff.

For me, however, the true test of institutional success in a university setting is a successful leadership transition. So when my term was up as Center director, I literally packed up and left town, making my way to Oxford for a sabbatical. The transition to a new director was not without its uncertainties, but in the end the Center was fortunate to have Professor William Travis take over the leadership of the Center.

Bill has had a wonderful successful term as director, having overseen a dramatic expansion of the Center – which on the eve of its 10th anniversary now totals 6 tenure-track faculty members. Ben Hale, Lisa Dilling, Max Boykoff and Deserai Crow are now members of the Center, representing an all-star line-up

PHOTO FROM THE PAST | Dr. John Marburger III being interviewed by Roger Pielke, Jr., February 14, 2005

of scholars. Each has made an individual mark on the University and beyond, ensuring that the Center's best years still lie ahead.

Thanks to Bill's skilled leadership the Center is extremely well positioned for whatever comes next. Our Center and its programs have been emulated at other universities and our record of scholarly achievement quite literally speaks for itself. I am also very proud of our collective achievements in education and especially outreach, where a student project call the "Prometheus blog" (what is a "blog" I asked skeptically at the time?) turned into one of the most widely accessed websites on all of campus and a major outlet for national and international science policy discussions.

With all of these successes, I am most proud of the students who we have had the privilege of working with. They come from across various departments on campus, many from Environmental Studies, and are seeking various degrees. Our alums today are in the private sector, government (local, state, federal), civil society and academia, and make up a rich network of talent and expertise. (Side note: Alums, do remember that the naming rights for our Center endowment remains open!) Seeing their successes and now working with many of them as peers has perhaps been for me the most rewarding aspect of our first 10 years.

An anniversary provides a wonderful excuse to look back and look ahead. For the CIRES Center for Science and Technology Policy Research the view looks bright in both directions.

Congrats to all, and here is to the next 10 years!

Roger Pielke, Jr., Director 2001-2007
Center for Science and Technology Policy Research
Professor, Environmental Studies Program
University of Colorado Boulder
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DIRECTOR
BILL TRAVIS

Our growing community of current and past faculty and students has contributed to the environmental social sciences in a myriad of ways, especially focused on the choices that people make in treating the environment and in responding to challenges like natural hazards, climate change, and variability.

- Bill Travis

What does it mean to be a social science research center in an environmental science institute? Not, to box us in, but a box is one way to explore the roots of the social-ecological sciences. Formulations of earth systems science are often encapsulated in so-called "wiring diagrams" of interacting variables meant to sum up whole systems. In early formulations a box resided somewhere in this wiring diagram that was labeled something like "society" or "humans". Like the other "subsystems" in the diagram, this one encompassed much more complexity than its modest size and appearance in the diagram signaled. Even as other system boxes were filled in with detail, the social box often sat blank, not because social scientists knew so little about human behavior, but because so few social scientists were yet engaged in the enterprise of explaining how earth systems functioned, and this was partly because few social scientists saw humans as part of the earth system. Still, the mostly-blank box beckoned, and some social scientists joined in the effort with theories and evidence for how humans behaved in the environment, how they changed earth systems, and how they responded to those changes.

PHOTO FROM THE PAST
Bill Travis introducing guest speaker Mike Hulme, November 4, 2010

As a social science unit in a natural science institute, the Policy Center represents a continuing effort to illuminate that society box in the old earth system diagrams, an effort now heading into its second decade. In the last decade, and indeed in the four decades since the first earth system diagrams were created, a growing body of work on human behavior, decision-making, policy choices, and environmental impacts has enriched our understanding of both the earth and people, yielding new insights into social-ecological systems. As reflected in this 10th anniversary issue of Ogmius, our growing community of current and past faculty and students has contributed to the effort in a myriad of ways, especially focused on the choices that people make in treating the environment and in responding to challenges like natural hazards, climate change, and variability in earth sub-systems such as the carbon and hydrologic cycles. The complexity hidden in the "society" box of those early earth system diagrams has been partially clarified, and in just the decade that the Center has existed, the questions put to social scientists increasingly attend not only to how humans behave in the environment, but how humans should manage earth systems, that is, what should be our policy for the earth system. Differences between what we do, and what we should do, to perturb earth systems, and perhaps to achieve sustainability—the diagnostic, prognostic and prescriptive elements of research----will continue to pose questions for the future researchers at the Center.

PHOTO FROM THE PAST
CSTPR faculty particiating in panel discusion about geoengineering, March 29, 2010

Bill Travis, Director
Center for Science and Technology Policy Research
Associate Professor of Geography
University of Colorado Boulder
william.travis@colorado.edu

ERIK FISHER

It's a pleasure to think back on my time at the Center for Science and Technology Policy Research. Nestled in between sleepy bungalows on Grandview Avenue, the Center was home to some of the liveliest debates on campus. At any point during the semester, upon entering the building by one of two weighty doors that presented something of a benign dilemma to the first time visitor, one could regularly expect to find gatherings that drew scientists of all kinds, worldly philosophers, and an intriguing variety of local and national policy practitioners. Surrounding the mysterious twin staircase that offered multiple routes to the same destination, the cloistered network of hallways, desks, and offices always seemed to me to be bursting not just with people, but with ideas and possibilities. Some ten years later, after an initial email inquiry to Roger [Pielke, Jr.] about the 'Science Wars', which soon after led to my rapid immersion in all things science policy and policy sciences, I can still trace elements of my own frameworks and methodologies—which have come to be applied in over 30 science and engineering laboratories in a dozen countries across three continents (http://cns.asu.edu/stir)—to sources of insight, inspiration and critical reflection that he and others at the Center introduced me to and helped me think through.

PHOTO FROM THE PAST | Erik Fisher giving a talk in 2009

Erik Fisher, research scientist and doctoral student, CSTPR 2003-06; Ph.D. ENVS 2006; currently assistant professor in the School of Politics and Global Studies and the Consortium for Science, Policy and Outcomes (CSPO) at Arizona State University; assistant director for international activities at the Center for Nanotechnology in Society (CNS-ASU); director of the Socio-Technical Integration Research (STIR) project.

JOEL GRATZ

I spent "College Part II" at the Center (some call this time period "Graduate School", but I like my title). For three years from 2003-2006, I had an amazing experience that was 'just right'. Just the right amount of learning vs fun, just small enough to know everyone but just big enough to get a diverse set of opinions. Just focused enough to get a grasp of a topic but just integrated enough to let me reach out and get an MBA along the way. I enjoyed almost every day I spent on Grandview, but one day proves more memorable than the others...

It was my Master's Thesis defense with Roger Pielke, Jr. and two other advisors from the private sector who had flown to Boulder just for the event. During my presentation, I had a small audience in addition to my advisors. The audience was my dad and my roommate Jen. As I started my talk, I had no idea that my dad had communicated with Jen for weeks leading up to these day. My dad had concocted a plan. A very funny plan. As I flipped to my fourth or fifth slide, my dad and Jen -- sitting next to each other -- held up signs. Since they were behind my advisors, the only person that could see the signs was me. And what did these signs say? One was in the shape of a big "D", and the other was in the shape of a white picket fence. Yep, my dad took a signature move out of the football fan's playbook and brought the "D-Fence" cheer to Grandview. I laughed out loud at the time, and can look back and laugh still...because ultimately I did pass the defense.

PHOTO FROM THE PAST | Joel Gratz giving a talk in 2005

Roger Pielke, Jr. keeps reminding me that when my business takes off, he'd be happy for me to set up a fund to support the center. Hopefully that day isn't too far off!

Joel Gratz, graduate student CSTPR 2003-06; MBA/MS, Meteorology and Policy, 2006; Founder & Meteorologist, www.Opensnow.com and www.ChanceOfWeather.com.

JIMMY HAGUE

When I reflect on the Center for Science and Technology Policy Research on the occasion of its 10th anniversary, I am reminded of how the Center became a second home during my time at the university. This certainly had something to do with the number of hours I spent there. However, the converted bungalow on the north end of campus was also a welcoming alternative to the staid academic settings of the main campus.

My desk space – where, if you craned your neck at the right angle, you could just see the Flatirons – was much preferred to the windowless, cinderblock cubes inside Folsom Field. The office became home to myriad books, papers and even gym clothes of mine, much to the chagrin of my officemates. The wide front porch became an extension of the classroom, especially on sunny days when conversations would continue long past the end of class.

Disregarding every other structure on the street, I usually referred to the Center simply as "Grandview." In my two short years there I saw dozens of people come through Grandview. The students, faculty and staff became like family. They challenged me to think about policy like I never had before. I learned to understand my biases and values and the biases and values of others when working on a policy problem. This is a critical skill working in the U.S. Senate where an appreciation for opposing viewpoints is a good prerequisite for finding compromise.

The students, faculty and staff at the Center were my friends away from class as well. I may never forget debating the shortcomings of the linear model with classmates at the Sundowner over pitchers of cheap beer.

I learned to understand my biases and values and the biases and values of others when working on a policy problem. This is a critical skill working in the U.S. Senate where an appreciation for opposing viewpoints is a good prerequisite for finding compromise.
- Jimmy Hague

Working for a senator from Colorado, I have the pleasure of continuing those debates and frequently collaborating with current and former Center personnel in our respective professional careers. The friendships I made at the Center are a valuable professional network of dedicated civil servants, analysts, lawyers, business people and others who share a common policy language.

This may prove to be the most lasting impact of the Center. It has created a wide wake in its ten short years of existence that is spreading out to many policy shores. The ideas and methods taught at the Center are rippling through the academic, government, non-profit and private sectors alike. I am eager to see what waves the next decade of Center graduates will make.

Jimmy Hague, graduate student at CSTPR 2005-2007; M.S. ENVS 2007; Legislative Assistant for Senator Mark Udall (CO).

FRAN HOLLENDER

In the fall of 2011, I was a visiting graduate student at CSTPR to conduct research for my Master's thesis. When I first asked Roger [Pielke, Jr.] whether he thought there would be an opportunity for me to come to Boulder for a semester, I had no idea that my stay would change my career choices.

Coming over from the University of Vienna I was new to American academic culture, but the relaxed and friendly atmosphere at the Center immediately put me at ease. From the regular organized colloquia to the productive personal consultations my time there helped me broaden my horizon. I was able to make use of the excellent resources and engage in interesting discussions and hear about topics I would have never considered!

During my short stay I got to know many interesting people who helped me in various ways. There was always someone to help me with administrative issues, give me feedback on my writings or just brainstorm – or pick up coffee from Starbucks! (thanks Bill!) Of course, the amazing setting of Boulder also helped make my stay awesome. Up until last summer I actually hated hiking – but living next to the Mount Sanitas trailhead and seeing the Flatirons every day on the way to the office turned that completely around. After I returned to Vienna, I decided to pursue a Ph.D. after finishing my Master's degree this year.

In the end, I have not only made new friends and spent a great time in one of the best cities I've lived in so far, but also found the encouragement and motivation to set higher academic goals for myself than I'd ever imagined. I am thankful for having had the opportunity and look forward to seeing everyone again!

Fran Hollender, CSTPR 2011 visiting graduate student, M.A. Science, Technology and Society 2012, University of Vienna.

CHRISTINE KIRCHHOFF

My first days at the Center were quiet. It was the summer and the usual hustle and bustle of the academic year had already faded. Sarah [Erskine], Bobbie [Klein], Bill [Travis] and my mentor, Lisa [Dilling], were the first people I saw in those early days and to a person they all made me feel welcome and at home there. Lisa and I got to work quickly outlining a proposed work plan to investigate the legal and procedural aspects of management and planning of water resources by U.S. states to understand what made states more or less adaptive under stress and change (including climate change). As summer turned to fall, I was invited to participate in other projects (Lisa's IDCA project) which helped to broaden my experience and understanding of research design, scientific collaboration, and interactions between practitioners and scientists that help to shape and inform research. It also gave me a chance to expand my network both at the Center and more broadly. Also in the fall, the Center's seminar series started back up. The seminar (and others on campus) was a great venue for learning more about science and policy through the sharing of ideas and research that others at the Center and around campus (and beyond) were doing.

Working on our states research effort and attending meetings and seminars really helped broaden my intellectual interests and academic network and paved the way for future collaborations. In addition to these more formal interactions were less formal conversations where I learned (among other things) more about what it means to be an academic, where to find a good, inexpensive meal, and where to cross-country ski in the winter. If only I could ski! (Thanks Bill and Bobbie for taking me out on the trails and showing me how it's done!)

My experience at the Center went beyond expanding my thinking about research at the interface of science and policy.

- Christine Kirchhoff

Overall, my experience at the Center went beyond expanding both my thinking about research at the interface of science and policy and my personal and professional network to something less tangible and harder to describe. The best I can do is to say being in Boulder leaves a subtle imprint. I left with new ideas and experiences, fond memories, and a hankering to get back!

Christine Kirchhoff, CSTPR Research Associate (Postdoctoral), 2010-2011, Ph.D. 2010 University of Michigan, Research Fellow (Postdoctoral)

GESA LÜDECKE

I am truly grateful to have had the chance to spend a term (fall 2010) in Boulder, and to get a close look at CSTPR and its different fields of work.

Due to the fact that climate change communication in the media from the recipient's perspective just has started to arouse interest among German scholars, I decided to profit from the further developed experience in this field abroad. At CSTPR I met Maxwell Boykoff, who strongly helped me to deepen my knowledge of environmental and climate change communication in the media, and helped me to get any possible opportunity to improve my professional work, and intensify my methodological skills.

I experienced CSTPR and its team as a wonderful and stimulating environment for me as a visitor from abroad.

During my time in Colorado I met many interesting people who helped me in bringing forward my ideas and notions concerning my work. I experienced Boulder as a wonderful and inspiring place for both work and living!

Thank you again for your support and a wonderful time in beautiful Boulder! All the best to you, and hopefully see you soon!

Gesa Lüdecke, Visiting researcher, CSTPR August-December 2010, Ph.D. at Leuphana University of Lueneburg, Germany. Currently employed as research assistant at Leuphana.

PHOTO FROM THE PAST | Dr. Neal Lane and Roger Pielke, Jr. during the Center's 2005 Presidential Science Advisor Series.

SHALI MOHLEJI

The Center for Science and Technology Policy Research provided an invaluable education to me while I was a doctoral student studying science policy. Through my courses, I learned to conceptualize scientific research based on missions, assess the decisions that shape the future of science, and strategize on methods to maximize science for decision making. Beyond these issues, my advisor - Roger Pielke, Jr. - encouraged me to think about the role of scientists when they engage in the policy process. This considers how the scientist can provide useful information to decision makers while maintaining the integrity of the scientific enterprise and the scientific profession; ultimately protecting the status of both from becoming simply a special interest. This issue has proven to be the most important lesson for me, both personally and professionally.

After graduating from the University, I moved to Washington, D.C. where I now work in science policy at the federal level. Washington D.C. is the home for federal policy work and therefore a hub for federal science policy. As the scientific enterprise is increasingly recognizing the importance of the intersection between science and policy, more scientists are getting involved in the science policy arena, sometimes unwittingly. Without the opportunity for formal consideration of such issues, many groups are unaware of the need to maintain the integrity of the scientific enterprise while many other groups are unaware of how to maintain the integrity of science. Therefore I have found it extremely important to share my knowledge on such issues and to personally proceed accordingly by engaging in a manner where I can provide and convey useful scientific information to decision makers without crossing the line into advocacy. In an environment like Washington, D.C. where advocacy is inherent to the political culture, it is extremely important that I understand my role and can adhere to it which actually allows me to optimize my role in the process.

PHOTO FROM THE PAST | Shali Mohleji participating in a workshop discussion in 2009

I am grateful to have learned about such an important issue and gained an understanding of how to incorporate these ideas into my professional conduct in order to benefit the scientific enterprise and contribute appropriately to the policy process. The Center provides an education that is unique and crucial to the future of science and the faculty, students, and researchers involved are bright and insightful scholars who are leading the efforts of science policy across the globe. It is an honor to be affiliated with the University of Colorado – Boulder Center for Science and Technology Policy Research.

Shalini Mohleji, Center Graduate Student 2004-2011; Ph.D. ENVS 2011; Currently Visiting Fellow, American Meteorological Society Policy Program

URSULA RICK

The Center for Science and Technology Policy Research was instrumental in changing my career path. When I began graduate school, I planned to pursue a career as a scientist, but I began to realize that I wanted to be a bridge between science and society. Courses and research at the Center led me to a Congressional science fellowship in Washington, D.C. and now a career in energy policy.

The email advertising the Graduate Certificate in Science and Technology Policy at the Center arrived during the 3rd year of my Ph.D. After working for several years on the behavior of glaciers and ice sheets, I became interested in how science was used in the policy and politics of climate change, and the program at the Center piqued my interest. I began taking classes and decided I wanted to move deeper into the policy world after my degree. I did a postdoc with Roger Pielke, Jr. and Max Boykoff. We studied media coverage of sea level rise, the impetus for which came from my Ph.D. research on the contribution of melting ice to sea level and how both scientists and journalists portrayed it in the media. During this time I discovered the AAAS science and technology policy fellowships in Washington, D.C. and was selected to be the 2010/2011 AGI Congressional Fellow.

I worked for Senator [Mark] Udall of Colorado on energy and natural resource policy. In D.C., I learned what it meant to be a science policy practitioner and where and when scientific knowledge can enter the policymaking process. By the end of my fellowship, I knew I wanted to stay in the world of policy. I enjoy maintaining the connection to scientists and engineers while thinking about how technical solutions can be used to make good policy and improve our world.

I was enriched by my time at CSTPR and am grateful for the people I worked with there. Happy 10th Anniversary CSTPR.

Ursula Rick, Post Doc CSTPR 2009-10, Ph.D . ATOC 2008

CENTER NEWS
CSTPR 10th Anniversary

SAVE THE DATE: September 27, 2012
CSTPR 10th Anniversary

The tentative agenda for the CSTPR 10th anniversary celebration is:

9:00 -10:30 am Panel discussion: Extremes: Nature, Society and Policy (Bill Travis, moderator)

10:30– 11:00 am Break

11:00-12:30 pm Panel discussion: Public Engagement in Science and Technology: when the stakes are high and debates are lively (Lisa Dilling and Max Boykoff, moderators)

12:30 – 1:30 pm Lunch on your own

1:30 – 3:00 pm Panel discussion: Usable Science (Elizabeth McNie, moderator)

3:00 - 3:30 pm Break

Dr. John Holdren

3:30 – 4:30 pm Panel discussion: Life after CSTPR

7:30 – 9:00 pm Keynote address by Dr. John Holdren, Science Advisor to President Barack Obama

All events will take place in Old Main on the CU-Boulder campus. More up-to-date information will be posted on the CSTPR website (http://sciencepolicy.colorado.edu) closer to the event so please check back.

CENTER NEWS
Roger Pielke, Jr. Receives GSA Award and Honorary Degree

Roger Pielke, Jr. is this year's recipient of the Geological Society of America (GSA) Public Service Award. The GSA Public Service Award was established in 1998 in honor of Eugene and Carolyn Shoemaker and is awarded for contributions that have materially enhanced the public's understanding of the earth sciences, or significantly served decision-makers in the application of scientific and technical information in public affairs and public policy related to the earth sciences.

In May 2012 Roger Pielke, Jr., received an Honorary Doctor of Philosophy from Linköping University, one of Sweden's top universities that focus on interdisciplinary research and teaching. In awarding the degree Linkoping stated that Roger's "outstanding achievement in interdisciplinary climate research is a bold and refreshing voice in the climate debate. You have taken on public discussions with the IPCC, environmentalists as well as climate sceptics. You are profoundly committed to both use science to critically scrutinize policies and political decisions, and to deeply engage in finding ways of enhancing dialogues between science and policy."

CENTER NEWS
Jessica Weinkle Awarded Fellowship

CSTPR graduate student Jessica Weinkle has been awarded the highly competitive CIRES Graduate Research Fellowship Program for fall 2012. Evaluations of the 2012 applications were based on each candidate's academic accomplishments, research plan and significance, ability to communicate and work independently, letter(s) of recommendation, and the likelihood of future contributions to Earth system science.

Congratulations Roger and Jessica!

NEW PUBLICATIONS

Boykoff, M. (2012), Climate Change and the Media: The Climate Stories We Tell Ourselves. This Side of the Pond, Cambridge University Press Blog, April 2, http://www.cambridgeblog.org/2012/04/climate-change-and-the-media.

Excerpt: At the end of this calendar year, misinterpretations of Mesoamerican / Mayan calendars will prove correct and catastrophe will beset humans…Or another cycle will begin: world leaders will again gather – this time in the oasis of Doha – for the ritual dance called international climate negotiations. If the latter scenario plays out, delegates and leaders will most likely perform their parts while prospects continue to look grim for substantive policy action to succeed the Kyoto Protocol, whose authority goes extinct just days later.

As many grope for answers as to how we collectively got here in the year 2012 (or 14th baktun), part of the answer resides in how these issues have been represented in mass media over time.

Therein rests a paradox: as media attention has largely grown over time, rather than providing greater clarity on the issues and possible consensus on ways forward to address them, coverage has contributed to further confusion regarding causes and consequences of climate change, and has catalyzed ongoing contentiousness around questions of what to do about modern climate change… Read more at http://www.cambridgeblog.org/2012/04/climate-change-and-the-media.

Ellenwood, M.S., L. Dilling, and J.B. Milford (2012), Managing United States Public Lands in Response to Climate Change: A View from the Ground Up. Environmental Management, http://sciencepolicy.colorado.edu/admin/publication_files/2012.03.pdf.

Abstract: Federal land managers are faced with the task of balancing multiple uses and goals when making decisions about land use and the activities that occur on public lands. Though climate change is now well recognized by federal agencies and their local land and resource managers, it is not yet clear how issues related to climate change will be incorporated into on-the-ground decision making within the framework of multiple use objectives. We conducted a case study of a federal land management agency field office, the San Juan Public Lands Center in Durango, CO, U.S.A., to understand from their perspective how decisions are currently made, and how climate change and carbon management are being factored into decision making. We evaluated three major management sectors in which climate change or carbon management may intersect other use goals: forests, biofuels, and grazing. While land managers are aware of climate change and eager to understand more about how it might affect land resources, the incorporation of climate change considerations into everyday decision making is currently quite limited. Climate change is therefore on the radar screen, but remains a lower priority than other issues. To assist the office in making decisions that are based on sound scientific information, further research is needed into how management activities influence carbon storage and resilience of the landscape under climate change… Read more at http://sciencepolicy.colorado.edu/admin/publication_files/2012.03.pdf.

Hale, B. (2011), Fukushima Daiichi, Normal Accidents, and Moral Responsibility: Ethical Questions about Nuclear Energy. Ethics, Policy & Environment 14 (3), December 9, http://sciencepolicy.colorado.edu/admin/publication_files/2011.33.pdf.

Excerpt: On March 11, 2011, at 2:46pm Japan Standard Time, an earthquake measuring 9.0 on the Richter scale rumbled off the northeast coast of Japan. Not far from the epicenter of this quake the Fukushima Daiichi nuclear power complex, including three functioning and three off-line 'boiling water' reactors, hummed in the towns of Okuma and Futaba, within the Fukushima Prefecture. At the first detection of tumult, all three operating reactors automatically shut down to protect their cores. Crews scrambled to ensure that all was in order, which it was. For a time.

An hour and five minutes after the initial shockwave, the churning sea let fall a violent tsunami upon the coastline of Japan. In a matter of minutes, thousands of homes and businesses were submerged and compacted by a powerful bulldozer of water, thousands of unsuspecting people were swept out to sea, and the Fukushima Daiichi complex underwent an unfathomably complicated string of natural events and unanticipated challenges. First the plant lost power, as emergency diesel generators were knocked out by the tsunami. Then the batteries used to control steam-driven emergency pumps lost power. Then, the first three reactors began to overheat, oxidizing their protective cladding and partially melting their radioactive cores, producing hydrogen. As this happened, the explosive hydrogen did what explosive hydrogen in a tight, hostile environment is given to do… Read more at http://sciencepolicy.colorado.edu/admin/publication_files/2011.33.pdf.

Kates, R.W., W.R. Travis, and T.J. Wilbanks (2012). Transformational Adaptation When Incremental Adaptations to Climate Change Are Insufficient. Proceedings of the National Academy of Sciences 109 (19) 7156-7161, http://sciencepolicy.colorado.edu/admin/publication_files/2012.06.pdf.

Abstract: All human–environment systems adapt to climate and its natural variation. Adaptation to human-induced change in climate has largely been envisioned as increments of these adaptations intended to avoid disruptions of systems at their current locations. In some places, for some systems, however, vulnerabilities and risks may be so sizeable that they require transformational rather than incremental adaptations. Three classes of

transformational adaptations are those that are adopted at a much larger scale, that are truly new to a particular region or resource system, and that transform places and shift locations. We illustrate these with examples drawn from Africa, Europe, and North America. Two conditions set the stage for transformational adaptation to climate change: large vulnerability in certain regions, populations, or resource systems; and severe climate change that overwhelms even robust human use systems. However, anticipatory transformational adaptation may be difficult to implement because of uncertainties about climate change risks and adaptation benefits, the high costs of transformational actions, and institutional and behavioral actions that tend to maintain existing resource systems and policies. Implementing transformational adaptation requires effort to initiate it and then to sustain the effort over time. In initiating transformational adaptation focusing events and multiple stresses are important, combined with local leadership. In sustaining transformational adaptation, it seems likely that supportive social contexts and the availability of acceptable options and resources for actions are key enabling factors. Early steps would include incorporating transformation adaptation into risk management and initiating research to expand the menu of innovative transformational adaptations... Read more at **http://sciencepolicy.colorado.edu/admin/publication_files/2012.06.pdf**.

McNeeley, S., L. Dilling, et al. (2012), Catalyzing Frontiers in Water-Climate-Society Research: A View from Early Career Scientists and Junior Faculty. Bulletin of the American Meteorological Society 93 (4) 477-484, April, http://sciencepolicy.colorado.edu/admin/publication_files/2012.05.pdf.

Excerpt: Changes in the availability and distribution of water have substantial effects on humans and the ecosystems upon which we depend. While we have always experienced variability in the availability of water across a variety of time scales, anthropogenic climate change will likely bring substantial additional effects on water cycles and water resource management, such as changes in timing, amount, and patterns of precipitation; decreasing snow packs; enhanced droughts; and more frequent and intense floods and storms, among others. The scientific community faces the challenge of helping societies plan for climate and water uncertainties in the context of complex and changing socio-environmental processes such as multiple and competing water demands, population growth, land-use changes, and energy extraction and production. Meeting this challenge requires utilizing the strengths of diverse disciplines and working in synergistic collaboration with key stakeholders.

In the spirit of this effort, a group of 27 junior faculty and early-career scientists, composed of social scientists, atmospheric scientists, and hydrologists, met in Boulder, Colorado, in July 2010 for a Junior Faculty Forum sponsored by NCAR (http://www.asp.ucar.edu/ecsa/jff/jff10.php). Expert presentations and discussions focused on adaptation of human societies and water systems to climate change. In this article, the members of this group present a synthesis of our ideas and recommendations for catalyzing scientific frontiers in use-inspired water–climate–society research... Read more at **http://sciencepolicy.colorado.edu/admin/publication_files/2012.05.pdf**.

Pielke, Jr., R. A. (2012), Chief Scientists Are Not Superheroes. Research Fortnight, March 2, http://exquisitelife.researchresearch.com/exquisite_life/2012/03/chief-scientists-are-not-superheroes.html.

Pielke, Jr., R. A. (2012), Guest opinion: The Enduring Importance of Higher Education. Daily Camera March 3, http://www.dailycamera.com/guestopinion/ci_20082061.

Pielke, Jr., R.A., 2012. The Great American Manufacturing Battle, Bridges, Vol. 33, May 25, http://sciencepolicy.colorado.edu/admin/publication_files/2012.07.pdf.

Excerpt: Currently, politicians, academics, and pundits in the United States are arguing over the need for and consequences of innovation in the 21st century economy. One important part of this debate involves the role of manufacturing in employment and economic growth, and the degree to which public policy should focus on treating manufacturing as a "special sector" that deserves targeted government support. In this column, I'll provide a bit of an overview of this debate and some historical data on the role of manufacturing in the economy... Read more at **http://sciencepolicy.colorado.edu/admin/publication_files/2012.07.pdf**.

Pielke, Jr., R. A. (2012), Post-Normal Science in a German Landscape. Nature and Culture 7 (2) 196-212, http://sciencepolicy.colorado.edu/admin/publication_files/2012.12.pdf.

Abstract: This essay explores the management and creation of ignorance via an exploration of the landscape of eastern Germany, which has seen profound social, political, and technological changes over the past several decades. Like in many places around the world decision makers in eastern Germany are seeking to reach a future state where seemingly conflicting outcomes related to the economy and the environment are simultaneously realized. The management of ignorance is an important but often overlooked consideration in decision making that the concept of "post-normal science" places into our focus of attention. Read more at: **http://sciencepolicy.colorado.edu/admin/publication_files/2012.12.pdf.**

Pielke, Jr., R.A. (2012), Why is Support for Climate Action Dropping? The Interpreter, Lowy Institute for International Policy, June 13, http://www.lowyinterpreter.org/post/2012/06/13/Why-is-support-for-climate-action-dropping.aspx.

Excerpt: The 2012 Lowy Poll shows that only 36% of those surveyed agreed with the statement that 'Global warming is a serious and pressing problem. We should begin taking steps now even if this involves significant costs.' Back in 2006, one year before Kevin Rudd elevated the

climate issue to national and international prominence, 68% of those surveyed agreed with that same statement, almost twice as many.

But have Australians really gone cold on climate change? The 2012 Lowy Poll shows that 55% surveyed say that their concern about climate change is unchanged since debate on the issue began in Australia, while 38% report being more concerned... Read more at **http://www.lowyinterpreter.org/post/2012/06/13/Why-is-support-for-climate-action-dropping.aspx**.

Simmons, K., D. Sutter, R.A. Pielke, Jr., (2011), Blown Away: Monetary and Human Impacts of the 2011 U.S. Tornadoes. Chapter 8 in: Extreme events and insurance: 2011 anus horribilis, The Geneva Reports: Risk and Insurance Research (eds.) C. Courbage and W.R. Stahel, http://sciencepolicy.colorado.edu/admin/publication_files/2012.01.pdf.

Excerpt: As 2011 began, the big news in the American sports world was the showdown between Auburn and Oregon for the national championship in college football. The big political story was the Tea Party, which had just helped Republicans regain control of the U.S. House of Representatives. In Hollywood, speculation was rife on who would win an Oscar. In other words, 2011 began as most years do. No one foresaw that the first five months of the year would reset the expectations of meteorologists, insurance companies, and the public regarding the toll tornadoes can impose on the U.S. today… Read more at **http://sciencepolicy.colorado.edu/admin/publication_files/2012.01.pdf**.

Center Presentations

Max Boykoff

Who speaks for climate? Making sense of media reporting on climate change. INSTAAR Noon Seminar, March 19, 2012, Boulder, CO.

Visualizing Climate Change: International Perspectives on Adaptation and Mitigation. Eco-Images: Altering Environmental Discussions and Political Landscapes, April 18, 2012, Munich.

(with Lisa Dilling), Climate Change Session. 2012 World Renewable Energy Forum, May 15, 2012, Denver, CO.

Rhetoric of Climate Change Deniers. CU Boulder Program for Writing and Rhetoric Seminar, May 16, 2012, Boulder, CO.

Meaghan Daly

The dynamics of vulnerability: Why adapting to climate variability may not always prepare us for climate change. Poster presentation. Climate Adaptation Futures, Second International Climate Change Adaptation Conference, May 29-31, 2012, Tucson, AZ.

Lisa Dilling

Climate Adaptation Barriers and Opportunities in the United States: A Focus on Policy and Decision Making at the Sub-National Scale. Poster presentation. Planet Under Pressure Conference, March 26-29, 2012, London.

Local adaptation strategies: Perceptions and responses to hazards by municipalities in Colorado, Wyoming and Utah. Scales, Frameworks and Metrics conference, ICARUS III, May 18-20, 2012, New York.

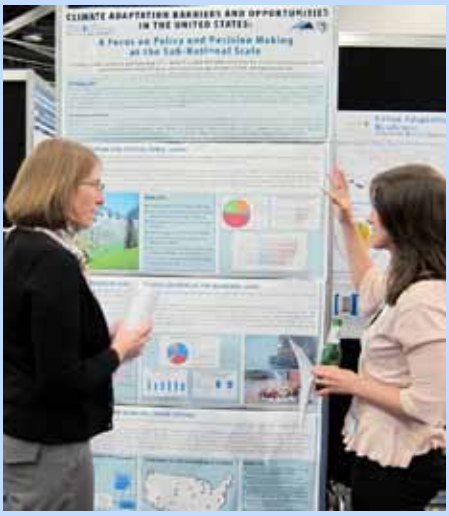
(with Meaghan Daly), The Dynamics of Vulnerability: Why Adapting to Climate Variability May not Always Prepare Us for Climate Change. Scales, Frameworks and Metrics conference, ICARUS III, May 18-20, 2012, New York.

Evaluating Success in Climate Adaptation Science and Practice panel, and Successful Adaptation to Climate Change: Linking Science and Policy in a Rapidly Changing World panel. Climate Adaptation Futures, Second International Climate Change Adaptation Conference, May 29-31, 2012, Tucson, AZ.

Roger Pielke, Jr.

Knowledge production for sustainable development workshop. Maastricht University, April 12-13, 2012, Netherlands.

Lessons from 50 Years of Science Advice to the US President. Berlin-Brandenburg Academy of Sciences and Humanities, April 17, 2012, Berlin.



Lisa Dilling (left) presenting poster at Planet Under Pressure Conference, March 2012

Bill Travis

Extreme events: Pacemakers of adaptation? Climate Adaptation Futures, Second International Climate Change Adaptation Conference, May 29-31, 2012, Tucson, AZ.

CSTPR MULTIMEDIA

Roger Pielke, Jr., discusses how we can understand the role of scientists and policy makers - particularly on the issue of climate change. Following the lecture Sam Roggeveen interviewed Prof. Pielke on the interplay between scientists and policy makers in the context of the current climate change debate. February 7, 2012, Lowy Lecture Series. Watch here: **http://vimeo.com/38008324**.

For more CSTPR multimedia (video, audio and photo) visit: **http://sciencepolicy.colorado.edu/news/multimedia**.

Science and Technology Policy Programs

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Science, Technology, and Public Policy at University of Michigan

In the Science, Technology, and Public Policy (STPP) Graduate Certificate Program, students explore the politics and policy related to science and technology. The program provides students with tools to analyze complex science and technology policy issues. Website: http://stpp.fordschool.umich.edu/graduate-certificate/index.php.

ABOUT US

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